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GOEWERMENTSKENNISGEWING

DEPARTEMENT VAN VERVOER

No. R. 2408 **2 Desember 1988**

TORREMOLINOS INTERNASIONALE KONVENSIE OOR DIE VEILIGHEID VAN VISSERSVAARTUIE, 1977

DIE PARTYE BY DIE KONVENSIE het,

UIT 'N BEGEERTE om die veiligheid van skepe in die algemeen en die veiligheid van vissersvaartuie in die besonder te bevorder,

GEDAGTIG AAN die uitmuntende bydrae van die Internasionale Konvensies vir die Beveiliging van Menselewens ter See en ook die Internasionale Konvensies insake Laslyne ter bevordering van die veiligheid van skepe,

IN DIE BESEF dat vissersvaartuie vrygestel is van byna al die vereistes van daardie Internasionale Konvensies,

UIT 'N BEGEERTE, DERHALWE, om in algemene ooreenstemming eenvormige beginsels en reëls oor die konstruksie en toerusting van vissersvaartuie op te stel wat die veiligheid van sodanige vaartuie en hul bemannings ten doel het,

MENENDE dat hierdie doel die beste bereik kan word deur die sluiting van 'n Konvensie,

SOOS VOLG OOREENGEKOM:

ARTIKEL 1

Algemene verpligtinge ingevolge die Konvensie

Die Partye moet uitvoering gee aan die bepalings van die Konvensie en die Aanhangsel daarvan, wat 'n integrerende deel van die Konvensie uitmaak. Tensy uitdruklik anders bepaal, is elke verwysing na die Konvensie tegelykertyd 'n verwysing na die Aanhangsel.

ARTIKEL 2

Woordomskrywings

By die toepassing van die Konvensie, tensy uitdruklik anders bepaal, beteken—

(a) "Party" 'n staat vir wie die Konvensie in werking getree het;

GOVERNMENT NOTICE

DEPARTMENT OF TRANSPORT

No. R. 2408 **2 December 1988**

TORREMOLINOS INTERNATIONAL CONVENTION FOR THE SAFETY OF FISHING VESSELS, 1977

THE PARTIES TO THE CONVENTION,

DESIRING to promote the safety of ships in general and the safety of fishing vessels in particular,

BEARING IN MIND the outstanding contribution of the International Conventions for the Safety of Life at Sea and also the International Conventions on Load Lines in promoting the safety of ships,

RECOGNISING that fishing vessels are exempt from almost all the requirements of those International Conventions.

DESIRING THEREFORE to establish in common agreement uniform principles and rules concerning the construction and equipment of fishing vessels directed to the safety of such vessels and their crews,

CONSIDERING that this end may best be achieved by the conclusion of a Convenion,

HAVE AGREED as follows:

ARTICLE 1

General obligations under the Convention

The Parties shall give effect to the provisions of the Convention and the Annex thereto, which shall constitute an integral part of the Convention. Unless expressly provided otherwise, a reference to the Convention constitutes at the same time a reference to the Annex.

ARTICLE 2

Definitions

For the purpose of the Convention, unless expressly provided otherwise—

(a) "Party" means a State for which the Convention has entered into force.

(b) "Vissersvaartuig" of "vaartuig" enige vaartuig wat kommersieel gebruik word om vis, walvisse, robbe, walrusse of ander lewende hulpbronne van die see te vang;

(c) "Organisasie" die Intergoewermentele Seevaartkonsultorganisasie;

(d) "Sekretaris-generaal" die Sekretaris-generaal van die Organisasie; en

(e) "Administrasie" die regering van die staat onder wie se vlag die vaartuig geregtig is om te vaar.

ARTIKEL 3

Toepassing

Die Konvensie is van toepassing op seegaande vissersvaartuie wat geregtig is om onder die vlag van 'n staat wat 'n Party is, te vaar.

ARTIKEL 4

Sertifisering en beheer

(1) Behoudens die bepalings van paragraaf (2) moet 'n sertifikaat uitgereik op gesag van 'n Party ooreenkomstig die bepalings van die Konvensie, deur die ander Partye aanvaar word en geag word dieselfde geldigheid te hê as 'n sertifikaat deur hulle uitgereik.

(2) Elke vaartuig met 'n sertifikaat uitgereik ingevolge Regulasie 7 of 8 is in die hawens van ander Partye onderworpe aan beheer deur die beampte wat behoorlik deur sodanige Partye gemagtig is vir sover sodanige beheer ten doel het om vas te stel of daar 'n geldige sertifikaat aan boord is. Sodanige sertifikaat moet aanvaar word, tensy daar klaarblyklike redes is om te glo dat die toestand van die vaartuig of van sy toerusting wesenlik nie ooreenstem met die besonderhede op daardie sertifikaat nie. In so 'n geval, of as daar nie 'n geldige sertifikaat is nie, moet die beampte in beheer onverwyld die konsul of, in sy afwesigheid, die diplomatieke verteenwoordiger van die Party onder wie se vlag die vaartuig geregtig is om te vaar, in kennis stel van al die omstandighede waarvoor die korrektiewe optrede deur daardie Party nodig geag word en moet die feite aan die Organisasie gerapporteer word. Die beampte in beheer moet sodanige stappe doen as wat sal verseker dat die vaartuig nie vertrek voordat hy sonder gevaar vir die vaartuig of persone aan boord op see kan gaan nie.

ARTIKEL 5

Oormag

(1) 'n Vaartuig wat ten tyde van sy vertrek op 'n vaart nie aan die bepalings van die Konvensie onderworpe is nie, of wat nie 'n sertifikaat hoef te hou ooreenkomstig die bepalings van die Konvensie nie, word nie weens afwyking van die voorgenome vaart as gevolg van slegte weer of 'n ander geval van oormag aan die bepalings van die Konvensie onderworpe nie.

(2) By die beoordeling van die vraag of van die bepalings van die Konvensie op 'n vaartuig van toepassing is, word geen rekening gehou met persone wat hulle as gevolg van oormag of van die verpligting om skipbreukelinge of ander persone te vervoer, aan boord van die vaartuig bevind nie.

ARTIKEL 6

Mededeling van inligting

(1) Die Partye moet die volgende aan die Organisasie verstrek:

(a) die teks van wette, orders, dekrete, regulasies en ander middele wat oor die onderskeie aangeleenthede binne die bestek van die Konvensie uitgevaardig is;

(b) "Fishing vessel" or "vessel" means any vessel used commercially for catching fish, whales, seals, walrus or other living resources of the sea.

(c) "Organisation" means the Inter-Governmental Maritime Consultative Organisation.

(d) "Secretary-General" means the Secretary-General of the Organisation.

(e) "Administration" means the Government of the State whose flag the vessel is entitled to fly.

ARTICLE 3

Application

The Convention shall apply to seagoing fishing vessels entitled to fly the flag of a State which is a Party.

ARTICLE 4

Certification and control

(1) Subject to the provisions of paragraph (2), a certificate issued under the authority of a Party in accordance with the provisions of the Convention shall be accepted by the other Parties and regarded for all purposes covered by the Convention as having the same validity as a certificate issued by them.

(2) Every vessel holding a certificate issued under Regulation 7 or 8 is subject, in the ports of other Parties, to control by officers duly authorised by such Parties in so far as this control is directed towards verifying that there is on board a valid certificate. Such certificate shall be accepted unless there are clear grounds for believing that the condition of the vessel or its equipment does not correspond substantially with the particulars of that certificate. In that case, or if there is not a valid certificate, the officer carrying out the control shall forthwith inform the Consul or, in his absence, the diplomatic representative of the Party whose flag the vessel is entitled to fly, of all the circumstances for which corrective action by that Party would be deemed necessary and the facts shall be reported to the Organisation. The officer carrying out the control shall take such steps as will ensure that the vessel shall not sail until it can proceed to sea without danger to the vessel or persons on board.

ARTICLE 5

Force majeure

(1) A vessel which is not subject to the provisions of the Convention or which is not required to hold a certificate in accordance with the provisions of the Convention at the time of its departure on any voyage shall not become subject to such provisions on account of any deviation from its intended voyage due to stress of weather or any other cause of *force majeure*.

(2) Persons who are on board a vessel by reason of *force majeure* or in consequence of the obligation to carry shipwrecked or other persons shall not be taken into account for the purpose of ascertaining the application to the vessel of any provisions of the Convention.

ARTICLE 6

Communication of information

(1) The Parties shall communicate to the Organisation:

(a) The text of laws, orders, decrees, regulations and other instruments which have been promulgated on the various matters within the scope of the Convention;

(b) 'n lys van nie-goewermentele instansies wat gemagtig is om namens hulle op te tree in aangeleenthede wat verband hou met die ontwerp, konstruksie en toerus van vaartuie ooreenkomstig die bepalings van die Konvensie; en

(c) 'n voldoende aantal voorbeelde van hul sertifikate wat ingevolge die bepalings van die Konvensie uitgereik is.

(2) Die Organisasie moet al die Partye in kennis stel van die ontvangs van enige mededeling ingevolge paragraaf (1) (a) en moet enige inligting ontvang ingevolge paragraaf (1) (b) en (c), aan hulle verstrek.

ARTIKEL 7

Ongevalle rakende vissersvaartuie

(1) Elke Party moet reël vir 'n ondersoek van enige ongeval rakende enige van sy vaartuie, onderworpe aan die bepalings van die Konvensie, wanneer hy oordeel dat sodanige ondersoek kan help om te bepaal watter veranderinge in die Konvensie wenslik sou wees.

(2) Elke Party moet die Organisasie voorsien van gepaste inligting betreffende die bevindinge van sodanige ondersoek vir deursending aan al die Partye. Geen verslae of aanbevelings van die Organisasie wat op sodanige inligting gebaseer is, mag die identiteit of nasionaliteit van die betrokke vaartuie bekend maak of op enige wyse verantwoordelikheid op enige vaartuig of persoon plaas of impliseer nie.

ARTIKEL 8

Ander verdrae en vertolking

Niks in die Konvensie mag die kodifisering en ontwikkeling van die seereg deur die Verenigde Nasies se Konferensie oor Seereg, belê ooreenkomstig Resolusie 2750 (XXV) van die Algemene Vergadering van die Verenigde Nasies, of deur die huidige of toekomstige aansprake en regsmenings van enige staat rakende die seereg en die aard en omvang van die vlagstaatjurisdiksie benadeel nie.

ARTIKEL 9

Ondertekening, bekragtiging, aanvaarding, goedkeuring en toetrede

(1) Die Konvensie bly van 1 Oktober 1977 tot 30 Junie 1978 by die Organisasie se hoofkwartier beskikbaar vir ondertekening en bly daarna beskikbaar vir toetrede. Alle state kan Partye by die Konvensie word deur—

(a) ondertekening sonder voorbehoud wat bekragtiging, aanneming of goedkeuring betref; of

(b) ondertekening onderworpe aan bekragtiging, aanneming of goedkeuring, gevolg deur bekragtiging, aanneming of goedkeuring of

(c) toetrede.

(2) Bekragtiging, aanneming, goedkeuring of toetrede geskied deur die indiening van 'n dokument te dien effekte by die Sekretaris-generaal.

(3) Die Sekretaris-generaal moet alle state wat die Konvensie onderteken het of daartoe toegetree het, in kennis stel van enige ondertekening of van die indiening van enige nuwe dokument van bekragtiging, aanneming, goedkeuring of toetrede en die datum van sodanige indiening.

(b) a list of non-governmental agencies which are authorised to act on their behalf in matters relating to the design, construction and equipment of vessels in accordance with the provisions of the Convention; and

(c) a sufficient number of specimens of their certificates issued under the provisions of the Convention.

(2) The Organisation shall notify all Parties of the receipt of any communication under paragraph (1) (a) and shall circulate to them any information communicated to it under paragraph (1) (b) and (c).

ARTICLE 7

Casualties to fishing vessels

(1) Each Party shall arrange for an investigation of any casualty occurring to any of its vessels subject to the provisions of the Convention, when it judges that such an investigation may assist in determining what changes in the Convention might be desirable.

(2) Each Party shall supply the Organisation with pertinent information concerning the findings of such investigation for circulation to all Parties. No reports or recommendations of the Organisation based upon such information shall disclose the identity or nationality of the vessels concerned, or in any manner fix or imply responsibility upon any vessel or person.

ARTICLE 8

Other treaties and interpretation

Nothing in this Convention shall prejudice the codification and development of the law of the sea by the United Nations Conference on the Law of the Sea convened pursuant to Resolution 2750 (XXV) of the General Assembly of the United Nations nor the present or future claims and legal views of any State concerning the law of the sea and the nature and extent of coastal and flag State jurisdiction.

ARTICLE 9

Signature, ratification, acceptance, approval and accession

(1) The Convention shall remain open for signature at the Headquarters of the Organisation from 1 October 1977 until 30 June 1978 and shall thereafter remain open for accession. All States may become Parties to the Convention by—

(a) signature without reservation as to ratification, acceptance or approval; or

(b) signature subject to ratification, acceptance or approval, followed by ratification, acceptance or approval; or

(c) accession.

(2) Ratification, acceptance, approval or accession shall be effected by the deposit of an instrument to that effect with the Secretary-General.

(3) The Secretary-General shall inform all States which have signed the Convention or acceded to it of any signature or of the deposit of any new intrument of ratification, acceptance, approval or accession and the date of its deposit.

ARTIKEL 10

Inwerkingtreding

(1) Die Konvensie tree in werking 12 maande na die datum waarop nie minder nie as 15 state dit òf onderteken het sonder voorbehoud wat bekragtiging, aanneming of goedkeuring betref, òf die vereiste dokumente van bekragtiging, aanneming, goedkeuring of toetrede ooreenkomstig Artikel 9 ingedien het, welke state se vissersvaartuigvlote gesamentlik minstens 50% volgens getal van die wêreld se vloot van vissersvaartuie met 'n lengte van 24 meter en meer moet uitmaak.

(2) Die Organisasie moet die state wat die Konvensie onderteken het of daartoe toegetree het, in kennis stel van die datum waarop dit in werking tree.

(3) Vir State wat 'n dokument van bekragtiging, aanneming, goedkeuring of toetrede ten opsigte van die Konvensie ingedien het nadat daar aan die vereistes vir die inwerkingtreding daarvan voldoen is, maar voor die datum van inwerkingtreding, word die bekragtiging, aanneming, goedkeuring of toetrede van krag op die datum van inwerkingtreding van die Konvensie of drie maande na die datum van indiening van die dokument, watter datum ook al die laatste is.

(4) Vir state wat 'n dokument van bekragtiging, aanneming, goedkeuring of toetrede ingedien het na die datum waarop die Konvensie in werking getree het, tree die Konvensie drie maande na die datum van indiening van die dokument in werking.

(5) Ná die datum waarop aan al die voorwaardes voldoen is wat ingevolge Artikel 11 vereis word om 'n wysiging van die Konvensie in werking te laat tree, is enige dokument van bekragtiging, aanneming, goedkeuring of toetrede op die Konvensie in sy gewysigde vorm van toepassing.

ARTIKEL 11

Wysigings

(1) Die Konvensie kan gewysig word deur enige van die prosedures uiteengesit in hierdie Artikel.

(2) Wysigings ná oorweging binne die Organisasie:

(a) Enige wysiging voorgestel deur 'n Party moet aan die Sekretaris-generaal voorgelê word, wat dit dan minstens ses maande voor die oorweging daarvan aan al die lede van die Organisasie en aan alle Partye moet deurstuur.

(b) Enige wysiging voorgestel en deurgestuur soos hierbo vermeld, moet vir oorweging aan die Komitee vir die Veiligheid van Seeliede van die Organisasie voorgelê word.

(c) Partye is daarop geregtig om deel te neem aan die verrigtinge van die Komitee vir die Veiligheid van Seeliede vir die oorweging en aanneming van wysigings, afgesien daarvan of hulle lede van die Organisasie is of nie.

(d) Wysigings word aangeneem deur 'n tweederdemeerderheid van die Partye wat teenwoordig is en stem in die Komitee vir die Veiligheid van Seeliede soos vergroot ingevolge subparagraaf (c) (hierna genoem "die vergrote Komitee vir die Veiligheid van Seeliede"), op voorwaarde dat minstens eenderde van die Partye ten tyde van die stemming teenwoordig moet wees.

(e) Die Sekretaris-generaal moet wysigings wat ooreenkomstig subparagraaf (d) aangeneem is, aan alle Partye deurstuur.

(f) (i) 'n Wysiging van 'n Artikel of van Regulasies 1 en 3 tot 11 word geag aangeneem te wees op die datum waarop dit deur twee derdes van die Partye aangeneem is.

ARTICLE 10

Entry into force

(1) The Convention shall enter into force 12 months after the date on which not less than 15 States have either signed it without reservation as to ratification, acceptance, or approval or have deposited the requisite instruments of ratification, acceptance, approval or accession in accordance with Article 9, the aggregate of whose fleets of fishing vessels constitutes not less than 50 per cent by number of the world's fleet of fishing vessels of 24 metres in length and over.

(2) The Organisation shall inform the States which have signed the Convention or acceded to it of the date on which it enters into force.

(3) For States which have deposited an instrument of ratification, acceptance, approval or accession in respect of the Convention after the requirements for entry into force thereof have been met but prior to the date of entry into force, the ratification, acceptance, approval or accession shall take effect on the date of entry into force of the Convention or three months after the date of deposit of the instrument, whichever is the later date.

(4) For States which have deposited an instrument of ratification, acceptance, approval or accession after the date on which the Convention entered into force, the Convention shall become effective three months after the date of deposit of the instrument.

(5) After the date on which all the conditions required under Article 11 to bring an amendment to the Convention into force have been fulfilled, any instrument of ratification, acceptance, approval or accession deposited shall apply to the Convention as amended.

ARTICLE 11

Amendments

(1) The Convention may be amended by either of the procedures specified in this Article.

(2) Amendments after consideration within the Organisation:

(a) Any amendment proposed by a Party shall be submitted to the Secretary-General, who shall then circulate it to all Members of the Organisation and to all the Parties at least six months prior to its consideration.

(b) Any amendment proposed and circulated as above shall be referred to the Maritime Safety Committee of the Organisation for consideration.

(c) Parties whether or not Members of the Organisation, shall be entitled to participate in the proceedings of the Maritime Safety Committee for the consideration and adoption of amendments.

(d) Amendments shall be adopted by a two-thirds majority of the Parties present and voting in the Maritime Safety Committee expanded as provided for in subparagraph (c) (hereinafter referred to as "the expanded Maritime Safety Committee") on condition that at least one-third of the Parties shall be persent at the time of voting.

(e) Amendments adopted in accordance with subparagraph (d) shall be communicated by the Secretary-General to all the Parties.

(f) (i) An amendment to an Article or to Regulations 1 and 3 to 11 shall be deemed to have been accepted on the date on which it is accepted by two-thirds of the Parties.

(ii) 'n Wysiging van die Aanhangsel, uitgesonderd Regulasies 1 en 3 tot 11, word geag aangeneem te wees—

(aa) aan die einde van twee jaar vanaf die datum waarop dit vir aanneming aan die Partye voorgelê word; of

(bb) aan die einde van 'n ander tydperk, wat minstens 'n jaar moet wees, indien so bepaal deur 'n twee derde-meerderheid van die Partye wat teenwoordig is en stem in die vergrote Komitee vir die Veiligheid van Seeliede.

Indien òf meer as een derde van die Partye, òf Partye wie se gekombineerde vissersvaartuigvlote minstens 50 persent volgens getal van die vloot van vissersvaartuie met 'n lengte van 24 meter of meer van al die Partye uitmaak, egter binne die bepaalde tydperk die Sekretaris-generaal daarvan in kennis stel dat hulle die wysiging teenstaan, word dit geag nie aangeneem te wees nie.

(iii) 'n Wysiging van 'n Byvoegsel by die Aanhangsel word geag aangeneem te wees aan die einde van 'n tydperk wat bepaal word deur die vergrote Komitee vir die Veiligheid van Seeliede ten tyde van die aanneming daarvan, welke tydperk minstens 10 maande is, tensy daar binne sodanige tydperk by die Organisasie beswaar aangeteken word deur minstens een derde van die Partye, of die Partye wie se gekombineerde vissersvaartuigvlote minstens 50 persent volgens getal van die vloot van vissersvaartuie met 'n lengte van 24 meter en meer van al die Partye uitmaak.

(g) (i) 'n Wysiging van 'n Artikel of van Regulasies 1 en 3 tot 11 tree in werking ten opsigte van die Partye wat dit aangeneem het ses maande na die datum waarop dit geag word aangeneem te wees, en ten opsigte van elke Party wat dit ná daardie datum aanneem, ses maande na die datum waarop daardie Party dit aangeneem het.

(ii) 'n Wysiging van die Aanhangsel, uitgesonderd Regulasies 1 en 3 tot 11, en van 'n Byvoegsel by die Aanhangsel tree in werking ten opsigte van al die Partye, met uitsondering van dié wat ingevolge subparagrawe (f) (ii) en (iii) beswaar aangeteken het teen die wysiging en wat sodanige besware nie teruggetrek het nie, ses maande na die datum waarop dit geag word aangeneem te wees. Enige party kan egter voor die datum bepaal vir die inwerkingtreding die Sekretaris-generaal daarvan in kennis stel dat hy homself daarvan onthef om uitvoering aan sodanige wysiging te gee vir 'n tydperk van hoogstens een jaar vanaf die inwerkingtreding daarvan of vir sodanige langer tydperk as wat bepaal word deur tweederdemeerderheid van die Partye wat teenwoordig is en stem in die vergrote Komitee vir die Veiligheid van Seeliede ten tyde van die aanneming van die wysiging.

(3) *Wysiging deur 'n Konferensie:*

(a) Op versoek van 'n Party met die instemming van minstens een derde van die Partye, moet die Organisasie 'n Konferensie van die Partye saamroep om wysigings van die Konvensie te oorweeg.

(ii) An amendment to the Annex other than to Regulations 1 and 3 to 11 shall be deemed to have been accepted:

(aa) at the end of two years from the date on which it is communicated to the Parties for acceptance; or

(bb) at the end of a different period, which shall not be less than one year, if so determined at the time of its adoption by a two-thirds majority of the Parties present and voting in the expanded Maritime Safety Committee.

However, if within the specified period either more than one-third of the Parties, or Parties the aggregate of whose fleets of fishing vessels constitutes not less than 50 per cent by number of the fleet of fishing vessels of all the Parties of 24 metres in length and over, notify the Secretary-General that they object to the amendment, it shall be deemed not to have been accepted.

(iii) An amendment to an Appendix to the Annex shall be deemed to have been accepted at the end of a period to be determined by the expanded Maritime Safety Committee at the time of its adoption, which period shall be not less than ten months, unless within that period an objection is communicated to the Organisation by not less than one-third of the Parties, or Parties the aggregate of whose fleets of fishing vessels constitutes not less than 50 per cent by number of the fleet of fishing vessels of all the Parties of 24 metres in length and over.

(g) (i) An amendment to an Article or to Regulations 1 and 3 to 11 shall enter into force with respect to those Parties which have accepted it, six months after the date on which it is deemed to have been accepted, and with respect to each Party which accepts it after that date, six months after the date of that Party's acceptance.

(ii) An amendment to the Annex other than to Regulations 1 and 3 to 11 and to an Appendix to the Annex shall enter into force with respect to all Parties, except those which have objected to the amendment under subparagraphs (f) (ii) and (iii) and which have not withdrawn such objections, six months after the date on which it is deemed to have been accepted. However, before the date set for the entry into force any Party may give notice to the Secretary-General that it exempts itself from giving effect to that amendment for a period not longer than one year from the date of its entry into force, or for such longer period as may be determined by a two-thirds majority of the Parties present and voting in the expanded Maritime Safety Committee at the time of the adoption of the amendment.

(3) *Amendment by a Conference:*

(a) Upon the request of a Party concurred in by at least one-third of the Parties, the Organisation shall convene a Conference of the Parties to consider amendments to the Convention.

(b) Elke wysiging wat by sodanige Konferensie aangeneem word deur 'n tweederdemeerderheid van die Partye wat teenwoordig is en stem, moet deur die Sekretaris-generaal vir aanneming aan alle Partye oorgedra word.

(c) Tensy die Konferensie anders besluit, word die wysiging geag aangeneem te wees en word dit van krag ooreenkomstig die prosedures in onderskeidelik subparagrawe (2) (f) en (g), met dien verstande dat verwysings in daardie subparagrawe na die vergrote Komitee vir die Veiligheid vir Seeliede beskou word as verwysings na die Konferensie.

(4) Enige Party wat geweier het om die wysiging van die Aanhangsel aan te neem, word vir die doel van die toepassing daarvan die wysiging geag nie 'n Party te wees nie.

(5) Tensy uitdruklik anders bepaal, is enige wysiging van die Konvensie wat betrekking het op die bou van die vaartuig, van toepassing slegs op vaartuie waarvoor, op of na die datum waarop die wysiging van krag word—

(a) die kiel gelê word; of

(b) konstruksie identifiseerbaar met 'n spesifieke vaartuig begin; of

(c) montering wat minstens 50 ton of 1 persent van die beraamde massa van alle boumateriaal behels begin, wat ook al die minste is.

(6) Enige verklaring van aanneming van, of beswaar teen 'n wysiging of enige kennisgewing ingevolge paragraaf (2) (g) (ii) moet skriftelik voorgelê word aan die Sekretaris-generaal, wat al die Partye van sodanige voorlegging, asook die ontvangsdatum daarvan, in kennis moet stel.

(7) Die Sekretaris-generaal moet alle Partye inlig aangaande enige wysigings wat van krag word, tesame met die datum van inwerkingtreding van elke sodanige wysiging.

ARTIKEL 12

Opsegging

(1) die Konvensie kan deur 'n Party opgesê word te eniger tyd na verstryking van vyf jaar vanaf die datum waarop die Konvensie vir daardie Party in werking tree.

(2) Opsegging geskied deur skriftelike kennisgewing aan die Sekretaris-generaal, wat al die ander Partye in kennis moet stel van enige sodanige kennisgewing wat ontvang is en van die ontvangsdatum daarvan, asook van die datum waarop sodanige opsegging in werking tree.

(3) 'n Opsegging tree in werking 12 maande nadat die kennisgewing van opsegging deur die Sekretaris-generaal ontvang is of na verstryking van enige sodanige langer tydperk as wat in die kennisgewing aangedui mag word.

ARTIKEL 13

Bewaring en registrasie

(1) Die Konvensie moet vir bewaring ingedien word by die Sekretaris-generaal, wat gewaarmerkte ware afskrifte daarvan moet stuur aan al die state wat die Konvensie onderteken het of daartoe toegetree het.

(2) Sodra die Konvensie van krag word, moet die Sekretaris-generaal die teks daarvan deurstuur aan die Sekretaris-generaal van die Verenigde Nasies vir registrasie en publikasie ooreenkomstig Artikel 102 van die Handves van die Verenigde Nasies.

ARTIKEL 14

Tale

Die Konvensie is in een eksemplaar opgestel in Engels, Frans, Russies en Spaans, met elke teks ewe outentiek. Amptelike vertalings moet in Arabies, Duits en Italiaans gedoen word en saam met die ondergetekende oorspronklike vir bewaring ingedien word.

(b) Every amendment adopted by such a Conference by a two-thirds majority of the Parties present and voting shall be communicated by the Secretary-General to all the Parties for acceptance.

(c) Unless the Conference decides otherwise, the amendment shall be deemed to have been accepted and shall enter into force in accordance with the procedures specified in paragraph (2) (f) and (g) respectively, provided that references in those subparagraphs to the expanded Maritime Safety Committee shall be taken to mean references to the Conference.

(4) Any Party which has declined to accept the amendment to the Annex shall be deemed not to be a Party for the purpose of application of that amendment.

(5) Unless expressly provided otherwise, any amendment to the Convention which relates to the structure of a vessel, shall apply only to vessels for which on or after the date of entry into force of the amendment—

(a) the keel is laid; or

(b) construction identifiable with a specific vessel begins; or

(c) assembly has commenced comprising at least 50 tonnes or 1 per cent of the estimated mass of all structural material; whichever is the less.

(6) Any declaration of acceptance of, or objection to, an amendment or any notice given under paragraph (2) (g) (ii) shall be submitted in writing to the Secretary-General who shall inform all the Parties of any such submission and of the date of its receipt.

(7) The Secretary-General shall inform all the Parties of any amendments which enter into force, together with the date on which each such amendment enters into force.

ARTICLE 12

Denunciation

(1) The Convention may be denounced by any Party at any time after the expiry of five years from the date on which the Convention enters into force for that Party.

(2) Denunciation shall be effected by notification in writing to the Secretary-General who shall inform all other Parties of any such notification received and of the date of its receipt as well as the date on which such denunciation takes effect.

(3) A denunciation shall take effect 12 months after receipt of the notification of denunciation by the Secretary-General or after the expiry of any longer period which may be indicated in the notification.

ARTICLE 13

Deposit and Registration

(1) The Convention shall be deposited with the Secretary-General who shall transmit certified true copies thereof to all the States which have signed the Convention or acceded to it.

(2) As soon as the Convention enters into force, the text shall be transmitted by the Secretary-General to the Secretary-General of the United Nations for registration and publication, in accordance with Article 102 of the Charter of the United Nations.

ARTICLE 14

Languages

The Convention is established in a single copy in the English, French, Russian and Spanish languages, each text being equally authentic. Official translations in the Arabic, German and Italian languages shall be prepared and deposited with the signed original.

TEN BEWYSE WAARVAN die ondergetekendes, behoorlik vir dié doel daartoe gemagtig deur hulle onderskeie regerings, die Konvensie onderteken het.*

GEDOEN TE TORREMOLINOS hierdie tweede dag van April Eenduisend Negehonderd Sewe-en-sewentig.

AANHANGSEL

REGULASIES VIR DIE KONSTRUKSIE EN TOERUSTING VAN VISSERSVAARTUIE

HOOFSTUK I

ALGEMENE BEPALINGS

Regulasie 1

Toepassing

(1) Tensy uitdruklik anders bepaal, is die bepalings van hierdie Aanhangsel van toepassing op nuwe vissersvaartuie met 'n lengte van 24 meter en meer, met inbegrip van vaartuie wat ook hul vangs verwerk.

(2) Die bepalings van hierdie Aanhangsel is nie van toepassing nie op vaartuie wat uitsluitlik gebruik word—

(a) vir sport of ontspanning;

(b) vir die verwerking van vis of ander lewende hulpbronne van die see;

(c) vir navorsing en opleiding; of

(d) as visvervoerders.

Regulasie 2

Woordomskrywings

(1) "Nuwe vaartuig" is 'n vissersvaartuig waarvoor, op of na die datum van inwerkingtreding van die Konvensie—

(a) die boukontrak of kontrak vir groot ombouing aangegaan word; of

(b) die boukontrak of kontrak vir groot ombouing aangegaan is voor die datum van inwerkingtreding van die Konvensie, en wat drie jaar of langer na die datum van sodanige inwerkingtreding afgelewer word; of

(c) in die afwesigheid van 'n boukontrak—

(i) die kiel gelê word; of

(ii) konstruksie identifiseerbaar met 'n spesifieke vaartuig begin; of

(iii) montering wat minstens 50 ton of 1 persent van die beraamde massa van al die boumateriaal behels, begin, wat ook al die minste is.

(2) "Bestaande vaartuig" is 'n vissersvaartuig wat nie 'n nuwe vaartuig is nie.

(3) "Goedgekeur" beteken goedgekeur deur die Administrasie.

(4) "Bemanning" beteken die skipper en al die persone wat in diens geneem is of in diens is in enige hoedanigheid aan boord van 'n vaartuig vir die werksaamhede van daardie vaartuig.

(5) "Die lengte (L)" is 96 persent van die totale lengte op 'n waterlyn by 85 persent van die kleinste diepte gemeet van die kiellyn, of die lengte vanaf die voorkant van die voorstewe tot by die as van die roerkoning op daardie waterlyn, indien dit groter is. By skepe ontwerp met 'n kop- of stuurlas is die waterlyn waarop die lengte gemeet word, ewewydig met die ontwerpte waterlyn.

* Handtekenings weggelaat.

IN WITNESS WHEREOF the undersigned, being duly authorised by their respective Governments for that purpose, have signed the Convention.*

DONE AT TORREMOLINOS this second day of April One thousand Nine hundred and Seventy-seven.

ANNEX

REGULATIONS FOR THE CONSTRUCTION AND EQUIPMENT OF FISHING VESSELS

CHAPTER I

GENERAL PROVISIONS

Regulation 1

Application

(1) Unless expressly provided otherwise, the provisions of this Annex shall apply to new fishing vessels of 24 metres in length and over, including vessels also processing their catch.

(2) The provisions of this Annex shall not apply to vessels exclusively used—

(a) for sport or recreation;

(b) for processing fish or other living resources of the sea;

(c) for research and training; or

(d) as fish carriers.

Regulation 2

Definitions

(1) "New vessel" is a fishing vessel for which, on or after the date of entry into force of the Convention—

(a) the building or major conversion contract is placed; or

(b) the building or major conversion contract has been placed before the date of entry into force of the Convention, and which is delivered three years or more after the date of such entry into force; or

(c) in the absence of a building contract—

(i) the keel is laid; or

(ii) construction identifiable with a specific vessel begins; or

(iii) assembly has commenced comprising at least 50 tonnes or 1 per cent of the estimated mass of all structural material; whichever is the less.

(2) "Existing vessel" is a fishing vessel which is not a new vessel.

(3) "Approved" means approved by the Administration.

(4) "Crew" means the skipper and all persons employed or engaged in any capacity on board a vessel on the business of that vessel.

(5) "The length (L)" shall be taken as 96 per cent of the total length on a waterline at 85 per cent of the least depth measured from the keel line, or as the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater. In vessels designed with rake of keel the waterline on which this length is measured shall be parallel to the designed waterline.

* Signatures omitted.

(6) "Die voorste en agterste loodlyne" is die voorste en agterste ente van die lengte (L). Die voorste loodlyn moet saamval met die voorkant van die voorstewe op die waterlyn waarop die lengte gemeet word.

(7) "Die breedte (B)" is die maksimum breedte van die vaartuig midskeeps gemeet tot aan die spant van die raam in die geval van 'n vaartuig met 'n metaalromp en tot aan die buitenste oppervlak van die romp in die geval van 'n vaartuig met 'n romp van 'n ander materiaal.

(8) (a) "Die holte (D)" is die vertikale afstand midskeeps gemeet van die kiellyn tot by die bokant van die werkdekbalk aan die kant.

(b) By vaartuie met ronde dolboorde word die holte gemeet tot by die snypunt van die spante van die dek- en buitehuidbeplating, met die lyne wat strek asof die dolboorde hoekig is.

(c) Waar die werkdek trapvormig is en die verhewe dekgedeelte oor die punt strek waar die holte gemeet moet word, moet die holte gemeet word by 'n verwysingslyn wat van die laagste gedeelte van die dek ewewydig met die verhewe gedeelte langs strek.

(9) "Die boonste bedryfswaterlyn" is die waterlyn wat verband hou met die maksimum toelaatbare bedryfsdiepgang.

(10) "Midskeeps" is die midlengte van L.

(11) "Grootspant" is die dwarsdeursnee van die romp wat omlyn word deur die kruising van die gevormde oppervlak van die romp en 'n vertikale vlak loodreg op die waterlyn- en middellynvlak wat midskeeps deurloop.

(12) "Kiellyn" is die lyn parallel met die helling van die kiel wat midskeeps deur die volgende gaan:

(a) die bokant van die kiel of kruislyn van die binnekant van die huidbeplating en die kiel waar 'n staafkiel bokant daardie lyn van 'n vaartuig met 'n metaaldop uitsteek; of

(b) die onderste sponninglyn van die kiel van 'n vaartuig met 'n dop van hout of 'n saamgestelde vaartuig; of

(c) die kruising van 'n gladderonding verlenging van die buitekant van die rompkontoer aan die onderkant met die middellyn van 'n vaartuig met 'n romp van ander materiaal as hout en metaal.

(13) "Grondlyn" is die horisontale lyn wat die kiellyn midskeeps sny.

(14) "Werkdek" is gewoonlik die laagste volledige dek bokant die boonste bedryfswaterlyn van waar daar vis gevang word. By vaartuie met twee of meer volledige dekke kan die Administrasie 'n laer dek as 'n werkdek aanvaar mits daardie dek bokant die boonste bedryfswaterlyn geleë is.

(15) "Bobou" is die konstruksie met 'n dek of dekke op die werkdek wat van boord tot boord van die vaartuig strek of met syplate wat nie meer as 0,04B binneboords van die huidbeplating is nie.

(16) "Ingeslote bobou" is 'n bobou met—

(a) eindskotte van doeltreffende konstruksie;

(b) toegangsopenings, indien daar is, in skotte wat voorsien is van permanent aangehegte weerbestande deure met 'n sterkte ekwivalent aan die struktuur sonder openings, wat van albei kante oop- en toegemaak kan word; en

(c) ander openings in skeepsboorde of ente van die bobou wat voorsien is van doeltreffende weerbestande sluitingsmiddels.

(6) "The forward and after perpendiculars" shall be taken at the forward and after ends of the length (L). The forward perpendicular shall be coincident with the foreside of the stem on the waterline on which the length is measured.

(7) "The breadth (B)" is the maximum breadth of the vessel, measured amidships to the moulded line of the frame in a vessel with a metal shell and to the outer surface of the hull in a vessel with a shell of any other material.

(8) (a) "The depth (D)" is the vertical distance measured amidships from the keel line to the top of the working deck beam at side.

(b) In vessels having rounded gunwales, the depth shall be measured to the point of intersection of the moulded lines of the deck and side shell plating, the lines extending as though the gunwale were of angular design.

(c) Where the working deck is stepped and the raised part of the deck extends over the point at which the depth is to be determined, the depth shall be measured to a line of reference extending from the lower part of the deck along a line parallel with the raised part.

(9) "Deepest operating waterline" is the waterline related to the maximum permissible operating draught.

(10) "Amidships" is the mid-length of L.

(11) "Midship section" is that section of the hull defined by the intersection of the moulded surface of the hull with a vertical plane perpendicular to the waterline and centreline planes passing through amidships.

(12) "Keel line" is the line parallel to the slope of keel passing amidships through—

(a) the top of the keel or line of intersection of the inside of shell plating with the keel where a bar keel extends above that line of a vessel with a metal shell; or

(b) the rabbet lower line of the keel of a vessel with a shell of wood or a composite vessel; or

(c) the intersection of a fair extension of the outside of the shell contour at the bottom with the centreline of a vessel with a shell of material other than wood and metal.

(13) "Baseline" is the horizontal line intersecting at amidships the keel line.

(14) "Working deck" is generally the lowest complete deck above the deepest operating waterline from which fishing is undertaken. In vessels fitted with two or more complete decks, the Administration may accept a lower deck as a working deck provided that that deck is situated above the deepest operating waterline.

(15) "Superstructure" is the decked structure on the working deck extending from side to side of the vessel or with the side plating not being inboard of the shell plating more than 0,04 B.

(16) "Enclosed superstructure" is a superstructure with—

(a) enclosing bulkheads of efficient construction;

(b) access openings, if any, in those bulkheads fitted with permanently attached weathertight doors of a strength equivalent to the unpierced structure which can be operated from each side; and

(c) other openings in sides or ends of the superstructure fitted with efficient weathertight means of closing.

'n Brug of kampanje word nie as ingeslote beskou nie, tensy daar daarvoor voorsiening gemaak is dat die bemanning die masjien- en ander werkruimtes in daardie dele van die bobou kan bereik deur alternatiewe toegang wat te alle tye beskikbaar is wanneer die skotopenings gesluit is.

(17) "Boboudek" is die algehele of gedeeltelike dek wat die bokant vorm van 'n bobou, dekhuis of ander oprigting wat minstens 1,8 meter bokant die werkdek is. Waar hierdie hoogte minder as 1,8 meter is, word die bokant van sodanige dekhuise of ander oprigtings op dieselfde wyse as die werkdek behandel.

(18) "Hoogte van 'n bobou of ander oprigting" is die kleinste vertikale afstand, by die kant gemeet, tussen die bokant van die boboudekbalke of 'n oprigting en die bokant van die werkdekbalke.

(19) "Weerbestand" beteken dat water, in enige seetoestande, nie in die vaartuig sal inlek nie.

(20) "Waterdig" beteken die vermoë om die deurlaat van water deur die struktuur in enige rigting onder 'n watermassa waarvoor die omliggende struktuur ontwerp is, te verhoed.

(21) "Aanvaringskot" is 'n waterdigte skot tot by die werkdek in die voorste deel van die vaartuig wat aan die volgende vereistes voldoen:

(a) Die skot moet op 'n afstand van die voorste loodlyn geleë wees van—
  (i) minstens 0,05L en hoogstens 0,08L vir vaartuie met 'n lengte van 45 meter en meer;
  (ii) minstens 0,05L en hoogstens 0,05L plus 1,35 meter vir vaartuie met 'n lengte van minder as 45 meter, behalwe soos deur die Administrasie toegelaat;
  (iii) in geen geval minder as 2,0 meter nie.

(b) Waar enige deel van die onderwaterromp verby die voorste loodlyn steek, byvoorbeeld 'n bolboeg, word die afstand wat in subparagraaf (a) bepaal word, gemeet vanaf die halfpadmerk van die verlenging vorentoe van die voorste loodlyn of vanaf 'n punt 0,015L voor die voorste loodlyn, wat ook al die kleinste is.

(c) Die skot kan inspringings of nisse hê, mits hulle binne die perke is wat in subparagraaf (a) voorgeskryf is.

(22) "Hoofstuurinrigting" is die masjinerie, die stuurinrigtingkrageenhede, as daar is, en hulptoerusting en die inrigting waarmee draaikrag op die roerkoning uitgeoefen word (byvoorbeeld roerpen of kwadrant) wat nodig is om beweging van die roer teweeg te bring met die doel om die vaartuig in normale dienstoestande te stuur.

(23) "Hulpinrigting om die stuur te aktiveer" is die toerusting wat voorsien is om beweging van die stuur teweeg te bring met die doel om die vaartuig te stuur in die geval van onklaarraking van die hoofstuurinrigting.

(24) "Stuurinrigtingkrageenheid" beteken in die geval van—

(a) 'n elektriese stuurinrigting, 'n elektromotor en sy verwante elektriese toerusting;

(b) elektro-hidrouliese stuurinrigting, 'n elektromotor en sy verwante elektriese toerusting en gekoppelde pomp; en

(c) ander hidrouliese stuurinrigting, 'n dryfenjin en gekoppelde pomp.

(25) "Maksimum dienssnelheid vorentoe" is die hoogste snelheid wat die vaartuig volgens ontwerp in seediens by sy maksimum toelaatbare bedryfsdiepgang kan handhaaf.

(26) "Maksimum trusnelheid" is die snelheid wat die vaartuig volgens beraming kan bereik by die maksimum ontwerptrukrag by sy maksimum toelaatbare bedryfsdiepgang.

A bridge or poop shall not be regarded as enclosed unless access is provided for the crew to reach machinery and other working spaces inside those superstructures by alternative means which are available at all times when bulkhead openings are closed.

(17) "Superstructure deck" is that complete or partial deck forming the top of a superstructure, deckhouse or other erection situated at a height of not less than 1,8 metres above the working deck. Where this height is less than 1,8 metres, the top of such deckhouses or other erections shall be treated in the same way as the working deck.

(18) "Height of a superstructure or other erection" is the least vertical distance measured at side from the top of the deck beams of a superstructure or an erection to the top of the working deck beams.

(19) "Weathertight" means that in any sea conditions water will not penetrate into the vessel.

(20) "Watertight" means capable of preventing the passage of water through the structure in any direction under a head of water for which the surrounding stucture is designed.

(21) "Collision bulkhead" is a watertight bulkhead up to the working deck in the forepart of the vessel which meets the following conditions:

(a) The bulkhead shall be located at a distance from the forward perpendicular—
  (i) not less than 0,05L and not more than 0,08L for vessels of 45 metres in length and over;
  (ii) not less than 0,05L and not more than 0,05L plus 1,35 metres for vessels of less than 45 metres in length, except as may be allowed by the Administration;
  (iii) in no case, less than 2,0 metres.

(b) Where any part of the underwater body extends forward of the forward perpendicular, e.g. a bulbous bow, the distance stipulated in sub-paragraph (a) shall be measured from a point at mid-length of the extension forward of the forward perpendicular or from a point 0,015L forward of the forward perpendicular, whichever is less.

(c) The bulkhead may have steps or recesses provided they are within the limits prescribed in sub-paragraph (a).

(22) "Main steering gear" is the machinery, the steering gear power units, if any, and ancillary equipment and the means of applying torque to the rudder stock (e.g. tiller or quadrant) necessary for effecting movement of the rudder for the purpose of steering the vessel under normal service conditions.

(23) "Auxiliary means of activating the rudder" is the equipment which is provided for effecting movement of the rudder for the purpose of steering the vessel in the event of failure of the main steering gear.

(24) "Steering gear power unit" means in the case of—

(a) electric steering gear, an electric motor and its associated electrical equipment;

(b) electro-hydraulic steering gear, an electric motor and its associated electrical equipment and connected pump; and

(c) other hydraulic steering gear, a driving engine and connected pump.

(25) "Maximum ahead service speed" is the greatest speed which the vessel is designed to maintain in service at sea at its maximum permissible operating draught.

(26) "Maximum astern speed" is the speed which it is estimated the vessel can attain at the designed maximum astern power at its maximum permissible operating draught.

(27) "Brandolie-eenheid" is die toerusting wat gebruik word vir die voorbereiding van brandolie vir lewering aan 'n olie-gestookte ketel, of toerusting wat gebruik word vir die voorbereiding van olie vir lewering aan 'n binnebrandenjin, en sluit enige oliedrukpompe, filters en verwarmers in wat olie hanteer by 'n druk meer as 0,18 newton per vierkante millimeter.

(28) "Normale bedryfs- en woontoestande" beteken toestande waarin die vaartuig in sy geheel, sy masjinerie, dienste, hoof- en hulpaandrywingsinrigtings, stuurinrigting en verwante toerusting, hulpmiddele vir veilige navigasie en om die risiko's van brand en oorstroming te beperk, interne en eksterne kommunikasie- en seinmiddele, reddingsmiddele en wenasse vir reddingsbote in behoorlike werkende toestand is en die minimum toestande van gerieflike bewoonbaarheid bevredigend is.

(29) "Kragaftoestand" is die toestand waarin die hoofaandrywingsinstallasie, ketels en hulptoerusting weens die afwesigheid van krag nie in werking is nie.

(30) "Hoofskakelbord" is 'n skakelbord wat regstreeks deur die hoofbron van elektriese krag voorsien word en bedoel is om elektriese energie te versprei.

(31) "Periodiek onbediende masjinerieruimtes" beteken die ruimtes wat die hoofaandrywings- en verwante masjinerie en alle bronne van hoof elektriese voorsiening bevat wat nie te alle tye in alle dienstoestande, met inbegrip van maneuvrering, beman is nie.

(32) "Onbrandbare materiaal" beteken 'n materiaal wat nòg brand, nòg vlambare dampe in genoegsame hoeveelhede vir selfontbranding vrystel wanneer dit tot ongeveer 750 °C verhit word, wat tot tevredenheid van die Administrasie deur 'n vasgestelde proefprosedure bepaal word. Enige ander materiaal is 'n brandbare materiaal.*

(33) "Standaardvuurproef" is 'n proef waarin monsters van die betrokke skotte of dekke in 'n proefoond blootgestel word aan temperature wat by benadering ooreenstem met die standaard tyd-temperatuurkromme. Die monster moet 'n blootgestelde oppervlak van minstens 4,65 vierkante meter hê en 'n hoogte (of lengte dek) van 2,44 meter wat so na moontlik met die beoogde konstruksie ooreenkom en wat, waar toepaslik, minstens een voeg insluit. Die standaard tyd-temperatuurkromme, word aangedui deur 'n egalige kromme wat deur die volgende punte getrek word:

Aan die einde van die eerste 5 minute	538 grade Celsius.
Aan die einde van die eerste 10 minute	704 grade Celsius.
Aan die einde van die eerste 30 minute	843 grade Celsius.
Aan die einde van die eerste 60 minute	927 grade Celsius.

(34) "Klas 'A'-verdelings" is die verdelings gevorm deur skotte en dekke wat aan die volgende voldoen:

(a) Hulle moet van staal of ander ekwivalente materiaal gebou wees;

(b) hulle moet op geskikte wyse verstewig wees;

(c) hulle moet sodanig gebou wees dat hulle in staat is om die deurlaat van rook en vlamme tot aan die einde van die eerste uur van die standaardvuurproef te verhoed; en

* Kyk *Recommendation on Test Method for Qualifying Marine Construction Materials as non-combustible*, brandbaar, soos aangeneem deur die Organisasie by Resolusie A.270(VIII).

(27) "Fuel oil unit" is the equipment used for the preparation of fuel oil for delivery to an oil-fired boiler, or equipment used for the preparation of oil for delivery to an internal combustion engine, and includes any oil pressure pumps, filters and heaters dealing with oil at a pressure greater than 0.18 newtons per square millimetre.

(28) "Normal operational and habitable conditions" means conditions under which the vessel as a whole, its machinery, services, means of main and auxiliary propulsion, steering gear and associated equipment, aids to safe navigation and to limit the risks of fire and flooding, internal and externalmeans of communicating and signalling, means of escape and winches for rescue boats, are in proper working order and the minimum comfortable conditions of habitability are satisfactory.

(29) "Dead ship condition" is the condition under which the main propulsion plant, boilers and auxiliaries are not in operation due to the absence of power.

(30) "Main switchboard" is a switchboard directly supplied by the main source of electrical power and intended to distribute electrical energy.

(31) "Periodically unattended machinery spaces" means those spaces containing main propulsion and associated machinery and all sources of main electrical supply which are not at all times manned under all operating conditions, including manoeuvring.

(32) "Non-combustible material" means a material which neither burns nor gives off flammable vapours in sufficient quantity for self-ignition when beated to approximately 750 degrees celsius, this being determined to the satisfaction of the Administration by an established test procedure. Any other material is a combustible material.*

(33) "Standard fire test" is one in which specimens of the relevant bulkheads or decks are exposed in a test furnace to temperatures corresponding approximately to the standard time-temperature curve. The specimen shall have an exposed surface of not less than 4.65 square metres and a height (or length of deck) of 2.44 metres resembling as closely as possible the intended construction and including where appropriate at least one joint. The standard time-temperature curve is defined by a smooth curve drawn through the following points:

At the end of the first 5 minutes	538 degrees celsius.
At the end of the first 10 minutes	704 degrees celsius.
At the end of the first 30 minutes	843 degrees celsius.
At the end of the first 60 minutes	927 degrees celsius.

(34) " 'A' Class divisions" are those divisions formed by bulkheads and decks which comply with the following:

(a) They shall be constructed of steel or other equivalent material;

(b) they shall be suitably stiffened;

(c) they shall be so constructed as to be capable of preventing the passage of smoke and flame to the end of the one-hour standard fire test; and

* See Recommendation on Test Method for Qualifying Marine Construction Materials as non-combustible, adopted by the Organization by Resolution A.270 (VIII).

(d) hulle moet met goedgekeurde onbrandbare materiaal geïsoleer wees sodat die gemiddelde hittegraad van die nie-blootgestelde kant nie meer as 139 °C bo die oorspronklike temperatuur styg nie, en die temperatuur op geen punt, met inbegrip van enige voeg, meer as 180 °C bo die oorspronklike temperatuur styg binne onderstaande tye nie:

Klas "A-60"—60 minute.
Klas "A-30"—30 minute.
Klas "A-15"—15 minute.
Klas "A-0"—0 minute.

Die Administrasie kan die toetsing van 'n prototipe skot of dek vereis om te verseker dat dit aan bogenoemde vereistes ten opsigte van integriteit en temperatuurstygings voldoen.*

(35) "Klas 'B'-verdelings" is die verdelings gevorm deur skotte, dekke, plafonne of voerings wat aan die volgende voldoen:

(a) Hulle moet sodanig gekonstrueer wees dat hulle in staat is om die deurlaat van vlamme tot aan die einde van die eerste halfuur van die standaardvuurproef te verhoed;

(b) hulle moet sodanige isolasiewaarde hê dat die gemiddelde hittegraad van die nie-blootgestelde kant nie meer as 139 °C bo die oorspronklike temperatuur styg nie, en die temperatuur op geen punt, met inbegrip van enige voeg, meer as 225 °C bo die oorspronklike temperatuur styg binne onderstaande tye nie:

Klas "B-15"—15 minute.
Klas "B-0"—0 minute.

(c) hulle moet gekonstrueer wees van goedgekeurde onbrandbare materiale en alle materiale wat vir die konstruksie en oprigting van Klas "B"-verdelings gebruik word, moet onbrandbaar wees, behalwe dat brandbare fineer toegelaat kan word mits dit aan die betrokke vereistes van Hoofstuk V voldoen.

Die Administrasie kan die toetsing van 'n prototipe verdeling vereis om te verseker dat dit aan bogenoemde vereistes ten opsigte van integriteit en temperatuurstygings voldoen.*

(36) "Klas 'C'-verdelings" is die verdelings wat gekonstrueer is van goedgekeurde onbrandbare materiale. Hulle hoef aan geen vereistes te voldoen ten opsigte van die deurlaat van rook of vlamme of die beperking van temperatuurstyging nie.

(37) "Klas 'F'-verdelings" is die verdelings wat gevorm is deur skotte, dekke, plafonne of voerings wat aan die volgende voldoen:

(a) hulle moet sodanig gekonstrueer wees dat hulle in staat is om die deurlaat van vlamme tot aan die einde van die eerste halfuur van die standaardvuurproef te verhoed; en

(b) hulle moet sodanige isolasiewaarde hê dat die gemiddelde hittegraad van die nie-blootgestelde kant nie meer as 139 °C bo die oorspronklike temperatuur styg nie, en die temperatuur op geen punt, met inbegrip van enige voeg, meer as 225 °C bo die oorspronklike temperatuur styg tot aan die einde van die eerste halfuur van die standaardvuurproef nie.

* Kyk *Recommendation for Fire Test Procedures for "A" and "B" Class Divisions*, soos deur die Organisasie aangeneem by Resolusies A.163(ES.IV) en A.215(VII).

(d) they shall be insulated with approved non-combustible materials such that the average temperature of the unexposed side will not rise more than 139 degrees celsius above the original temperature, nor will the temperature, at any one point, including any joint, rise more than 180 degrees celsius above the original temperature, within the time listed below:

Class "A-60"—60 minutes.
Class "A-30"—30 minutes.
Class "A-15"—15 minutes.
Class "A-0"—0 minutes.

The Administration may require a test of a prototype bulkhead or deck to ensure that it meets the above requirements for integrity and temperature rise.*

(35) " 'B' Class divisions" are those divisions formed by bulkheads, decks, ceilings or linings which comply with the following:

(a) They shall be so constructed as to be capable of preventing the passage of flame to the end of the first one-half hour of the standard fire test;

(b) they shall have an insulation value such that the average temperature of the unexposed side will not rise more than 139 degrees celsius above the original temperature, nor will the temperature at any one point, including any joint, rise more than 225 degrees celsius above the original temperature, within the time listed below:

Class "B-15"—15 minutes.
Class "B-0"—0 minutes.

(c) they shall be constructed of approved non-combustible materials and all materials entering into the construction and erection of "B" Class divisions shall be non-combustible with the exception that combustible veneers may be permitted provided they meet the relevant requirements of Chapter V.

The Administration may require a test of a prototype division to ensure that it meets the above requirements for integrity and temperature rise.*

(36) " 'C' Class divisions" are those divisions constructed of approved non-combustible materials. They need meet no requirements relative to the passage of smoke and flame nor the limiting of temperature rise.

(37) " 'F' Class divisions" are those divisions formed by bulkheads, decks, ceilings or linings which comply with the following:

(a) They shall be so constructed as to be capable of preventing the passage of flame to the end of the first one-half hour of the standard fire test; and

(b) they shall have an insulation value such that the average temperature of the unexposed side will not rise more than 139 degrees celsius above the original temperature, nor will the temperature at any one point, including any joint, rise more than 225 degrees celsius above the original temperature, up to the end of the first one-half hour of the standard fire test.

* See Recommendation for Fire Test Procedures for "A" and "B" Class divisions, adopted by the Organization by Resolution A.163(ES.IV) and A.215(VII).

Die Administrasie kan die toetsing van 'n prototipe verdeling vereis om te verseker dat dit aan bogenoemde vereistes ten opsigte van integriteit en temperatuurstygings voldoen.*

(38) "Deurlopende Klas 'B'-plafonne of -voerings" is die Klas "B"-plafonne of -voerings wat slegs by 'n Klas "A"- of Klas "B"-verdeling ophou.

(39) "Staal of ander ekwivalente materiaal" beteken staal of enige materiaal wat, op sigself of weens isolering wat voorsien is, strukturele en integriteitseienskappe ekwivalent aan staal het aan die einde van die toepaslike vuurblootstelling van die standaardvuurproef (byvoorbeeld aluminiumallooi met paslike isolering).

(40) "Lae vlamverspreiding" beteken dat die oppervlak aldus beskryf, die verspreiding van vlamme toereikend sal beperk, en dit moet tot tevredenheid van die Administrasie deur middel van 'n vaste toetsprosedure bepaal word.

(41) "Akkommodasieruimtes" is die ruimtes wat gebruik word as openbare ruimtes, gange, toilette, kajuite, kantore, hospitale, teaters, speletjie- en stokperdjiekamers, spense wat nie kooktoestelle bevat nie en soortgelyke ruimtes.

(42) "Openbare ruimtes" is die dele van die akkommodasieruimtes wat gebruik word as sale, eetkamers, sitkamers en soortgelyke blywend omslote ruimtes.

(43) "Diensruimtes" is die ruimtes wat gebruik word as skeepskombuise, spense wat kooktoestelle bevat, sluitkaste en proviandkamers, werkwinkels behalwe dié wat deel van die masjinerieruimtes uitmaak, en soortgelyke ruimtes en kokers na sulke ruimtes.

(44) "Beheerposte" is die ruimtes waarin die skip se radio- of hoofnavigasietoerusting of die noodkragbron geleë is, of waar die brandverkliktoerusting of brandbeheerapparaat gesentraliseer is.

(45) "Masjinerieruimtes van Kategorie A" is die ruimtes wat binnebrandtipe masjinerie bevat wat gebruik word òf—

(a) vir hoofaandrywing; of

(b) vir ander doeleindes waar sodanige masjinerie altesaam 'n totale kraglewering van minstens 375 kilowatt het,

òf wat enige oliegestookte ketel of brandolie-eenheid bevat; en kokers na sulke ruimtes.

(46) "Masjinerieruimtes" is die masjinerieruimtes van Kategorie A en alle ander ruimtes wat aandrywingsmasjinerie, stoomketels, brandolie-eenhede, stoom- en binnebrandenjins, kragopwekkers, stuurinrigtings, groot elektriese masjinerie, olievulstasies, verkoelings-, stabiliserings-, ventilerings- en lugversorgingsmasjinerie bevat en soortgelyke ruimtes; en kokers na sulke ruimtes.

(47) "Oorlewingsvaartuie" beteken die vaartuie wat voorsien is vir die akkommodering van persone aan boord ingeval die vaartuig verlaat moet word en sluit reddingsbote, reddingsvlotte en ander vaartuie in wat as geskik vir die beskerming en bewaring van persone in sodanige omstandighede goedgekeur is.

(48) "Redboot" is 'n maklik aangedrewe, hoogs maneuvreerbare boot wat maklik en gou te water gelaat kan word deur 'n klein aantal bemanningslede en wat toereikend is vir die red van 'n man wat oorboord is.

(49) "Opgeblaasde reddingsboot" is 'n permanent opgeblaasde oorlewingsvaartuig wat onderverdeel is en 'n sterk, skuurbestande konstruksie het.

* Kyk *Recommendation for Fire Test Procedures for "A" and "B" Class division*, soos deur die Organisasie aangeneem by Resolusies A.163 (ES.IV) en A.215(VII).

The Administration may require a test of a prototype division to ensure that it meets the above requirements for integrity and temperature rise.*

(38) "Continuous 'B' Class ceilings or linings" are those "B" Class ceilings or linings which terminate only at an "A" or "B" Class division.

(39) "Steel or other equivalent material" means steel or any material which by itself or due to insulation provided, has structural and integrity properties equivalent to steel at the end of the applicable fire exposure to the standard fire test (e.g. aluminium alloy with appropriate insulation).

(40) "Low flame spread" means that surface thus described will adequately restrict the spread of flame, this being determined to the satisfaction of the Administration by an established test procedure.

(41) "Accommodation spaces" are those spaces used for public spaces, corridors, lavatories, cabins, offices, hospitals, cinemas, games and hobbies rooms, pantries containing no cooking appliances and similar spaces.

(42) "Public spaces" are those portions of the accommodation spaces which are used for halls, dining rooms, lounges, and similar permanently enclosed spaces.

(43) "Service spaces" are those spaces used for galleys, pantries containing cooking appliances, lockers and storerooms, workshops other than those forming part of the machinery spaces, and similar spaces and trunks to such spaces.

(44) "Control stations" are those spaces in which the ship's radio or main navigation equipment or the emergency source of power is located, or where the fire recording or fire control equipment is centralized.

(45) "Machinery spaces of Category A" are those spaces which contain internal combustion type machinery used either—

(a) for main propulsion; or

(b) for other purposes where such machinery has in the aggregate a total power output of not less than 375 kilowatts,

or which contain any oil-fired boiler or fuel oil unit; and trunks to such spaces.

(46) "Machinery spaces" are those machinery spaces of Category A and all other spaces containing propulsion machinery, boilers, fuel oil units, steam and internal combustion engines, generators, steering gear, major electrical machinery, oil filling stations, refrigerating, stabilizing, ventilating and air condition machinery and similar spaces; and trunks to such spaces.

(47) "Survival craft" means those craft provided for accommodating the persons on board in the event of abandonment of the vessel and includes lifeboats, liferafts and any other craft approved as suitable for the protection and preservation of persons in such circumstances.

(48) "Rescue boat" is an easily propelled highly manoeuvrable boat capable of being easily and quickly launched by a small number of crew and adequate for rescuing a man overboard.

(49) "Inflated lifeboat" is a permanently inflated survival craft subdivided and of strong, abrasion resistant construction.

* See Recommendation for Fire Test Procedures for "A" and "B" Class divisions, adopted by the Organization by Resolution A. 163 (ES.IV) and A.215(VII).

(50) "Tewaterlatingtoestel" is 'n toestel wat in staat is om 'n reddingsvlot, met die volle getal persone wat hy mag dra en met sy uitrusting aan boord, van die inskepingsplek te water te laat.

(51) "Vrydryf oorlewingsvaartuie" is vaartuie waarvan die installasies en stuwing so ontwerp is dat dit outomaties van 'n sinkende vaartuig vrykom en na die oppervlak dryf.

Regulasie 3

Vrystellings

(1) Die Administrasie kan enige vaartuig wat nuwe soorte eienskappe bevat, vrystel van enige van die bepalings van Hoofstukke II, III, IV, V, VI en VII, waarvan die toepassing navorsing ten opsigte van die ontwikkeling van sodanige eienskappe en hulle opneming in vaartuie ernstig kan strem. Enige sodanige vaartuig moet egter voldoen aan veiligheidsvereistes wat na die mening van die Administrasie toereikend is vir die diens waarvoor so 'n vaartuig bestem is, en wat sodanig is dat dit die algemene veiligheid van die vaartuig verseker.

(2) Vrystellings van die vereistes van Hoofstuk IX word in Regulasies 132 en 139 (2) (b) behandel en vrystellings van Hoofstuk X word in Regulasie 147 behandel.

(3) Die Administrasie kan enige vaartuig wat uitsluitlik vir die vang van vis naby die kus van sy land gebruik word, vrystel van enige van die vereistes van hierdie Aanhangsel indien hy van mening is dat die toepassing onredelik en ondoenlik is in die lig van die afstand van die vaartuig se werkgebied van sy hawe in sy eie land, die tipe vaartuig, die weerstoestande en die afwesigheid van algemene navigasiegevare, met dien verstande dat dit voldoen aan die veiligheidsvereistes wat na die mening van daardie Administrasie toereikend is vir die diens waarvoor so 'n skip bestem is en sodanig is dat dit die algemene veiligheid van die vaartuig verseker.

(4) Die Administrasie wat enige vrystelling kragtens hierdie Regulasie toelaat, moet besonderhede daarvan aan die Organisasie oordra indie mate waarin dit nodig is om te bevestig dat die veiligheidspeil toereikend gehandhaaf word en die Organisasie moet sodanige besonderhede aan die Partye vir hulle inligting stuur.

Regulasie 4

Ekwivalente

(1) Die Administrasie mag toelaat dat enige toebehore, materiaal, toestel of apparaat in 'n vaartuig aangebring word, of dat enige besondere voorsiening gemaak word as 'n alternatief vir dit wat by hierdie Aanhangsel vereis word, indien sodanige toebehore, materiaal, toestel of apparaat ten minste ewe doeltreffend is as dit wat by hierdie Aanhangsel vereis word.

(2) Die Administrasie wat die aanbring van toebehore, materiaal, 'n toestel of apparaat, of die maak van enige besondere voorsiening toelaat as 'n alternatief vir dit wat by hierdie Aanhangsel vereis word, moet besonderhede daarvan aan die Organisasie verstrek vir mededeling aan die Partye vir hulle inligting en toepaslike optrede, as daar is.

Regulasie 5

Reparasies, veranderings en wysigings

(1) 'n Vaartuig wat reparasies, veranderings en wysigings ondergaan en dienooreenkomstig toegerus word, moet nog steeds voldoen aan ten minste die vereistes wat tevore op die vaartuig van toepassing was.

(2) Reparasies, veranderings en wysigings van groot omvang, sowel as die toerusting wat daarmee in verband staan, moet aan die vereistes vir 'n nuwe vaartuig voldoen slegs wat sodanige reparasies, veranderings en wysigings betref en vir sover die Administrasie dit redelik en doenlik ag.

(50) "Launching appliance" is a device capable of launching, from the embarkation position, a craft fully loaded with the number of persons it is permitted to carry and with its equipment.

(51) "Float-free survival craft" are craft whose installations and stowage are intended to permit them to clear a sinking vessel and float to the surface automatically.

Regulation 3

Exemptions

(1) The Administration may exempt any vessel which embodies features of a novel kind from any of the requirements of Chapters II, III, IV, V, VI and VII, the application of which might seriously impede research into the development of such features and their incorporation in vessels. Any such vessel shall, however, comply with safety requirements which, in the opinion of that Administration, are adequate for the service for which it is intended and are such as to ensure the overall safety of the vessel.

(2) Exemptions from the requirements of Chapter IX are dealt with in Regulations 132 and 139 (2) (b) and exemptions from Chapter X are dealt with in regulation 147.

(3) The Administration may exempt any vessel engaged solely in fishing near the coast of its country from any of the requirements of this Annex if it considers that the application is unreasonable and impracticable in view of the distance of the vessel's operating area from its base port in its own country, the type of vessel, weather conditions and the absence of general navigational hazards, provided that it complies with safety requirements which, in the opinion of that Administration, are adequate for the service for which it is intended and are such as to ensure the overall safety of the vessel.

(4) The Administration which allows any exemption under this Regulation shall communicate to the Organisation particulars of the same to the extent necessary to confirm that the level of safety is adequately maintained and the Organisation shall circulate such particulars to the Parties for their information.

Regulation 4

Equivalents

(1) The Administration may allow any fitting, material, appliance or apparatus to be fitted in a vessel, or any particular provision to be made as an alternative to that required by this Annex if such fitting, material, applicance or apparatus is at least as effective as that required by this Annex.

(2) The Administration which allows a fitting, material, appliance or apparatus, or any particular provision to be made as an alternative to that required by this Annex shall communicate to the Organisation for circulation to the Parties particulars thereof for their information and appropriate action, if any.

Regulation 5

Repairs, alterations and modifications

(1) A vessel which undergoes repairs, alterations and modifications and outfitting related thereto shall continue to comply with at least the requirements previously applicable to the vessel.

(2) Repairs, alterations and modifications of a major character and outfitting related thereto shall meet the requirements for a new vessel only to the extent of such repairs, alterations and modifications and in so far as the Administration deems reasonable and practicable.

Regulasie 6

Ondersoeke

(1) Elke vaartuig moet onderwerp word aan ondervermelde ondersoeke:

(a) 'n Aanvanklike ondersoek voordat die vaartuig in diens gestel word of voordat die sertifikaat wat kragtens Regulasie 7 vereis word, vir die eerste keer uitgereik word, wat 'n volledige ondersoek moet insluit van sy bou, stabiliteit, masjinerie, inrigtings en materiaal, met inbegrip van die buitekant van die vaartuig se romp en die binne- en buitekant van die ketels en toerusting vir sover die vaartuig deur hierdie Aanhangsel gedek word. Hierdie ondersoek moet van so 'n aard wees dat daar verseker word dat die inrigtings, materiaal en afmetings van die bou, ketels en ander drukhouers en hul toebehore, hoof- en hulpmasjinerie, elektriese installasies, radio-installasies, radiotelegraafinstallasies in motorreddingsbote, draagbare radio-apparaat vir oorlewingsvaartuie, nood-posisieaanduidingradiobakens (EPIRBs), reddingstoestelle, brandopsporings- en -blusstelsels, radar, eggopeilingstoestelle, girokompasse en ander toerusting ten volle voldoen aan die vereistes van hierdie Aanhangsel. Die ondersoek moet ook sodanig wees dat daar verseker word dat die vakwerk ten opsigte van alle dele van die vaartuig en sy toerusting in alle opsigte bevredigend is, en dat die vaartuig toegerus is met die ligte en middels vir die gee van geluidseine en noodseine soos vereis by hierdie Aanhangsel en die Internasionale Regulasies vir die Voorkoming van Botsings ter See. Waar loodslere aan boord is, moet dit ook ondersoek word om te verseker dat hulle in 'n veilige werkende toestand is en voldoen aan die betrokke vereistes van die Internasionale Konvensie vir die Beveiliging van die Menselewens op See.

(b) Periodieke ondersoeke met tussenpose soos hieronder vermeld:

(i) Vier jaar in die geval van die bou en masjinerie van die vaartuig bedoel in Hoofstukke II, III, IV, V en VI. Die tydperk kan egter vir een jaar verleng word op voorwaarde dat die vaartuig binne en buite ondersoek word vir sover dit redelik en doenlik is.

(ii) Twee jaar in die geval van die toerusting van die vaartuig bedoel in Hoofstukke II, III, IV, V, VI, VII en X.

(iii) Een jaar in die geval van die radio-installasies en radiorigtingsoekers van die vaartuig bedoel in Hoofstukke IX en X.

Die ondersoek moet sodanig wees dat dit verseker dat die items vermeld in subparagraaf (a), in die besonder die veiligheidstoerusting, ten volle voldoen aan die toepaslike vereistes van hierdie Aanhangsel, dat die gemelde toerusting in 'n goeie werkende toestand is en dat die stabiliteitsinligting geredelik aan boord beskikbaar is. Waar die duur van die sertifikaat wat kragtens Regulasie 7 uitgereik is, egter verleng is soos in Regulasie 11 (2) of (4) gespesifiseer, kan die tussenpose van die periodieke ondersoek dienooreenkomstig verleng word.

(c) Tussenondersoeke in die geval van die bou of masjinerie en toerusting van die vaartuig met tussenpose gespesifiseer deur die Administrasie. Die ondersoek moet ook sodanig wees dat dit verseker dat die veranderings wat die veiligheid van die vaartuig of die bemanning sal benadeel, nie aangebring is nie. Sodanige tussenondersoeke en hul tussenpose moet geëndosseer word op die Internasionale Vissersvaartuigveiligheidsertifikaat uitgereik kragtens Regulasie 7.

Regulation 6

Surveys

(1) Every vessel shall be subjected to the surveys specified below:

(a) An initial survey before the vessel is put into service or before the certificate required under Regulation 7 is issued for the first time, which shall include a complete survey of its structure, stability, machinery, arrangements and material, including the outside of the vessel's hull and the inside and outside of the boilers and equipment in so far as the vessel is covered by this Annex. This survey shall be such as to ensure that the arrangements, material, and scantlings of the structure, boilers, and other pressure vessels and their appurtenances, main and auxiliary machinery, electrical installations, radio installations, radio-telegraph installations in motor lifeboats, portable radio apparatus for survival craft, emergency position-indicating radio beacons (EPIRBs), life-saving appliances, fire detecting and extinguishing systems, radar, echosounding devices, gyro-compasses and other equipment fully comply with the requirements of this Annex. The survey shall also be such as to ensure that the workmanship of all parts of the vessel and its equipment is in all respects satisfactory and that the vessel is provided with the lights, means of making sound signals and distress signals, required by this Annex and the International Regulations for Preventing Collisions at Sea in force. Where pilot ladders are carried these shall also be surveyed to ensure that they are in a safe working condition and comply with the relevant requirements of the International Convention for the Safety of Life at Sea in force.

(b) Periodical surveys at intervals specified below:

(i) Four years in the case of the structure and machinery of the vessel referred to in Chapters II, III, IV, V and VI. However, the period may be extended for one year subject to the vessel being surveyed internally or externally as far as it is reasonable and practicable.

(ii) Two years in the case of the equipment of the vessel referred to in Chapters II, III, IV, V, VI, VII and X.

(iii) One year in the case of the radio installations and radio direction-finder of the vessel referred to in Chapters IX and X.

The survey shall be such as to ensure that the items referred to in subparagraph (a), in particular the safety equipment, fully comply with the applicable requirements of this Annex, that the said equipment is in good working order and that the stability information is readily available on board. However, where the duration of the certificate issued under Regulation 7 is extended as specified in Regulation 11 (2) or (4), the interval of the periodical survey may be extended correspondingly.

(c) Intermediate surveys in the case of the structure or machinery and equipment of the vessel at intervals specified by the Administration. The survey shall also be such as to ensure that alterations which would adversely affect the safety of the vessel or the crew have not been made. Such intermediate surveys and their intervals shall be endorsed on the International Fishing Vessel Safety Certificate issued under Regulation 7.

(2) Ondersoeke van die vaartuig met die oog op die toepassing van die vereistes van hierdie Aanhangsel moet deur beamptes van die Administrasie gedoen word. Die Administrasie kan egter die ondersoeke òf aan ondersoekers aangewys vir dié doel, òf aan organisasies wat deur hom erken word, toevertrou. In elke geval moet die betrokke Administrasie oortuig wees van die volledigheid en doeltreffendheid van die ondersoeke.

(3) Nadat enige ondersoek van die vaartuig kragtens hierdie Regulasie voltooi is, mag geen beduidende verandering aan die bou, toerusting, toebehore, inrigtings of materiaal gedek deur die ondersoek, sonder die goedkeuring van die Administrasie aangebring word nie, behalwe die regstreekse vervanging van sodanige toerusting of toebehore.

Regulasie 7

Uitreiking van sertifikate

(1) (a) 'n Sertifikaat genoem 'n Internasionale Vissersvaartuigveiligheidsertifikaat moet uitgereik word na die ondersoek van 'n vaartuig wat voldoen aan die toepaslike vereistes van die Aanhangsel.

(b) Wanneer 'n vrystelling kragtens en ooreenkomstig die bepalings van hierdie Aanhangsel aan 'n vaartuig verleen word, moet 'n sertifikaat genoem 'n Internasionale Vissersvaartuigvrystellingsertifikaat bo en behalwe die sertifikaat voorgeskryf in subparagraaf (a), uitgereik word.

(2) Die sertifikate vermeld in paragraaf (1) moet òf deur die Administrasie òf deur enige persoon of organisasie wat behoorlik deur die Administrasie daartoe gemagtig is, uitgereik word. In elke geval aanvaar die Administrasie volle verantwoordelikheid vir die uitreiking van die sertifikate.

Regulasie 8

Uitreiking van 'n sertifikaat deur 'n ander Party

(1) 'n Party mag, op versoek van 'n ander Party, 'n vaartuig laat ondersoek en, indien hy oortuig is dat daar aan die bepalings van hierdie Aanhangsel voldoen word, sertifikate uitreik of magtiging tot die uitreiking daarvan verleen ooreenkomstig die bepalings van hierdie Aanhangsel.

(2) 'n Kopie van die sertifikaat en 'n kopie van die ondersoekverslag moet so gou moontlik aan die versoekende Administrasie gestuur word.

(3) 'n Aldus uitgereikte sertifikaat moet 'n verklaring bevat waarin vermeld word dat dit uitgereik is op versoek van die ander Administrasie en dit het dieselfde krag en ontvang dieselfde erkenning as die sertifikate uitgereik kragtens Regulasie 7.

Regulasie 9

Vorm van sertifikate

Die sertifikate moet in die amptelike taal of tale van die land van uitreiking opgestel word in 'n vorm wat ooreenkom met die voorbeeld wat in Byvoegsel 1 gegee word. Indien die taal nie Engels of Frans is nie, moet die teks 'n vertaling in een van hierdie tale inslui.

Regulasie 10

Die aanplak van sertifikate

Alle sertifikate of gewaarmerkte afskrifte daarvan uitgereik ingevolge hierdie Aanhangsel, moet op 'n prominente en toeganklike plek op die skip aangeplak word.

(2) Surveys of the vessel with the view to the enforcement of the requirements of this Annex shall be carried out by officers of the Administration. The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organisations recognized by it. In every case the Administration concerned shall be satisfied with regard to the completeness and efficiency of the surveys.

(3) After any survey of the vessel under this Regulation has been completed, no significant change shall be made to the structure, equipment, fittings, arrangements or material covered by the survey without the sanction of the Administration, except the direct replacement of such equipment or fittings.

Regulation 7

Issue of certificates

(1) (a) A certificate entitled an International Fishing Vessel Safety Certificate shall be issued after survey of a vessel which complies with the applicable requirements of this Annex.

(b) When an exemption is granted to a vessel under, and in accordance with, the provisions of this Annex, a certificate entitled an International Fishing Vessel Exemption Certificate shall be issued in addition to the certificate prescribed in subparagraph (a).

(2) The Certificates referred to in paragraph (1) shall be issued either by the Administration or by any person or organisation duly authorized by the Administration. In every case, the Administratin shall assume full responsibility for the issuance of the certificate.

Regulation 8

Issue of a certificate by another party

(1) A Party may, at the request of another Party, cause a vessel to be surveyed and, if satisfied that the requirements of this Annex are complied with, shall issue or authorize the issue of certificates to the vessel in accordance with the provisions of this Annex.

(2) A copy of the Certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.

(3) A certificate so issued shall contain a statement to the effect that it has been issued at the request of the other Administration and it shall have the same force and receive the same recognition as the certificates issued under Regulation 7.

Regulation 9

Form of certificates

The certificates shall be drawn up in the official language or languages of the issuing country in the form corresponding to the model given in Appendix 1. If the language used is neither English nor French, the text shall include a translation into one of these languages.

Regulation 10

Posting up of certificates

All certificates or certified copies thereof issued under this Annex shall be posted up in a prominent and accessible place in the vessel.

Regulasie 11

Geldigheidsduur van sertifikate

(1) Internasionale Vissersvaartuigveiligheidsertifikaat word uitgereik vir 'n tydperk van hoogstens vier jaar en mag nie vir meer as een jaar verleng word nie, onderworpe aan die periodieke en tussenondersoeke vereis in Regulasie 6 (1) (b) en (c), behalwe soos bepaal in paragrawe (2), (3) en (4) van hierdie Regulasie. 'n Internasionale Vissersvaartuigvrystellingsertifikaat is nie langer geldig as die geldigheidsduur van die Internasionale Vissersvaartuigveiligheidsertifikaat nie.

(2) Indien 'n vaartuig op die tydstip waarop sy sertifikaat verstryk of nie langer geldig is nie, hom nie in 'n hawe bevind van die Party onder wie se vlag die vaartuig geregtig is om te vaar nie, kan daardie Party die geldigheid van die sertifikaat verleng, maar so 'n verlenging word slegs toegestaan om die vaartuig in staat te stel om sy reis na 'n hawe van daardie Party of na die hawe waarin dit ondersoek moet word, te voltooi en dan slegs in gevalle waar dit gepas en redelik lyk om dit te doen.

(3) Geen sertifikaat word vir langer as vyf maande aldus verleng nie, en 'n vaartuig ten opsigte waarvan so 'n verlenging toegestaan is, is nie by sy aankoms in 'n hawe van die Party onder wie se vlag die vaartuig geregtig is om te vaar of by die hawe waarin hy ondersoek moet word, op grond van sodanige verlenging geregtig daarop om sodanige hawe te verlaat sonder dat hy 'n nuwe sertifikaat verkry het nie.

(4) 'n Sertifikaat wat nie kragtens die bepalings van paragraaf (2) verleng is nie, kan deur die Administrasie verleng word vir 'n grasietydperk van hoogstens een maand vanaf die verstrykingsdatum wat daarop aangegee is.

(5) 'n Sertifikaat is nie meer geldig nie—

(a) indien groot veranderinge plaasgevind het in die konstruksie, toerusting, toebehore, inrigtings of materiaal vereis, sonder die goedkeuring van die Administrasie, behalwe die direkte vervanging van sodanige toerusting of toebehore;

(b) indien periodieke of tussenondersoeke nie uitgevoer word binne die tydperke gespesifiseer in Regulasie 6 (1) (b) en (c) of soos verleng ooreenkomstig paragraaf (2) of (4) van hierdie Regulasie nie;

(c) indien so 'n vaartuig deur 'n ander Staat oorgeneem word en dan onder daardie Staat se vlag vaar. In die geval van 'n oorname tussen Partye moet die Party onder wie se vlag die vaartuig voorheen geregtig was om te vaar, op versoek so gou moontlik aan die ander Party afskrifte oorhandig van die sertifikate wat die vaartuig voor die oorname gehad het en, indien beskikbaar, afskrifte van die betrokke ondersoekverslae.

HOOFSTUK II

KONSTRUKSIE, WATERDIGTE INTEGRITEIT EN TOERUSTING

Regulasie 12

Konstruksie

(1) Die sterkte en konstruksie van die romp, boboue, dekhuise, masjinerie-omkastings, gange en enige ander strukture en toerusting van die vaartuig moet toereikend wees om alle voorsienbare toestande van die beoogde diens te weerstaan en moet die Administrasie tevrede stel.

(2) Die romp van vaartuie wat bedoel is om in die ys te werk, moet versterk wees ooreenkomstig die verwagte navigasietoestande en werkgebied.

Regulation 11

Validity of certificates

(1) An International Fishing Vessel Safety Certificate shall be issued for a period of not more than four years and shall not be extended for more than one year subject to the periodical and intermediate surveys as required in Regulation 6 (1) (b) and (c), except as provided for in paragraphs (2), (3) and (4) of this Regulation. An International Fishing Vessel Exemption Certificate shall not be valid for longer than the period of the International Fishing Vessel Safety Certificate.

(2) If at the time when the validity of its certificate expires or ceases, a vessel is not in a port of the Party whose flag the vessel is entitled to fly, the validity of the certificate may be extended by that Party, but such extension shall be granted only for the purpose of allowing the vessel to complete its voyage to a port of that Party or to the port in which it is to be surveyed and then only in cases where it appears proper and reasonable to do so.

(3) No certificate shall be thus extended for a period longer than five months and a vessel to which such extension is granted shall not on its arrival in a port of the Party whose flag the vessel is entitled to fly or the port in which it is to be surveyed, be entitled by virtue of such extension to leave such port without having obtained a new certificate.

(4) A certificate which has not been extended under the provisions of paragraph (2) may be extended by the Administration for a period of grace up to one month from the date of expiry stated on it.

(5) A certificate shall cease to be valid—

(a) if major alterations have taken place in the construction, equipment, fittings, arrangements, or material required without the sanction of the Administration, except the direct replacement of such equipment or fittings;

(b) if periodical or intermediate surveys are not carried out within the periods specified under Regulation 6 (1) (b) and (c) or as they may have been extended in accordance with paragraph (2) or (4) of this Regulation;

(c) upon transfer of a vessel to the flag of another State. In the case of a transfer between Parties, the Party whose flag the vessel was formerly entitled to fly shall, on request, transmit as soon as possible to the other Party copies of the certificates carried by the vessel before the transfer and, if available, copies of the relevant survey reports.

CHAPTER II

CONSTRUCTION, WATERTIGHT INTEGRITY AND EQUIPMENT

Regulation 12

Construction

(1) Strength and construction of hull, superstructures, deckhouses, machinery casings, companionways and any other structures and vessel's equipment shall be sufficient to withstand all foreseeable conditions of the intended service and shall be to the satisfaction of the Administration.

(2) The hull of vessels intended for operation in ice shall be strengthened in accordance with the anticipated conditions of navigation and area of operation.

(3) Skotte, toemaaktoestelle en sluitings van openings in hierdie skotte, asook metodes vir hul toetsing, moet in ooreenstemming met die vereistes van die Administrasie wees. Vaartuie wat van ander materiaal as hout gebou is, moet beskik oor 'n aanvaringskot en minstens waterdigte skotte wat die hoofmasjinierieruimte afsluit. Sodanige skotte moet tot by die werkdek strek. Vaartuie wat van hout gebou is, moet ook beskik oor sodanige skotte, wat sover doenlik waterdig moet wees.

(4) Pype wat deur die aanvaringskot gaan, moet geskikte kleppe hê wat van bo die werkdek bedien kan word en die klepkas moet by die aanvaringskot binne die voorpiek bevestig wees. Geen deur, mangat, ventilasiegang of enige ander opening mag in die aanvaringskot onder die werkdek aangebring word nie.

(5) Waar 'n lang voorbobou aangebring word, moet die aanvaringskot weerbestand na die dek onmiddellik bo die werkdek verleng word. Die verlenging hoef nie reg bo die skot onder aangebring te word nie, mits dit binne die perke aangegee in Regulasie 2 (21), geplaas is en die deel van die dek wat die trap vorm, doeltreffend weerbestand gemaak word.

(6) Die getal openings in die aanvaringskot bo die werkdek moet beperk word tot die minimum wat versoenbaar is met die ontwerp en normale werksaamhede van die vaartuig. Sodanige openings moet weerbestand gesluit kan word.

(7) By vaartuie met 'n lengte van 75 meter en meer moet 'n waterdigte dubbelboom sover doenlik tussen die aanvaringskot en die agterpiekskot aangebring word.

Regulasie 13

Waterdigte deure

(1) Die getal openings in waterdigte skotte, soos vereis by Regulasie 12 (3), moet beperk word tot die minimum versoenbaar met die aglemene inrigting en bedryfsbehoeftes van die vaartuig; openings moet waterdigte toemaaktoestelle hê wat die Administrasie tevrede stel. Waterdigte deure moet 'n ekwavalente sterkte hê as die aanliggende struktuur sonder openings.

(2) By vaartuie met 'n lengte van minder as 45 meter, mag sodanige deure van die skarniertipe wees wat plaaslik van albei kante oop- en toegemaak moet kan word en wat normaalweg op see toegehou moet word. 'n Kennisgewing moet aan elke kant van die deur aangebring word om te meld dat die deur op see toegehou moet word.

(3) By vaartuie met 'n lengte van 45 meter en meer moet waterdigte deure van die skuiftipe wees in—

(a) ruimtes waarin hulle op see na verwagting oopgemaak sal word en indien geleë met hul drumpels onder die boonste bedryfswaterlyn, tensy die Administrasie dit met inagneming van die tipe en werksaamhede van die vaartuie as ondoenlik of onnodig beskou; en

(b) die onderste deel van 'n masjinerieruimte waarvandaan daar toegang is tot 'n astonnel.

Andersins mag waterdigte deure van die skarniertipe wees.

(4) Waterdigte skuifdeure moet oop- en toegemaak kan word wanneer die vaartuig 15 grade slagsy na enige kant het.

(5) Waterdigte skuifdeure, wat met die hand of andersins oop- en toegemaak word, moet plaaslik van albei kante oop- en toegemaak kan word; by vaartuie met 'n lengte van 45 meter of meer moet hierdie deure ook met afstandbeheer oop- en toegemaak kan word vanaf 'n toeganklike posisie bo die werkdek, behalwe wanneer die deure in die akkommodasieruimtes van die bemanning aangebring is.

(6) Middels moet by afstandbeheer-posisies voorsien word om aan te dui wanneer 'n skuifdeur oop of toe is.

(3) Bulkheads, closing devices and closures of openings in these bulkheads, as well as methods for their testing, shall be in accordance with the requirements of the Administration. Vessels constructed of material other than wood shall be fitted with a collision bulkhead and at least with watertight bulkheads bounding the main machinery space. Such bulkheads shall be extended up to the working deck. In vessels constructed of wood such bulkheads, which as far as practicable shall be watertight, shall also be fitted.

(4) Pipes piercing the collision bulkhead shall be fitted with suitable valves operable from above the working deck and the valve chest shall be secured at the collision bulkhead inside the forepeak. No door, manhole, ventilation duct or any other opening shall be fitted in the collision bulkhead below the working deck.

(5) Where a long forward superstructure is fitted, the collision bulkhead shall be extended weathertight to the deck next above the working deck. The extension need not be fitted directly over the bulkhead below provided it is located within the limits given in Regulation 2 (21) and the part of the deck which forms the step is made effectively weathertight.

(6) The number of openings in the collision bulkhead above the working deck shall be reduced to the minimum compatible with the design and normal operation of the vessel. Such openings shall be capable of being closed weathertight.

(7) In vessels of 75 metres in length and over, a watertight double bottom shall be fitted, as far as practicable, between the collision bulkhead and the afterpeak bulkhead.

Regulation 13

Watertight doors

(1) The number of openings in watertight bulkheads, as required by Regulation 12 (3), shall be reduced to the minimum compatible with the general arrangements and operational needs of the vessel; openings shall be fitted with watertight closing appliances to the satisfaction of the Administration. Watertight doors shall be of an equivalent strength to the adjacent unpierced structure.

(2) In vessels of less than 45 metres in length, such doors may be of the hinged type, which shall be capable of being operated locally from each side of the door and shall normally be kept closed at sea. A notice shall be attached to the door on each side, to state the door shall be kept closed at sea.

(3) In vessels of 45 metres in length and over, watertight doors shall be of the sliding type in—

(a) spaces where it is intended to open them at sea and if located with their sills below the deepest operating waterline, unless the Administration considers it to be impracticable or unnecessary taking into account the type and operation of the vessels; and

(b) the lower part of a machinery space where there is access from it to a shaft tunnel.

Otherwise watertight doors may be of the hinged type.

(4) Sliding watertight doors shall be capable of being operated when the vessel is listed up to 15 degrees either way.

(5) Sliding watertight doors whether manually operated or otherwise shall be capable of being operated locally from each side of the door; in vessels of 45 metres in length and over these doors shall also be capable of being operated by remote control from an accessible position above the working deck except when the doors are fitted in crew accommodation spaces.

(6) Means shall be provided at remote operating positions to indicate when a sliding door is open or closed.

Regulasie 14

Waterdigte integriteit

(1) Openings waardeur water die vaartuig kan inkom, moet van toemaaktoestelle voorsien word ooreenkomstig die toepaslike bepalings van hierdie Hoofstuk. Dekopenings wat gedurende visvangbedrywighede oop mag wees, moet normaalweg naby die vaartuig se middellyn aangebring word. Die Administrasie kan egter verskillende plasings goedkeur indien hy oortuig is dat die veiligheid van die vaartuig nie in gevaar gestel sal word nie.

(2) Visflappe op hektreilers moet waterdig en kragaangedrewe wees en moet beheer kan word uit enige posisie wat 'n onbelemmerde uitsig op die werking van die flappe bied.

Regulasie 15

Weerbestande deure

(1) Alle toegangsopenings in skotte van ingeslote boboue en ander buitestrukture waardeur water kan inkom en die vaartuig in gevaar stel, moet voorsien wees van deure wat permanent aan die skot bevestig is, moet van kosyne en verstywingstyle voorsien en so aangebring wees dat die hele struktuur net so sterk is as die skot sonder openings, en moet waterdig wees wanneer hulle gesluit is. Die middels om hierdie deure so te bevestig dat hulle waterdig is, moet bestaan uit pakstukke en klampinrigtings of ander gelykwaardige middels, moet blywend aan die skot of aan die deure self bevestig wees en moet so geplaas word dat hulle van weerskante van die skot oop- en toegemaak kan word.

(2) Die hoogte bo die dek van drumpels in sodanige ingange, in gange, oprigtings en masjinerie-omkastings wat direkte toegang bied tot dele van die dek wat aan die weer en see blootgestel is, moet minstens 600 millimeter op die werkdek en minstens 300 millimeter op die boboudek wees. Waar bedryfsondervinding dit geregverdig het en die Administrasie dit goedgekeur het, mag hierdie hoogtes, behalwe by die ingange wat direkte toegang tot die masjinerieruimtes bied, verminder word tot minstens onderskeidelik 380 millimeter en 150 millimeter.

Regulasie 16

Luikopenings toegemaak met houtluikdeksels

(1) Die hoogte bo die dek van luikhoofde moet minstens 600 millimeter op die blootgestelde dele van die werkdek en minstens 300 millimeter op die boboudek wees.

(2) Die afgewerkte dikte van houtluikopeningdeksels moet voorsiening maak vir afskuring as gevolg van ruwe hantering. In elke geval moet die afgewerkte dikte van hierdie luikdeksels minstens 4 millimeter vir elke 100 millimeter ongesteunde spanwydte wees, onderworpe aan 'n minimum van 40 millimeter, en die wydte van hul dravlakke moet minstens 65 millimeter wees.

(3) Middels om te verseker dat die houtluikopeningdeksels weerbestand is, moet tot tevredenheid van die Administrasie voorsien word.

Regulasie 17

Luikopenings toegemaak deur ander deksels as houtdeksels

(1) Die hoogte bo die dek van luikhoofde moet wees soos gespesifiseer in Regulasie 16 (1). Waar bedryfsondervinding dit geregverdig het en die Administrasie dit goedgekeur het, mag die hoogte van hierdie luikhoofde verminder word of heeltemal weggelaat word, mits die veiligheid van vaartuie nie daardeur in gevaar gestel word nie. In so 'n geval moet die luikopenings so klein doenlik gehou word en die deksels permanent deur middel van skarniere of ekwivalente middels vasgeheg word en moet vinnig toegemaak en vasgekroef kan word.

Regulation 14

Watertight integrity

(1) Openings through which water can enter the vessel shall be provided with closing devices in accordance with the applicable provisions of this Chapter. Deck openings which may be open during fishing operations shall normally be arranged near to the vessel's centreline. However, the Administration may approve different arrangements if satisfied that the safety of the vessel will not be impaired.

(2) Fish flaps on stern trawlers shall be watertight, power-operated and capable of being controlled from any position which provides an unobstructed view of the operation of the flaps.

Regulation 15

Weathertight doors

(1) All access openings in bulkheads of enclosed superstructures and other outer structures through which water could enter and endanger the vessel, shall be fitted with doors permanently attached to the bulkhead, framed and stiffened so that the whole structure is of equivalent strength to the unpierced structure, and weathertight when closed. The means for securing these doors weathertight shall consist of gaskets and clamping devices or other equivalent means and shall be permanently attached to the bulkhead or to the doors themselves, and shall be so arranged that they can be operated from each side of the bulkhead.

(2) The height above deck of sills in those doorways, in companionways, erections and machinery casings which give direct access to parts of the deck exposed to the weather and sea shall be at least 600 millimetres on the working deck and at least 300 millimetres on the superstructure deck. Where operating experience has shown justification and on approval of the Administration, these heights, except in the doorways giving direct access to machinery spaces, may be reduced to not less than 380 millimetres and 150 millimetres respectively.

Regulation 16

Hatchways closed by wood covers

(1) The height above deck of hatchway coamings shall be at least 600 millimetres on exposed parts of the working deck and at least 300 millimetres on the superstructure deck.

(2) The finished thickness of wood hatchway covers shall include an allowance for abrasion due to rough handling. In any case, the finished thickness of these covers shall be at least 4 millimetres for each 100 millimetres of unsupported span subject to a minimum of 40 millimetres and the width of their bearing surfaces shall be at least 65 millimetres.

(3) Arrangements for securing wood hatchway covers weathertight shall be provided to the satisfaction of the Administration.

Regulation 17

Hatchways closed by covers other than wood

(1) The height above deck of hatchway coamings shall be as specified in Regulation 16 (1). Where operating experience has shown justification and on the approval of the Administration the height of these coamings may be reduced, or the coamings omitted entirely, provided that the safety of vessels is not thereby impaired. In this case the hatchway openings shall be kept as small as practicable and the covers be permanently attached by hinges or equivalent means and be capable of being rapidly closed and battened down.

(2) Vir die doeleindes van sterkteberekenings word daar veronderstel dat luikopeningdeksels onderwerp word aan die massa van vrag wat op hulle vervoer gaan word of aan die volgende statiese ladings, wat ook al die grootste is:

(a) 10,0 kilonewton per vierkante meter vir vaartuie met 'n lengte van 24 meter;

(b) 17,0 kilonewton per vierkante meter vir vaartuie met 'n lengte van 100 meter en meer.

Vir tussenlengtes moet die ladingwaardes deur lineêre interpolasie bepaal word. Die Administrasie mag die ladings verminder na minstens 75 persent van bogenoemde waardes vir deksels van luikopenings op die boboudek in 'n posisie agter 'n punt 0,25L van die voorste loodlyn af.

(3) Waar deksels van sagte staal gemaak is, mag die maksimum spanning bereken volgens paragraaf (2) maal 4,25 nie die minimum breeksterkte van die materiaal oorskry nie. Onder hierdie lading mag die deurbuigings nie meer as 0,0028 maal die spanwydte wees nie.

(4) Deksels wat van ander materiale as sagte staal gemaak is, moet minstens gelyk wees aan die sterkte van dié van sagte staal en hul konstruksie moet styf genoeg wees om te verseker dat hulle weerbestand is onder die lading gespesifiseer in paragraaf (2).

(5) Deksels moet aangebring word met klamptoestelle en pakstukke wat voldoende is om weerbestandheid te verseker, of ander ekwivalente maatreëls tot tevredenheid van die Administrasie.

Regulasie 18

Masjinerieruimte-openings

(1) Masjinerieruimte-openings moet versterk en omsluit wees deur omkastings van 'n sterkte gelyk aan die omliggende bobou. Eksterne toegangsopenings moet van deure voorsien wees wat aan die bepalings van Regulasie 15 voldoen.

(2) Ander openings as toegangsopenings moet voorsien wees van deksels van gelyke sterkte as die struktuur sonder openings, moet permanent daaraan vasgeheg word en moet weerbestand kan toemaak.

Regulasie 19

Ander dekopenings

(1) Waar dit essensieel is vir visvang, mag gelykvlakse luike van die skroef-, bajonet- of ekwivalente tipe en mangate aangebring word, mits hulle waterdig toegemaak kan word, en sodanige toestelle moet permanent aan die omliggende struktuur vasgeheg word. Wat die grootte en rangskikking van die openings en die ontwerp van die toemaaktoestelle betref mag metaal-op-metaalsluitings aangebring word indien die Administrasie tevrede is dat hulle doeltreffend waterdig is.

(2) Ander openings as luikopenings, masjinerieruimopenings, mangate en gelykvlakse luike in die werk- of boboudek, moet beskerm word met ingeslote strukture wat van weerbestande deure of hul ekwivalente voorsien is. Gange moet so na doenlik aan die middellyn van die vaartuig geleë wees.

Regulasie 20

Lugkokers

(1) By vaartuie met 'n lengte van 45 meter en meer moet die hoogte bo die dek van ander lugkokeromrandings as lugkokeromrandings van die masjinerieruimte minstens 900 millimeter op die werkdek en minstens 760 millimeter op die boboudek wees. By vaartuie met 'n lengte van minder as 45 meter moet die hoogte van hierdie omrandings onderskeidelik 760 millimeter en 450 millimeter wees. Die hoogte bo die dek van die lugkokeropenings van die masjinerieruimte moet die Administrasie tevrede stel.

(2) For the purpose of strength calculations, it shall be assumed that hatchway covers are subjected to the weight of cargo intended to be carried on them or to the following static loads, whichever is the greater:

(a) 10,0 kilonewtons per square metre for vessels of 24 metres in length;

(b) 17,0 kilonewtons per square metre for vessels of 100 metres in length and over.

For intermediate lengths the load values shall be determined by linear interpolation. The Administration may reduce the loads to not less than 75 per cent of the above values for covers to hatchways situated on the superstructure deck in a position abaft a point located 0,25L from the forward perpendicular.

(3) Where covers are made of mild steel, the maximum stress calculated according to paragraph (2) multiplied by 4,25 shall not exceed the minimum ultimate strength of the material. Under these loads the deflections shall not be more than 0,0028 times the span.

(4) Covers made of materials other than mild steel shall be at least of equivalent strength to those made of mild steel, and their construction shall be of sufficient stiffness ensuring weathertightness under the loads specified in paragraph (2).

(5) Covers shall be fitted with clamping devices and gaskets sufficient to ensure weathertightness, or other equivalent arrangements to the satisfaction of the Adminstration.

Regulation 18

Machinery space openings

(1) Machinery space openings shall be framed and enclosed by casings of a strength equivalent to the adjacent superstructure. External access openings therein shall be fitted with doors complying with the requirements of Regulation 15.

(2) Openings other than access openings shall be fitted with covers of equivalent strength to the unpierced structure, permanently attached thereto and capable of being closed weathertight.

Regulation 19

Other deck openings

(1) Where it is essential for fishing operations, flush deck scuttles of the screw, bayonet or equivalent type and manholes may be fitted provided these are capable of being closed watertight and such devices shall be permanently attached to the adjacent structure. Having regard to the size and disposition of the openings and the design of the closing devices, metal-to-metal closures may be fitted if the Administration is satisfied that they are effectively watertight.

(2) Openings other than hatchways, machinery space openings, manholes and flush scuttles in the working or superstructure deck shall be protected by enclosed structures fitted with weathertight doors or their equivalent. Companionways shall be situated as close as practicable to the centreline of the vessel.

Regulation 20

Ventilators

(1) In vessels of 45 metres in length and over, the height above deck of ventilator coamings, other than machinery space ventilator coamings, shall be at least 900 millimetres on the working deck and at least 760 millimetres on the superstructure deck. In vessels of less than 45 metres in length, the height of these coamings shall be 760 millimetres and 450 millimetres respectively. The height above deck of machinery space ventilator openings shall be to the satisfaction of the Administration.

(2) Lugkokeromrandings moet net so sterk soos die omliggende struktuur wees en moet weerbestand toegemaak kan word deur toemaaktoestelle wat permanent aan die lugkoker of omliggende struktuur vasgeheg is. Waar die omranding van enige lugkoker 'n hoogte van 900 millimeter oorskry, moet dit spesiaal gesteun word.

(3) Toemaaktoestelle by vaartuie met 'n lengte van 45 meter en meer hoef nie aangebring te word aan lugkokers waarvan die omrandings meer as 4,5 meter bo die werkdek of meer as 2,3 meter bo die boboudek uitsteek nie, tensy dit spesifiek deur die Administrasie vereis word. By vaartuie met 'n lengte van minder as 45 meter hoef toemaaktoestelle nie aan lugkokers aangebring te word waarvan die omrandings meer as 3,4 meter bo die werkdek of meer as 1,7 meter bo die boboudek uitsteek nie. Indien die Administrasie oortuig is dat dit onwaarskynlik is dat water die vaartuig deur masjinerieruimtelugkokers sal binnekom, mag toemaaktoestelle aan sodanige lugkokers weggelaat word.

Regulasie 21

Lugpype

(1) Waar lugpype wat na tenks en leë ruimtes onder die dek lei, bo die werk- of die boboudek uitsteek, moet die blootgestelde dele van die pype 'n sterkte hê wat ekwivalent aan dié van die aanliggende strukture is en van toepaslike beskerming voorsien wees. Lugpypopenings moet voorsien wees van sluitmiddels wat permanent aan die pyp of omliggende struktuur vasgeheg is.

(2) Die hoogte van lugpype bo die dek tot by die punt van waar water na onder kan binnekom, moet minstens 760 millimeter op die werkdek en minstens 450 millimeter op die boboudek wees. Die Administrasie mag 'n vermindering van die hoogte van 'n lugpyp aanvaar om belemmering van die vissersbedrywighede te voorkom.

Regulasie 22

Peilingstoestelle

(1) Peilingstoestelle moet tot tevredenheid van die Administrasie aangebring word—

(a) ten opsigte van die kimme van die kompartemente wat nie te alle tyde gedurende die reis geredelik toeganklik is nie; en

(b) ten opsigte van alle tenks en kofferdamme.

(2) Waar peilingspype aangebring word, moet hul boonste ente verleng word na 'n geredelik toeganklike posisie en, waar doenlik, bo die werkdek. Hul openings moet voorsien word van permanent aangehegte sluitmiddels. Peilingspype wat nie tot bo die werkdek verleng word nie, moet van outomatiese selftoemaaktoestelle voorsien word.

Regulasie 23

Patryspoorte en vensters

(1) Patryspoorte in ruimtes onder die werkdek en in ruimtes binne die ingeslote boboue op daardie dek moet voorsien wees van geskanierde patryspoortbinneluike wat waterdig toegemaak kan word.

(2) Geen patryspoort mag in so 'n posisie aangebring wees dat die laagste punt van sy opening minder as 500 millimeter bo die boonste bedryfswaterlyn is nie.

(3) Patryspoorte, met inbegrip van die glas en patryspoortbinneluike, moet 'n goedgekeurde konstruksie hê.

(4) Getemperde veiligheidsglas of die ekwivalent daarvan moet vir die stuurhuisvensters gebruik word.

(5) Die Administrasie mag patryspoorte en vensters sonder binneluike in die boord- en agterskotte van dekhuise op of bo die werkdek aanvaar indien hy oortuig is dat dit die veiligheid van die vaartuig nie in gevaar stel nie.

(2) Coamings of ventilators shall be of equivalent strength to the adjacent structure and capable of being closed weathertight by closing appliances permanently attached to the ventilator or adjacent structure. Where the coaming of any ventilator exceeds 900 millimetres in height it shall be specially supported.

(3) Closing applicances in vessels of 45 metres in length and over need not to be fitted to ventilators the coamings of which extend to more than 4,5 metres above the working deck or more than 2,3 metres above the superstructure deck unless specifically required by the Administration. In vessels of less than 45 metres in length, closing appliances need not be fitted to ventilators the coamings of which extend to more than 3,4 metres above the working deck or more than 1,7 metres above the superstructure deck. If the Administration is satisfied that it is unlikely that water will enter the vessel through machinery space ventilators, closing appliances to such ventilators may be omitted.

Regulation 21

Air pipes

(1) Where air pipes to tanks and void spaces below deck extend above the working or the superstructure decks, the exposed parts of the pipes shall be of strength equivalent to the adjacent structures and fitted with appropriate protection. Openings of air pipes shall be provided with means of closing, permanently attached to the pipe or adjacent structure.

(2) The height of air pipes above deck to the point where water may have access below shall be at least 760 millimetres on the working deck and at least 450 millimetres on the superstructure deck. The Administration may accept reduction of the height of an air pipe to avoid interference with the fishing operations.

Regulation 22

Sounding devices

(1) Sounding devices, to the satisfaction of the Administration, shall be fitted—

(a) to the bilges of those compartments which are not readily accessible at all times during the voyage; and

(b) to all tanks and cofferdams.

(2) Where sounding pipes are fitted, their upper ends shall be extended to a readily accessible position and, where practicable, above the working deck. Their openings shall be provided with permanently attached means of closing. Sounding pipes which are not extended above the working deck shall be fitted with automatic self-closing devices.

Regulation 23

Sidescuttles and windows

(1) Sidescuttles to spaces below the working deck and to spaces within the enclosed structures on that deck shall be fitted with hinged deadlights capable of being closed watertight.

(2) No sidescuttle shall be fitted in such a position that its sill is less than 500 millimetres above the deepest operating waterline.

(3) Sidescuttles, together with their glasses and deadlights, shall be of an approved construction.

(4) Toughened safety glass or its equivalent shall be used for the wheelhouse windows.

(5) The Administration may accept sidescuttles and windows without deadlights in side and aft bulkheads of deckhouses located on or above the working deck if satisfied that the safety of the vessel will not be impaired.

Regulasie 24

Inlaatopenings en afvoerpype

(1) Afvoerpype wat deur die huid loop, hetsy vanaf ruimtes onder die werkdek of binne 'n geslote boboue of dekhuise op die werkdek wat voorsien is van deure wat aan die vereistes van Regulasie 15 voldoen, moet van toeganklike middels voorsien word wat verhoed dat water die vaartuig binnekom. Normaalweg moet elke afsonderlike afvoerpyp 'n outomatiese terugslagklep hê met 'n positiewe inrigting waarmee dit vanaf 'n toeganklike posisie toegemaak kan word. So 'n klep word nie vereis nie indien die Administrasie meen dat die instroming van water in die vaartuig deur die opening waarskynlik nie tot gevaarlike oorstroming sal lei nie en dat die dikte van die pypwerk voldoende is. Die inrigting vir die inwerkingstelling van die positiewewerkingklep moet voorsien wees van 'n wyser wat toon of die klep oop of toe is.

(2) In bemande masjinerieruimtes mag hoof- en hulpinrigtings vir die in- en uitlaat van seewater wat essensieel is vir die werking van masjinerie, plaaslik beheer word. Die beheertoestelle moet toeganklik wees en van wysers voorsien wees wat toon of die kleppe oop of toe is.

(3) Toebehore aan die huid en die kleppe wat by hierdie Regulasie vereis word, moet van staal, brons of ander goedgekeurde rekbare materiaal gemaak wees. Alle pype tussen die huid en die kleppe moet van staal wees, behalwe dat die Administrasie in ander ruimtes as masjinerieruimtes in vaartuie wat van ander materiaal as staal gebou is, die gebruik van ander materiale kan goedkeur.

Regulasie 25

Waterafvoerpoorte

(1) Wanneer verskansings op weerblootgestelde gedeeltes op die werkdek kuile vorm, word die minimum oppervlakte van die waterafvoerpoorte (A) in vierkante meter aan weerskante van die vaartuig vir elke kuil op die werkdek soos volg in verhouding tot die lengte (ℓ) en die hoogte van die verskansing in die kuil bepaal:

(a) $A = 0{,}07\ell$

(ℓ hoef nie groter as 0,7L geneem te word nie).

(b) (i) Waar die gemiddelde hoogte van die verskansing meer as 1 200 millimeter is, word die vereiste oppervlakte vergroot met 0,004 vierkante meter per meter kuillengte vir elke 100 millimeter verskil in hoogte.

(ii) Waar die gemiddelde hoogte van die verskansing minder as 900 millimeter is, mag die vereiste oppervlakte verklein word met 0,004 vierkante meter per meter kuillengte vir elke 100 millimeter verskil in hoogte.

(2) Die oppervlakte van waterafvoerpoorte bereken volgens paragraaf (1) moet vergroot word waar die Administrasie van mening is dat die vaartuig se seeg nie voldoende is om te verseker dat water vinnig en doeltreffend van die dek afgevoer word nie.

(3) Onderworpe aan die goedkeuring van die Administrasie moet die minimum oppervlakte van afvoerpoorte van elke kuil op die boboudek nie kleiner as die helfte wees van die oppervlakte (A) wat in paragraaf (1) gegee is nie.

(4) Waterafvoerpoorte moet so langs die lengte van verskansings af geplaas wees dat verseker word dat water baie vinnig en doeltreffend van die dek afgevoer word. Die onderste rande van waterafvoerpoorte moet so na doenlik aan die dek wees.

Regulation 24

Inlets and discharges

(1) Discharges led through the shell either from spaces below the working deck or from within enclosed superstructures or deckhouses on the working deck fitted with doors complying with the requirements of Regulation 15 shall be fitted with accessible means for preventing water from passing inboard. Normally each separate discharge shall have an automatic non-return valve with a positive means of closing it from an accessible position. Such a valve is not required if the Administration considers that the entry of water into the vessel through the opening is not likely to lead to dangerous flooding and that the thickness of the piping is sufficient. The means for operating the sensitive action valve shall be provided with an indicator showing whether the valve is open or closed.

(2) In manned machinery spaces main and auxiliary sea inlets and discharges essential for the operation of machinery may be controlled locally. The controls shall be accessible and shall be provided with indicators showing whether the valves are open or closed.

(3) Fittings attached to the shell and the valves required by this Regulation shall be of steel, bronze or other approved ductile material. All pipes between the shell and the valves shall be of steel, except that in spaces other than machinery spaces of vessels constructed of material other than steel the Administration may approve the use of other materials.

Regulation 25

Freeing ports

(1) Where bulwarks on weather parts of the working deck form wells, the minimum freeing port area (A) in square metres, on each side of the vessel for each well on the working deck shall be determined in relation to the length (ℓ) and height of bulwark in the well as follows:

(a) $A = 0{,}07\ell$
(ℓ need not be taken as greater than 0,7L).

(b) (i) Where the bulwark is more than 1 200 millimetres in average height the required area shall be increased by 0,004 square metres per metre of length of well for each 100 millimetres difference in height.

(ii) Where the bulwark is less than 900 millimetres in average height, the required area may be decreased by 0,004 square metres per metre of length of well for each 100 millimetres difference in height.

(2) The freeing port area calculated according to paragraph (1) shall be increased where the Administration considers that the vessel's sheer is not sufficient to ensure that the deck is rapidly and effectively freed of water.

(3) Subject to the approval of the Administration the minimum freeing port area for each well on the superstructure deck shall be not less than one-half the area (A) given in paragraph (1).

(4) Freeing ports shall be so arranged along the length of bulwarks as to ensure that the deck is freed of water most rapidly and effectively. Lower edges of freeing ports shall be as near the deck as practicable.

(5) "Poundboards" en middels vir die stuwing van visvangtoerusting moet so geplaas wees dat die doeltreffendheid van waterafvoerpoorte nie benadeel sal word nie. Poundboards moet so gebou word dat hulle in posisie vasgesluit kan word wanneer dit gebruik word en mag nie die afvoer van oorgekryde water belemmer nie.

(6) Waterafvoerpoorte wat dieper as 300 millimeter is, moet voorsien wees van stawe wat hoogstens 230 millimeter en minstens 150 millimeter uitmekaar gespasieer is, of van ander geskikte beskerming. Waterafvoerpoortdeksels, indien aangebring, moet 'n goedgekeurde konstruksie hê. Indien toestelle om waterafvoerpoortdeksels gedurende visvangbedrywighede vas te sluit noodsaaklik geag word, moet hulle die Administrasie tevrede stel en maklik van 'n geredelik toeganklike posisie bedien kan word.

(7) By vaartuie wat bedoel is om in gebiede te werk waar ysvorming voorkom, moet deksels en beskermende inrigtings vir waterafvoerpoorte maklik verwyder kan word om die ysaansetting te beperk. Die grootte van openings en middels voorsien vir die verwydering van hierdie beskermende inrigtings, moet die Administrasie tevrede stel.

Regulasie 26

Anker- en vasmeertoerusting

Ankertoerusting wat ontwerp is vir vinnige en veilige werking, moet voorsien wees en moet bestaan uit ankertoerusting, ankerkettings of draadtoue, stoppers en 'n windas of ander inrigtings om anker te gooi en te lig en die vaartuig in alle voorsienbare dienstoestande voor anker te hou. Vaartuie moet ook voorsien wees van toereikende vasmeertoerusting vir veilige vasmering in alle bedryfstoestande. Die anker- en vasmeertoerusting moet die Administrasie tevrede stel.*

HOOFSTUK III

STABILITEIT EN GEPAARDGAANDE SEEWAARDIGHEID

Regulasie 27

Algemeen

Vaartuie moet so ontwerp en gebou wees dat die vereistes van hierdie Hoofstuk nagekom word in werktoestande waarvan in Regulasie 33 melding gemaak word. Berekenings van die regbringhefboomkrommes moet tot tevredenheid van die Administrasie gedoen word.†

Regulasie 28

Stabiliteitskriteria

(1) Daar moet aan die volgende minimum stabiliteitskriteria voldoen word, tensy die Administrasie tevrede is dat bedryfsondervinding afwykings daarvan regverdig:

(a) Die area onder die regbringhefboomkromme (GZ-kromme) moet minstens 0,055 meter-radiale wees tot by 30 grade slagsyhoek en minstens 0,090 meter-radiale tot by 40 grade of die oorstromingshoek θf, indien hierdie hoek minder as 40 grade is. Hierbenewens mag die area onder die regbringhefboomkromme (GZ-kromme) tussen 30 grade en 40 grade slagsyhoek of tussen 30 grade en θf, indien hierdie

* Aanhangsel II—*Recommended Practice for Anchor and Mooring Equipment*—van Deel B van die *Code of Safety for Fishermen and Fishing Vessels*.

† Kyk Byvoegsel 1 van die *Recommendation on Intact Stability of Fishing Vessels*, aangeneem deur die Organisasie by Resolusie A. 169 (Es.IV) en die *Code of Practice concerning the Accuracy of Stability Information for Fishing Vessels*, aangeneem deur die Organisasie by Resolusie A.267 (VIII).

(5) Poundboards and means for stowage of the fishing gear shall be arranged so that the effectiveness of freeing ports will not be impaired. Poundboards shall be so constructed that they can be locked in position when in use and shall not hamper the discharge of shipped water.

(6) Freeing ports over 300 millimetres in depth shall be fitted with bars spaced not more than 230 millimetres nor less than 150 millimetres apart or provided with other suitable protective arrangements. Freeing port covers, if fitted, shall be of approved construction. If devices are considered necessary for locking freeing port covers during fishing operations they shall be to the satisfaction of the Administration and easily operable from a readily accessible position.

(7) In vessels intended to operate in areas subject to icing, covers and protective arrangements for freeing ports shall be capable of being easily removed to restrict ice accretion. The size of openings and means provided for removal of these protective arrangements shall be to the satisfaction of the Administration.

Regulation 26

Anchor and mooring equipment

Anchor equipment designed for quick and safe operation shall be provided which shall consist of anchoring equipment, anchor chains or wire ropes, stoppers and a windlass or other arrangements for dropping and hoisting the anchor and for holding the vessel at anchor in all foreseeable service conditions. Vessels shall also be provided with adequate mooring equipment for safe mooring in all operating conditions. Anchor and mooring equipment shall be to the satisfaction of the Administration.*

CHAPTER III

STABILITY AND ASSOCIATED SEA WORTHINESS

Regulation 27

General

Vessels shall be so designed and constructed that the requirements of this Chapter will be satisfied in the operating conditions referred to in Regulation 33. Calculations of the righting lever curves shall be to the satisfaction of the Administration.†

Regulation 28

Stability criteria

(1) The following minimum stability criteria shall be met unless the Administration is satisfied that operating experience justifies departures therefrom:

(a) The area under the righting lever curve (GZ curve) shall not be less than 0,055 metre-radians up to 30 degrees angle of heel and not less than 0,090 metre-radians up to 40 degrees or the angle of flooding θf if this angle is less than 40 degrees. Additionally, the area under the righting lever curve (GZ curve) between the angles of heel of 30 degrees and 40 degrees

* See Annex II—Recommended Practice for Anchor and Mooring Equipment—of Part B of the Code of Safety for Fishermen and Fishing Vessels.

† See Appendix I of the Recommendation on Intact Stability of Fishing Vessels, adopted by the Organization by Resolution A.168 (ES.IV) and the Code of Practice concerning the Accuracy of Stability Information for Fishing Vessels adopted by the Organization by Resolution A. 267 (VIII).

hoek kleiner as 40 grade is, nie minder as 0,030 meter-radiale wees nie. θf is die slagsyhoek waaronder openings in die romp, bobou of dekhuise wat nie vinnig waterdig toegemaak kan word nie, onder water begin kom. By die toepassing van hierdie kriterium hoef klein openings waardeur progressiewe oorstroming nie kan plaasvind nie, nie as oop beskou te word nie.

(b) Die regbringhefboom GZ moet minstens 200 millimeter onder 'n slagsyhoek gelyk aan of groter as 30 grade wees.

(c) Die maksimum regbringhefboom GZ maks. moet onder 'n slagsyhoek wat verkieslik 30 grade oorskry, maar minstens 25 grade, voorkom.

(d) Die aanvanklike metasentriese hoogte GM moet minstens 350 millimeter vir enkeldekvaartuie wees. By vaartuie met volledige bobou of vaartuie met 'n lengte van 70 meter en meer mag die metasentriese hoogte tot tevredenheid van die Administrasie verminder word, maar dit mag in geen geval minder as 150 millimeter wees nie.

(2) Waar ander inrigtings as kimkiele voorsien word om die rolhoeke te beperk, moet die Administrasie tevrede gestel wees dat die stabiliteitskriteria wat in paragraaf (1) gegee is, in alle bedryfstoestande gehandhaaf word.

(3) Waar ballas voorsien word om te verseker dat aan paragraaf (1) voldoen word, moet die aard en inrigting daarvan die Administrasie tevrede stel.

Regulasie 29

Oorstroming van visskeepsruime

Die slagsyhoek waaronder progressiewe oorstroming van visskeepsruime kan voorkom deur luike wat oopbly gedurende visvangbedrywighede en wat nie vinnig toegemaak kan word nie, moet minstens 20 grade wees, tensy aan die stabiliteitskriteria van Regulasie 28 (1) voldoen kan word met die onderskeie visskeepsruime gedeeltelik of heeltemal oorstroom.

Regulasie 30

Besondere visvangmetodes

Vaartuie wat van besondere visvangmetodes gebruik maak waar bykomende eksterne kragte gedurende visvangbedrywighede op die vaartuig uitgeoefen word, moet voldoen aan die stabiliteitskriteria van Regulasie 28 (1), wat, indien nodig, tot tevredenheid van die Administrasie verhoog kan word.

Regulasie 31

Sterk wind en rol

Vaartuie moet in staat wees om, tot tevredenheid van die Administrasie, die effek van sterk wind en rol in verwante seetoestande te weerstaan, met inagneming van die seisoenale weerstoestande, die seetoestande waarin die vaartuig werksaam sal wees, die tipe vaartuig en sy werkwyse.*

Regulasie 32

Water op die dek

Vaartuie moet in staat wees om, tot tevredenheid van die Administrasie, die effek van water op die dek te weerstaan, met inagneming van die seisoenale weerstoestande, die seetoestande waarin die vaartuig werksaam sal wees, die tipe vaartuig en sy werkwyse.†

* Kyk *Guidance on Method of Calculation of the Effect of Severe Wind and Rolling in Associated Sea Conditions*, soos vervat in Aanbeveling 1 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

† Kyk *Guidance on Method of Calculation of the Effect of Water on Deck*, soos vervat in Aanbeveling 2 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

or between 30 degrees and θf, if this angle is less than 40 degrees shall not be less than 0,030 metre-radians. θf is the angle of heel at which openings in the hull, superstructure or deckhouses which cannot rapidly be closed watertight commence to immerse. In applying this criterion, small openings through which progressive flooding cannot take place need not be considered as open.

(b) The righting lever GZ shall be at least 200 millimetres at an angle of heel equal to or greater than 30 degrees.

(c) The maximum righting lever GZ max shall occur at an angle of heel preferably exceeding 30 degrees but not less than 25 degrees.

(d) The initial metacentric height GM shall not be less than 350 millimetres for single deck vessels. In vessels with complete superstructure or vessels of 70 metres in length and over the metacentric height may be reduced to the satisfaction of the Administration but in no case shall be less than 150 millimetres.

(2) Where arrangements other than bilge keels are provided to limit the angles of roll, the Administration shall be satisfied that the stability criteria given in paragraph (1) are maintained in all operating conditions.

(3) Where ballast is provided to ensure compliance with paragraph (1), its nature and arrangement shall be to the satisfaction of the Administration.

Regulation 29

Flooding of fish-holds

The angle of heel at which progressive flooding of fish-holds could occur through hatches which remain open during fishing operations and which cannot rapidly be closed shall be at least 20 degrees unless the stability criteria of Regulation 28 (1) can be satisfied with the respective fish-holds partially or completely flooded.

Regulation 30

Particular fishing methods

Vessels engaged in particular fishing methods where additional external forces are imposed on the vessel during fishing operations, shall meet the stability criteria of Regulation 28 (1) increased, if necessary, to the satisfaction of the Administration.

Regulation 31

Severe wind and rolling

Vessels shall be able to withstand, to the satisfaction of the Administration, the effect of severe wind and rolling in associated sea conditions taking account of the seasonal weather conditions, the sea states in which the vessel will operate, the type of vessel and its mode of operation.*

Regulation 32

Water on deck

Vessels shall be able to withstand, to the satisfaction of the Administration,the effect of water on deck, taking account of the seasonal weather conditions, the sea states in which the vessel will operate, the type of vessel and its mode of operation.†

* See Guidance on a Method of Calculation of the Effect of Severe Wind and Rolling in Associated Sea Conditions contained in Recommendation 1 of Attachment 3 to the Final Act of the Conference.

† See Guidance on a Method of Calculation of the Effect of Water on Deck contained in Recommendation 2 of Attachment 3 to the Final Act of the Conference.

Regulasie 33

Bedryfstoestande

(1) Die aantal en tipe bedryfstoestande wat in ag geneem moet word, moet die Administrasie tevrede stel en moet die volgende insluit:

(a) vertrek na die visgronde met alle brandstof, voorrade, ys, visvangtoerusting, ensovoorts;

(b) vertrek van die visgronde met volle vangs;

(c) aankoms by die tuishawe met volle vangs en 10 persent van die voorrade, brandstof, ensovoorts; en

(d) aankoms by die tuishawe met 20 persent van die volle vangs en 10 persent van die voorrade, brandstof, ensovoorts.

(2) Benewens die spesifieke bedryfstoestande wat in paragraaf (1) genoem is, moet die Administrasie ook tevrede wees dat aan die minimum stabiliteitskriteria wat in Regulasie 28 gemeld is, voldoen word in alle ander werklike bedryfstoestande, met inbegrip van dié wat die laagste waardes lewer van die stabiliteitsparameters wat in hierdie kriteria vervat is. Die Administrasie moet ook tevrede wees dat die spesiale toestande wat verband hou met 'n verandering in die vaartuig se werkwyse of werkgebiede wat die stabiliteitsoorwegings van hierdie Hoofstuk raak, in ag geneem word.

(3) Betreffende die toestande wat in paragraaf (1) gemeld is, moet die berekenings die volgende insluit:

(a) Voorsiening vir die massa van die nat visnette, visvangtoerusting, ensovoorts op die dek;

(b) voorsiening vir ysaansetting, indien dit verwag word, ooreenkomstig die bepalings van Regulasie 34;

(c) egalige verspreiding van die vangs, tensy dit teenstrydig is met die praktyk;

(d) vangs op die dek, indien dit verwag word, in bedryfstoestande waarvan in paragraaf (1) (b) en (c) en paragraaf (2) melding gemaak is;

(e) waterballas indien ingeneem in tenks wat spesiaal vir hierdie doel voorsien is, of in ander tenks wat ook toegerus is om vir hierdie doel aangewend te word; en

(f) voorsiening vir die vryoppervlakeffek van vloeistowwe en, indien toepaslik, die vangs aan boord.

Regulasie 34

Ysaansetting

(1) Vir vaartuie wat in gebiede werk waar ysaansetting waarskynlik sal voorkom, moet die volgende voorsiening vir ys in die stabiliteitsberekenings gemaak word:*

(a) 30 kilogram per vierkante meter op blootgestelde bodekke en gangboorde;

(b) 7,5 kilogram per vierkante meter vir geprojekteerde laterale oppervlakte van elke kant van die vaartuig bo die watervlak;

(c) die geprojekteerde laterale oppervlakte van die niedeurlopende oppervlakke van relings, sparre (behalwe maste) en touwerk van vaartuie wat nie seile het nie en die geprojekteerde laterale oppervlakte van ander klein voorwerpe moet bereken word deur die totale geprojekteerde oppervlakte van deurlopende oppervlakke met 5 persent en die statiese momente van hierdie oppervlakte met 10 persent te vermeerder.

* Vir seegebiede waar ysaansetting kan voorkom en wysigings van die ysvoorsiening voorgestel word, kyk *Guidance Relating to Ice Accretion*, vervat in Aanbeveling 3 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

Regulation 33

Operating conditions

(1) The number and type of operating conditions to be considered shall be to the satisfaction of the Administration and shall include the following:

(a) Departure for the fishing grounds with full fuel, stores, ice, fishing gear, etc.;

(b) departure from the fishing grounds with full catch;

(c) arrival at home port with full catch and 10 per cent stores, fuel, etc.; and

(d) arrival at home port with 20 per cent of full catch and 10 per cent stores, fuel, etc.

(2) In addition to the specific operating conditions given in paragraph (1) the Administration shall also be satisfied that the minimum stability criteria given in Regulation 28 are met under all other actual operating conditions including those which produce the lowest values of the stability parameters contained in these criteria. The Administration shall also be satisfied that those special conditions associated with a change in the vessel's mode or areas or operation which affect the stability considerations of this Chapter are taken into account.

(3) Concerning the conditions referred to in paragraph (1), the calculations shall include the following:

(a) Allowance for the weight of the wet fishing nets and tackle, etc. on the deck;

(b) allowance for ice accretion, if anticipated, in accordance with the provisions of Regulation 34;

(c) homogeneous distribution of the catch, unless this is inconsistent with practice;

(d) catch on deck, if anticipated, in operating conditions referred to in paragraph (1) (b) and (c) and paragraph (2);

(e) water ballast if carried either in tanks which are expecially provided for this purpose or in other tanks also equipped for carrying water ballast; and

(f) allowance for the free surface effect of liquids and, if applicable, catch carried.

Regulation 34

Ice accretion

(1) For vessels operating in areas where ice accretion is likely to occur the following icing allowance shall be made in the stability calculations:*

(a) 30 kilogrammes per square metre on exposed weather decks and gangways;

(b) 7,5 kilogrammes per square metre for projected lateral area of each side of the vessel above the water plane;

(c) the projected lateral area of discontinuous surfaces of rail, spars (except masts) and rigging of vessels having no sails and the projected lateral area of other small objects shall be computed by increasing the total projected area of continuous surfaces by 5 per cent and the static moments of this area by 10 per cent.

* For sea areas where ice accretion may occur and modifications of the icing allowance are suggested see Guidance Relating to Ice Accretion contained in Recommendation 3 of Attachment 3 to the Final Act of the Conference.

(2) Vaartuie wat bedoel is vir werk in gebiede waar ysaansetting wel voorkom, moet—

(a) ontwerp word om die aansetting van ys tot die minimum te beperk; en

(b) toegerus word met sodanige middels vir die verwydering van ys as wat die Administrasie vereis.

Regulasie 35

Hellingtoets

(1) Elke vaartuig moet na voltooiing aan 'n hellingtoets onderwerp word en die werklike verplasing en posisie van die swaartepunt moet vir die ligteskiptoestand bepaal word.

(2) Waar veranderings aan 'n vaartuig aangebring word wat sy ligteskiptoestand en die posisie van die swaartepunt beïnvloed, moet die vaartuig, indien die Administrasie dit nodig ag, weer aan 'n hellingtoets onderwerp en die stabiliteitsgegewens hersien word.

(3) Die Administrasie mag toelaat dat daar van die hellingtoets van 'n individuele vaartuig afgesien word, mits basiese stabiliteitsgegewens beskikbaar is van die hellingtoets van 'n susterskip en daar tot tevredenheid van die Administrasie getoon is dat betroubare stabiliteitsgegewens vir die vrygestelde vaartuig van sodanige basiese gegewens verkry kan word.

Regulasie 36

Stabiliteitsgegewens

(1) Geskikte stabiliteitsgegewens moet voorsien word om die skipper in staat te stel om met gemak en sekerheid die vaartuig se stabiliteit onder verskeie bedryfstoestande vas te stel.* Sodanige inligting moet spesifieke opdragte aan die skipper insluit wat hom waarsku vir sodanige bedryfstoestande as wat òf die stabiliteit òf die trim van die vaartuig nadelig kan beïnvloed. 'n Kopie van die stabiliteitsgegewens moet vir goedkeuring aan die Administrasie voorgelê word.†

(2) Die goedgekeurde stabiliteitsgegewens moet aan boord gehou word, te alle tye geredelik toeganklik wees en tydens die periodieke ondersoeke van die vaartuig geïnspekteer word om te verseker dat dit goedgekeur is vir die werklike bedryfstoestande.

(3) Waar veranderings aan 'n vaartuig aangebring word wat sy stabiliteit beïnvloed, moet hersiene stabiliteitsberekenings opgestel word en vir goedkeuring aan die Administrasie voorgelê word. Indien die Administrasie besluit dat die stabiliteitsgegewens hersien moet word, moet die nuwe gegewens aan die skipper verstrek word en die vervangde gegewens verwyder word.

Regulasie 37

Verplaasbare visskeepsruimverdelings

Die vangs moet behoorlik beveilig wees teen verskuiwing wat 'n gevaarlike trim of slagsy van die vaartuig kan veroorsaak. Indien verplaasbare visskeepsruimverdelings aangebring word, moet die Administrasie tevrede wees met die afmetings daarvan.‡

* Kyk *Guidance on Stability Information*, vervat in Aanbeveling 4 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

† Kyk *Code of Practice concerning the Accuracy of Stability Information for Fishing Vessels*, aangeneem deur die Organisasie by Resolusie A267 (VIII).

‡ Kyk Aanhangsel V van die *Recommendation on Intact Stability of Fishing Vessels*, aangeneem deur die Organisasie by Resolusie A168 (Es.IV), soos gewysig by Resolusie A268 (VIII).

(2) Vessels intended for operation in areas where ice accretion is known to occur shall be—

(a) designed to minimize the accretion of ice; and

(b) equipped with such means for removing ice as the Administration may require.

Regulation 35

Inclining test

(1) Every vessel shall undergo an inclining test upon its completion and the actual displacement and position of the centre of gravity shall be determined for the light ship condition.

(2) Where alterations are made to a vessel affecting its light ship condition and the position of the centre of gravity, the vessel shall, if the Administration considers this necessary, be re-inclined and the stability information revised.

(3) The Administration may allow the inclining test of an individual vessel to be dispensed with provided basic stability data are available from the inclining test of a sister ship and it is shown to the satisfaction of the Administration that reliable stability information for the exempted vessel can be obtained from such basic data.

Regulation 36

Stability information

(1) Suitable stability information shall be supplied to enable the skipper to assess with ease and certainty the stability of the vessel under various operating conditions.* Such information shall include specific instructions to the skipper warning him of those operating conditions which could adversely affect either the stability or the trim of the vessel. A copy of the stability information shall be submitted to the Administration for approval.†

(2) The approved stability information shall be kept on board, readily accessible at all times and inspected at the periodical surveys of the vessel to ensure that it has been approved for the actual operating conditions.

(3) Where alterations are made to a vessel affecting its stability, revised stability calculations shall be prepared and submitted to the Administration for approval. If the Administration decides that the stability information must be revised, the new information shall be supplied to the skipper and the superseded information removed.

Regulation 37

Portable fish-hold divisions

The catch shall be properly secured against shifting which could cause dangerous trim or heel of the vessel. The scantlings of portable fish-hold divisions, if fitted, shall be to the satisfaction of the Administration.‡

* See Guidance on Stability Information contained in Recommendation 4 of Attachment 3 to the Final Act of the Conference.

† See Code of Practice concerning the Accuracy of Stability Information for Fishing Vessels, adopted by the Organisation by Resolution A.267 (VIII).

‡ See Appendix V of the Recommendation on Intact Stability of Fishing Vessels adopted by the Organisation by Resolution A.168 (ES.IV) as amended by Resolution A.268 (VIII).

Regulasie 38

Boeghoogte

Die boeghoogte moet tot tevredenheid van die Administrasie voldoende wees om te voorkom dat die skip oormatige hoeveelhede water oorkry en moet bepaal word met inagneming van die seisoenaleweerstoestande, die seetoestande waarin die vaartuig werksaam sal wees, die tipe vaartuig en sy werkwyse.*

Regulasie 39

Maksimum toelaatbare bedryfsdiepgang

'n Maksimum toelaatbare bedryfsdiepgang moet deur die Administrasie goedgekeur word en moet sodanig wees dat, in die toepaslike bedryfstoestand, aan die stabiliteitskriteria van hierdie Hoofstuk voldoen word en die vereistes van Hoofstukke II en VI, waar van toepassing, nagekom word.

Regulasie 40

Onderverdeling en lekstabiliteit

Vaartuie met 'n lengte van 100 meter en meer moet, waar die totale aantal mense aan boord 100 of meer is, tot tevredenheid van die Administrasie in staat wees om met positiewe stabiliteit te bly dryf ná die oorstroming van enige kompartement wat geag word beskadig te wees, met inagneming van die tipe vaartuig, die bedoelde diens en werkgebied.†

HOOFSTUK IV

MASJINERIE EN ELEKTRIESE INSTALLASIES EN PERIODIEK ONBEDIENDE MASJINERIERUIMTES

DEEL A—ALGEMEEN

Regulasie 41

Algemeen

Masjinerie-installasies

(1) Die hoofaandrywing-, kontrole-, stoompyp-, brandolie-, perslug-, elektriese en koelstelsels; hulpmasjinerie; ketels en ander drukhouers; pyp- en pompinrigtings; stuurtoerusting en inrigtings, asse en koppelings vir kragtransmissie moet ontwerp, gekonstrueer, getoets, geïnstalleer en versien word tot tevredenheid van die Administrasie. Hierdie masjinerie en toerusting, asook die hystoerusting, windasse, vishanterings- en visverwerkingstoerusting, moet beskut word om enige gevaar vir persone aan boord tot die minimum te beperk. Spesiale aandag moet aan bewegende dele, warm oppervlakke en ander gevare geskenk word.

(2) Masjinerieruimtes moet so ontwerp wees dat dit veilige en vrye toegang tot alle masjinerie en hul kontroles, asook tot enige ander dele wat versiening mag vereis, verskaf. Sodanige ruimtes moet toereikend geventileer wees.

(3) (a) Middels moet voorsien word waardeur die werkvermoë van die aandrywingsmasjinerie gehandhaaf of herstel kan word selfs as een van die essensiële hulpmasjiene onklaar raak. Spesiale oorweging moet geskenk word aan die funksionering van—

(i) die inrigting wat brandoliedruk vir die hoofaandrywingsmasjinerie verskaf;

(ii) die gewone bronne van smeeroliedruk;

* Kyk *Guidance on Method of Calculation of Bow Height*, vervat in Aanbeveling 5 van Aanhangsel 3 van die Sluitingsoorkonde van die Konferensie.

† Kyk *Guidance on Subdivision and Damage Stability Calculations*, vervat in Aanbeveling 6 van Aanhangsel 3 van die Sluitingsoorkonde van die Konferensie.

Regulation 38

Bow height

The bow height shall be sufficient, to the satisfaction of the Administration, to prevent the excessive shipping of water and shall be determined taking account of the seasonal weather conditions, the sea states in which the vessel will operate, the type of vessel and its mode of operation.*

Regulation 39

Maximum permissible operating draught

A maximum permissible operating draught shall be approved by the Administration and shall be such that, in the associated operating condition, the stability criteria of this Chapter and the requirements of Chapters II and VI as appropriate are satisfied.

Regulation 40

Subdivision and damage stability

Vessels of 100 metres in length and over, where the total number of persons carried is 100 or more, shall be capable, to the satisfaction of the Administration, of remaining afloat with positive stability, after the flooding of any one compartment assumed damaged, having regard to the type of vessel, the intended service and area of operation.†

CHAPTER IV

MACHINERY AND ELECTRICAL INSTALLATIONS AND PERIODICALLY UNATTENDED MACHINERY SPACES

PART A—GENERAL

Regulation 41

General

Machinery installations

(1) Main propulsion, control, steam pipe, fuel oil, compressed air, electrical and refrigeration systems; auxiliary machinery; boilers and other pressure vessels; piping and pumping arrangements; steering equipment and gears, shafts and couplings for power transmission shall be designed, constructed, tested, installed and serviced to the satisfaction of the Administration. This machinery and equipment, as well as lifting gear, winches, fish handling and fish processing equipment shall be protected so as to reduce to a minimum any danger to persons on board. Special attention shall be paid to moving parts, hot surfaces and other dangers.

(2) Machinery spaces shall be so designed as to provide safe and free access to all machinery and its controls as well as to any other parts which may require servicing. Such spaces shall be adequately ventilated.

(3) (a) Means shall be provided whereby the operational capability of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative. Special consideration shall be given to the functioning of—

(i) the arrangements which supply fuel oil pressure for main propulsion machinery;

(ii) the normal sources of lubricating oil pressure;

* See Guidance on a Method of Calculation of Bow Height contained in Recommendation 5 of Attachment 3 to the Final Act of the Conference.

† See Guidance on Subdivision and Damage Stability Calculations contained in Recommendation 6 of Attachment 3 to the Final Act of the Conference.

(iii) die hidrouliese pneumatiese en elektriese middels vir die beheer van die hoofaandrywingsmasjinerie, met inbegrip van reëlbaresteekskroewe;

(iv) die bronne van waterdruk vir hoofaandrywingverkoelingstelsels; en

(v) 'n lugkompressor en 'n lugontvanger vir aansit- of beheerdoeleindes;

met dien verstande dat die Administrasie, wat algehele veiligheidsoorwegings betref, 'n gedeeltelike vermindering in die vermoë, in plaas van die volle gewone werking mag aanvaar.

(b) Middels moet voorsien word waardeur die masjinerie van 'n kragaftoestand in werking gebring kan word sonder buitehulp.

(4) Hoofaandrywingsmasjinerie en alle hulpmasjinerie wat noodsaaklik is vir die aandrywing en die veiligheid van die vaartuig, moet, soos geïnstalleer, kan werk terwyl die vaartuig regop is of tot 15 grade slagsy na enige kant het onder statiese toestande en tot 22½ grade slagsy na enige kant onder dinamiese toestande, dit wil sê wanneer dit na enige kant rol en tegelykertyd hei (dinamiese oorgehel) tot 7½ grade by die boeg of agterstewe. Die Administrasie mag, met inagneming van die tipe, grootte en bedryfstoestande van die vaartuig, afwyking van hierdie hoeke toelaat.

(5) Spesiale oorweging moet geskenk word aan die ontwerp, bou en installasie van aandrywingsmasjineriestelsels sodat enige vibrasiemodus nie oormatige spanning in sodanige masjineriestelsels binne normale bedryfsperke veroorsaak nie.

Elektriese installasies

(6) Die ontwerp en bou van elektriese installasies moet sodanig wees dat dit die volgende verskaf:

(a) die dienste wat nodig is om die vaartuig in normale werk- en woontoestande te hou sonder gebruikmaking van 'n noodkragbron;

(b) die dienste wat noodsaaklik is vir veiligheid wanneer die hoof elektriese kragbron defek raak; en

(c) beskerming van die bemanning en vaartuig teen die gevare van elektrisiteit.

(7) Die Administrasie moet tevrede wees dat Regulasies 54 tot 56 eenvormig geïmplementeer en toegepas word.*

Periodiek onbediende masjinerieruimtes

(8) Regulasies 57 tot 62 is, benewens Regulasies 41 tot 56 en 63 tot 105, van toepassing op vaartuie met periodiek onbediende masjienerieruimtes.

(9) Maatreëls moet tot tevredenheid van die Administrasie getref word om te verseker dat alle toerusting op 'n betroubare wyse funksioneer in alle bedryfstoestande, met ingebrip van maneuvrering, en dat reëlings tot tevredenheid van die Administrasie getref word vir gereelde inspeksies en roetinetoetse om voortdurende betroubare werking te verseker.

(10) Dokumentêre bewys van hul geskiktheid om met periodiek onbediende masjinerieruimtes op te tree, moet tot tevredenheid van die Administrasie aan vaartuie verskaf word.

* Kyk ook *Recommendation published by the International Electrotechnical Commission* en in die besonder *Publication 92 Electrical Installations in Ships*.

(iii) the hydraulic, pneumatic and electrical means for the control of main propulsion machinery including controllable pitch propellers;

(iv) the sources of water pressure for main propulsion cooling systems; and

(v) an air compressor and an air receiver for starting or control purposes;

provided that the Administration may, having regard to overall safety considerations, accept a partial reduction in capability in lieu of full normal operation.

(b) Means shall be provided whereby the machinery can be brought into operation from the dead ship condition without external aid.

(4) Main propulsion machinery and all auxiliary machinery essential to the propulsion and the safety of the vessel shall, as fitted, be capable of operating whether the vessel is upright or listed up to 15 degrees either way under static conditions and up to 22½ degrees either way under dynamic conditions, i.e. when rolling either way and simultaneously pitching (inclined dynamically) up to 7½ degrees by bow or stern. The Administration may permit deviation from these angles, taking into consideration the type, size and service conditions of the vessel.

(5) Special consideration shall be given to the design, construction and installation of propulsion machinery systems so that any mode of their vibrations shall not cause undue stresses in such machinery sysems in the normal operating ranges.

Electrical installations

(6) The design and construction of electrical installations shall be such as to provide—

(a) the services necessary to maintain the vessel in normal operational and habitable conditions without having recourse to an emergency source of power;

(b) the services essential to safety when failure of the main source of electrical power occurs; and

(c) protection of the crew and vessel from electrical hazards.

(7) The Administration shall be satisfied that Regulations 54 to 56 are uniformly implemented and applied.*

Periodically unattended machinery spaces

(8) Regulations 57 to 62 shall apply, in addition to Regulations 41 to 56 and 63 to 105, to vessels with periodically unattended machinery spaces.

(9) Measures shall be taken to the satisfaction of the Administration to ensure that all equipment is functioning in a reliable manner in all operating conditions, including manoeuvring, and that arrangements to the satisfaction of the Administration are made for regular inspections and routine tests to ensure continuous reliable operation.

(10) Vessels shall be provided with documentary evidence to the satisfaction of the Administration of their fitness to operate with periodically unattended machinery spaces.

* See also Recommendation published by the International Electrotechnical Commission and in particular Publication 92 Electrical Installations in Ships.

DEEL B—MASJINERIE-INSTALLASIES

(Kyk ook Regulasie 41)

Regulasie 42

Masjinerie

(1) Hoof- en hulpmasjinerie wat noodsaaklik is vir die aandrywing en veiligheid van die vaartuig, moet van doeltreffende kontrolemiddels voorsien wees.

(2) Binnebrandenjins met 'n silinderdiameter van meer as 200 millimeter of 'n krukkasvolume van meer as 0,6 kubieke meter moet voorsien wees van krukkasplofontlaskleppe van 'n goedgekeurde tipe met toereikende ontlasruimte.

(3) Waar hoof- of hulpmasjinerie, met inbegrip van drukhouers of enige dele van sodanige masjinerie, onderhewig is aan binnedruk en aan gevaarlike oordruk onderhewig kan wees, moet daar, waar van toepassing, middels wees wat teen sodanige oormatige druk beveiliging sal bied.

(4) Alle ratwerk en elke as en koppeling wat gebruik word vir die oorbring van krag na masjinerie wat noodsaaklik is vir die aandrywing en veiligheid van die vaartuig of die veiligheid van persone aan boord, moet so ontwerp en gebou wees dat dit die maksimum werkspanning waaraan dit in alle dienstoestande onderhewig kan wees, sal weerstaan. Behoorlike oorweging moet geskenk word aan die tipe enjins waardeur dit aangedryf word of waarvan dit deel uitmaak.

(5) Hoofaandrywingsmasjinerie en, waar van toepassing, hulpmasjinerie moet voorsien wees van outomatiese afsluitinrigtings in geval van onklaarraking, soos smeerolietoevoeronderbreking, wat maklik tot skade, algehele onklaarraking of ontploffing kan lei. Daar moet ook 'n vooralarm wees sodat die waarskuwing voor die outomatiese afsluiting gegee word, maar die Administrasie mag voorsiening toelaat vir die oorheersing van outomatiese afsluittoestelle. Die Administrasie mag met inagneming van die tipe vaartuig of sy spesifieke diens, vaartuie ook vrystel van die bepalings van hierdie paragraaf.

Regulasie 43

Vermoë om agteruit te vaar

(1) Vaartuie moet voldoende krag hê om agteruit te vaar sodat behoorlike beheer oor die vaartuig in alle normale omstandighede verseker kan word.

(2) Daar moet op see gedemonstreer word in watter mate die masjinerie die vermoë besit om die stootkragrigting van die skroef om te keer en sodoende die vaartuig van die maksimum dienssnelheid vorentoe binne 'n redelike afstand tot stilstand te bring.

Regulasie 44

Stoomketels, toevoerstelsels en stoompypinrigtings

(1) Elke stoomketel en elke ongestookte stoomontwikkelaar moet voorsien wees van minstens twee veiligheidskleppe van toereikende kapasiteit. Met dien verstande dat die Administrasie, wat die lewering of enige ander kenmerke van enige stoomketel of ongestookte stoomontwikkelaar betref, mag toelaat dat slegs een veiligheidsklep aangebring word, indien hy tevrede is dat toereikende beveiliging teen oordruk daardeur gebied word.

(2) Elke oliegestookte stoomketel wat bedoel is om sonder bedienertoesig te werk, moet veiligheidsinrigtings hê wat die brandstoftoevoer afsluit en 'n alarm gee in geval van 'n lae watervlak, lugtoevoeronderbreking of vlamuitdowing.

PART B—MACHINERY INSTALLATIONS

(See also Regulation 41)

Regulation 42

Machinery

(1) Main and auxilliary machinery essential for the propulsion and safety of the vessel shall be provided with effective means of control.

(2) Internal combustion engines of a cylinder diameter greater than 200 millimetres or a crankcase volume greater than 0,6 cubic metres shall be provided with crankcase explosion relief valves of an approved type with sufficient relief area.

(3) Where main or auxiliary machinery including pressure vessels or any parts of such machinery are subject to internal pressure and may be subject to dangerous overpressure, means shall be provided, where applicable, which will protect against such excessive pressure.

(4) All gearing and every shaft and coupling used for transmission of power to machinery essential for the propulsion and safety of the vessel or the safety of persons on board shall be so designed and constructed that it will withstand the maximum working stresses to which it may be subjected in all service conditions. Due consideration shall be given to the type of engines by which it is driven or of which it forms part.

(5) Main propulsion machinery and, where applicable, auxiliary machinery shall be provided with automatic shut-off arrangements in the case of failures, such as lubricating oil supply failure, which could lead rapidly to damage, complete breakdown or explosion. An advance alarm shall also be provided so that warning is given before automatic shut-off but the Administration may permit provisions for overriding automatic shut-off devices. The Administration may also exempt vessels from the provisions of this paragraph, giving consideration to the type of vessel or its specific service.

Regulation 43

Means of going astern

(1) Vessels shall have sufficient power for going astern to secure proper control of the vessel in all normal circumstances.

(2) The ability of the machinery to reverse the direction of thrust of the propeller in sufficient time and so to bring the vessel to rest within a reasonable distance from maximum ahead service speed shall be demonstrated at sea.

Regulation 44

Steam boilers, feed systems and steam piping arrangements

(1) Every steam boiler and every unfired steam generator shall be provided with not less than two safety valves of adequate capacity. Provided that the Administration may, having regard to the output or any other features of any steam boiler or unfired steam generator, permit only one safety valve to be fitted if satisfied that adequate protection against overpressure is thereby provided.

(2) Every oil-fired steam boiler which is intended to operate without manual supervision shall have safety arrangements which shut off the fuel supply and give an alarm in the case of low water level, air supply failure or flame failure.

(3) Die Administrasie moet spesiale aandag skenk aan stoomketelinstallasies om te verseker dat toevoerstelsels, moniteertoestelle en veiligheidsvoorsorg in alle opsigte toereikend is om die veiligheid van ketels, stoomdrukhouers en stoompypinrigtings te verseker.

Regulasie 45

Kommunikasie tussen die stuurhuis en masjinerieruimte

Twee afsonderlike kommunikasiemiddels tussen die stuurhuis en die masjinerieruimtebeheerplatform moet voorsien word. Een van die middels moet 'n enjinkamertelegraaf wees, maar die Administrasie mag by vaartuie met 'n lengte van minder as 45 meter waar die aandrywingsmasjinerie direk vanuit die stuurhuis beheer word, ander kommunikasiemiddels as 'n enjinkamertelegraaf aanvaar.

Regulasie 46

Stuurhuisbeheer van aandrywingsmasjinerie

(1) Waar afstandsbeheer van aandrywingsmasjinerie vanuit die stuurhuis voorsien word, is die volgende van toepassing:

(a) In alle bedryfstoestande, met inbegrip van maneuvrering, moet die snelheid, stootkragrigting en, indien van toepassing, die steek van die skroef ten volle vanuit die stuurhuis beheerbaar wees.

(b) Die afstandsbeheer waarvan in subparagraaf (a) melding gemaak is, moet tot tevredenheid van die Administrasie uitgeoefen word deur middel van 'n beheertoestel met, waar nodig, middels om die oorbelasting van die aandrywingsmasjinerie te voorkom.

(c) Die hoofaandrywingsmasjinerie moet toegerus wees met 'n noodstoptoestel in die stuurhuis wat onafhanklik is van die stuurhuisbeheerstelsel waarvan in subparagraaf (a) melding gemaak is.

(d) Afstandsbeheer van die aandrywingsmasjinerie mag slegs van een beheerpos op 'n keer moontlik wees: by enige beheerpos mag vergrendelde beheereenhede toegelaat word. By elke beheerpos moet daar 'n aanwyser wees wat toon watter pos in beheer van die aandrywingsmasjinerie is. Die oordrag van beheer tussen die stuurhuis en die masjinerieruimtes mag slegs in die masjinerieruimte of beheerkamer moontlik wees. By vaartuie met 'n lengte van minder as 45 meter mag die Administrasie toelaat dat die beheerpos in die masjinerieruimte slegs 'n noodpos is, mits die monitering en beheer in die stuurhuis voldoende is.

(e) Aanwysers moet in die stuurhuis aangebring word vir—

(i) skroefsnelheid en -rigting in die geval van vaste skroewe;

(ii) skroefsnelheid en -steekposisie in die geval van reëlbaresteekskroewe; en

(iii) vooralarm soos vereis by Regulasie 42 (5).

(f) Dit moet moontlik wees om die aandrywingsmasjinerie plaaslik te beheer, selfs in die geval van onklaarraking van enige deel van die afstandbeheerstelsel.

(g) Tensy die Administrasie dit onprakties ag, moet die ontwerp van die afstandbeheerstelsel sodanig wees dat indien dit defek raak, 'n alarm gegee word en die voorafgestelde snelheid en stootkragrigting gehandhaaf word totdat plaaslike beheer in werking is.

(h) Spesiale inrigtings moet voorsien word om te verseker dat outomatiese aansit nie die aansitmoontlikhede uitput nie. 'n Alarm moet voorsien word om lae aansitlugdruk aan te dui en moet op 'n peil gestel word wat steeds die hoofenjinaansitwerking sal toelaat.

(3) The administration shall give special consideration to steam boiler installations to ensure that feed systems, monitoring devices, and safety provisions are adequate in all respects to ensure the safety of boilers, steam pressure vessels and steam piping arrangements.

Regulation 45

Communication between the wheelhouse and machinery space

Two separate means of communication between the wheelhouse and the machinery space control platform shall be provided. One of the means shall be an engine room telegraph except that in vessels of less than 45 metres in length, where the propulsion machinery is directly controlled from the wheelhouse, the Administration may accept means of communication other than an engine room telegraph.

Regulation 46

Wheelhouse control of propulsion machinery

(1) Where remote control of propulsion machinery is provided from the wheelhouse, the following shall apply:

(a) Under all operating conditions, including manoeuvring, the speed, direction of thrust and, if applicable, the pitch of the propeller shall be fully controllable from the wheelhouse.

(b) The remote control referred to in sub-paragraph (a) shall be performed by means of a control device to the satisfaction of the Administration with, where necessary, means of preventing overload of the propulsion machinery.

(c) The main propulsion machinery shall be provided with an emergency stopping device in the wheelhouse and independent from the wheelhouse control system referred to in subparagraph (a).

(d) Remote control of the propulsion machinery shall be possible only from one sation at a time: at any control station interlocked control units may be permitted. There shall be at each station an indicator showing which station is in control of the propulsion machinery. The transfer of control between the wheelhouse and machinery spaces shall be possible only in the machinery space or control room. On vessels of less than 45 metres in length the Administration may permit the control station in the machinery space to be an emergency station only, provided that the monitoring and control in the wheelhouse is adequate.

(e) Indicators shall be fitted in the wheelhouse for—

(i) propeller speed and direction in the case of fixed propellers;

(ii) propeller speed and pitch position in the case of controllable pitch propellers; and

(iii) advance alarm as required in Regulation 42 (5).

(f) It shall be possible to control the propulsion machinery locally even in the case of failure in any part of the remote control system.

(g) Unless the Administration considers it impracticable the design of the remote control system shall be such that if it fails an alarm will be given and the pre-set speed and direction of thrust will be maintained until local control is in operation.

(h) Special arrangements shall be provided to ensure that automatic starting shall not exhaust the starting possibilities. An alarm shall be provided to indicate low starting air pressure and shall be set at a level which will still permit main engine starting operations.

(2) Waar die hoofaandrywings- en hulpmasjinerie, met inbegrip van bronne van hoofelektriese toevoer, voorsien is van verskeie vlakke van outomatiese of afstandsbeheer en voortdurend onder bemande toesig uit 'n beheerkamer is, moet die beheerkamer sodanig ontwerp, toegerus en geïnstalleer wees dat die masjineriebediening net so veilig en doeltreffend sal wees as wanneer dit onder direkte toesig sou wees.

(3) In die algemeen moet outomatiese aansit-, bedienings- en beheerstelsels middels insluit om die outomatiese middels met die hand uit te skakel, selfs in die geval van onklaarraking van enige deel van die outomatiese en afstandbeheerstelsel.

Regulasie 47

Ludgrukstelsels

(1) Middels moet voorsien word om oormaatdruk te voorkom in enige deel van druklugstelsels en waar watermantels of kaste van lugkompressors en verkoelers ook al aan gevaarlike oormaatdruk onderhewig kan wees as gevolg van 'n lekkasie in hulle in vanuit lugdrukdele. Geskikte drukontlasinrigtings moet voorsien word.

(2) Die hoofaansitluginrigtings vir hoofaandrywingsbinnebrandenjins moet toereikend beveilig wees teen die effekte van terugploffing en binne-ontploffing in die aansitlugpype.

(3) Alle afvoerpype van die aansitlugkompressors moet direk na die aansitlugontvangers lei en al die aansitpype van die lugontvangers na die hoof- of hulpenjins moet heeltemal afsonderlik van die kompressorafvoerpypstelsel wees.

(4) Voorsiening moet gemaak word om die inlating van olie in die lugdrukstelsels tot 'n minimum te beperk en om hierdie stelsels te dreineer.

Regulasie 48

Reëlings betreffende brandolie, smeerolie en ander vlambare olie

(1) Geen brandolie met 'n flitspunt van laer as 60 grade Celsius (geslote-houertoets), soos bepaal met 'n goedgekeurde flitspuntapparaat, mag as brandstof gebruik word nie, behalwe by noodgenerators, in welke geval die flitspunt nie laer as 43 grade Celsius mag wees nie; met dien verstande dat die Administrasie die algemene gebruik van brandolie met 'n flitspunt van minstens 43 grade Celsius mag toelaat, onderworpe aan sodanige bykomende voorsorgmaatreëls as wat hy nodig mag ag en op voorwaarde dat die temperatuur van die ruimte waarin sodanige brandstof geberg of gebruik word, nie tot binne 10 grade Celsius onder die flitspunt van die brandstof mag styg nie.

(2) Veilige en doeltreffende middels moet voorsien word waarmee die hoeveelheid brandolie in enige olietenk vasgestel kan word. Indien peilpype geïnstalleer word, moet hul bopunte in veilige posisies eindig en moet hulle met geskikte toemaakmiddels toegerus wees. Buisvormige meterglase mag nie aangebring word nie, maar geskik beskermde meters met plat glase van aansienlike dikte en selfsluittoebehore mag gebruik word. Ander middels om die hoeveelheid brandolie in enige brandolietenk vas te stel, kan toegelaat word mits hulle onklaarraking of die oorvulling van die tenks nie die vrylating van brandstof sal toelaat nie.

(3) Voorsiening moet gemaak word om oordruk te voorkom in enige olietenk of in enige deel van die brandoliestelsel, insluitend die vulpype. Ontlaskleppe en lug- of oorlooppype moet afvoer na plekke en op 'n wyse wat veilig is.

(2) Where the main propulsion and associated machinery including sources of main electrical supply are provided with various degrees of automatic or remote control and are under continuous manned supervision from a control room, the control room shall be so designed, equipped and installed that the machinery operation will be as safe and effective as if it were under direct supervision.

(3) In general, automatic starting, operational and control systems shall include means for manually overriding the automatic means, even in the case of failure of any part of the automatic and remote control system.

Regulation 47

Air pressure systems

(1) Means shall be provided to prevent excess pressure in any part of compressed air systems and wherever water-jackets or casings of air compressors and coolers might be subjected to dangerous excess pressure due to leakage into them from air pressure parts. Suitable pressure-relief arrangements shall be provided.

(2) The main starting air arrangements for main propulsion internal combustion engines shall be adequately protected against the effects of backfiring and internal explosion in the starting air pipes.

(3) All discharge pipes from starting air compressor shall lead directly to the starting air receivers and all starting pipes from the air receivers to main or auxiliary engines shall be entirely separate from the compressor discharge pipe system.

(4) Provision shall be made to reduce to a minimum the entry of oil into the air pressure systems and to drain these systems.

Regulation 48

Arrangements for fuel oil, lubricating oil and other flammable oils

(1) Fuel oil which has a flashpoint of less than 60 degrees celsius (closed cup test) as determined by an approved flashpoint apparatus shall not be used as fuel, except in emergency generators, in which case the flashpoint shall be not less than 43 degrees celsius. Provided that the Administration may permit the general use of fuel oil having a flashpoint of not less than 43 degrees celsius subject to such additional precautions as it may consider necessary and on condition that the temperature of the space in which such fuel is stored or used shall not rise to within 10 degrees celsius below the flashpoint of the fuel.

(2) Safe and efficient means of ascertaining the amount of fuel oil contained in any oil tank shall be provided. If sounding pipes are installed, their upperends shall terminate in safe positions and shall be fitted with suitable means of closure. Tubular gauge glasses shall not be fitted, but suitably protected gauges having flat glasses of substantial thickness and self-closing fittings may be used. Other means of ascertaining the amount of fuel oil contained in any fuel oil tank may be permitted providing their failure or overfilling of the tanks will not permit release of fuel.

(3) Provision shall be made to prevent overpressure in any oil tank or in any part of the fuel oil system including the filling pipes. Relief valves and air or overflow pipes shall discharge to a position and in a manner which is safe.

(4) Onderworpe aan die tevredenheid van die Administrasie moet brandoliepype wat, as dit beskadig is, olie sou laat ontsnap uit 'n bergingstenk, 'n sinktenk of daaglikse dienstenk wat bo die dubbelboom geleë is, met 'n kraan of klep aan die tenk toegerus wees wat vanaf 'n veilige plek buite die betrokke ruimte toegemaak kan word ingeval 'n brand ontstaan binne die ruimte waarin sodanige tenk geleë is. In die spesiale geval van diep tenks wat binne enige as- of pyptonnel of dergelike ruimte geleë is, moet kleppe aan die tenks aangebring wees, maar beheer kan in die geval van 'n brand bewerkstellig word deur middel van 'n bykomende klep in die pyp of pype buite die tonnel of dergelike ruimte. Indien sodanige bykomende klep in die masjinerieruimte aangebring word, moet dit van buite hierdie ruime beheer kan word.

(5) Pompe wat deel van die brandoliestelsel vorm, moet afsonderlik van enige ander stelsel wees en die koppelings van enige sodanige pompe moet toegerus wees met 'n doeltreffende ontlasklep, wat in geslote kring moet wees. Waar brandolietenks ook as tenks vir vloeibare ballas gebruik word, moet behoorlike middels voorsien word om die brandolie- en ballasstelsels te isoleer.

(6) Geen olietenk mag geleë wees waar die oorloop of 'n lek daaruit 'n gevaar kan skep deur olie op verhitte oppervlakke te laat drup nie. Voorsorg moet getref word om te verhoed dat enige olie wat onder druk uit enige pomp, filter of verwarmer ontsnap, met verhitte oppervlakke in aanraking kom.

(7) (a) Brandoliepype en hul kleppe en toebehore moet van staal of ander ekwivalente materiaal wees, met dien verstande dat buigbare pype toelaatbaar is op plekke waar die Administrasie daarvan oortuig is dat hulle nodig is. Sulke buigbare pype en hulle eindstukke moet 'n toereikende sterkte hê en moet tot tevredenheid van die Administrasie gemaak wees van goedgekeurde brandbestande materiale of brandbestande deklae hê.

(b) Waar nodig, moet brandolie- en smeeroliepypleidings afgeskerm of andersins geskik beskerm word om sover doenlik oliespuiting of olielekke op verhitte oppervlakke of in masjinerieluginlate te verhoed. Die aantal lasse in pypstelsels moet tot die minimum beperk word.

(8) Sover doenlik moet olietenks deel van die vaartuig se struktuur uitmaak en moet hulle buite die masjinerieruimtes van Kategorie A geleë wees. Waar ander brandolietenks as dubbelboomtenks noodwendig langs of in masjinerieruimtes van Kategorie A geplaas is, moet minstens een van hul vertikale sye aanliggend aan die masjinerieruimtegrense wees en moet hulle verkieslik 'n gemeenskaplike grens met die dubbelboomtenks, as daar is, hê, en die oppervlakte van die gemeenskaplike grens wat die tenk met die masjinerieruimte het, moet tot die minimum beperk word. Wanneer sulke tenks binne die grense van masjinerieruimtes van Kategorie A geplaas is, mag hulle nie brandolie met 'n flitspunt van laer as 60 grade Celsius (geslote-houertoets) bevat nie. In die algemeen moet die gebruik van losstaande brandolietenks in brandgevaargebiede vermy word, en veral in masjinerieruimtes van Kategorie A. Wanneer losstaande brandolietenks toegelaat word, moet hulle geplaas word in 'n ruim oliedigte stortpan met 'n geskikte dreineringspyp wat na 'n stortolietenk van gepaste grootte lei.

(9) Die ventilasie van masjinerieruimtes moet in alle normale omstandighede voldoende wees om die akkumulering van oliedampe te verhoed.

(10) Die inrigtings vir die berging, verspreiding en gebruik van olie wat in 'n druksmeerstelsel gebruik word, moet die Administrasie tevrede stel. Sodanige inrigtings in masjinerieruimtes van Kategorie A en, waar doenlik, in ander masjinerieruimtes moet ten minste voldoen aan die

(4) Subject to the satisfaction of the Administration, fuel oil pipes which, if damaged, would allow oil to escape from a storage, settling or daily service tank situated above the double bottom, shall be fitted with a cock or valve on the tank capable of being closed from a safe position outside the space concerned in the event of a fire arising in the space in which such tanks are situated. In the special case of deep tanks situated in any shaft or pipe tunnel or similar space, valves on the tank shall be fitted but control in the event of fire may be effected by means of an additional valve on the pipe or pipes outside the tunnel or similar space. If such additional valve is fitted in the machinery space it shall be capable of being operated outside this space.

(5) Pumps forming part of the fuel oil system shall be separate from any other system and the connections of any such pumps shall be provided with an efficient relief valve which shall be in closed circuit. Where fuel oil tanks are alternatively used as liquid ballast tanks, proper means shall be provided to isolate the fuel oil and ballast systems.

(6) No oil tank shall be situated where spillage or leakage therefrom can constitute a hazard by falling on heated surfaces. Precautions shall be taken to prevent any oil that may escape under pressure from any pump, filter or heater from coming into contact with heated surfaces.

(7) (a) Fuel oil pipes and their valves and fittings shall be of steel or other equivalent material, provided that restricted use of flexible pipes may be permitted in positions where the Administation is satisfied that they are necessary. Such flexible pipes and end attachments shall be of adequate strength and shall, to the satisfaction of the Administration, be constructed of approved fire-resistant materials or have fire-resistant coatings.

(b) Where necessary, fuel oil and lubricating oil pipelines shall be screened or otherwise suitably protected to avoid, as far as praticable, oil spray or oil leakage on heated surfaces or into machinery air intakes. The number of joints in piping systems shall be kept to a minimum.

(8) As far as practicable, fuel oil tanks shall be part of the vessel's structure and shall be located outside machinery spaces of Category A. Where fuel oil tanks, other than double bottom tanks, are necessarily located adjacent to or within machinery spaces of Category A, at least one of their vertical sides shall be contiguous to the machinery space boundaries, and shall preferably have a common boundary with the double bottom tanks where fitted and the area of the tank boundary common with the machinery space shall be kept to a minimum. When such tanks are sited within the boundaries of machinery spaces of Category A they shall not contain fuel oil having a flashpoint of less than 60 degrees celsius (closed cup test). In general, the use of free-standing fuel oil tanks shall be avoided in fire hazard areas, and particularly in machinery spaces of Category A. When free-standing fuel oil tanks are permitted, they shall be placed in an oil-tight spill tray of ample size having a suitable drain pipe leading to a suitably sized spill oil tank.

(9) The ventilation of machinery spaces shall be sufficient under all normal conditions to prevent accummulation of oil vapour.

(10) The arrangements for the storage, distribution and use of oil employed in pressure lubrication systems shall be to the satisfaction of the Administration. Such arrangement in machinery spaces of Category A and, wherever practicable, in other machinery spaces shall at least comply with

bepalings van paragrawe (1), (3), (6) en (7) en, in soverre die Administrasie dit nodig ag, van paragrawe (2) en (4). Dit sluit nie die gebruik van vloeisigglase in die smeerstelsels uit nie, mits 'n toets getoon het dat hulle 'n geskikte mate van brandbestandheid het.

(11) Die inrigtings vir die berging, verspreiding en gebruik van vlambare olie wat onder druk in kragtransmissiestelsels, uitgesonderd olie waarvan in paragraaf (10) melding gemaak is, in beheer- en aktiveringstelsels en verwarmingstelsels gebruik word, moet die Administrasie tevrede stel. Op plekke waar ontstekingsmiddels aanwesig is, moet sodanige inrigtings ten minste voldoen aan die bepalings van paragrawe (2) en (6) en aan die bepalings van paragrawe (3) en (7) ten opsigte van sterkte en konstruksie.

Regulasie 49

Lenspompinrigtings

(1) 'n Doeltreffende lenspompinstallasie moet voorsien word wat in alle praktiese toestande daartoe in staat sal wees om enige waterdigte kompartement wat nòg 'n permanente olietenk nòg 'n permanente watertenk is, ongeag of die vaartuig regop is of slagsy het, leeg te pomp en te dreiner. Vir dié doel moet suigleidings aan die kante, indien nodig, aangebring word. Maatreëls moet getref word sodat water maklik na die suigpype kan vloei. Mits die Administrasie daarvan oortuig is dat die veiligheid van die vaartuig nie in gevaar gestel word nie, hoef daar in besondere kompartemente nie lenspompinrigtings aangebring te word nie.

(2) (a) Minstens twee onafhanklik aangedrewe kraglenspompe moet voorsien word, waarvan een deur die hoofenjin aangedryf kan word. 'n Ballaspomp of ander algemenedienspomp met toereikende kapasiteit kan as 'n kraglenspomp gebruik word.

(b) Elke kraglenspomp moet in staat wees om water teen 'n snelheid van minstens 2 meter per sekonde te pomp deur die hooflensleiding, wat 'n binnediameter moet hê van minstens:

$$d = 25 + 1{,}68 \sqrt{L(B + D)}$$

waar d die binnediameter in millimeter en L, B en D in meter is.

(c) Elke lenspomp wat ooreenkomstig hierdie regulasie voorsien word, moet voorsien wees van direkte lenssuigleiding, met een suigleiding wat van die bakboordkant van die masjinerieruimte af pomp en die ander van die stuurboordkant af, behalwe dat in die geval van 'n vaartuig met 'n lengte van minder as 75 meter slegs een lenspomp met 'n direkte lenssuigleiding voorsien hoef te word.

(d) Geen lenssuigleiding mag 'n binnediameter van minder as 50 millimeter hê nie. Die inrigting en grootte van die lenspompstelsel moet sodanig wees dat die volle aangeslane vermoë van die pomp hierbo gespesifiseer in elke waterdigte kompartement tussen die aanvarings- en agterpiekskot aangewend kan word.

(3) 'n Kimwaterejekteur tesame met 'n onafhanklik aangedrewe hoëdrukseewaterpomp mag geïnstalleer word as 'n vervanging van een onafhanklik aangedrewe lenspomp wat by paragraaf (2) (a) vereis word, mits hierdie inrigting die Administrasie tevrede stel.

(4) By vaartuie waar vishantering of -verwerking kan veroorsaak dat hoeveelhede water in ingeslote ruimtes versamel, moet voldoende dreinering voorsien word.

(5) Lenspype mag nie deur brandolie-, ballas of dubbelboomtenks loop nie, tensy hierdie pype van dik staal gemaak is.

(6) Die inrigting van die lens- en ballaspompstelsel moet sodanig wees dat dit sal verhoed dat water vanuit die see of vanuit waterballasruimtes die ruime of masjinerieruimtes

the provisions of paragraphs (1), (3), (6) and (7) and in so far as the Administration may consider necessary with paragraphs (2) and (4). This does not preclude the use of sight flow glasses in lubrication systems provided they are shown by test to have a suitable degree of fire resistance.

(11) The arrangements for the storage, distribution and use of flammable oils employed under pressure in power transmission systems other than oils referred to in paragraph (10) in control and activating systems and heating systems shall be to the satisfaction of the Administration. In locations where means of ignition are present such arrangements shall at least comply with the provisions of paragraphs (2) and (6) and with the provisions of paragraphs (3) and (7) in respect of strength and construction.

Regulation 49

Bilge pumping arrangements

(1) An efficient bilge pumping plant shall be provided which under all practical conditions shall be capable of pumping from and draining any watertight compartment which is neither a permanent oil tank nor a permanent water tank whether the vessel is upright or listed. Wing suctions shall be provided if necessary for that purpose. Arrangements shall be provided for easy flow of water to the suction pipes. Provided the Administration is satisfied that the safety of the vessel is not impaired the bilge pumping arrangements may be dispensed within particular compartments.

(2) (a) At least two independently driven power bilge pumps shall be provided, one of which may be driven by the main engine. A ballast pump or other general service pump of sufficient capacity may be used as a power driven bilge pump.

(b) Power bilge pumps shall be capable of giving a speed of water of at least 2 metres per second through the main bilge pipe which shall have an internal diameter of at least:

$$d = 25 + 1{,}68 \sqrt{L(B + D)}$$

where: d is the internal diameter in millimetres, and L, B and D are in metres.

(c) Each of the bilge pumps provided in accordance with this Regulation shall be provided with a direct bilge suction, one of these suctions drawing from the port side of the machinery space and the other from the starboard side, except that in the case of a vessel of less than 75 metres in length only one bilge pump need be provided with a direct bilge suction.

(d) No bilge suction shall have an inside diameter of less than 50 millimetres. The arrangement and sizing of the bilge systems shall be such that the full rated capacity of the pump specified above can be applied to each of the watertight compartments located between the collision and afterpeak bulkheads.

(3) A bilge ejector in combination with an independently driven high pressure sea-water pump may be installed as a substitute for one independently driven bilge pump required by paragraph (2) (a), provided this arrangement is to the satisfaction of the Administration.

(4) In vessels where fish handling or processing may cause quantitites of water to accumulate in enclosed spaces, adequate drainage shall be provided.

(5) Bilge pipes shall not be led through fuel oil, ballast or double bottom tanks, unless these pipes are of heavy gauge steel construction.

(6) Bilge and ballast pumping systems shall be arranged so as to prevent water passing from the sea or from water ballast spaces into holds or into machinery spaces or from

binnekom, of van die een waterdigte kompartement na die ander vloei. Die lenskoppeling aan enige pomp wat water uit die see of uit waterballasruimtes pomp, moet voorsien word van òf 'n terugslagklep òf 'n kraan wat nie gelyktydig òf na die kimme en na die see òf na die kimme en na die waterballasruimtes oopgemaak kan word nie. Kleppe in verdeelkaste van die lenspompstelsel moet van die terugslagtipe wees.

(7) Enige lenspyp wat deur 'n aanvaringsskot loop, moet voorsien wees van 'n positiewe afsluitmiddel by die skot met afstandbeheer vanaf die werkdek en 'n aanwyser wat die posisie van die klep toon, met dien verstande dat indien die klep aan die agterkant van die skot aangebring is en geredelik in alle dienstoestande toeganklik is, afstandsbeheer nie aangebring hoef te word nie.

Regulasie 50

Beskerming teen geraas

Maatreëls moet getref word om die effekte van geraas op personeel in masjinerieruimtes te beperk tot peile wat die Administrasie tevrede stel.

Regulasie 51

Stuurinrigting

(1) Vaartuie moet tot tevredenheid van die Administrasie toegerus wees met 'n hoofstuurinrigting en hulptoerusting om die roer te bedien. Die hoofstuurinrigting en die hulptoerusting om die roer te bedien moet so ingerig wees dat vir sover dit redelik en doenlik is, 'n enkele onklaarraking in een van hulle nie die ander een buite werking sal stel nie.

(2) Waar die hoofstuurinrigting twee of meer identiese krageenhede insluit, hoef 'n hulpstuurinrigting nie aangebring te word indien die hoofstuurinrigting die roer kan bedien soos vereis by paragraaf (10), wanneer een van die eenhede buite werking is nie. Elke krageenheid moet deur 'n afsonderlike stroombaan bedien word.

(3) Die posisie van die roer, indien kragaangedrewe, moet in die stuurhuis aangedui word. Die roerhoekaanwysing vir kragaangedrewe stuurinrigtings moet onafhanklik van die stuurinrigtingbeheerstelsel wees.

(4) In die geval van onklaarraking van enige van die stuurinrigtingeenhede moet 'n alarm in die stuurhuis gegee word.

(5) Wysers vir loopaanwysing van die motore van elektriese en elektrohidrouliese stuurinrigtings moet in die stuurhuis geïnstalleer word. Kortsluitingsbeveiliging, 'n oorbelasalarm en 'n nulspanningsalarm moet vir hierdie stroombane en motore voorsien word. Beveiliging teen 'n oormaatstroom, indien dit voorsien word, moet vir minstens twee maal die volle lasstroom van die motor of stroombaan wat so beveilig word, wees en moet so ingerig wees dat dit die toepaslike aansitstrome deurlaat.

(6) Die hoofstuurinrigting moet sterk genoeg en voldoende wees om die vaartuig in maksimum dienssnelheid te stuur. Die hoofstuurinrigting en roerkoning moet so ontwerp wees dat hulle nie in maksimum snelheid agtertoe of deur maneuvrering gedurende visvangbedrywighede beskadig sal word nie.

(7) Die hoofstuurinrigting moet, met die vaartuig by sy maksimum toelaatbare bedryfsdiepgang, in staat wees om die roer vanaf 35 grade aan die een kant tot 35 grade aan die ander kant oor te bring wanneer die vaartuig teen die maksimum dienssnelheid vorentoe vaar. Die roer moet in staat wees om in dieselfde toestande hoogstens 28 sekondes vanaf 35 grade aan enige kant tot 30 grade aan die ander kant oorgebring te word. Die hoofstuurinrigting moet, waar nodig, kragaangedrewe wees om aan hierdie vereistes te voldoen.

one watertight compartment to another. The bilge connexion to any pump which draws from the sea or from water ballast spaces shall be fitted with either a non-return valve or a cock which cannot be opened simultaneously either to the bilges and to the sea or to the bilges and water ballast spaces. Valves in bilge distribution boxes shall be of a non-return type.

(7) Any bilge pipe piercing a collision bulkhead shall be fitted with a positive means of closing at the bulkhead with remote control from the working deck with an indicator showing the position of the valve provided that, if the valve is fitted on the after side of the bulkhead and is readily accessible under all service conditions, the remote control may be dispensed with.

Regulation 50

Protection against noise

Measures shall be taken to reduce the effects of noise upon personnel in machinery spaces to levels satisfactory to the Administration.

Regulation 51

Steering gear

(1) Vessels shall be provided with a main steering gear and an auxiliary means of actuating the rudder to the satisfaction of the Administration. The main steering gear and the auxiliary means of actuating the rudder shall be arranged so that so far as is reasonable and practicable a single failure in one of them will not render the other one inoperative.

(2) Where the main steering gear comprises two or more identical power units an auxiliary steering gear need not be fitted if the main steering gear is capable of operating the rudder as required by paragraph (10) when any one of the units is out of operation. Each of the power units shall be operated from a separate circuit.

(3) The position of the rudder, if power operated, shall be indicated in the wheelhouse. The rudder angle indication for power-operated steering gear shall be independent of the steering gear control system.

(4) In the event of failure of any of the steering gear units an alarm shall be given in the wheelhouse.

(5) Indicators for running indication of the motors of electric and electrohydraulic steering gear shall be installed in the wheelhouse. Short circuit protection, an overload alarm and a no-voltage alarm shall be provided for these circuits and motors. Protection against excess current, if provided, shall be for not less than twice the full load current of the motor or circuit so protected, and shall be arranged to permit the passage of the appropriate starting currents.

(6) The main steering gear shall be of adequate strength and sufficient to steer the vessel at maximum service speed. The main steering gear and rudder stock shall be so designed that they will not be damaged at maximum speed astern or by manoeuvring during fishing operations.

(7) The main steering gear shall, with the vessel at is maximum permissible operating draught, be capable of putting the rudder over from 35 degrees on one side to 35 degrees on the other side with the vessel running ahead at maximum service speed. The rudder shall be capable of being put over from 35 degrees on either side to 30 degrees on the other side in not more than 28 seconds, under the same conditions. The main steering gear shall be operated by power where necessary to fulfil these requirements.

(8) Die hoofstuurinrigtingkrageenheid moet ingerig wees om òf met die hand in die stuurhuis òf outomaties wanneer die krag na 'n kragonderbreking herstel is, in werking gestel te word.

(9) Die hulpinrigting om die roer te bedien, moet sterk genoeg en voldoende wees om die vaartuig teen navigeersnelheid te stuur en moet in 'n noodgeval vinnig in werking gebring kan word.

(10) Die hulpinrigting om die roer in werking te bring moet in staat wees om die roer binne 60 sekondes vanaf 15 grade aan die een kant tot 15 grade aan die ander kant oor te bring wanneer die vaartuig teen die helfte van sy maksimum dienssnelheid vorentoe of teen 7 knope vaar, wat ook al die vinnigste is. Die hulpinrigting om die roer in werking te bring, moet waar nodig kragaangedrewe wees om aan hierdie vereistes te voldoen.

(11) Elektriese of elektrohidrouliese stuurinrigtings by vaartuie met 'n lengte van 75 meter en meer moet bedien word deur minstens twee stroombane vanaf die hoofskakelbord en hierdie stroombane moet so ver moontlik van mekaar geskei wees.

Regulasie 52

Ingenieursalarm

Vaartuie met 'n lengte van 75 meter en meer moet van 'n ingenieursalarm voorsien wees wat uit die masjienbeheerkamer of by die maneuvreerplatform bedien word, soos toepaslik, en moet duidelik in die ingenieursakkommodasie gehoor kan word.

Regulasie 53

Koelstelsels vir bewaring van die vangs

(1) Koelstelsels moet so ontwerp, gebou, getoets en geïnstalleer wees dat die veiligheid van die stelsels ten opsigte van die mate van moontlike besering van persone vanweë die koelmiddel wat gebruik word, in ag geneem word, en moet die Administrasie tevrede stel.

(2) Koelmiddels wat in die koelstelsels gebruik gaan word, moet die Administrasie tevrede stel. Metielchloried mag egter nie as 'n koelmiddel gebruik word nie.

(3) (a) Koelinstallasies moet behoorlik beveilig wees teen vibrasie, skok, uitsetting, krimping, ensovoorts, en moet toegerus wees met 'n outomatiese veiligheidsbeheertoestel om 'n gevaarlike styging in die temperatuur en druk te voorkom.

(b) Koelstelsels waarin toksiese of vlambare koelmiddels gebruik word, moet toegerus wees met dreineringstoestelle wat na 'n plek lei waar die koelmiddel nie 'n gevaar vir die vaartuie of die persone aan boord skep nie.

(4) (a) Enige ruimte met koelmasjinerie, met inbegrip van kondensators en gastenks, wat toksiese koelmiddels gebruik, moet deur gasdigte skotte van enige aanliggende ruimte geskei word. Enige ruimte met koelmasjinerie, met inbegrip van kondensators en gastenks, moet voorsien wees van 'n lekopsporingstelsel wat 'n aanwyser buite die ruimte langs die ingang het en moet toegerus wees met 'n onafhanklike ventileringstelsel en watersproeistelsel.

(b) Waar sodanige afdigting as gevolg van die grootte van die vaartuig nie doenlik is nie, mag die koelstelsel geïnstalleer word in die masjinerieruimte, mits die hoeveelheid koelmiddel wat gebruik word, nie gevaar vir die persone in die masjinerieruimte sal skep indien al die gas sou ontsnap nie, en mits 'n alarm aangebring word wat 'n waarskuwing van 'n gevaarlike konsentrasie gas gee indien enige lek in die kompartement sou voorkom.

(8) The main steering gear power unit shall be arranged to start either by manual means in the wheelhouse or automatically when power is restored after a power failure.

(9) The auxiliary means for actuating the rudder shall be of adequate strength and sufficient to steer the vessel at navigable speed and capable of being brought speedily into action in an emergency.

(10) The auxiliary means for actuating the rudder shall be capable of putting the rudder over from 15 degrees on one side to 15 degrees on the other side in not more than 60 seconds with the vessel running at one half of its maximum service speed ahead or 7 knots whichever is the greater. The auxiliary means for actuating the rudder shall be operated by power where necessary to fulfil these requirements.

(11) Electric or electrohydraulic steering gear in vessels of 75 metres in length and over shall be served by at least two circuits fed from the main switchboard and these circuits shall be as widely separated as possible.

Regulation 52

Engineers' alarm

In vessels of 75 metres in length and over an engineers' alarm shall be provided to be operated from the engine control room or at the manoeuvring platform as appropriate, and shall be clearly audible in the engineers' accommodation.

Regulation 53

Refrigeration systems for preservation of the catch

(1) Refrigeration systems shall be so designed, constructed, tested and installed as to take account of the safety of the systems considering the degree of possible harm to persons from the refrigerant used and shall be to the satisfaction of the Administration.

(2) Refrigerants to be used in refrigeration systems shall be to the satisfaction of the Administration. However, methylchloride shall not be used as a refrigerant.

(3) (a) Refrigerating installations shall be adequately protected against vibration, shock, expansion, shrinkage, etc. and shall be provided with an automatic safety control device to prevent a dangerous rise in temperature and pressure.

(b) Refrigeration systems in which toxic or flammable refrigerants are used shall be provided with drainage devices leading to a place where the refrigerant presents no danger to the vessels or to persons on board.

(4) (a) Any space containing refrigerating machinery including condensers and gas tanks utilizing toxic refrigerants shall be separated from any adjacent space by gastight bulkheads. Any space containing the refrigerating machinery including condensers and gas tanks shall be fitted with a leak detection system having an indicator outside the space adjacent to the entrance and shall be provided with an independant ventilation system and a water spray system.

(b) When such containment is not practicable, due to the size of the vessel, the refrigeration system may be installed in the machinery space provided that the quantity of refrigerant used will not cause danger to persons in the machinery space, should all the gas escape, and provided that an alarm is fitted to give warning of a dangerous concentration of gas should any leakage occur in the compartment.

(5) By koelmasjinerieruimtes en koelkamers moet die alarms met die stuurhuis of beheerposte of nooduitgange verbind wees om te voorkom dat persone vasgekeer word. Minstens een uitgang uit elke sodanige ruimte moet van die binnekant oopgemaak kan word. Waar doenlik moet uitgange uit die ruimtes met koelmasjinerie wat toksiese of vlambare gas gebruik, nie direk in enige akkommodasieruimtes inlei nie.

(6) Waar enige koelmiddel wat skadelik is vir mense, in 'n koelstelsel gebruik word, moet minstens twee stelle asemhalingsapparaat voorsien wees, waarvan een in 'n posisie geplaas moet word waar dit in die geval van 'n lekkasie van koelmiddel waarskynlik nie ontoeganklik sal wees nie. Asemhalingsapparaat wat voorsien word as deel van die vaartuig se brandbestrydingstoerusting, kan beskou word as sou dit aan al of 'n deel van hierdie voorwaarde voldoen, mits sy plasing aan albei doeleindes voldoen. Waar selfstandige asemhalingsapparaat gebruik word, moet reserwesilinders voorsien word.

(7) Toereikende voorskrifte vir die veilige bediening van en noodprosedures vir die koelstelsel moet voorsien word deur geskikte kennisgewings wat aan boord van die vaartuig vertoon moet word.

DEEL C—ELEKTRIESE INSTALLASIES

(Kyk ook Regulasie 41)

Regulasie 54

Hoofbron van elektriese krag

(1) (a) Waar elektriese krag die enigste middel is tot instandhouding van hulpdienste wat onontbeerlik is vir die aandrywing en die veiligheid van die vaartuig, moet daar 'n hoofbron van elektriese krag wees wat ten minste twee opwekstelle moet insluit, waarvan een deur die hoofenjin aangedryf mag word. Die Administrasie mag ander inrigtings met ekwivalente elektriese vermoë aanvaar.

(b) Die krag van hierdie stelle moet sodanig wees dat wanneer een van hierdie opwekstelle buite werking is, dit nog steeds moontlik sal wees om die funksionering te verseker van die dienste waarvan in Regulasie 41 (6) (a) melding gemaak word, uitsluitende die krag wat in visvangaktiwiteite, prosessering en preservering van die vangs vereis word. Wanneer enigeen van die opwekstelle op 'n vaartuig met 'n lengte van minder as 45 meter buite werking is, is dit egter slegs nodig om die funksionering te verseker van dienste wat noodsaaklik is vir die aandrywing en veiligheid van die vaartuig.

(c) Die inrigting van die vaartuig se hoofbron van elektriese krag moet sodanig wees dat die dienste bedoel in Regulasie 41 (6) (a) in stand gehou kan word ongeag die aantal omwentelings en die rigting van die hoofaandrywingsenjins of -asse.

(d) Waar transformators 'n noodsaaklike deel uitmaak van die toevoerstelsel wat by hierdie paragraaf vereis word, moet die stelsel só ingerig word dat die kontinuïteit van die toevoer verseker word.

(2) (a) Die inrigting van die hoofverligtingstelsel moet sodanig wees dat 'n brand of ander ongeluk in die ruimte of ruimtes wat die hoofbron van elektriese krag insluitende transformators, as daar is, bevat, nie die noodverligtingstelsel buite werking sal stel nie.

(b) Die inrigting van die noodverligtingstelsel moet sodanig wees dat 'n brand of ander ongeluk in die ruimte of ruimtes wat die noodbron van elektriese krag insluitende transformators, as daar is, bevat, nie die hoofverligtingstelsel buite werking sal stel nie.

(5) In refrigerating machinery spaces and refrigerating rooms, alarms shall be connected to the wheelhouse or control stations or escape exits to prevent persons being trapped. At least one exit from each such space shall be capable of being opened from the inside. Where practicable, exits from the spaces containing refrigerating machinery using toxic or flammable gas shall not lead directly into any accommodation spaces.

(6) Where any refrigerant harmful to persons is used in a refrigeration system, at least two sets of breathing apparatus shall be provided, one of which shall be placed in a position not likely to become inaccessible in the event of leakage of refrigerant. Breathing apparatus provided as part of the vessel's fire-fighting equipment may be considered as meeting all or part of this provision provided its location meets both purposes. Where self-contained breathing apparatus is used, spare cylinders shall be provided.

(7) Adequate guidance for the safe operation and emergency procedures for the refrigeration system shall be provided by suitable notices displayed on board the vessel.

PART C—ELECTRICAL INSTALLATIONS

(See also Regulation 41)

Regulation 54

Main source of electrical power

(1) (a) Where electrical power constitutes the only means of maintaining auxiliary services essential for the propulsion and the safety of the vessel, a main source of electrical power shall be provided which shall include at least two generating sets, one of which may be driven by the main engine. The Administration may accept other arrangements having equivalent electrical capability.

(b) The power of these sets shall be such as to ensure the functioning of the services referred to in Regulation 41 (6) (a), excluding the power required in fishing activities, processing and preservation of the catch, in the event of any one of these generating sets being stopped. However, in vessels of less than 45 metres in length, in the event of any one of the generating sets being stopped, it shall only be necessary to ensure the functioning of services essential for propulsion and safety of the vessel.

(c) The arrangement of the vessel's main source of electrical power shall be such that the services referred to in Regulation 41 (6) (a) can be maintained regardless of the number of revolutions and direction of the main propelling engines or shafting.

(d) Where transformers constitute an essential part of the supply system required by this paragraph, the system shall be so arranged as to ensure continuity of the supply.

(2) (a) The arrangement of the main lighting system shall be such that a fire or other casualty in the space or spaces containing the main source of electrical power, including transformers, if any, will not render the emergency lighting system inoperative.

(b) The arrangement of the emergency lighting system shall be such that a fire or other casualty in the space or spaces containing the emergency source of electrical power, including transformers, if any, will not render the main lighting system inoperative.

Regulasie 55

Noodbron van elektriese krag

(1) Daar moet 'n selfstandige noodbron van elektriese krag wees wat tot tevredenheid van die Administrasie buite die masjinerieruimtes geplaas is, en dit moet só ingerig wees dat die funksionering daarvan in die geval van brand of ander oorsake van die onklaarraking van die hoofelektrisiteitsinstallasie verseker is.

(2) Die noodbron van elektriese krag moet daartoe in staat wees om, met betrekking tot aansitstroom en die kortstondige aard van sekere ladings, vir 'n tydperk van ten minste drie uur die volgende tegelykertyd van krag te voorsien:

(a) interne kommunkasietoerusting, brankverklikstelsels en seine wat in 'n noodgeval nodig kan wees;

(b) die navigasieligte, indien uitsluitlik elektries, en die noodligte—

(i) van tewaterlatingsposte en oor die kant van die vaartuig;

(ii) in alle gange, trappe en uitgange;

(iii) in ruimtes wat masjinerie of die noodbron van krag bevat;

(iv) in beheerposte; en

(v) in ruimtes waar vis gehanteer en geprosesseer word; en

(c) die noodbrandpomp, as daar is.

(3) Die noodbron van elektriese krag kan òf 'n generator of 'n akkumulatorbattery wees.

(4) (a) Waar die noodbron van elektriese krag 'n generator is, moet dit tot tevredenheid van die Administrasie voorsien wees van sowel 'n onafhanklike brandstoftoevoer as doeltreffende aansitinrigtings. Tensy 'n tweede onafhanklike middel voorsien word om die noodgenerator aan te sit, moet die enkele bron van opgegaarde energie beskerm word om te voorkom dat dit totaal uitgeput word deur die outomatiese aansitstelsel.

(b) Waar die noodbron van elektriese krag 'n akkumulatorbattery is, moet dit daartoe in staat wees om die noodlading te dra sonder dat hy weer gelaai hoef te word, terwyl dit die spanning van die batterty dwarsdeur die ontladingstydperk binne min of meer 12 persent van sy nominale spanning handhaaf. In geval van 'n onderbreking in die hoofkragtoevoer, moet hierdie akkumulatorbattery outomaties aan die noodskakelbord gekoppel word en moet dit onmiddellik krag voorsien aan ten minste die dienste gespesifiseer in paragraaf (2) (a) en (b). Die noodskakelbord moet voorsien wees van 'n hulpskakelaar waarmee die battery met die hand verbind kan word, in geval van die onklaarraking van die outomatiese verbindingstelsel.

(5) Die noodskakelbord moet geïnstalleer word so na aan die noodkragbron as wat prakties uitvoerbaar is, en moet ooreenkomstig paragraaf (1) geleë wees. Wanneer die noodkragbron 'n generator is, moet die noodskakelbord in dieselfde ruimte geleë wees, tensy die bediening van die noodskakelbord daardeur belemmer sal word.

(6) 'n Akkumulatorbattery wat ingevolge hierdie regulasie aangebring word, buiten batterye wat vir die radiosender en -ontvanger aangebring word in vaartuie met 'n lengte van minder as 45 meter, moet geïnstalleer word in 'n goed geventileerde ruimte wat nie die ruimte mag wees wat die noodskakelbord bevat nie. 'n Aanwyser moet op 'n geskikte plek op die hoofskakelbord of in die masjineriebeheerkamer aangebring word om aan te dui wanneer die battery wat die noodbron van krag uitmaak, besig is om af te loop. Die noodskakelbord moet in normale werking toevoer ontvang vanaf die hoofskakelbord deur 'n koppelvoerder wat by die

Regulation 55

Emergency source of electrical power

(1) A self-contained emergency source of electrical power located, to the satisfaction of the Administration, outside the machinery spaces shall be provided and so arranged as to ensure its functioning in the event of fire or other causes of failure of the main electrical installations.

(2) The emergency source of electrical power shall be capable, having regard to starting current and the transitory nature of certain loads, of serving simultaneously for a period of at least three hours—

(a) internal communication equipment, fire detecting systems and signals which may be required in an emergency;

(b) the navigation lights if solely electrical and the emergency lights—

(i) of launching stations and overside of the vessel;

(ii) in all alleyways, stairways and exits;

(iii) in spaces containing machinery or the emergency source of power;

(iv) in control stations; and

(v) in fish handling and fish processing spaces; and

(c) the operation of the emergency fire pump, if any.

(3) The emergency source of electrical power may be either a generator or an accumulator battery.

(4) (a) Where the emergency source of electrical power is a generator, it shall be provided both with an independant fuel supply and with efficient starting arrangements to the satisfaction of the Administration. Unless a second independent means of starting the emergency generator is provided the single source of stored energy shall be protected to preclude its complete depletion by the automatic starting system.

(b) Where the emergency source of electrical power is an accumulator battery it shall be capable of carrying the emergency load without recharging whilst maintaining the voltage of the battery throughout the discharge period within plus or minus 12 per cent of its nominal voltage. In the event of failure of the main power supply this accumulator battery shall be automatically connected to the emergency switchboard and shall immediately supply at least those services specified in paragraph (2) (a) and (b). The emergency switchboard shall be provided with an auxiliary switch allowing the battery to be connected manually, in case of failure of the automatic connection system.

(5) The emergency switchboard shall be installed as near as is practicable to the emergency source of power and shall be located in accordance with paragraph (1). Where the emergency source of power is a generator, the emergency swichboard shall be located in the same place unless the operation of the emergency switchboard would thereby be impaired.

(6) An accumulator battery fitted in accordance with this Regulation, other than batteries fitted for the radio transmitter and receiver in vessels of less than 45 metres in length, shall be installed in a well ventilated space which shall not be the space containing the emergency switchboard. An indicator shall be mounted in a suitable place on the main switchboard or in the machinery control room to indicate when the battery constituting the emergency source of power is being discharged. The emergency switchboard is to be supplied in normal operation from the main switchboard by an inter-connector feeder which is to be protected

hoofskakelbord teen oorbelasting en kortsluiting beskerm moet word. Die inrigting by die noodskakelbord moet sodanig wees dat die koppelvoerder outomaties by die noodskakelbord ontkoppel word wanneer daar 'n onderbreking in die hoofkragtoevoer plaasvind, en by vaartuie met 'n lengte van 45 meter en meer moet dit voorsiening maak vir outomatiese verbinding van die noodtoevoer in geval van sodanige onderbreking. Wanneer die stelsel vir terugkoppelwerking ingerig is, moet die koppelvoerder ook by die noodskakelbord teen ten minste kortsluiting beskerm word.

(7) Die noodgenerator en sy primêre aandrywe en enige akkumulatorbattery moet só ingerig wees dat verseker word dat hulle met volle aangeslane krag sal funksioneer wanneer die vaartuig regop is en wanneer dit weerskante toe tot 'n hoek van 22½ grade rol en terselfdertyd 10 grade by boeg of agterstewe hei, of in enige kombinasie van hoeke binne daardie grense.

(8) Die noodbron van elektriese krag en outomatiese aansittoerusting moet so saamgestel en geplaas wees dat voldoende toetsing deur die bemanning uitgevoer kan word terwyl die vaartuig in 'n bedryfstoestand is.

Regulasie 56

Voorsorgmaatreëls teen skok, brand en ander gevare van elektriese oorsprong*

(1) (a) Blootgestelde permanent bevestigde metaaldele van elektriese masjiene of toerusting wat nie bedoel is om onder stroom te wees nie maar onder kan kom as gevolg van 'n fout, moet geaard word tensy—

(i) hulle voorsien word teen 'n spanning van hoogstens 55 volt gelykstroom of 55 volt wortel van gemiddelde kwadraat tussen geleiers; outotransformators mag nie gebruik word met die doel om hierdie alternatiewe stroomspanning te bereik nie; of

(ii) hulle voorsien word teen 'n spanning van hoogstens 250 volt deur veiligheidsafsondertransformators wat aan slegs een verbruiktoestel krag lewer; of

(iii) hulle in ooreenstemming met die beginsel van dubbele isolasie gebou is.

(b) Draagbare elektriese toerusting moet teen 'n veilige spanning werk, en blootgestelde metaaldele van sodanige toerusting wat nie bedoel is om 'n spanning te hê nie, maar wat dit as gevolg van 'n fout kan hê, moet geaard wees. Die Administrasie kan bykomende voorsorgmaatreëls vereis vir draagbare elektriese lampe, gereedskap of soortgelyke apparaat vir gebruik in beperkte of buitengewoon klam ruimtes waar bepaalde gevare as gevolg van geleivermoë kan voorkom.

(c) Elektriese apparaat moet só gebou en geïnstalleer word dat dit nie 'n besering sal veroorsaak wanneer dit op die normale manier gehanteer of aangeraak word nie.

(2) Hoof- en noodskakelborde moet só geplaas word dat maklike toegang soos nodig tot apparaat en toerusting verkry kan word, sonder gevaar vir die bedieners. Die sye en agterkante en, waar nodig, die voorkante van skakelborde moet op geskikte wyse beskerm word. Blootgestelde stroomdraende dele met geaarde spannings hoër as 'n stroomspanning gespesifiseer deur die Administrasie mag nie aan die voorkant van sodanige skakelborde geïnstalleer word nie. Waar nodig moet daar nie-geleidende matte of roosters voor en agter wees.

(3) (a) Die verspreidingstelsel van terugleiding deur die romp mag nie vir krag, verhitting of verligting gebruik word in vaartuie met 'n lengte van 75 meter en meer nie.

* Kyk *Precautions against Shock, Fire and Other Hazards of Electrical Origin* vervat in Regulasie 23 van die *Recommendation Concerning Regulations for Machinery and Electrical Installations in Passenger and Cargo Ships*, deur die Organisasie aangeneem by Resolusie A.325 (IX).

at the main switchboard against overload and short circuit. The arrangement at the emergency switchboard shall be such that the inter-connector feeder is disconnected automatically at the emergency switchboard upon failure of the main power supply, and for vessels of 45 metres in length and over shall provide for automatic connection of the emergency supply in the event of such failure. When the system is arranged for feedback operation, the inter-connector feeder shall also be protected at the emergency switchboard at least against short circuit.

(7) The emergency generator and its prime mover and any accumulator battery shall be so arranged as to ensure that they will function at full rated power when the vessel is upright and when rolling up to an angle of 22½ degrees either way and simultaneously pitching 10 degrees by bow or stern, or is in any combination of angles within those limits.

(8) The emergency source of electrical power and automatic starting equipment shall be so constructed and arranged as to enable adequate testing to be carried out by the crew while the vessel is in operating condition.

Regulation 56

Precautions against shock, fire and other hazards of electrical origin*

(1) (a) Exposed permanently fixed metal parts of electrical machines or equipment which are not intended to be "live" but which are liable under fault conditions to become "live" shall be earthed (grounded) unless—

(i) they are supplied at a voltage not exceeding 55 volts direct current or 55 volts, root mean square, between conductors; autotransformers shall not be used for the purpose of achieving this alternative current voltage; or

(ii) they are supplied at a voltage not exceeding 250 volts by safety isolating transformers supplying one consuming device only; or

(iii) they are constructed in accordance with the principle of double insulation.

(b) Portable electrical equipment shall operate at a safe voltage, exposed metal parts of such equipment which are not intended to have a voltage but which may have such under fault conditions, shall be earthed. The Administration may require additional precautions for portable electric lamps, tools or similar apparatus for use in confined or exceptionally damp spaces where particular risks due to conductivity may exist.

(2) Main and emergency switchboards shall be so arranged as to give easy access as may be needed to apparatus and equipment, whithout danger to attendants. The sides and backs and, where necessary, the fronts of switchboards, shall be suitably guarded. Exposed "live" parts having voltages to earth exceeding a voltage to be specified by the Administration shall not be installed on the front of such switchboards. There shall be non-conducting mats or gratings at the front and rear, where necessary.

(3) (a) The hull return system of distribution shall not be used for power, heating or lighting in vessels of 75 metres in length and over.

* See Precautions against shock, fire and other hazards of electrical origin contained in Regulation 23 of the Recommendation Concerning Regulations for machinery and electrical installations in passenger and cargo ships adopted by the Organisation by Resolution A.325 (IX).

(b) Die vereiste van subparagraaf (a) sluit nie, kragtens bepalings goedgekeur deur die Administrasie, die gebruik van die volgende uit nie:

(i) Opgelegdestroom katodiese beskermingstelsels;
(ii) beperkte en lokaal geaarde stelsels; of
(iii) isolasiepeilmoniteertoestelle, mits die sirkulasiestroom nie meer is as 30 milliampère onder die mees ongunstige toestande nie.

(c) Waar die verspreidingstelsel van terugleiding deur die romp gebruik word, moet alle eindsubbane (alle bane wat na die laaste beveiligingstoestel aangebring is) tweedraadverbindings wees en moet spesiale voorsorg tot tevredenheid van die Administrasie getref word.

(4) Waar 'n verdeelstelsel, òf primêr òf sekondêr, sonder 'n aardverbinding gebruik word vir krag, verhitting of verligting, moet 'n toestel voorsien word wat daartoe in staat is om die aardisolasiepeil te moniteer en om 'n hoorbare of sigbare aanduiding van abnormaal lae isoleerwaardes te gee.

(5) (a) Behalwe soos deur die Administrasie in buitengewone omstandighede toegelaat, moet alle metaalmantels en pantsering van kabels elektries deurlopend en geaard wees.

(b) Alle elektriese kabels moet ten minste 'n vlamvertragende tipe wees en moet só geïnstalleer wees dat hul oorspronklike vlamvertragende eienskappe nie benadeel word nie. Die Administrasie mag die gebruik toelaat van spesiale tipes kabels wanneer nodig vir bepaalde aanwendings, soos radiofrekwensiekabels, wat nie aan die voorgaande voldoen nie.

(c) Kabels en bedrading wat noodsaaklike krag, noodkrag, verligting, interne kommunikasie of seine bedien, moet so ver doenlik weg van kombuise, masjinerieruimtes van Kategorie A en ander gebiede met 'n hoë brandrisiko en wasserye, vishanteer- en -prosesseerruimtes en ander ruimtes waar daar 'n hoë voggehalte is, gelê wees. Kabels wat brandpompe met die noodskakelbord verbind, moet 'n brandbestande tipe wees waar dit deur gebiede met 'n hoë brandrisiko loop. Waar doenlik moet alle sodanige kabels op só 'n manier gelê word dat voorkom word dat hulle onbruikbaar gemaak word deur verhitting van die skotte wat deur 'n brand in 'n aangrensende ruimte veroorsaak kan word.

(d) Waar kabels geïnstalleer word in ruimtes waar daar 'n brand- of ontploffingsgevaar bestaan in geval van 'n elektriese fout, moet spesiale voorsorg teen sodanige gevare tot tevredenheid van die Administrasie getref word.

(e) Drade moet op só 'n wyse ondersteun word dat hulle nie afskaaf of andersins beskadig kan word nie.

(f) Afhegtings en koppelings in alle geleiers moet só gemaak wees dat hulle die oorspronklike elektriese, meganiese, vlamvertragende en, waar nodig, brandbestande eienskappe van die kabel behou.

(g) Kabels wat in koelkompartemente geïnstalleer word, moet vir lae temperature en 'n hoë humiditeit geskik wees.

(6) (a) Stroombane moet teen kortsluitings beskerm wees. Stroombane moet ook teen oorbelasting beskerm wees, behalwe soos by Regulasie 51 voorgeskryf of waar die Administrasie by wyse van uitsondering anders mag toelaat.

(b) Die aanslag of toepaslike stelling van die oorlasbeveiligingstoestel vir elke stroombaan moet permanent by die ligging van die beveiligingstoestel aangedui word.

(7) Ligtoebehore moet geplaas word om temperatuurstygings wat vir die bedrading skadelik kan wees, te voorkom, en ook om te verhinder dat omringende materiaal oorverhit word.

(b) The requirement of sub-paragraph (a) does not preclude, under conditions approved by the Administration, the use of—

(i) impressed current cathodic protective systems;
(ii) limited and locally earthed systems; or
(iii) insulation level monitoring devices provided the circulation current does not exceed 30 milliamperes under the most unfavourable conditions.

(c) Where the hull return system is used, all final subcircuits (all circuits fitted after the last protective device) shall be two wire and special precautions shall be taken to the satisfaction of the Administration.

(4) Where a distribution system, whether primary or secondary, for power, heating or lighting, with no connection to earth is used a device capable of continously monitoring the insulation level to earth and of giving an audible or visual indication of abnormally low insulation values shall be provided.

(5) (a) Except as permitted by the Administration in exceptional circumstances, all metal sheaths and armour of cables shall be electrically continuous and shall be earthed.

(b) All electrical cables shall be at least of a flame-retardant type and shall be so installed as not to impair their original flame-retarding properties. The Administration may permit the use of special types of cables when necessary for particular applications, such as radio frequency cables, which do not comply with the foregoing.

(c) Cables and wiring serving essential or emergency power, lighting, internal communications or signals shall as far as practicable be routed clear of galleys, machinery spaces of Category A and other high fire risk areas and laundries, fish handling and fish processing spaces and other spaces where there is a high moisture content. Cables connecting fire pumps to the emergency switchboard shall be of a fire-resistant type where they pass through high fire risk areas. Where practicable all such cables should be run in such a manner as to preclude their being rendered unserviceable by heating of the bulkheads that may be caused by a fire in an adjacent space.

(d) Where cables which are installed in spaces where the risk of fire or explosion exists in the event of an electrical fault, special precautions against such risks shall be taken to the satisfaction of the Administration.

(e) Wiring shall be supported in such a manner as to avoid chafing or other damage.

(f) Terminations and joints in all conductors shall be made such that they retain the original electrical, mechanical, flame-retarding and, where necessary, fire-resisting properties of the cable.

(g) Cables installed in refrigerated compartments shall be suitable for low temperatures and high humidity.

(6) (a) Circuits shall be protected against short circuit. Circuits shall also be protected against overload, except in accordance with Regulation 51 or where the Administration may exceptionally otherwise permit.

(b) The rating or appropriate setting of the overload protective device for each circuit shall be permanently indicated at the location of the protective device.

(7) Lighting fittings shall be arranged to prevent temperature rises which could damage the wiring and to prevent surrounding material from becoming excessively hot.

(8) Verligting- of kragstroombane wat doodloop in 'n ruimte waar 'n brand- of ontploffingsrisiko bestaan, moet met isoleerskakelaars buite die ruimte toegerus word.

(9) (a) Die omhulsel van 'n akkumulatorbattery moet tot tevredenheid van die Administrasie gebou en geventileer word.

(b) Elektriese en ander toerusting wat 'n bron van ontvlamming van vlambare dampe kan uitmaak, mag nie in hierdie kompartemente toegelaat word nie, behalwe soos by paragraaf (10) toegelaat.

(c) 'n Akkumulatorbattery mag nie in akkommodasieruimtes geleë wees nie, tensy dit in 'n hermeties verseëlde houer geïnstalleer is.

(10) In ruimtes waar vlambare mengsels maklik kan versamel en in 'n kompartement wat hoofsaaklik as die bevatter van 'n akkumulatorbattery aangewys is, mag geen elektriese toerusting geïnstalleer word nie tensy die Administrasie daarvan oortuig is dat dit—

(a) noodsaaklik is vir bedryfsdoeleindes;

(b) 'n tipe is wat nie die betrokke mengsel sal laat ontvlam nie;

(c) geskik is vir die betrokke ruimte; en

(d) toepaslik gesertifiseer is vir veilige gebruik in die stof, damp of gas wat waarskynlik sal voorkom.

(11) Blitsgeleiers moet aan alle houtmaste of topmaste aangebring word. By vaartuie wat van nie-geleidende materiale gemaak is, moet die blitsgeleiers deur geskikte geleiers verbind wees aan 'n koperplaat wat goed onder die waterlyn aan die vaartuig se romp bevestig is.

DEEL D—PERIODIEK ONBEDIENDE MASJINERIERUIMTES

(Kyk ook Regulasie 41)

Regulasie 57

Brandveiligheid

Brandvoorkoming

(1) Spesiale oorweging moet aan hoëdrukbrandoliepype gegee word. Waar doenlik, moet daar by lekkasies in sodanige pypstelsels 'n geskikte aflooptenk wees wat van 'n hoëvlakalarm voorsien moet wees.

(2) Waar daagliksediens-brandolietenks outomaties of deur middel van afstandbeheer gevul word, moet middele voorsien word om oorvloei te voorkom. Soortgelyke oorweging moet gegee word aan ander toerusting wat outomaties vlambare vloeistowwe hanteer, byvoorbeeld brandoliesuiweraars, wat, wanneer ookal doenlik, in 'n spesiale ruimte wat vir suiweraars en hul verhitters bedoel is, geïnstalleer moet word.

(3) Waar daagliksediens-brandolietenks of besinktenks met verhittingsinrigtings toegerus is, moet 'n hoëtemperatuuralarm voorsien wees indien die flitspunt van die brandolie oorskry kan word.

Brandopsporing

(4) 'n Goedgekeurde brandverklikstelsel, wat op 'n selfmoniteerbeginsel gebaseer is en fasiliteite vir periodieke toetsing insluit, moet in masjinerieruimtes geïnstalleer word. By vaartuie met 'n lengte van minder as 45 meter mag die Administrasie hierdie vereiste laat vaar, mits die ligging van die masjinerieruimtes die opsporing van brand deur persone aan boord vergemaklik.

(5) Die verklikstelsel moet sowel 'n hoorbare as 'n sigbare alarm inisieer in die stuurhuis en in genoeg gepaste ruimtes sodat dit gehoor en waargeneem kan word deur persone aan boord wanneer die vaartuig in die hawe is.

(8) Lighting or power circuits terminating in a space where the risk of fire or explosion exists shall be provided with isolating switches outside the space.

(9) (a) The housing of an accumulator battery shall be constructed and ventilated to the satisfaction of the Administration.

(b) Electrical and other equipment which may constitute a source of ignition of flammable vapours shall not be permitted in these compartments except as permitted in paragraph (10).

(c) An accumulator battery shall not be located in accommodation spaces unless installed in a hermetically sealed container.

(10) In spaces where flammable mixtures are liable to collect and in any compartment assigned principally to the containment of an accumulator battery, no electrical equipment shall be installed unless the Administration is satisfied that it is—

(a) essential for operational purposes;

(b) of a type which will not ignite the mixture concerned;

(c) appropriate to the space concerned; and

(d) appropriately certified for safe usage in the dusts, vapours or gases likely to be encountered.

(11) Lightning conductors shall be fitted to all wooden masts or topmasts. In vessels constructed of non-conductive materials the lightning conductors shall be connected by suitable conductors to a copper plate fixed to the vessel's hull well below the waterline.

PART D—PERIODICALLY UNATTENDED MACHINERY SPACES

(See also Regulation 41)

Regulation 57

Fire safety

Fire prevention

(1) Special consideration shall be given to high pressure fuel oil pipes. Where practicable, leakages from such piping systems shall be collected in a suitable drain tank which shall be provided with a high level alarm.

(2) Where daily service fuel oil tanks are filled automatically or by remote control, means shall be provided to prevent overflow spillages. Similar consideration shall be given to other equipment which treats flammable liquids automatically, e.g. fuel oil purifiers, which whenever practicable shall be installed in a special space reserved for purifiers and their heaters.

(3) Where fuel oil daily service tanks or settling tanks are fitted with heating arrangements, a high temperature alarm shall be provided if the flashpoint of the fuel oil can be exceeded.

Fire detection

(4) An approved fire detection system based on a self-monitoring principle and including facilities for periodical testing shall be installed in machinery spaces. In vessels of less than 45 metres in length the Administration may waive this requirement provided the location of the machinery space facilitates the detection of fire by persons on board.

(5) The detection system shall initiate both audible and visual alarm in the wheelhouse and in sufficient appropriate spaces to be heard and observed by persons on board, when the vessel is in harbour.

(6) Die brandverklikstelsel moet outomaties vanaf 'n noodbron van krag bedien word indien die hoofbron van krag onklaar raak.

(7) Binnebrandenjins van 2 500 kilowatt en meer moet toegerus wees met krukkas-olienewelverklikkers of enjinlaertemperatuurdetektors of ekwivalente toestelle.

Brandbestryding

(8) 'n Vaste brandblusstelsel wat aan die vereistes van Regulasies 83 en 101 moet voldoen, moet tot tevredenheid van die Administrasie voorsien word.

(9) In vaartuie met 'n lengte van 75 meter en meer moet voorsiening gemaak word vir onmiddellike watertoevoer vanaf die hoofbrandpypstelsel deur òf—

(a) afstandbeheerde aansitinrigtings van een van die hoofbrandpompe in die stuurhuis en by die brandbeheerpos, as daar is; òf

(b) permanente drukreëling van die brandtoevoerstelsel, met behoorlike inagneming van die moontlikheid van bevriesing.*

(10) Die Administrasie moet tevrede wees met die handhawing van die brandintegriteit van die masjinerieruimtes, die ligging en sentralisering van die brandblusstelselkontroles, die afsluitinrigtings bedoel in Regulasie 62, bv. ventilasie, brandstofpompe, ens., en kan brandblustoestelle en ander brandbestrydingstoerusting en asemhaalapparaat bykomend by die toepaslike vereistes van Hoofstuk V vereis.

Regulasie 58

Beskerming teen oorstroming

(1) Kimme in masjinerieruimtes moet toegerus wees met 'n hoëvlakalarm op so 'n manier dat die akkumulasie van vloeistowwe by normale hoeke van trim en hiel verklik word. Die verklikstelsel moet 'n hoorbare en sigbare alarm inisieer in die plekke waar waghouding deurlopend geskied.

(2) By vaartuie met 'n lengte van 45 meter of meer moet 'n klep wat 'n seewaterinlaat bedien, 'n uitlaatopening onder die waterlyn of 'n kiminjekteurstelsel só geplaas wees dat voldoende tyd vir inwerkingstelling toegelaat word in geval van instroming van water na die ruimte.

Regulasie 59

Kommunikasiemiddele

By vaartuie met 'n lengte van 75 meter en meer moet een van die twee afsonderlike kommunikasiemiddels bedoel in Regulasie 45 'n betroubare vokale kommunikasiemiddel wees. 'n Bykomende betroubare middel van vokale kommunikasie moet tussen die stuurhuis en die ingenieursakkommodasie voorsien word.

Regulasie 60

Alarmstelsel

(1) 'n Alarmstelsel moet voorsien word wat 'n fout wat aandag vereis, moet aandui.

(2) (a) Die alarmstelsel moet daartoe in staat wees om 'n hoorbare alarm in die masjinerieruimte te laat klink en moet elke afsonderlike alarmfunksie op 'n geskikte posisie aandui. By vaartuie met 'n lengte van minder as 45 meter mag die Administrasie egter toelaat dat die stelsel slegs in die stuurhuis 'n hoorbare alarm laat klink en elke afsonderlike alarmfunksie visueel aandui.

* Kyk *Guidance for Precautions Against Freezing of Fire Mains* vervat in Aanbeveling 7 van Aanhangsel 3 van die Sluitingsoorkonde van die Konferensie.

(6) The fire detection system shall be fed automatically from an emergency source of power if the main source of power fails.

(7) Internal combustion engines of 2 500 kilowatts and over shall be provided with crankcase oil mist detectors or engine bearing temperature detectors or equivalent devices.

Fire fighting

(8) A fixed fire-extinguishing system shall be provided to the satisfaction of the Administration, which shall be in compliance with the requirements of Regulations 83 and 101.

(9) In vessels of 75 metres in length and over provision shall be made for immediate water delivery from the fire main system either by—

(a) remote starting arrangements of one of the main fire pumps in the wheelhouse and at the fire control station, if any; or

(b) permanent pressurisation of the fire main system, due regard being paid to the possibility of freezing.*

(10) The Administration shall be satisfied with the maintenance of the fire integrity of the machinery spaces, the location and centralisation of the fire-extinguishing system controls, the shut-down arrangements referred to in Regulation 62, e.g. ventilation, fuel pumps, etc., and may require fire-extinguishing appliances and other fire-fighting equipment and breathing apparatus in addition to the relevant requirements of Chapter V.

Regulation 58

Protection against flooding

(1) Bilges in machinery spaces shall be provided with a high level alarm in such a way that the accumulation of liquids is detected at normal angles of trim and heel. The detection system shall initiate an audible and visual alarm in the places where continuous watch is maintained.

(2) In vessels of 45 metres in length and over the controls of any valve serving a sea inlet, a discharge below the waterline or a bilge injection system shall be so sited as to allow adequate time for operation in case of influx of water to the space.

Regulation 59

Communications

In vessels of 75 metres in length and over one of the two separate means of communication referred to in Regulation 45 shall be a reliable vocal communication. An additional reliable means of vocal communication shall be provided between the wheelhouse and the engineers' accommodation.

Regulation 60

Alarm system

(1) An alarm system shall be provided which shall indicate any fault requiring attention.

(2) (a) The alarm system shall be capable of sounding in the machinery space an audible alarm and indicate visually each separate alarm function at a suitable position. However, in vessels of less than 45 metres in length the Administration may permit the system to be capable of sounding and indicating visually each separate alarm function in the wheelhouse only.

* See Guidance for Precautions Against Freezing of Fire Mains contained in Recommendation 7 of Attachment 3 to the Final Act of the Conference.

(b) By vaartuie met 'n lengte van 45 meter en meer moet die alarmstelsel 'n verbinding hê met die ingenieurskajuite deur 'n kiesskakelaar om verbinding met een van die kajuite en met die ingenieurs se openbare ruimtes, as daar is, te verseker. Die Administrasie mag alternatiewe maatreëls wat 'n ekwivalente mate van veiligheid lewer, toelaat.

(c) By vaartuie met 'n lengte van 45 meter en meer moet die ingenieursalarm en 'n alarm na die stuurhuis vir persone wat op wagdiens is, geaktiveer word indien 'n alarmfunksie nie binne 'n beperkte tydperk soos deur die Administrasie gespesifiseer, aandag ontvang het nie.

(d) Hoorbare en sigbare alarms moet in die stuurhuis geaktiveer word vir 'n situasie wat aksie vereis deur die verantwoordelike persoon op wagdiens of wat onder sy aandag gebring behoort te word.

(e) Die alarmstelsel moet sover doenlik volgens die faalvrybeginsel ontwerp word.

(3) Die alarmstelsel moet—

(a) deurlopend van krag voorsien word deur outomatiese oorskakeling na 'n gereedheidskragtoevoer in die geval van verlies van normale kragtoevoer; en

(b) geaktiveer word deur 'n onderbreking in die normale kragtoevoer.

(4) (a) Die alarmstelsel moet gelyktydig meer as een fout kan aandui en die aanvaarding van een alarm moet nie 'n ander alarm inhibeer nie.

(b) Aanvaarding by die posisie bedoel in paragraaf (2)(a) van 'n alarmtoestand moet by die posisies waar dit getoon is, aangedui word. Alarms moet gehandhaaf word totdat hulle aanvaar word en die sigbare aanduidings moet daar bly totdat die fout reggestel is. Alle alarms moet outomaties terugstel wanneer die fout reggestel is.

Regulasie 61

Spesiale vereistes vir masjinerie, ketel- en elektriese installasies

(1) By vaartuie met 'n lengte van 75 meter en meer moet die hooftoevoer van elektriese krag soos volg gelewer word:

(a) Waar die elektriese krag normaalweg deur een generator gelewer kan word, moet daar geskikte lasafwerpinrigtings voorsien word om die integriteit van lewering aan dienste wat vir aandrywing en stuur vereis word, te verseker. Om die geval van verlies van die generator in werking te dek, moet daar voldoende voorsorg wees vir outomatiese aansit en verbinding met die hoofskakelbord van 'n noodgenerator van voldoende kapasiteit om aandrywing en stuur toe te laat en met outomatiese heraansit van die noodsaaklike hulptoestelle, insluitende, waar nodig, opeenvolgende werking. Middels mag tot tevredenheid van die Administrasie voorsien word vir afstandbeheerde (hand-) aansit en verbinding van die noodgenerator met die hoofskakelbord, asook middels van herhaalde afstandbeheerde aansit van noodsaaklike hulptoestelle.

(b) Indien die elektriese krag normaalweg deur meer as een opwekstel gelyktydig gelewer word, moet daar voorsorg wees, byvoorbeeld deur lasafwerping, om te verseker dat, in geval van verlies van een van hierdie opwekstelle, die oorblywendes in werking gehou word sonder oorbelasting, sodat aandrywing en stuur voortgesit kan word.

(2) Waar duplisering vereis word, moet ander hulpmasjinerie wat vir aandrywing noodsaaklik is, met outomatiese oorskakeltoestelle toegerus word watoordraging na 'n reserwemasjien toelaat. 'n Alarm moet op outomatiese oorskakeling gegee word.

(b) In vessels of 45 metres in length and over the alarm system shall have a connection to the engineers' cabins through a selector switch to ensure connection to one of those cabins and to the engineers' public rooms, if any. The Administration may permit alternative arrangements which provide an equivalent measure of safety.

(c) In vessels of 45 metres in length and over an engineers' alarm and an alarm to the wheelhouse for persons on watch shall be activated if an alarm function has not received attention within a limited period as specified by the Administration.

(d) Audible and visual alarms shall be activated in the wheelhouse for any situation requiring action by the responsible person on watch or which should be brought to his attention.

(e) The alarm system shall as far as is practicable be designed on the fail-safe principle.

(3) The alarm systems shall be—

(a) continuously powered with automatic change-over to a stand-by power supply in case of loss of normal power supply; and

(b) activated by failure of the normal power supply.

(4) (a) The alarm system shall be able to indicate at the same time more than one fault and the acceptance of any alarm shall not inhibit another alarm.

(b) Acceptance at the position referred to in paragraph (2) (a) of any alarm condition shall be indicated at the positions where it was shown. Alarms shall be maintained until they are accepted and the visual indications shall remain until the fault has been corrected. All alarms shall automatically reset when the fault has been rectified.

Regulation 61

Special requirements for machinery, boiler and electrical installations

(1) In vessels of 75 metres in lenght and over the main source of electrical power shall be supplied as follows:

(a) Where the electrical power can normally be supplied by one generator, there shall be provided suitable load shedding arrangements to ensure the integrity of supplies to services required for propulsion and steering. To cover the case of loss of the generator in operation, there shall be adequate provisions for automatic starting and connecting to the main switchboard of a stand-by generator of sufficient capacity to permit propulsion and steering and with automatic restarting of the essential auxiliaries including, where necessary, sequential operations. Means may be provided to the satisfaction of the Administration for remote (manual) starting and connection of the stand-by generator to the main switchboard as well as means of repeated remote starting of essential auxiliaries.

(b) If the electrical power is normally supplied by more than one generating set simultaneously, there shall be provisions, e.g. by load shedding, to ensure that in case of loss of one of these generating sets, the remaining ones are kept in operation without overload to permit propulsion and steering.

(2) Where required to be duplicated, other auxiliary machinery essential to propulsion shall be fitted with automatic change-over devices allowing transfer to a stand-by machine. An alarm shall be given on automatic change-over.

(3) Outomatiese beheer- en alarmstelsels moet soos volg voorsien word:

(a) Die beheerstelsel moet sodanig wees dat, deur die nodige outomatiese inrigtings, die dienste wat vir die werking van die hoofaandrywingsmasjinerie en die hulptoestelle daarvan nodig is, verseker word;

(b) middels moet voorsien word om die aansitlugdruk op die vereiste vlak te hou waar binnebrandenjins vir hoofaandrywing gebruik word;

(c) 'n alarmstelsel wat voldoen aan Regulasie 60, moet voorsien word vir alle belangrike drukke, temperature, vloeistofhoogtes, ens.; en

(d) waar toepaslik moet 'n geskikte sentrale punt ingerig word met die nodige alarmpanele en instrumentasie wat 'n gealarmeerde fout aandui.

Regulasie 62

Veiligheidstelsel

'n Veiligheidstelsel moet voorsien word sodat ernstige foutiewe werking in masjinerie- of ketelwerking wat 'n onmiddellike gevaar daarstel, die outomatiese afsluiting van daardie deel van die installasie sal inisieer en 'n alarm moet gegee word. Afsluiting van die aandrywingstelsel mag nie outomaties geaktiveer word nie, behalwe in gevalle wat tot ernstige skade, algehele onklaarraking of ontploffing kan lei. Waar inrigtings vir die oorheersing van die afsluiting van die hoofaandrywingsmasjinerie aangebring is, moet dit sodanig wees dat onopsetlike aktivering uitgesluit word. Sigbare middele moet voorsien word om aan te dui of dit geaktiveer is of nie.

HOOFSTUK V

BRANDBESKERMING, BRANDOPSPORING, BRANDBLUSSING EN BRANDBESTRYDING

DEEL A—BRANDVEILIGHEIDSMAATREËLS BY VAARTUIE MET 'N LENGTE VAN 55 METER EN MEER

(Kyk ook Regulasie 57)

Regulasie 63

Algemeen

Een van die volgende beskermingsmetodes moet in akkommodasie- en diensruimtes gevolg word:

(a) *Metode IF*—Die konstruksie van alle interne verdeelskotte van onbrandbare Klas "B"- of "C"-verdelings, gewoonlik sonder die installering van 'n verklikstelsel of sproeierstelsel in die akkommodasie- en diensruimtes; of

(b) *Metode IIF*—Die installering van 'n outomatiese sproeier- en brandalarmstelsel vir die opspoor en blus van 'n brand in alle ruimtes waarin 'n brand na verwagting sou kon ontstaan, gewoonlik met geen beperking op die tipe interne verdeelskotte nie; of

(c) *Metode IIIF*—Die installering van 'n outomatiese brandalarm- en -verklikstelsel in alle ruimtes waarin 'n brand na verwagting sou kon ontstaan, gewoonlik met geen beperking op die tipe interne verdeelskotte nie, behalwe dat die oppervlakte van 'n akkommodasieruimte of -ruimtes wat deur 'n Klas "A"- of "B"-verdeling begrens word, in geen geval 50 vierkante meter mag oorskry nie. Die Administrasie mag egter hierdie oppervlakte vir openbare ruimtes vergroot.

Die vereistes vir die gebruik van onbrandbare materiale in konstruksie en isolering van die grensskotte van masjinerieruimtes, beheerposte, ens., en die beskerming van trapomsluitings en gange is by al drie metodes dieselfde.

(3) Automatic control and alarm systems shall be provided as follows:

(a) The control system shall be such that through the necessary automatic arrangements the services needed for the operation of the main propulsion machinery and its auxiliaries are ensured;

(b) means shall be provided to keep the starting air pressure at the required level where internal combustion engines are used for main propulsion;

(c) an alarm system complying with Regulation 60 shall be provided for all important pressures, temperatures, fluid levels, etc.; and

(d) where appropriate an adequate central position shall be arranged with the necessary alarm panels and instrumentation indicating any alarmed fault.

Regulation 62

Safety system

A safety system shall be provided so that serious malfunction in machinery or boiler operations, which presents an immediate danger, shall initiate the automatic shut-down of that part of the plant and an alarm shall be given. Shut-down of the propulsion system shall not be automatically activated except in cases which could lead to serious damage, complete breakdown, or explosion. Where arrangements for overriding the shut-down of the main propelling machinery are fitted these shall be such as to preclude inadvertent activation. Visual means shall be provided to show whether or not it has been activated.

CHAPTER V

FIRE PROTECTION, FIRE DETECTION, FIRE EXTINCTION AND FIRE FIGHTING

PART A—FIRE SAFETY MEASURES IN VESSELS OF 55 METRES IN LENGTH AND OVER

(See also Regulation 57)

Regulation 63

General

One of the following methods of protection shall be adopted in accommodation and service spaces:

(a) *Method IF*—The construction of all internal divisional bulkheads of non-combustible "B" or "C" Class divisions generally without the installation of a detection or sprinkler system in the accommodation and services spaces; or

(b) *Method IIF*—The fitting of an automatic sprinkler and fire alarm system for the detection and extinction of fire in all spaces in which fire might be expected to originate, generally with no restriction on the type of internal divisional bulkheads; or

(c) *Method IIIF*—The fitting of an automatic fire alarm and detection system in all spaces in which a fire might be expected to originate, generally with no restriction on the type of internal divisional bulkheads, except that in no case shall the area of any accommodation space or spaces bounded by an "A" or "B" Class division exceed 50 square metres. However, the Administration may increase this area for public spaces.

The requirements for the use of non-combustible materials in construction and insulation of the boundary bulkheads of machinery spaces, control stations, etc., and the protection of stairway enclosures and corridors shall be common to all three methods.

Regulasie 64

Bou

(1) Die romp, bobou, strukturele skotte, dekke en dekhuise moet van staal of ander ekwivalente materiaal gebou wees, behalwe soos in paragraaf (4) anders gespesifiseer.

(2) Die isolering van aluminiumallooikomponente van Klas "A"- of "B"-verdelings, behalwe bouwerk wat na die mening van die Administrasie nie belas is nie, moet sodanig wees dat die strukturele kern se temperatuur nie meer as 200 °C bo die omringende temperatuur styg te eniger tyd gedurende die toepaslike vuurblootstelling in die standaardvuurtoets nie.

(3) Spesiale aandag moet geskenk word aan die isolering van aluminiumallooikomponente van pilare, stutte en ander strukturele raamdele wat vereis word vir die ondersteuning van oorlewingsvaartuigstuwing, -tewaterlatings- en- inskepingsgebiede, en verdelings van Klas "A" en "B", om te verseker—

(a) dat die temperatuurstygbeperkings soos gespesifiseer in paragraaf (2) aan die einde van een uur sal geld ten opsigte van dié raamdele wat oorlewingsvaartuiggebiede ondersteun en Klas "A"-verdelings; en

(b) dat die temperatuurstygbeperking soos gespesifiseer in paragraaf (2) aan die einde van 'n halfuur sal geld vir dié raamdele wat Klas "B"-verdelings moet ondersteun.

(4) Die kruine en hulsels van masjinerieruimtes van Katergorie A moet van staal gebou en voldoende geïsoleer wees en enige openinge daarin moet paslik ingerig en beskerm wees om brandverspreiding te verhoed.

Regulasie 65

Skotte binne die akkommodasie- en diensruimtes

(1) Binne die akkommodasie- en diensruimtes moet alle skotte wat Klas "B"-verdelings moet wees, van dek tot dek strek en tot by die buiteromp of ander grense, tensy deurlopende Klas "B"-plafonne of -bekledings, of albei, aan beide kante van die skotte aangebring word, in welke geval die skot by die deurlopende plafon of bekleding mag eindig.

(2) *Metode IF*.—Alle skotte wat nie ingevolge hierdie of ander regulasies van hierdie Deel Klas "A"- of "B"-verdelings hoef te wees nie, moet ten minste Klas "C"-verdelings wees.

(3) *Metode IIF*.—Daar is geen beperking op die konstruksie van skotte wat nie ingevolge hierdie of ander Regulasies van hierdie Deel Klas "A"- of "B"-verdelings hoef te wees nie, behalwe in individuele gevalle waar Klas "C"-skotte ooreenkomstig Tabel 1 in Regulasie 68 vereis word.

(4) *Metode IIIF*.—Daar is geen beperking op die konstruksie van skotte wat nie ingevolge hierdie of ander Regulasies van hierdie Deel Klas "A"- of "B"-verdelings hoef te wees nie. In geen geval mag die oppervlakte van 'n akkommodasieruimte of -ruimtes wat deur 'n deurlopende Klas "A"- of "B"-verdeling begrens word, 50 vierkante meter oorskry nie, behalwe in individuele gevalle waar Klas "C"-skotte ooreenkomstig Tabel 1 in Regulasie 68 vereis word. Die Administrasie mag egter hierdie oppervlakte vir openbare ruimtes vergroot.

Regulasie 66

Beskerming van trappe en hyserskagte in akkommodasieruimtes, diensruimtes en beheerposte

(1) Trappe wat deur slegs 'n enkele dek gaan, moet ten minste op een vlak deur ten minste Klas "B-O"-verdelings en selfsluitende deure beskerm word. Hysers wat deur slegs 'n enkele dek gaan, moet deur Klas "A-O"-verdelings met staaldeure op albei vlakke omsluit word. Trappe en hyserskagte wat deur meer as 'n enkele dek gaan, moet deur ten minste Klas "A-O"-verdelings omsluit word en op alle vlakke deur selfsluitende deure beskerm word.

Regulation 64

Structure

(1) The hull, superstructure, structural bulkheads, decks and deckhouses shall be constructed of steel or other equivalent material except as otherwise specified in paragraph (4).

(2) The insulation of aluminium alloy components of "A" or "B" Class divisions, except structures which, in the opinion of the Administration, are non-load-bearing, shall be such that the temperature of the structural core does not rise more than 200 degrees celsius above the ambient temperature at any time during the applicable fire exposure to the standard fire test.

(3) Special attention shall be given to the insulation of aluminium alloy components of columns, stanchions and other structural members required to support survival craft stowage, launching and embarkation areas, and "A" and "B" Class divisions, to ensure—

(a) that for such members supporting survival craft areas and "A" Class divisions the temperature rise limitation specified in paragraph (2) shall apply at the end of one hour; and

(b) that for such members required to support "B" Class divisions, the temperature rise limitation specified in paragraph (2) shall apply at the end of one half-hour.

(4) Crowns and casings of machinery spaces of Category A shall be of steel construction adequately insulated and any openings therein shall be suitably arranged and protected to prevent the spread of fire.

Regulation 65

Bulkheads within the accommodation and service spaces

(1) Within the accomodation and service spaces, all bulkheads required to be "B" Class divisions shall extend from deck to deck and to the shell or other boundaries unless continuous "B" Class ceilings or linings, or both, are fitted on both sides of the bulkheads in which case the bulkhead may terminate at the continuous ceiling or lining.

(2) *Method IF*—All bulkheads not required by this or other Regulations of this Part to be "A" or "B" Class divisions shall be at least "C" Class divisions.

(3) *Method IIF*—There shall be no restriction on the construction of bulkheads not required by this or other Regulations of this Part to be "A" or "B" Class divisions except in individual cases where "C" Class bulkheads are required in accordance with Table 1 in Regulation 68.

(4) *Method IIIF*—There shall be no restriction on the construction of bulkheads not required by this or other Regulations of this Part to be "A" or "B" Class divisions. In no case shall the area of any accommodation space or spaces bounded by a continuous "A" or "B" Class division exceed 50 square metres, except in individual cases where "C" Class bulkheads are required in accordance with Table 1 in Regulation 68. However, the Administration may increase this area for public spaces.

Regulation 66

Protection of stairways and lift trunks in accommodation spaces, service spaces and control stations

(1) Stairways which penetrate only a single deck shall be protected at least at one level by at least "B-O" Class divisions and self-closing doors. Lifts which penetrate only a single deck shall be enclosed by "A-O" Class divisions with steel doors at both levels. Stairways and lift trunks which penetrate more than a single deck shall be enclosed by at least "A-O" Class division and protected by self-closing doors at all levels.

(2) Alle trappe moet met staalrame gebou wees, behalwe waar die Administrasie die gebruik van ander ekwivalente materiaal toelaat.

Regulasie 67

Deure in brandbestande verdelings

(1) Deure moet sover doenlik weerstand teen brand bied ekwivalent aan dié van die verdeling waarin hulle aangebring is. Deure en deurrame in Klas "A"-verdelings moet van staal gemaak wees. Deure in Klas "B"-verdelings moet onbrandbaar wees. Deure wat in grensskotte van masjinerieruimtes van Kategorie A aangebring is, moet selfsluitend en redelik gasdig wees. Die Administrasie mag die gebruik van brandbare materiale toelaat in deure wat kajuite van die individuele binne sanitêre akkommodasie, soos storte, skei indien dit volgens Metode IF gemaak word.

(2) Deure wat selfsluitend moet wees, mag nie met vashouerhake toegerus word nie. Vashouerinrigtings wat met afstandbeheerde loslatingsmeganismes van die faalvry tipe toegerus is, mag egter gebruik word.

(3) Ventilasie-openinge mag toegelaat word in en onder die deure in gangskotte, maar sulke openinge mag nie in en onder trapomsluitingsdeure toegelaat word nie. Die openinge mag slegs in die onderste helfte van 'n deur voorsien word. Waar daar so 'n opening in of onder 'n deur is, mag die totale netto oppervlakte van sodanige opening of openinge nie 0,05 vierkante meter oorskry nie. Wanneer sodanige opening in 'n deur gesny is, moet dit toegerus wees met 'n rooster van onbrandbare materiaal.

(4) Waterdigte deure hoef nie geïsoleer te wees nie.

Regulasie 68

Brandintegriteit van skotte en dekke

(1) Benewens hulle voldoening aan die spesifieke vereistes betreffende skotte en dekke elders in hierdie Deel moet die minimum brandintegriteit van skotte en dekke wees soos voorgeskryf in Tabelle 1 en 2 van hierdie Regulasie.

(2) Die gebruik van die tabelle is onderworpe aan die volgende bepalings:

(a) Tabelle 1 en 2 geld ten opsigte van onderskeidelik skotte en dekke wat aangrensende ruimtes skei; en

(b) vir die vasstelling van die toepaslike brandintegriteitstandaarde van toepassing op die verdelings tussen aangrensende ruimtes word sodanige ruimtes geklassifiseer ooreenkomstig hulle brandrisiko soos volg:

(i) *Beheerposte* (1)

Ruimtes met noodbronne van krag en verligting.

Stuurhuis en kaartkamer.

Ruimtes met die vaartuig se radiotoerusting.

Brandbluskamers, brandbeheerkamers en brandregistrasieposte.

Beheerkamer vir aandrywingsmasjinerie waar dit buite die majinerieruimte geleë is.

Ruimtes met gesentraliseerde brandalarmtoerusting.

(ii) *Gange* (2)

Gange en voorportale.

(iii) *Akkommodasieruimtes* (3)

Ruimtes omskryf in Regulasie 2 (41) en (42), uitsluitende gange.

(2) All stairways shall be of steel frame construction except where the Administration permits the use of other equivalent material.

Regulation 67

Doors in fire-resistant divisions

(1) Doors shall have resistance to fire as far as practicable, equivalent to the division in which they are fitted. Doors and door frames in "A" Class divisions shall be constructed of steel. Doors in "B" Class divisions shall be non-combustible. Doors fitted in boundary bulkheads of machinery spaces of Category A shall be self-closing and reasonably gastight. The Administration may permit the use of combustible materials in doors separating cabins from the individual interior sanitary accommodation, such as showers, if constructed according to Method IF.

(2) Doors required to be self-closing shall not be fitted with hold-back hooks. However, hold-back arrangements fitted with remote release fittings of the fail-safe type may be used.

(3) Ventilation openings may be permitted in and under the doors in corridor bulkheads except that such openings shall not be permitted in and under stairway enclosure doors. The openings shall be provided only in the lower half of a door. Where such opening is in or under a door the total net area of any such opening or openings shall not exceed 0.05 square metres. When such opening is cut in a door it shall be fitted with a grille made of non-combustible material.

(4) Watertight doors need not be insulated.

Regulation 68

Fire integrity of bulkheads and decks

(1) In addition to the specific provisions for fire integrity of bulkheads and decks required elsewhere in this Part the minimum fire integrity of bulkheads and decks shall be as prescribed in Table 1 and Table 2 of this Regulation.

(2) The following requirements shall govern application of the Tables:

(a) Tables 1 and 2 shall apply respectively to bulkheads and decks separating adjacent spaces; and

(b) for determining the appropriate fire integrity standards to be applied to divisions between adjacent spaces, such spaces are classified according to their fire risk as follows:

(i) *Control Stations* (1)

Spaces containing emergency sources of power and lighting.

Wheelhouse and chartroom.

Spaces containing the vessel's radio equipment.

Fire-extinguishing rooms, fire-control rooms and fire-recording stations.

Control room for propulsion machinery when located outside the machinery space.

Spaces containing centralised fire alarm equipment.

(ii) *Corridors* (2)

Corridors and lobbies.

(iii) *Accommodation Spaces* (3)

Spaces as defined in Regulation 2 (41) and (42) excluding corridors.

(iv) *Trappe* (4)

Binnetrappe, -hysers en -roltrappe, behalwe dié wat volkome omsluit is binne masjinerieruimtes en omsluitings daarvan. In hierdie verband word 'n trap wat net op een vlak omsluit is, beskou as deel van die ruimte waarvan dit nie deur 'n branddeur geskei word nie.

(v) *Diensruimtes* met 'n klein brandrisiko (5)
Sluitkaste en pakkamers met oppervlaktes van minder as 2 vierkante meter, droogkamers en wasserye.

(vi) *Masjinerieruimtes* van Kategorie A (6)
Ruimtes omskryf in Regulasie 2 (45).

(vii) *Ander masjinerieruimtes* (7)

Ruimtes omskryf in Regulasie 2 (46) insluitende vismeelprosesseerruimtes, maar uitsluitende masjinerieruimtes van Kategorie A.

(viii) *Vragruime* (8)

Alle ruimtes wat vir vrag gebruik word, insluitende vragolietenks, en kokergange en luikopeninge na sodanige ruimtes.

(ix) *Diensruimtes* met 'n groot brandrisiko (9)

Kombuise, spense met kookstoestelle, verfkamers, lampkamers, sluitkaste en pakkamers met 'n oppervlakte van twee of meer vierkante meter, en werkwinkels wat nie deel uitmaak van die masjinerieruimtes nie.

(x) *Oop dekke* (10)

Oop dekruimtes en omslote promenades, ruimtes vir die prosessering van vis in 'n rou staat, viswasruimtes en soortgelyke ruimtes wat geen brandrisiko inhou nie.

Die lugspasies buite boboue en dekhuise.

Die titel van elke kategorie is tipies eerder as beperkend.

Die nommer tussen hakies ná elke kategorie verwys na die toepaslike kolom of ry in die tabelle.

(iv) *Stairways* (4)

Interior stairways, lifts and escalators other than those wholly contained within the machinery spaces and enclosures thereto. In this connection, a stairway which is enclosed only at one level shall be regarded as part of the space from which it is not separated by a fire door.

(v) *Service Spaces of Low Fire Risk* (5)

Lockers and store-rooms having areas of less than 2 square metres, drying rooms and laundries.

(vi) *Machinery Spaces of Category A* (6)

Spaces as defined in Regulation 2 (45).

(vii) *Other Machinery Spaces* (7)

Spaces as defined in Regulation 2 (46) including fishmeal processing spaces, but excluding machinery spaces of Category A.

(viii) *Cargo Spaces* (8)

All spaces used for cargo, including cargo oil tanks, and trunkways and hatchways to such spaces.

(ix) *Service Spaces of High Fire Risk* (9)

Galleys, pantries containing cooking appliances, paint rooms, lamp rooms, lockers and store-rooms having areas of 2 square metres or more, and workshops other than those forming part of the machinery spaces.

(x) *Open Decks* (10)

Open deck spaces and enclosed promenades, spaces for processing fish in the raw state, fish washing spaces and similar spaces containing no fire risk.
The air spaces outside superstructures and deckhouses.

The title of each category is intended to be typical rather than restrictive. The number in parenthesis following each category refers to the applicable column or row in the Tables.

TABEL 1—BRANDINTEGRITEIT VAN SKOTTE WAT AANGRENSENDE RUIMTES SKEI

Ruimtes	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Beheerposte (1)	A-0[e]	A-O	A-60	A-0	A-15	A-60	A-15	A-60	A-60	*
Gange (2)		C	B-0	B-0 A-0[c]	B-0	A-60	A-0	A-0	A-0	*
Akkommodasieruimtes (3)			C[a,b]	B-0 A-0[c]	B-0	A-60	A-0	A-0	A-0	*
Trappe (4)				B-0 A-0[c]	B-0 A-0[c]	A-60	A-0	A-0	A-0	*
Diensruimtes met klein brandrisiko (5)					C	A-60	A-0	A-0	A-0	*
Masjinerieruimtes van Kategorie A (6)						*	A-0	A-0	A-60	*
Ander masjinerieruimtes (7)							A-0[d]	A-0	A-0	*
Vragruime (8)								*	A-0	*
Diensruimtes met groot brandrisiko (9)									A-0[d]	*
Oop dekke (10)										

TABEL 2—BRANDRISIKO VAN DEKKE WAT AANGRENSENDE RUIMTES SKEI

Ruimte onder ↓ Ruimte bo →	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Beheerposte (1)	A-0	A-0	A-0	A-0	A-0	A-60	A-0	A-0	A-0	*
Gange (2)	A-0	*	*	A-0	*	A-60	A-0	A-0	A-0	*

Ruimte onder ↓ Ruimte bo →	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Akkommodasieruimtes..... (3)	A-60	A-0	*	A-0	*	A-60	A-0	A-0	A-0	*
Trappe ..... (4)	A-0	A-0	A-0	*	A-0	A-60	A-0	A-0	A-0	*
Diensruimtes met klein brandrisiko (5)	A-15	A-0	A-0	A-0	*	A-60	A-0	A-0	A-0	*
Masjinerieruimtes van Kategorie A (6)	A-60	A-60	A-60	A-60	A-60	*	A-60	A-30	A-60	*
Ander masjinerieruimtes..... (7)	A-15	A-0	A-0	A-0	A-0	A-0	*	A-0	A-0	*
Vragruime..... (8)	A-60	A-0	A-0	A-0	A-0	A-0	A-0	*	A-0	*
Diensruimtes met klein brandrisiko (9)	A-60	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0[d]	*
Oop dekke.....(10)	*	*	*	*	*	*	*	*	*	–

Notas.—Moet toegepas word op sowel Tabel 1 as Tabel 2 soos toepaslik.

[a] Geen spesiale vereistes vir hierdie skotte word in Metode IIF- en Metode IIIF-brandbeskerming voorgeskryf nie.

[b] In die geval van Metode IIIF moet Klas "B"-skotte met 'n "B-0"-waarde voorsien word tussen ruimtes of groepe ruimtes met 'n oppervlakte van 50 vierkante meter of meer.

[c] Vir duidelikheid oor wat van toepassing is, kyk Regulasies 65 en 66.

[d] Waar ruimtes van dieselfde numeriese kategorie is en die boskrif [d] voorkom, word 'n skot of dek van die waarde wat in die tabelle getoon word, slegs vereis wanneer die aangrensende ruimtes vir 'n ander doel is, bv. in kategorie (9). 'n Kombuis langs 'n kombuis vereis nie so 'n skot nie, maar 'n kombuis langs 'n verfkamer vereis 'n "A-0"-skot.

[e] Skotte wat die stuurhuis, kaartkamer en radiokamer van mekaar skei, mag 'n "B-0"-waarde hê.

* Waar 'n asterisk in die tabelle voorkom, moet die verdeling van staal of ekwivalente materiaal wees, maar dit hoef nie Klas "A"-standaard te wees nie.

TABLE 1—FIRE INTEGRITY OF BULKHEADS SEPARATING ADJACENT SPACES

Spaces	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Control stations.....(1)	A–0[e]	A–0	A–60	A–0	A–15	A–60	A–15	A–60	A–60	*
Corridors .....(2)		C	B–0	B–0 A–0[c]	B–0	A–60	A–0	A–0	A–0	*
Accommodation spaces .....(3)			C[a,b]	B–0 A–0[c]	B–0	A–60	A–0	A–0	A–0	*
Stairways.....(4)				B–0 A–0[c]	B–0 A–0[c]	A–60	A–0	A–0	A–0	*
Service spaces of low fire risk...(5)					C	A–60	A–0	A–0	A–0	*
Machinery spaces of category A (6)						*	A–0	A–0	A–60	*
Other machinery spaces.....(7)							A–0[d]	A–0	A–0	*
Cargo spaces.....(8)								*	A–0	*
Service spaces of high fire risk..(9)									A–0[d]	*
Open decks..... (10)										—

TABLE 2—FIRE INTEGRITY OF DECKS SEPARATING ADJACENT SPACES

Space below ↓ Space above →	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Control stations.....(1)	A–0	A–0	A–0	A–0	A–0	A–60	A–0	A–0	A–0	*
Corridors .....(2)	A–0	*	*	A–0	*	A–60	A–0	A–0	A–0	*
Accommodation spaces .....(3)	A–60	A–0	*	A–0	*	A–60	A–0	A–0	A–0	*
Stairways.....(4)	A–0	A–0	A–0	*	A–0	A–60	A–0	A–0	A–0	*
Service spaces of low fire risk...(5)	A–15	A–0	A–0	A–0	*	A–60	A–0	A–0	A–0	*
Machinery spaces of category A (6)	A–60	A–60	A–60	A–60	A–60	*	A–60	A–30	A–60	*
Other machinery spaces.....(7)	A–15	A–0	A–0	A–0	A–0	A–0	*	A–0	A–0	*
Cargo spaces.....(8)	A–60	A–0	A–0	A–0	A–0	A–0	A–0	*	A–0	*
Service spaces of high fire risk..(9)	A–60	A–0	A–0	A–0	A–0	A–0	A–0	A–0	A–0[d]	*
Open decks..... (10)	*	*	*	*	*	*	*	*	*	—

Notes—To be applied to both Tables 1 and 2, as appropriate.

[a] No special requirements are imposed upon these bulkheads in Methods IIF and IIIF fire protection.

[b] In case of Method IIIF "B" Class bulkheads of "B–0" rating shall be provided between spaces or groups of spaces of 50 square metres and over in area.

[c] For clarification as to which applies see Regulations 65 and 66.

[d] Where spaces are of the same numerical category and superscript [d] appears, a bulkhead or deck of the rating shown in the Tables is only required when the adjacent spaces are for a different purpose, e.g. in category (9). A galley next to a galley does not require a bulkhead but a galley next to a paint room requires an "A–0" bulkhead.

[e] Bulkheads separating the wheelhouse, chartroom and radio room from each other may be "B–0" rating.

* Where an asterisk appears in the Tables the division is required to be of steel or equivalent material but is not required to be of "A" Class standard.

(3) Deurlopende Klas "B"-plafonne of -bekledings, saam met die betrokke dekke of skotte, kan aanvaar word as ten volle of gedeeltelik bydraend tot die vereiste isolasie en integriteit van 'n verdeling.

(4) Vensters en dakvensters van masjinerieruimtes moet soos volg wees:

(a) Waar dakvensters oopgemaak kan word, moet hulle van buite die ruimte af toegemaak word. Dakvensters met glasruite moet buite toegerus wees met 'n permanent aangehegte luik van staal of ander ekwivalente materiaal.

(b) Glas of soortgelyke materiale mag nie in masjinerieruimtegrense aangebring word nie. Dit sluit nie die gebruik van draadversterkte glas vir dakvensters en glas in beheerkamers binne die masjinerieruimtes uit nie.

(c) In dakvensters bedoel in subparagraaf (a) moet draadversterkte ruite gebruik word.

(5) Vensters en patryspoorte mag in buitegrense wat ingevolge Regulasie 64 (1) van staal of 'n ekwivalente materiaal moet wees, aangebring word mits daar nêrens in hierdie Deel vereis word dat sodanige grense Klas "A"-integriteit moet hê nie. Eweneens mag deure in sodanige grense as wat nie Klas "A"-integriteit hoef te hê nie, van materiale gemaak wees wat die Administrasie tevrede stel.

Regulasie 69

Konstruksiebesonderhede

(1) *Metode IF*—In akkommodasie- en diensruimtes en beheerposte moet alle bekledings, lugstroomstuiters, plafonne en hul gepaardgaande bedekkings van onbrandbare materiale wees.

(2) *Metodes IIF en IIIF*—In gange en trapomsluitings wat akkommodasie- en diensruimtes en beheerstasies bedien, moet plafonne, bekledings, lugstroomstuiters en hul gepaardgaande bedekkings van onbrandbare materiale wees.

(3) *Metodes IF, IIF en IIIF:*

(a) Behalwe in vragruime of koelkompartemente van diensruimtes moet isolasiemateriale onbrandbaar wees. Voglae en kleefmiddels wat saam met isolering gebruik word, sowel as die isolering van pyptoebehore, vir verkoelingsdiensstelsels, hoef nie van onbrandbare materiaal te wees nie, maar moet in die kleinste moontlike hoeveelheid beperk word, en hulle blootgestelde oppervlakke moet tot tevredenheid van die Administrasie weerstand bied teen die verspreiding van vlamme. In ruimtes waar die penetrering van olieprodukte moontlik is, moet die isolasie-oppervlak ondeurlatend wees vir olie of oliedamp.

(b) Waar onbrandbare skotte, bekledings en plafonne in akkommodasie- en diensruimtes aangebring word, mag hulle 'n brandbare fineer hê van hoogstens 2,0 millimeter dik binne enige sodanige ruimte, behalwe gange, trapomsluitings en beheerposte, waar dit nie 1,5 millimeter mag oorskry nie.

(c) Lugruimtes wat agter plafonne, panele of bekledings ingesluit word, moet verdeel wees deur styfpassende lugstroomstuiters hoogstens 14 meter uitmekaar. In die vertikale rigting moet sodanige spasies, insluitende dié agter bekledings van trappe, kokers, ens., by elke dek toegemaak wees.

(3) Continuous "B" Class ceilings or linings, in association with the relevant decks or bulkheads, may be accepted as contributing, wholly or in part, to the required insulation and integrity of a division.

(4) Windows and skylights to machinery spaces shall be as follows:

(a) Where skylights can be opened they shall be capable of being closed from outside the space. Skylights containing glass panels shall be fitted with external shutters of steel or other equivalent material permanently attached.

(b) Glass or similar materials shall not be fitted in machinery space boundaries. This does not preclude the use of wire-reinforced glass for skylights and glass in control rooms within the machinery spaces.

(c) In skylights referred to in sub-paragraph (a) wire-reinforced glass shall be used.

(5) External boundaries which are required by Regulation 64 (1) to be of steel or equivalent material may be pierced for the fitting of windows and side-scuttles provided that there is no requirement elsewhere in this Part for such boundaries to have "A" Class integrity. Similarly, in such boundaries which are not required to have "A" Class integrity, doors may be of materials to the satisfaction of the Administration.

Regulation 69

Details of construction

(1) *Method IF*—In accommodation and service spaces and control stations all linings, draught stops, ceilings and their associated grounds shall be of non-combustible materials.

(2) *Methods IIF and IIIF*—In corridors and stairway enclosures serving accommodation and service spaces and control stations, ceilings, linings, draught stops and their associated grounds shall be of non-combustible materials.

(3) *Methods IF, IIF and IIIF:*

(a) Except in cargo spaces or refrigerated compartments of service spaces insulating materials shall be non-combustible. Vapour barriers and adhesives used in conjunction with insulation, as well as the insulation of pipe fittings, for cold service systems need not be of non-combustible material, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have qualities of resistance to the propagation of flame to the satisfaction of the Administration. In spaces where penetration of oil products is possible, the surface of insulation shall be impervious to oil or oil vapour.

(b) Where non-combustible bulkheads, linings and ceilings are fitted in accommodation and service spaces they may have a combustible veneer not exceeding 2,0 millimetres in thickness within any such space except corridors, stairway enclosures and control stations, where it shall not exceed 1,5 millimteres in thickness.

(c) Air spaces enclosed behind ceilings, panellings, or linings shall be divided by close-fitting draught stops spaced not more than 14 metres apart. In the vertical direction, such spaces, including those behind linings of stairways, trunks, etc., shall be closed at each deck.

Regulasie 70

Ventilasiestelsels

(1) Waar kokers of leidings ruimtes bedien aan albei kante van Klas "A"-skotte of -dekke, moet dempers aangebring word om die verspreiding van brand en rook tussen afdelings te voorkom. Handdempers moet van albei kante van die skot of dek bedien kan word. Waar die kokers of leidings met 'n vry dwarsdeursneeoppervlakte van meer as 0,02 vierkante meter deur Klas "A"-skotte of -dekke gaan, moet outomatiese selfsluitende dempers aangebring wees. Kokers wat kompartemente bedien wat slegs aan een kant van sodanige skotte geleë is, moet aan paragraaf (2) (b) voldoen.

(2) (a) Ventilasieleidings moet van onbrandbare materiaal gemaak wees. Kort leidings, wat gewoonlik nie langer is as 2 meter nie en met 'n dwarsdeursneeoppervlakte van hoogstens 0,02 vierkante meter, hoef egter nie onbrandbaar te wees nie, behoudens die volgende voorwaardes:

(i) Hierdie leidings moet van 'n materiaal wees wat, tot tevredenheid van die Administrasie, 'n klein brandrisiko het;

(ii) hulle mag slegs by die einde van die ventilasietoestel gebruik word; en

(iii) hulle mag nie minder as 600 millimeter, gemeet met die leiding langs, vanaf 'n opening in 'n Klas "A"-of 'n Klas "B"-verdeling, insluitende deurlopende Klas "B"-plafonne, geleë wees nie.

(b) Waar die ventilasieleidings met 'n vry dwarsdeursneeoppervlakte van meer as 0,02 vierkante meter deur Klas "A"-skotte of -dekke loop, moet die opening beklee word met 'n staalplaathuls, tensy die leidings wat deur die skotte of dekke loop, van staal is in die nabyheid van die deurgang deur die skot of dek en in daardie gedeelte van die leiding aan die volgende voldoen:

(i) Vir leidings met 'n vry dwarsdeursneeoppervlakte van meer as 0,02 vierkante meter, moet die hulse ten minste 3 millimeter dik en ten minste 900 millimeter lank wees. Wanneer dit deur skotte loop, moet hierdie lengte verkieslik ewe ver aan weerskante van die skot strek. Leidings met 'n vry dwarsdeursneeoppervlakte van meer as 0,02 vierkante meter moet van brandisolasie voorsien wees. Die isolasie moet ten minste dieselfde brandintegriteit hê as die skot of dek waardeer die leiding gaan. Ekwivalente penetrasiebeskerming mag tot tevredenheid van die Administrasie voorsien word.

(ii) Leidings met 'n vry dwarsdeursneeoppervlakte van meer as 0,075 vierkante meter moet, bykomend by die vereistes van subparagraaf (b) (i), met branddempers toeegrus wees. Die branddemper moet outomaties werk maar moet ook van albei kante van die skot of dek met die hand toegemaak kan word. Die demper moet voosien wees van 'n aanwyser wat toon of die demper oop of toe is. Branddempers word egter nie vereis nie waar leidings deur ruimtes gaan wat deur Klas "A"-verdelings omring word, sonder om daardie ruimtes te bedien, mits daardie kanale dieselfde brandintegriteit het as die skotte waardeur hulle gaan.

(c) Ventilasieleidings vir masjinerieruimtes van Kategorie A of kombuise mag oor die algemeen nie deur akkommodasieruimtes, diensruimtes of beheerposte loop nie. Waar die Administrasie hierdie reëling toelaat, moet die leidings van staal of ekwivalente materiaal wees en so ingerig wees dat die integriteit van die verdelings bewaar word.

Regulation 70

Ventilation systems

(1) Where trunks or ducts serve spaces on both sides of "A" Class bulkheads or decks, dampers shall be fitted so as to prevent the spread of fire and smoke between compartments. Manual dampers shall be operable from both sides of the bulkhead or the deck. Where the trunks or ducts with a free cross-sectional area exceeding 0,02 square metres pass through "A" Class bulkheads or decks, automatic self-closing dampers shall be fitted. Trunks serving compartments situated only on one side of such bulkheads shall comply with paragraph (2) (b).

(2) (a) Ventilation ducts shall be of non-combustible material. Short ducts, however, not generally exceeding 2 metres in length and with a cross section not exceeding 0,02 square metres need not be non-combustible, subject to the following conditions:

(i) These ducts shall be of a material which, to the satisfaction of the Administration, has a low fire risk;

(ii) they may only be used at the end of the ventilation device; and

(iii) they shall not be situated less than 600 millimetres, measured along the duct, from an opening in an "A" or "B" Class division including continuous "B" Class ceilings.

(b) Where the ventilation ducts with a free cross-sectional area exceeding 0,02 square metres pass through "A" Class bulkheads or decks, the opening shall be lined with a steel sheet sleeve unless the ducts passing through the bulkheads or decks are of steel in the vicinity of passage through the deck or bulkhead and comply in that portion of the duct with the following:

(i) For ducts with a free cross-sectional area exceeding 0,02 square metres the sleeves shall have a thickness of at least 3 millimetres and a length of at least 900 millimetres. When passing through bulkheads this length shall preferably be divided evenly on each side of the bulkhead. Ducts with a free cross-sectional area exceeding 0,02 square metres shall be provided with fire insulation. The insulation shall have at least the same fire integrity as the bulkhead or deck through which the duct passes. Equivalent penetration protection may be provided to the satisfaction of the Administration.

(ii) Ducts with a free cross-sectional area exceeding 0.075 square metres shall be fitted with fire dampers in addition to the requirements of sub-paragraph (b) (i). The fire damper shall operate automatically but shall also be capable of being closed manually from both sides of the bulkhead or deck. The damper shall be provided with an indicator which shows whether the damper is open or closed. Fire dampers are not required, however, where ducts pass through spaces surrounded by "A" Class divisions, without serving those spaces, provided those ducts have the same fire integrity as the bulkheads which they penetrate.

(c) Ventilation ducts for machinery spaces of Category A or galleys shall not in general pass through accommodation spaces, service spaces or control stations. Where the Administration permits this arrangement, the ducts shall be constructed of steel or equivalent material and so arranged as to preserve the integrity of the divisions.

(d) Ventilasieleidings van akkommodasieruimtes, diensruimtes of beheerposte mag oor die algemeen nie deur masjinerieruimtes van Kategorie A of deur kombuise loop nie. Waar die Administrasie hierdie reëling toelaat, moet die leidings van staal of ekwivalente materiaal wees en so ingerig wees dat die integriteit van die verdelings bewaar word.

(e) Waar ventilasieleidings met 'n vry dwarsdeursnee-oppervlakte van meer as 0,02 vierkante meter deur Klas "B"-skotte loop, moet die openinge beklee word met staalplaathulse van ten minste 900 mm lank, tensy die leidings vir hierdie afstand van staal is waar hulle deur die skotte loop. Wanneer die leidings deur 'n Klas "B"-skot gaan, moet hierdie afstand verkieslik ewe ver aan weerskante van die skot strek.

(f) Prakties uitvoerbare maatreëls moet getref word ten opsigte van beheerposte buite masjinerieruimtes ten einde te verseker dat ventilering, sigbaarheid en vryheid van rook gehandhaaf word, sodat die masjinerie en toerusting daarin in geval van brand onder toesig kan wees en doeltreffend kan bly funksioneer. Alternatiewe en afsonderlike middels vir lugvoorsiening moet verskaf word; luginlate van die twee toevoerbronne moet so geplaas wees dat die risiko dat beide inlate gelyktydig rook intrek, tot die minimum beperk word. Na goeddunke van die Administasie hoef hierdie vereistes nie te geld ten opsigte van beheerposte wat geleë is of uitgaan op 'n oop dek of waar plaaslike reëlings ewe doeltreffend sal wees nie.

(g) Waar hulle deur akkkommodasieruimtes of ruimtes met brandbare materiaal loop, moet die uitlaatleidings vanaf kombuisstowe van Klas "A"-verdelings gemaak wees. Elke uitlaatleiding moet toegerus wees met—

(i) 'n vetvanger wat maklik verwyder kan word om skoon te maak;

(ii) 'n branddemper in die onderend van die leiding;

(iii) middels waarmee die uitlaatwaaier vanuit die kombuis afgesluit kan word; en

(iv) vaste middels vir brandblussing binne die leiding, behalwe waar die Administrasie sulke toebehore as onprakties beskou in 'n vaartuig met 'n lengte van minder as 75 meter.

(3) Die hoofinlate en -uitlate van alle ventilasiestelsels moet van buite die geventileerde ruimtes af toegemaak kan word. Die kragventilering van akkommodasieruimtes, diensruimtes, beheerposte en masjinerieruimtes moet gestaak kan word vanaf 'n maklik bereikbare plek buite die ruimte wat bedien word. Hierdie posisie mag nie maklik afgesny kan word in geval van 'n brand in die ruimtes wat bedien word nie. Die middels wat voosien word vir die staak van die kragventilasie van die majinerieruimtes, moet heeltemal apart wees van die middels wat voorsien word vir die staak van ventilasie van ander ruimtes.

(4) Middels moet voorsien word vir die toemaak, vanaf 'n veilige posisie, van die ringruimtes om skoorstene.

(5) Ventilasiestelsels wat masjinerieruimtes bedien, moet onafhanklik wees van stelsels wat ander ruimtes bedien.

(6) Pakkamers wat aansienlike hoeveelhede hoogs vlambare produkte bevat, moet voorsien word van ventilasieinrigtings wat apart is van ander ventilasiestelsels. Ventilasie moet op hoë en lae vlakke gereël word, en die in- en uitlate van ventilators moet op veilige plekke geplaas en met vonkvangers toegerus wees.

Regulasie 71

Verwarmingsinstallasies

(1) Elektriese straalverwarmers moet vas geïnstalleer wees op 'n wyse wat brandrisiko tot 'n minimum beperk. Sodanige verwarmers mag nie 'n element hê wat so blootgestel is dat klerasie, gordyne of ander dergelike stowwe geskroei kan word of aan die brand kan raak as gevolg van die element se hitte nie.

(d) Ventilation ducts of accommodation spaces, service spaces or control stations shall not in general pass through machinery spaces of Category A or through galleys. Where the Administration permits this arrangement the ducts shall be constructed of steel or equivalent material and so arranged as to preserve the integrity of the divisions.

(e) Where ventilation ducts with a free cross-sectional area exceeding 0,02 square metres pass through "B" Class bulkheads the openings shall be lined with steel sheet sleeves of at least 900 millimetres in length, unless the ducts are of steel for this length in way of the bulkheads. When passing through a "B" Class bulkhead this length shall preferably be divided evenly on each side of the bulkhead.

(f) Such measures as are practicable shall be taken in respect of control stations outside machinery spaces in order to ensure that ventilation, visibility and freedom from smoke are maintained, so that in the event of fire the machinery and equipment contained therein may be supervised and continue to function effectively. Alternative and separate means of air supply shall be provided; air inlets of the two sources of supply shall be so disposed that the risk of both inlets drawing in smoke simultaneously is minimized. At the discretion of the Administration, such requirements need not apply to control stations situated on, and opening on to, an open deck, or where local closing arrangements are equally effective.

(g) Where they pass through accommodation spaces or spaces containing combustible materials, the exhaust ducts from galley ranges shall be constructed of "A" Class divisions. Each exhaust duct shall be fitted with—

(i) a grease trap readily removable for cleaning;

(ii) a fire damper located in the lower end of the duct;

(iii) arrangements, operable from within the galley, for shutting off the exhaust fan; and

(iv) fixed means for extinguishing a fire within the duct, except where the Administration considers such fittings impractical in a vessel of less than 75 metres in length.

(3) The main inlets and outlets of all ventilation systems shall be capable of being closed from outside the spaces being ventilated. Power ventilation of accommodation spaces, service spaces, control stations and machinery spaces shall be capable of being stopped from an easily accessible position outside the space being served. This position should not be readily cut off in the event of a fire in the spaces served. The means provided for stopping the power ventilation of the machinery spaces shall be entirely separate from the means provided for stopping ventilation of other spaces.

(4) Means shall be provided for closing, from a safe position, the annular spaces around funnels.

(5) Ventilation systems serving machinery spaces shall be independent of systems serving other spaces.

(6) Store-rooms containing appreciable quantities of highly flammable products shall be provided with ventilation arrangements which are separate from other ventilation systems. Ventilation shall be arranged at high and low levels and the inlets and outlets of ventilators shall be positioned in safe areas and fitted with spark arresters.

Regulation 71

Heating installations

(1) Electric radiators shall be fixed in position and so constructed as to reduce fire risks to a minimum. No such radiator shall be fitted with an element so exposed that clothing, curtains or other similar materials can be scorched or set on fire by heat from the element.

(2) Verhitting deur middel van oop vure word nie toegelaat nie. Verwarmingstowe en ander soortgelyke toestelle moet stewig bevestig word en voldoende beskerming en isolasie teen brand moet voorsien word onder en rondom sodanige toestelle en by hulle opneempype. Opneempype van stowe wat vaste brandstof brand, moet só ingerig en ontwerp word dat die moontlikheid van blokkering deur verbrandingsprodukte geminimaliseer word en dit moet maklik skoongemaak kan word. Dempers vir die beperking van lugstrome in opneempype moet, wanneer dit in die geslote stand is, steeds 'n toereikende deel ooplaat. Ruimtes waarin stowe geïnstalleer is, moet voorsien wees van ventilators van voldoende oppervlakte om genoegsame verbrandingslug vir die stoof te voorsien. Sodanige ventilators mag op geen manier toegemaak kan word nie en hul posisie moet sodanige wees dat geen afsluittoestelle ooreenkomstig Regulasie 20 vereis word nie.

(3) Oopvlam-gastoestelle, behalwe kookstowe en waterverwarmers, word nie toegelaat nie. Ruimtes wat sodanige stowe of waterverwarmers bevat, moet voldoende ventilasie hê om dampe en moontlike gaslekkasie na 'n veilige plek te verwyder. Alle pype wat gas van houer tot stoof of waterverwarmer vervoer, moet van staal of ander goedgekeurde materiaal wees. Outomatiese veiligheidgasafsluittoestelle wat in werking gestel word wanneer daar 'n verlies van druk in die gashoofleiding is of wanneer vlamuitdowing by 'n toestel plaasvind, moet geïnstalleer wees.

(4) Waar gasbrandstof vir huishoudelike doeleindes gebruik word, moet die inrigitings, berging, verspreiding en gebruik van die brandstof tot tevredenheid van die Administrasie geskied en in ooreenstemming met Regulasie 73, wees.

Regulasie 72

*Diverse items**

(1) Alle blootgestelde oppervlakke in gange en trapomsluitings en oppervlakke insluitende oppervlakke in versteekte of ontoeganklike ruimtes binne akkommodasie- en diensruimtes en beheerposte moet lae vlamverspreidingskenmerke hê.† Blootgestelde oppervlakke van plafonne in akkommodasie- en diensruimtes en beheerposte moet lae vlamverspreidingseienskappe hê.

(2) Verwe, vernisse en ander afwerkings aan blootgestelde binneoppervlakke moet nie buitensporige hoeveelhede rook of toksiese gasse of dampe kan produseer nie. Die Administrasie moet tevrede wees dat hulle nie van 'n aard is wat oormatige brandgevaar skep nie.

(3) Primêre dekbedekkings binne akkommodasie- en diensruimtes en beheerposte moet van goedgekeurde materiaal wees wat nie maklik sal ontbrand of sal lei tot gif- of ontploffingsgevaar by verhoogde temperature nie.‡

(4) Waar Klas "A"- of "B"-verdelings deurdring word vir die deurgang van elektriese kabels, pype, kokers, leidings, ens. of vir die installering van ventilasieaansluitings, vaste ligtoebehore en derglike inrigtings, moet maatreëls getref word om te verseker dat die brandintegriteit van die verdelings nie in gevaar gestel word nie.

* Kyk *Guidance Concerning the Use of Certain Plastic Materials* vervat in Aanbeveling 8 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

† Kyk *Guidelines on the Evaluation of Fire Hazard Properties of Materials*, deur die Organisasie aangeneem by Resolusie A.166 (ES.IV).

‡ Kyk *Improved Provisional Guidelines on Test Procedures for Primary Deck Coverings* deur die Organisasie aangeneem by Resolusie A.214 (VII).

(2) Heating by means of open fires shall not be permitted. Heating stoves and other similar appliances shall be firmly secured and adequate protection and insulation against fire shall be provided beneath and around such appliances and in way of their uptakes. Uptakes of stoves which burn solid fuel shall be so arranged and designed as to minimize the possibility of becoming blocked by combustion products and shall have a ready means for cleaning. Dampers for limiting draughts in uptakes shall, when in the closed position, still leave an adequate area open. Spaces in which stoves are installed shall be provided with ventilators of sufficient area to provide adequate combustion-air for the stove. Such ventilators shall have no means of closure and their position shall be such that closing appliances in accordance with Regulation 20 are not required.

(3) Open flame gas appliances, except cooking stoves and water heaters, shall not be permitted. Spaces containing any such stoves or water heaters shall have adequate ventilation to remove fumes and possible gas leakage to a safe place. All pipes conveying gas from container to stove or water heater shall be of steel or other approved material. Automatic safety gas shut-off devices shall be fitted to operate on loss of pressure in the gas main pipe or flame failure on any appliance.

(4) Where gaseous fuel is used for domestic purposes, the arrangements, storage, distribution and use of the fuel shall be to the satisfaction of the Administration and in accordance with Regulation 73.

Regulation 72

*Miscellaneous items**

(1) All exposed surfaces in corridors and stairway enclosures and surfaces including grounds in concealed or inaccessible spaces in accommodation and service spaces and control stations shall have low flame-spread characteristics.† Exposed surfaces of ceilings in accommodation and service spaces and control stations shall have low flame-spread characteristics.

(2) Paints, varnishes and other finishes used on exposed interior surfaces shall not be capable of producing excessive quantities of smoke or toxic gases or vapours. The Administration shall be satisfied that they are not of a nature to offer an undue fire hazard.

(3) Primary deck coverings within accommodation and service spaces and control stations, shall be of approved material which will not readily ignite or give rise to toxic or explosive hazards at elevated temperatures.‡

(4) Where "A" or "B" Class divisions are penetrated for the passage of electrical cables, pipes, trunks, ducts, etc., or for the fitting of ventilation terminals, lighting fixtures and similar devices, arrangements shall be made to ensure that the fire integrity of the divisions is not impaired.

* See Guidance Concerning the use of Certain Plastic Materials contained in Recommendation 8 of Attachment 3 to the Final Act of the Conference.

† See Guidelines on the Evaluation of Fire Hazard Properties of Materials adopted by the Organization by Resolution A.166(ES.IV).

‡ See Improved Provisional Guidelines on Test Procedures for Primary Deck Coverings adopted by the Organization by Resolution A.214(VII).

(5) (a) In akkommodasie- en diensruimtes en beheerposte moet pype wat deur Klas "A"- of "B"-verdelings gaan, van goedgekeurde materiale gemaak wees betreffende die hittegraad wat sodanige verdelings moet kan weerstaan. Waar die Administrasie die vervoer van olie en brandbare vloeistowwe deur akkommodasie- en diensruimtes toelaat, moet die pype wat die olie of brandbare vloeistowwe vervoer, van 'n goedgekeurde materiaal gemaak wees wat die brandrisiko betref.

(b) Materiale wat maklik deur hitte onbruikbaar gemaak word, moet nie gebruik word vir oorboordse spuigate, sanitêre uitlaatpunte en ander uitlate naby die waterlyn wat in die geval van brand weens die faling van die materiaal 'n oorstromingsgevaar kan skep nie.

(6) Film met 'n sellulosenitraat-basis mag nie in kinematografiese inrigtings gebruik word nie.

(7) Alle afvalhouers buiten dié wat by visprosessering gebruik word, moet van onbrandbare materiaal gemaak wees met geen openinge aan die sykante of die onderkant nie.

(8) Masjinerie wat brandolie-oorvoerpompe, brandolieeenheidspompe en ander soortgelyke brandstofpompe aandryf, moet toegerus wees met afstandkontroles wat aan die buitekant van die betrokke ruimte geplaas is, sodat hulle afgeskakel kan word in geval van 'n brand wat ontstaan in die ruimte waarin hulle geleë is.

(9) Drupbakke moet aangebring word waar nodig om te verhoed dat olie in die kimme inlek.

(10) Brandbare isolasie in kompartemente wat vir die stuwing van vis gebruik word, moet deur styfpassende bekleding beskerm word.

Regulasie 73

Berging van gassilinders en gevaarlike materiale

(1) Silinders vir saamgeperste, vloeibare of opgeloste gasse moet duidelik gemerk wees met voorgeskrewe identifikasiekleure, moet 'n duidelik leesbare identifikasie van die naam en chemiese formule van die inhoud hê en moet behoorlik vasgemaak wees.

(2) Silinders wat vlambare of ander gevaarlike gasse bevat en leë silinders moet, behoorlik vasgemaak, geberg word op oop dekke, en alle kleppe, drukreëlaars en pype wat vanaf sodanige silinders lei, moet teen beskadiging beskerm word. Silinders moet beskerm word teen buitensporige temperatuurwisselinge, direkte sonstrale en die akkumulasie van sneeu. Die Administrasie mag egter toelaat dat sodanige silinders geberg word in kompartemente wat aan die vereistes van paragrawe (3) tot (5) voldoen.

(3) Ruimtes wat hoogs vlambare vloeistowwe bevat, soos vlugtige verwe, paraffien, bensool, ens., en, waar toegelaat, vloeibare gas, mag slegs van oop dekke direkte toegang hê. Drukversteltoestelle en ontlaskleppe moet binne die kompartement uitlaat. Waar grensskotte van sodanige kompartemente aan ander omslote ruimtes grens, moet hulle gasdig wees.

(4) Behalwe soos nodig vir diens binne die ruimte, word elektriese bedrading en toebehore nie toegelaat binne kompartemente wat gebruik word vir die berging van hoogs vlambare vloeistowwe of vloeibare gasse nie. Waar sodanige elektriese toebehore geïnstalleer word, moet hulle tot tevredenheid van die Administrasie geskik wees vir gebruik in 'n vlambare atmosfeer. Hittebronne moet van sodanige ruimtes weggehou word en "Rook Verbode"- en "Oop Ligte Verbode"-kennisgewings moet in 'n prominente posisie vertoon word.

(5) (a) In accommodation and service spaces and control stations, pipes penetrating "A" or "B" Class divisions shall be of approved materials having regard to the temperature such divisions are required to withstand. Where the Administration permits the conveying of oil and combustible liquids through accommodation and service spaces, the pipes conveying oil or combustible liquids shall be of an approved material having regard to the fire risk.

(b) Materials readily rendered ineffective by heat shall not be used for overboard scuppers, sanitary discharges, and other outlets which are close to the waterline and where the failure of the material in the event of fire would give rise to danger of flooding.

(6) Cellulose-nitrate-based film shall not be used in cinematograph installations.

(7) All waste receptacles other than those used in fish processing shall be constructed of non-combustible materials with no openings in the sides or bottom.

(8) Machinery driving fuel oil transfer pumps, fuel oil unit pumps and other similar fuel pumps shall be fitted with remote controls situated outside the space concerned so that they can be stopped in the event of a fire arising in the space in which they are located.

(9) Drip trays shall be fitted where necessary to prevent oil leaking into bilges.

(10) Within compartments used for stowage of fish, combustible insulation shall be protected by close-fitting cladding.

Regulation 73

Storage of gas cylinders and dangerous materials

(1) Cylinders for compressed, liquefied or dissolved gases shall be clearly marked by means of prescribed identifying colours, have a clearly legible identification of the name and chemical formula of their contents and be properly secured.

(2) Cylinders containing flammable or other dangerous gases and expended cylinders shall be stored, properly secured, on open decks and all valves, pressure regulators and pipes leading from such cylinders shall be protected against damage. Cylinders shall be protected against excessive variations in temperature, direct rays of the sun, and accumulation of snow. However, the Administration may permit such cylinders to be stored in compartments complying with the requirements of paragraphs (3) to (5).

(3) Spaces containing highly flammable liquids, such as volatile paints, paraffin, benzole, etc., and where permitted, liquefied gas, shall have direct access from open decks only. Pressure-adjusting devices and relief valves shall exhaust within the compartment. Where boundary bulkheads of such compartments adjoin other enclosed spaces they shall be gastight.

(4) Except as necessary for service within the space, electrical wiring and fittings shall not be permitted within compartments used for the storage of highly flammable liquids or liquefied gases. Where such electrical fittings are installed, they shall be to the satisfaction of the Administration for use in a flammable atmosphere. Sources of heat shall be kept clear of such spaces and "No Smoking" and "No Naked Light" notices shall be displayed in a prominent position.

(5) Aparte bergruimtes vir elke tipe saamgeperste gas moet voorsien word. Kompartemente wat vir die berging van sodanige gasse gebruik word, mag nie gebruik word vir die berging van ander brandbare produkte of vir gereedskap of voorwerpe wat nie deel is van die gasdistribusiestelsel nie. Die Administrasie mag egter hierdie vereistes verslap, met inagneming van die eienskappe, volume en beoogde gebruik van sodanige saamgeperste gasse.

Regulasie 74

Nooduitgange

(1) Trappe en lere na en van alle akkommodasieruimtes en in ruimtes waarin die bemanning normaalweg diens doen, masjinerieruimtes uitgesonderd, moet so geplaas wees dat dit as vinnige nooduitgange kan dien na die oop dek en daarvandaan na die oorlewingsvaartuie, en met betrekking tot hierdie ruimtes in die besonder—

(a) moet daar op alle akkommodasievlakke ten minste twee nooduitgange ver uit mekaar wees, wat die normale toegange vanaf elke beperkte ruimte of groep ruimtes kan insluit;

(b) (i) moet die hoofnooduitgang onder die bodek 'n trap wees, terwyl die tweede nooduitgang 'n koker of 'n trap mag wees; en

(ii) moet die nooduitgang bo die bodek trappe of deure na 'n oop dek wees of 'n kombinasie daarvan;

(c) mag die Administrasie by wyse van uitsondering slegs een nooduitgang toelaat, met behoorlike inagneming van die aard en ligging van ruimtes en die getal persone wat normaalweg daar geakkommodeer is of diens doen;

(d) mag 'n gang of deel van 'n gang waaruit daar slegs een ontsnappingsroete is, hoogstens 7 meter lank wees;

(e) moet die breedte en deurlopendheid van die nooduitgange die Administrasie tevrede stel; en

(f) moet twee nooduitgange vanuit 'n radiotelegraafstasie wat geen direkte toegang tot die oop dek het nie, tot tevredenheid van die Administrasie voorsien wees.

(2) Twee nooduitgange moet voorsien word vanuit elke masjinerieruimte van Kategorie A deur een van die volgende:

(a) Twee staallere, so ver moontlik van mekaar geskei, wat na eweneens geskeide deure bo in die ruimte lei, waarvandaan toegang verleen word tot die oop dek. Oor die algemeen moet een van die lere deurlopende brandbeskerming verleen vanaf die onderste deel van die ruimte tot by 'n veilige plek buite die ruimte. Die Administrasie hoef egter nie sodanige beskerming te vereis nie indien, as gevolg van spesiale inrigtings of dimensies van die masjinerieruimte, 'n veilige ontsnappingsroete vanaf die onderste deel van hierdie ruimte voorsien word. Hierdie beskerming moet van staal wees, moet, waar nodig, tot tevredenheid van die Administrasie geïsoleer wees en moet voorsien wees van 'n selfsluitende staaldeur aan die onderpunt.

(b) Een staalleer wat lei na 'n deur bo in die ruimte, van waar toegang verleen word tot die oop dek en, daarbenewens, in die onderste deel van die ruimte en in 'n posisie ver van bedoelde leer af, 'n staaldeur wat van beide kante af oop- en toegemaak kan word en wat toegang tot 'n veilige ontsnappingsroete van die onderste deel van die ruimte tot op die oop dek voorsien.

(5) Separate storage shall be provided for each type of compressed gas. Compartments used for the storage of such gases shall not be used for storage of other combustible products nor for tools or objects not part of the gas distribution system. However, the Administration may relax these requirements considering the characteristics, volume and intended use of such compressed gases.

Regulation 74

Means of escape

(1) Stairways and ladders leading to and from all accommodation spaces and in spaces in which the crew is normally employed, other than machinery spaces, shall be so arranged as to provide ready means of escape to the open deck and thence to the survival craft. In particular in relation to these spaces—

(a) at all levels of accommodation at least two widely separated means of escape shall be provided which may include the normal means of access from each restricted space or group of spaces;

(b) (i) below the weather deck the main means of escape shall be a stairway and the second escape may be a trunk or a stairway; and

(ii) above the weather deck the means of escape shall be stairways or doors to an open deck or a combination thereof;

(c) exceptionally the Administration may permit only one means of escape, due regard being paid to the nature and location of spaces and to the number of persons who normally might be accommodated or employed there;

(d) a corridor or part of a corridor from which there is only one route of escape, shall not exceed 7 metres in length;

(e) the width and continuity of the means of escape shall be to the satisfaction of the Administration; and

(f) two means of escape from a radiotelegraph station which has no direct access to the open deck shall be provided and these shall be to the satisfaction of the Administration.

(2) Two means of escape shall be provided from every machinery space of Category A by one of the following means:

(a) Two sets of steel ladders as widely separated as possible leading to doors in the upper part of the space similarly separated and from which access is provided to the open deck. In general, one of these ladders shall provide continuous fire shelter from the lower part of the space to a safe position outside the space. However, the Administration may not require such shelter if, due to special arrangements or dimensions of the machinery space, a safe escape route from the lower part of this space is provided. This shelter shall be of steel, insulated, where necessary, to the satisfaction of the Administration and be provided with a self-closing steel door at the lower end.

(b) One steel ladder leading to a door in the upper part of the space from which access is provided to the open deck and additionally, in the lower part of the space and in a position well separated from the ladder referred to, a steel door capable of being operated from each side and which provides access to a safe escape route from the lower part of the space to the open deck.

(3) Vanuit ander masjinerieruimtes as dié van Kategorie A moet ontsnappingsroetes tot tevredenheid van die Administrasie verskaf word, met inagneming van die aard en ligging van die ruimte en of persone normaalweg in daardie ruimte diens doen.

(4) Hysers mag nie geag word een van die vereiste nooduitgange te wees nie.

Regulasie 75

Outomatiese sproeier-, brandalarm- en brandverklikstelsels

(Metode IIF)

(1) In vaartuie waarin Metode IIF aangeneem is, moet 'n outomatiese sproeier- en brandalarmstelsel van 'n goedgekeurde tipe en in ooreenstemming met die vereistes van hierdie regulasies geïnstalleer en so ingerig word dat akkommodasieruimtes en diensruimtes, behalwe ruimtes wat geen wesentlike brandrisiko inhou nie, soos leë ruimtes en sanitêre ruimtes, beskerm word.

(2) (a) Die stelsel moet te eniger tyd gereed wees om dadelik te werk, en geen handeling deur die bemanning moet nodig wees om dit te laat werk nie. Dit moet van die natpyptipe wees, maar klein blootgestelde gedeeltes kan van die droëpyptipe wees waar dit na die oordeel van die Administrasie 'n nodige voorsorgmaatreël is. Enige dele van die stelsel wat tydens diens aan temperature onder vriespunt blootgestel mag word, moet paslik teen bevriesing beskerm word.* Dit moet onder die nodige druk gelaai gehou word en daar moet voorsiening wees vir 'n standhoudende watervoorraad soos in paragraaf 6 (b) vereis word.

(b) Elke seksie sproeiers moet van middels voorsien wees wat outomaties sigbaar en hoorbaar alarm maak by een of meer aanduidingseenhede sodra enige sproeier begin werk. Sodanige eenhede moet aandui in watter seksie wat deur die stelsel bedien word, brand voorkom, en moet in die stuurhuis gesentraliseer wees, en verder moet sigbare en hoorbare alarms van die eenheid geplaas word in 'n ander posisie as in die stuurhuis om te verseker dat die aanduiding van brand onmiddellik deur die bemanning ontvang word. So 'n alarmstelsel moet só ingerig wees dat dit aandui as daar enige fout in die stelsel voorkom.

(3) (a) Sproeiers moet in afsonderlike seksies gegroepeer wees met hoogstens 200 sproeiers elk.

(b) Elke seksie sproeiers moet deur net een afsluitklep geïsoleer kan word. Die afsluitklep van elke seksie moet maklik bereikbaar wees en sy posisie moet duidelik en permanent aangedui word. Middels moet voorsien word wat enige ongemagtigde persoon sal verhinder om met die afsluitkleppe te werk.

(c) 'n Meter wat die druk in die stelsel aandui, moet by elke seksie se afsluitklep en in 'n sentrale stasie voorsien word.

(d) Die sproeiers moet korrosiewerend wees. In akkommodasie- en diensruimtes moet die sproeiers in werking tree binne die temperatuurperke van 68 °C en 79 °C, behalwe dat die werkingstemperatuur verhoog kan word met hoogstens 30 °C bo die maksimum deksolderingstemperatuur in lokale soos droogkamers waar hoë omringende temperature verwag kan word.

(e) By elke aanduidingseenheid moet daar 'n lys of plan vertoon word wat ten opsigte van elke seksie die ruimtes wat gedek word en die ligging van die sone aandui. Geskikte instruksies vir toetsing en onderhoud moet beskikbaar wees.

* Kyk *Guidance for Precautions Against Freezing of Fire Mains* vervat in Aanbeveling 7 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

(3) From machinery spaces other than those of Category A, escape routes shall be provided to the satisfaction of the Administration having regard to the nature and location of the space and whether persons are normally employed in that space.

(4) Lifts shall not be considered as forming one of the required means of escape.

Regulation 75

Automatic sprinkler and fire alarm and fire detection systems

(Method IIF)

(1) In vessels in which method IIF is adopted an automatic sprinkler and fire alarm system of an approved type and complying with the requirements of this Regulation shall be installed and so arranged as to protect accommodation spaces and service spaces except spaces which afford no substantial fire risks, such as void spaces and sanitary spaces.

(2) (a) The system shall be capable of immediate operation at all times and no action by the crew shall be necessary to set it in operation. It shall be of the wet pipe type but small exposed sections may be of the dry pipe type where in the opinion of the Administration this is a necessary precaution. Any parts of the system which may be subjected to freezing temperatures in service shall be suitably protected against freezing.* It shall be kept charged at the necessary pressure and shall have provision for a continuous supply of water as required in paragraph 6 (b).

(b) Each section of sprinklers shall include means for giving a visible and audible alarm signal automatically at one or more indicating units whenever any sprinkler comes into operation. Such units shall indicate in which section served by the system, fire has occurred and shall be centralised in the wheelhouse and in addition, visible and audible alarms from the unit shall be placed in a position other than in the wheelhouse, so as to ensure that the indication of fire is immediately received by the crew. Such an alarm system shall be so constructed as to indicate if any fault occurs in the system.

(3) (a) Sprinklers shall be grouped into separate sections, each of which shall contain not more than 200 sprinklers.

(b) Each section of sprinklers shall be capable of being isolated by one stop valve only. The stop valve in each section shall be readily accessible and its location shall be clearly and permanently indicated. Means shall be provided to prevent the operation of the stop valves by any unauthorised person.

(c) A gauge indicating the pressure in the system shall be provided at each section stop valve and at a central station.

(d) The sprinklers shall be resistant to corrosion. In accommodation and service spaces the sprinklers shall come into operation within the temperature range of 68 degrees celcius and 79 degrees celsius, except that in locations such as drying rooms, where high ambient temperatures might be expected, the operating temperature may be increased by not more than 30 degrees celsius above the maximum deck head temperature.

(e) A list or plan shall be displayed at each indicating unit showing the spaces covered and the location of the zone in respect of each section. Suitable instructions for testing and maintenance shall be available.

* See Guidance for Precautions Against Freezing of Fire Mains contained in Recommendation 7 of Attachment 3 to the Final Act of the Conference.

(4) Sproeiers moet oorhoofs geplaas wees en in 'n geskikte patroon gerangskik wees om 'n gemiddelde leweringstempo van minstens vyf liter per vierkante meter per minuut vol te hou oor die nominale area wat deur die sproeiers gedek word. Andersins mag die Administrasie die gebruik toelaat van sproeiers wat sodanige hoeveelheid water en geskikte verspreiding toelaat as wat tot tevredenheid van die Administrasie bewys is as nie minder doeltreffend nie.

(5) (a) 'n Druktenk met 'n volume gelyk aan minstens twee keer dié van die lading water gespesifiseer in hierdie subparagraaf moet voorsien word. Die tenk moet 'n vaste voorraad varswater bevat gelykstaande met die hoeveelheid water wat binne een minuut gelewer sou word deur die pomp waarna verwys word in paragraaf (6) (b) en die inrigting moet voorsiening maak vir die behoud van sodanige lugdruk in die tenk as wat sal verseker dat, indien die vaste voorraad varswater in die tenk gebruik is, die druk nie laer as die werkdruk van die sproeier is nie, plus die druk van 'n volume water gemeet vanaf die bodem van die tenk tot by die hoogste sproeier in die stelsel. Geskikte middels vir die aanvulling van die lug onder druk en van die varswatervoorraad in die tenk moet voorsien word. 'n Meetglas moet aangebring word om die korrekte watervlak in die tenk aan te dui.

(b) Middels wat verhoed dat seewater die tenk binnekom, moet voorsien word.

(6) (a) 'n Onafhanklike kragpomp moet voorsien word vir die uitsluitlike doel om outomaties die waterlewering deur die sproeiers voort te sit. Die pomp moet outomaties in werking gestel word deur 'n drukdaling in die stelsel voordat die vaste voorraad varswater in die druktenk heeltemal uitgeput is.

(b) Die pomp en die pypnetwerk moet in staat wees om die nodige druk op die vlak van die hoogste sproeier te handhaaf om 'n voortdurende waterlewering toereikend vir die gelyktydige dekking van die maksimum oppervlakte wat deur brandbestande skotte van Klas "A"- en "B"-verdelings geskei word of 'n oppervlakte van 280 vierkante meter, wat ook al die kleinste is, vol te hou teen die leweringstempo gespesifiseer in paragraaf (4).

(c) Die pomp moet aan sy leweringskant toegerus wees met 'n toetsklep met 'n kort oop uitlaatpyp. Die effektiewe oppervlakte deur die klep en pyp moet genoegsaam wees om die vereiste pomplewering toe te laat terwyl dit die druk in die stelsel behou soos gespesifiseer in paragraaf (5) (a).

(d) Die pomp se see-inlaat moet waar moontlik in die ruimte met die pomp wees en moet so ingerig wees dat wanneer die vaartuig vlot is, dit nie nodig sal wees om die seewatertoevoer na die pomp vir enige ander doel as die inspeksie of herstel van die pomp af te sluit nie.

(7) Die sproeierpomp en -tenk moet redelik ver van enige masjinerieruimte van Kategorie A geleë wees en moet nie geleë wees in enige ruimte wat deur die sproeierstelsel beskerm moet word nie.

(8) (a) Daar moet minstens twee kragbronne wees vir die seewaterpomp en die outomatiese brandalarm- en brandverklikstelsel. Indien dit 'n elektriese pomp is, moet dit verbind word met die hoofbron van elektriese krag, wat deur minstens twee generators voorsien moet kan word.

(b) Die plasing van voerleidings moet kombuise, masjinerieruimtes en ander omslote ruimtes met 'n groot brandrisiko vermy behalwe vir sover dit nodig is om die toepaslike skakelbord te bereik. Een van die kragbronne vir die brandalarm- en -verklikstelsel moet 'n noodbron wees. Waar een van die kragbronne vir die pomp 'n binnebrandenjin is, moet dit, benewens voldoening aan die bepalings van paragraaf (7), só geleë wees dat 'n brand in 'n beskermde ruimte nie die lugtoevoer na daardie enjin sal belemmer nie.

(4) Sprinklers shall be placed in an overhead position and spaced in a suitable pattern to maintain an average application rate of not less than 5 litres per square metre per minute over the nominal area covered by the sprinklers. Alternatively, the Administration may permit the use of sprinklers providing such quantity of water suitably distributed as has been shown to the satisfaction of the Administration to be not less effective.

(5) (a) A pressure tank having a volume equal to at least twice that of the charge of water specified in this sub-paragraph shall be provided. The tank shall contain a standing charge of fresh water, equivalent to the amount of water which would be discharged in one minute by the pump referred to in paragraph (6) (b), and the arrangements shall provide for maintaining such air pressure in the tank as to ensure that, where the standing charge of fresh water in the tank has been used, the pressure will be not less than the working pressure of the sprinkler, plus the pressure due to a head of water measured from the bottom of the tank to the highest sprinkler in the system. Suitable means of replenishing the air under pressure and of replenishing the fresh water charge in the tank shall be provided. A glass gauge shall be provided to indicate the correct level of the water in the tank.

(b) Means shall be provided to prevent the passage of seawater into the tank.

(6) (a) An independent power pump shall be provided solely for the purpose of continuing automatically the discharge of water from the sprinklers. The pump shall be brought into action automatically by the pressure drop in the system before the standing fresh water charge in the pressure tank is completely exhausted.

(b) The pump and the piping system shall be capable of maintaining the necessary pressure at the level of the highest sprinkler to ensure a continuous output of water sufficient for the simultaneous coverage of the maximum area separated by fire-resisting bulkheads of "A" and "B" Class divisions or an area of 280 square metres whichever is the less at the application rate specified in paragraph (4).

(c) The pump shall have fitted on the delivery side a test valve with a short open-ended discharge pipe. The effective area through the valve and pipe shall be adequate to permit the release of the required pump output while maintaining the pressure in the system specified in paragraph (5) (a).

(d) The sea inlet to the pump shall wherever possible be in the space containing the pump and shall be so arranged that when the vessel is afloat it will not be necessary to shut off the supply of sea-water to the pump for any purpose other than the inspection or repair of the pump.

(7) The sprinkler pump and tank shall be situated in a position reasonably remote from any machinery space of Category A and shall not be situated in any space required to be protected by the sprinkler system.

(8) (a) There shall not be less than two sources of power supply for the seawater pump and the automatic fire alarm and fire detection system. If the pump is electrically driven it shall be connected to the main source of electrical power, which shall be capable of being supplied by at least two generators.

(b) The feeders shall be arranged so as to avoid galleys, machinery spaces and other enclosed spaces of high fire risk except in so far as it is necessary to reach the appropriate switchboard. One of the sources of power supply for the fire alarm and fire detection system shall be an emergency source. Where one of the sources of power for the pump is an internal combustion-type engine it shall, in addition to complying with the provisions of paragraph (7), be so situated that a fire in any protected space will not affect the air supply to that engine.

(9) Die sproeierstelsel moet aan die vaartuig se hoofbrandweerpyp gekoppel wees deur middel van 'n sluitbare vasskroef-terugslagklep by die koppeling wat terugvloei vanaf die sproeierstelsel na die hoofbrandweerpyp verhoed.

(10) (a) 'n Toetsklep moet voorsien word vir die toets van die outomatiese alarm vir elke seksie sproeiers deur die loslating van water gelyk aan dié van een sproeier. Die toetsklep vir elke seksie moet naby die afsluitklep van daardie seksie geleë wees.

(b) Middels moet voorsien wees vir die toets van die outomatiese werking van die pomp by 'n daling van die druk in die stelsel.

(c) Skakelaars moet voorsien word by een van die aanduidingseenhede genoem in subparagraaf (2) (b) wat dit moontlik maak om die alarm en die aanduiders vir elke seksie sproeiers te toets.

(11) Noodspuitstukke moet tot tevredenheid van die Administrasie vir elke seksie sproeiers voorsien word.

Regulasie 76

Outomatiese brandalarm- en brandverklikstelsels

(Metode IIIF)

(1) In vaartuie waarin Metode IIIF aangeneem is, moet 'n outomatiese brandalarm- en brandverklikstelsel van 'n goedgekeurde tipe en in ooreenstemming met die vereistes van hierdie regulasie geïnstalleer en so ingerig word dat die aanwesigheid van brand in alle akkommodasieruimtes en diensruimtes, behalwe ruimtes wat geen wesentlike brandgevare inhou nie, soos leë ruimtes en sanitêre ruimtes, opgespoor word.

(2) (a) Die stelsel moet te eniger tyd gereed wees om dadelik te werk en geen handeling van die bemanning moet nodig wees om dit te laat werk nie.

(b) Elke seksie verklikkers moet van middels voorsien wees wat outomaties sigbaar en hoorbaar alarm maak by een of meer aanduidingseenhede sodra enige verklikker begin werk. Sodanige eenhede moet aandui in watter seksie wat deur die stelsel bedien word, brand voorkom, en moet in die stuurhuis en sodanige ander posisies gesentraliseer wees as wat sal verseker dat 'n alarm van die stelsel onmiddellik deur die bemanning ontvang word. Verder moet inrigtings voorsien word om te verseker dat alarm gemaak word op die dek waarop die brand opgespoor is. Sodanige alarm- en verklikstelsel moet só ingerig wees dat dit aandui as enige fout in die stelsel voorkom.

(3) Verklikkers moet in afsonderlike seksies gegroepeer wees sodat elk nie meer as 50 vertrekke dek wat deur die stelsel bedien word nie, en nie meer as 100 verklikkers bevat nie. Verklikkers moet gesoneer word om aan te dui op watter dek 'n brand voorkom.

(4) Die stelsel moet in werking gestel word deur 'n abnormale lugtemperatuur, deur 'n abnormale konsentrasie rook of deur ander faktore wat dui op die ontstaan van 'n brand in elk van die beskermde ruimtes. Stelsels wat vir lugtemperatuur sensitief is, moet by temperature van minstens 57 °C en hoogstens 74 °C in werking tree wanneer die temperatuurtoename tot by daardie vlakke hoogstens 1 °C per minuut is. Na goeddunke van die Administrasie mag die toelaatbare werkingstemperatuur verhoog word tot 30 °C bo die maksimum deksolderingstemperatuur in droogkamers en soortgelyke plekke met 'n hoë omringende temperatuur. Stelsels wat sensitief is vir rookkonsentrasie, moet in werking tree by die vermindering van die intensiteit van 'n uitgesende ligstraal in die mate wat die Administrasie bepaal. Ander ewe doeltreffende werkingsmetodes mag na goeddunke van die Administrasie aanvaar word. Die verklikstelsel mag vir geen ander doel as brandopsporing aangewend word nie.

(9) The sprinkler system shall have a connection from the vessel's fire main by way of a lockable screw-down non-return valve at the connection which will prevent a back flow from the sprinkler system to the fire main.

(10) (a) A test valve shall be provided for testing the automatic alarm for each section of sprinklers by a discharge of water equivalent to the operation of one sprinkler. The test valve for each section shall be situated near the stop valve for that section.

(b) Means shall be provided for testing the automatic operation of the pump on reduction of pressure in the system.

(c) Switches shall be provided at one of the indicating positions referred to in subparagraph (2) (b) which will enable the alarm and the indicators for each section of sprinklers to be tested.

(11) Spare sprinkler heads shall be provided for each section of sprinklers to the satisfaction of the Administration.

Regulation 76

Automatic fire alarm and fire detection systems

(Method IIIF)

(1) In vessels in which Method IIIF is adopted an automatic fire alarm and fire detection system of an approved type and complying with the requirements of this Regulation shall be installed and so arranged as to detect the presence of fire in all accommodation spaces and service spaces except spaces which afford no substantial fire risk, such as void spaces and sanitary spaces.

(2) (a) The system shall be capable of immediate operation at all times and no action of the crew shall be necessary to set it in operation.

(b) Each section of detectors shall include means for giving a visible and audible alarm signal automatically at one or more indicating units whenever any detector comes into operation. Such units shall indicate in which section served by the system a fire has occurred and shall be centralised on the wheelhouse and such other positions as will ensure that any alarm from the system is immediately received by the crew. Additionally, arrangements shall be provided to ensure that an alarm is sounded on the deck on which the fire has been detected. Such an alarm and detection system shall be so constructed as to indicate if any fault occurs in the system.

(3) Detectors shall be grouped into separate sections, each covering not more than 50 rooms served by such a system and containing not more than 100 detectors. Detectors shall be zoned to indicate on which deck a fire has occurred.

(4) The system shall be operated by an abnormal air temperature, by an abnormal concentration of smoke or by other factors indicative of incipient fire in any one of the spaces to be protected. Systems which are sensitive to air temperature shall not operate at less than 57 degrees celsius and shall operate at a temperature not greater than 74 degrees celsius when the temperature increase to those levels is not more than 1 degree celsius per minute. At the discretion of the Administration the permissible temperature of operation may be increased to 30 degrees celsius above the maximum deckhead temperature in drying rooms and similar places of a normally high ambient temperature. Systems which are sensitive to smoke concentration shall operate on the reduction of the intensity of a transmitted light beam by an amount to be determined by the Administration. Other equally effective methods of operation may be accepted at the discretion of the Administration. The detection system shall not be used for any purpose other than fire detection.

(5) Die verklikkers mag ingerig wees om die alarm in werking te stel deur die oop- en toemaak van kontakpunte of op ander geskikte wyses. Hulle moet in 'n oorhoofse posisie aangebring wees en moet paslik beskerm wees teen stampe en fisiese skade. Hulle moet geskik wees vir gebruik in seelug. Hulle moet in 'n oop posisie geplaas wees, weg van balke en ander objekte wat waarskynlik die vloei van warm gasse of rook na die sensitiewe element kan belemmer. Verklikkers wat deur die toemaak van Kontakpunte werk, moet van die verseëldekontaktipe wees en die baan moet deurentyd gemonitor word om foute aan te toon.

(6) Minstens een verklikker moet geïnstalleer wees in elke ruimte waar verklikfasiliteite vereis word en daar moet minstens een verklikker wees vir elke ongeveer 37 vierkante meter dekoppervlakte. In groot ruimtes moet die verklikkers sodanig in 'n vaste patroon gerangskik wees dat geen verklikker meer as 9 meter van 'n ander is of verder as 4,5 meter van 'n skot af nie.

(7) Daar moet minstens twee kragbronne wees vir elektriese toerusting wat vir die werking van die brandalarm- en brandverklikstelsel gebruik word, waarvan een 'n noodbron moet wees. Die toevoer moet voorsien word deur afsonderlike voerleidings wat net vir daardie doel gereserveer is. Sodanige voerleidings moet na 'n oorskakelaar loop wat in die beheerpos van die brandverklikstelsel geleë is. Die bedradingstelsel moet ingerig wees om kombuise, masjinerieruimtes en ander omslote ruimtes met 'n groot brandrisiko te vermy, behalwe vir sover dit nodig is om die brandverklikking in sulke ruimtes te voorsien of om die betrokke skakelbord te bereik.

(8) (a) Langs elke aanduidingseenheid moet daar 'n lys of plan vertoon word wat die ruimtes wat gedek word, en die ligging van die sone ten opsigte van elke seksie aandui. Geskikte instruksies vir toetsing en onderhoud moet beskikbaar wees.

(b) Voorsiening moet gemaak word om die korrekte werking van die verklikkers en aanduidingseenhede te toets deur die verskaffing van middels waarmee warm lug en rook by die verklikkersposisie vrygestel kan word.

(9) Noodverklikkerkoppe moet tot tevredenheid van die Administrasie vir elke seksie verklikkers voorsien word.

Regulasie 77

Vaste brandsmoorinrigtings in vragruime met 'n groot brandrisiko

Vragruime met 'n groot brandrisiko moet beskerm word deur 'n vaste brandsmoorgasstelsel of deur 'n brandblusstelsel wat ekwivalente beskerming bied, tot tevredenheid van die Administrasie.

Regulasie 78

Brandpompe

(1) Ten minste twee brandpompe moet voorsien word.

(2) Indien 'n brand in enige enkele kompartement al die brandpompe buite werking kan stel, moet daar alternatiewe middels wees om water vir brandbestryding te voorsien. By vaartuie met 'n lengte van 75 meter en meer moet hierdie alternatiewe middel 'n onafhanklik aangedrewe vaste noodpomp wees. Hierdie noodpomp moet twee strale water tot tevredenheid van die Administrasie kan lewer.

(3) (a) Die brandpompe, behalwe die noodpomp, moet daartoe in staat wees om vir brandbestrydingsdoeleindes 'n hoeveelheid water teen 'n minimum druk van 0,25 newton per vierkante millimeter te lewer, met 'n totale vermoë (Q) van ten minste—

$Q = (0{,}15\sqrt{L(B+D)} + 2{,}25)^2$ kubieke meter per uur waar L, B en D in meter is.

Die totale vereiste vermoë van die brandpompe hoef egter nie meer as 180 kubieke meter per uur te wees nie.

(5) The detectors may be arranged to operate the alarm by the opening or closing of contacts or by other appropriate methods. They shall be fitted in an overhead position and shall be suitably protected against impact and physical damage. They shall be suitable for use in a marine atmosphere. They shall be placed in an open position clear of beams and other objects likely to obstruct the flow of hot gases or smoke to the sensitive element. Detectors operated by the closing of contacts shall be of the sealed contact type and the circuit shall be continuously monitored to indicate fault conditions.

(6) At least one detector shall be installed in each space where detection facilities are required and there shall be not less than one detector for each 37 square metres of deck area approximately. In large spaces the detectors shall be arranged in a regular pattern so that no detector is more than 9 metres from another detector or more than 4,5 metres from a bulkhead.

(7) There shall be not less than two sources of power supply for the electrical equipment used in the operation of the fire alarm and fire detection system, one of which shall be an emergency source. The supply shall be provided by separate feeders reserved solely for that purpose. Such feeders shall run to a change-over switch situated in the control station for the fire detection system. The wiring system shall be so arranged as to avoid galleys, machinery spaces and other enclosed spaces having a high fire risk except in so far as it is necessary to provide for fire detection in such spaces or to reach the appropriate switchboard.

(8) (a) A list or plan shall be displayed adjacent to each indicating unit showing the spaces covered and the location of the zone in respect of each system. Suitable instructions for testing and maintenance shall be available.

(b) Provision shall be made for testing the correct operation of the detectors and the indicating units by supplying means for applying hot air or smoke at detector positions.

(9) Spare detector heads shall be provided for each section of detectors to the satisfaction of the Administration.

Regulation 77

Fixed fire-extinguishing arrangements in cargo spaces of high fire risk

Cargo spaces of high fire risk shall be protected by a fixed gas fire-extinguishing system or by a fire-extinguishing system which gives equivalent protection, to the satisfaction of the Administration.

Regulation 78

Fire pumps

(1) At least two fire pumps shall be provided.

(2) If a fire in any one compartment could put all the fire pumps out of action, there shall be an alternative means of providing water for fire fighting. In vessels of 75 metres in length and over this alternative means shall be a fixed emergency fire pump independently driven. This emergency fire pump shall be capable of supplying two jets of water to the satisfaction of the Administration.

(3) (a) The fire pumps, other than the emergency pump shall be capable of delivering for fire-fighting purposes a quantity of water at a minimum pressure of 0.25 newtons per square millimetre, with a total capacity (Q) of at least:

$Q = (0{,}15\sqrt{L(B + D)} + 2{,}25)^2$ cubic metres per hour where L, B and D are in metres.

However, the total required capacity of the fire pumps need not exceed 180 cubic meters per hour.

(b) Elk van die vereiste brandpompe, behalwe 'n noodpomp, moet 'n vermoë hê van minstens 40 persent van die totale vermoë van brandpompe vereis by subparagraaf (a) en moet in elk geval daartoe in staat wees om minstens die strale water vereis by Regulasie 80(2)(a) te lewer. Hierdie brandpompe moet daartoe in staat wees om die hoofbrandtoevoerstelsel in die vereiste toestande te voorsien. Waar daar meer as twee pompe geïnstalleer word, moet die vermoë van sodanige bykomende pompe die Administrasie tevrede stel.

(4) (a) Brandpompe moet onafhanklik aangedrewe kragpompe wees. Sanitêre, ballas-, lens- of algemenedienspompe kan as brandpompe aanvaar word, mits hulle nie normaalweg vir die pomp van olie gebruik word nie en mits geskikte omskakelingsinrigtings aangebring is in gevalle waar hulle by geleentheid aangewend word om brandolie oor te voer of te pomp.

(b) Alle brandpompe moet met ontlaskleppe toegerus word indien die pompe 'n groter druk kan ontwikkel as die ontwerpdruk van die watertoevoerpype, brandkrane en brandslange. Hierdie kleppe moet so geleë en ingestel wees dat oormatige druk in enige deel van die hoofbrandtoevoerstelsel voorkom sal word.

(c) Kragbrandpompe vir noodgevalle moet onafhanklik aangedrewe selfstandige pompe wees, òf met hul eie dieselenjin primêre kragbron en brandstoftoevoer geïnstalleer in 'n toeganklike posisie buite die kompartement wat die hoofbrandpompe bevat, òf wat aangedryf word deur 'n selfstandige generator, wat die noodgenerator bedoel in Regulasie 55 mag wees, van voldoende vermoë wat in 'n veilige plek buite die masjienkamer en verkieslik bo die werkdek geleë is. Die noodbrandpomp moet vir 'n tydperk van ten minste drie uur kan werk.

(d) Noodbrandpompe, seewatersuigkleppe en ander nodige kleppe moet bedienbaar wees vanaf die buitekant van kompartemente wat hoofbrandpompe bevat en moet in 'n posisie wees wat nie maklik deur 'n brand in daardie kompartemente afgesny kan word nie.

Regulasie 79

Hoofbrandpype

(1) (a) Waar meer as een brandkraan nodig is om die getal strale gespesifiseer in Regulasie 80(2)(a) te lewer, moet 'n hoofbrandpyp voorsien word.

(b) Hoofbrandpype mag geen ander verbindings hê as dié wat vir brandbestryding vereis word nie, behalwe vir die doel van die was van die dek en ankerkettings of vir die bediening van die kettingbakkimwaterejekteur.

(c) Waar hoofbrandweerpype nie selfdreinerend is nie, moet geskikte aftapkrane aangebring word waar vriesskade verwag kan word.*

(2) (a) Die diameter van die hoofbrandweerpyp en watertoevoerpype moet toereikend wees vir die doeltreffende verspreiding van die maksimum vereiste lewering van twee brandpompe wat gelyktydig in werking is of van 140 kubieke meter per uur, wat ook al die minste is.

(b) Wanneer die twee pompe gelyktydig die hoeveelheid water gespesifiseer in subparagraaf (a) van hierdie paragraaf deur spuitstukke gespesifiseer in Regulasie 80 (5) deur enige aangrensende brandkrane lewer, moet die minimum druk van 0,25 newton per vierkante millimeter by alle brandkrane gehandhaaf word.

* Kyk *Guidance for Precautions Against Freezing of Fire Mains* vervat in Aanbeveling 7 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

(b) Each of the required fire pumps other than any emergency pump shall have a capacity not less than 40 per cent of the total capacity of fire pumps required by sub-paragraph (a) and shall in any event be capable of delivering at least the jets of water required by Regulation 80 (2) (a). These fire pumps shall be capable of supplying the fire main systems under the required conditions. Where more than two pumps are installed the capacity of such additional pumps shall be to the satisfaction of the Administration.

(4) (a) Fire pumps shall be independently driven power pumps. Sanitary, ballast, bilge or general service pumps may be accepted as fire pumps, provided that they are not normally used for pumping oil and that, if they are subject to occasional duty for the transfer or pumping of fuel oil, suitable change-over arrangements are fitted.

(b) Relief valves shall be provided in conjunction with all fire pumps if the pumps are capable of developing a pressure exceeding the design pressure of the water service pipes, hydrants and hoses. These valves shall be so placed and adjusted as to prevent excessive pressure in any of the fire main systems.

(c) Emergency power-operated fire pumps shall be independently driven self-contained pumps either with their own diesel engine prime mover and fuel supply fitted in an accessible position outside the compartment which contains the main fire pumps, or be driven by a self-contained generator, which may be the emergency generator referred to in Regulation 55, of sufficient capacity and which is positioned in a safe place outside the engine room and preferably above the working deck. The emergency fire pump shall be capable of operating for a period of at least 3 hours.

(d) Emergency fire pumps, sea-suction valves and other necessary valves shall be operable from outside compartments containing main fire pumps in a position not likely to be cut off by a fire in those compartments.

Regulation 79

Fire mains

(1) (a) Where more than one hydrant is required to provide the number of jets specified in Regulation 80 (2) (a) a fire main shall be provided.

(b) Fire mains shall have no connections other than those required for fire fighting except for the purpose of washing the deck and anchor chains or operating the chain locker bilge ejector.

(c) Where fire mains are not self-draining, suitable drain cocks shall be fitted where frost damage could be expected.*

(2) (a) The diameter of the fire main and water service pipes shall be sufficient for the effective distribution of the maximum required discharge from two fire pumps operating simultaneously or of 140 cubic metres per hour, whichever is the less.

(b) With the two pumps simultaneously delivering through nozzles specified in Regulation 80 (5) the quantity of water specified in subparagraph (a) of this paragraph, through any adjacent hydrants, the minimum pressure of 0,25 newtons per square millimetre shall be maintained at all hydrants.

* See Guidance for Precautions Against Freezing of Fire Mains contained in Recommendation 7 of Attachment 3 to the Final Act of the Conference.

Regulasie 80

Brandkrane, brandslange en spuitstukke

(1) (a) Die aantal brandslange wat voorsien word, moet gelyk wees aan die aantal brandkrane ingerig volgens paragraaf (2), en een reserwebrandslang. Hierdie getal sluit nie brandslange wat in 'n enjin- of ketelkamer vereis word, in nie. Die Administrasie mag die aantal brandslange wat vereis word, vermeerder om te verseker dat 'n voldoende aantal brandslange te alle tye beskikbaar en toeganklik is, met inagneming van die grootte van die vaartuig.

(b) Brandslange moet van 'n goedgekeurde materiaal wees en moet lank genoeg wees om 'n straal water te spuit tot in enige van die ruimtes waarin dit nodig mag wees om hulle te gebruik. Hulle maksimum lengte is 20 meter. Elke brandslang moet met 'n spuitstuk en die nodige koppelinge toegerus wees. Brandslange moet, saam met die nodige toebehore en gereedskap, op opvallende plekke naby die watertoevoerbrandkrane of -verbindings gereed vir gebruik gehou word.

(2) (a) Die getal en posisies van brandkrane moet sodanig wees dat minstens twee strale water wat nie uit dieselfde brandkraan kom nie en waarvan een uit 'n enkele stuk brandslang afkomstig is, enige deel van die vaartuig kan bereik wat normaalweg vir die bemanning toeganklik is terwyl die vaartuig besig is om te vaar.

(b) Alle vereiste brandkrane moet toegerus wees met brandslange met tweedoelige spuitstukke soos by paragraaf (5) vereis. Een brandkraan moet naby die ingang van die ruimte wat beskerm moet word, geplaas wees.

(3) Materiale wat geredelik deur hitte ondoeltreffend gemaak word, mag nie vir hoofbrandpype en brandkrane gebruik word nie, tensy dit behoorlik beskerm is. Die pype en brandkrane moet so geplaas wees dat die brandslange maklik aan hulle gekoppel kan word. Op vaartuie waar dekvrag vervoer kan word, moet die brandkrane so geplaas wees dat hulle altyd geredelik toeganklik is en moet die pype sover doenlik so geplaas wees dat gevaar van beskadiging deur sodanige vrag vermy word. Tensy een brandslang en spuitstuk vir elke brandkraan voorsien word, moet daar volkome verwisselbaarheid van slangkoppelings en spuitstukke wees.

(4) 'n Kraan of kiep moet geïnstalleer wees om elke brandslang te bedien sodat enige brandslang verwyder kan word terwyl die brandpompe in werking is.

(5) (a) Standaard spuitstukgroottes is 12 millimeter, 16 millimeter en 19 millimeter of so na daaraan as moontlik. Spuitstukke met 'n groter diameter mag na die oordeel van die Administrasie toegelaat word.

(b) Vir akkommodasie- en diensruimtes hoef die spuitstukgrootte slegs 12 millimeter te wees.

(c) Vir masjinerieruimtes en plekke buite moet die spuitstukgrootte sodanig wees dat die maksimum lewering moontlik van twee strale by die druk in Regulasie 79 (2) (b) gespesifiseer, van die kleinste pomp bereik word, met dien verstande dat 'n spuitstuk groter as 19 mm nie gebruik hoef te word nie.

Regulasie 81

Brandblussers

(1) Brandblussers moet van goedgekeurde tipes wees. Die inhoudsvermoë van vereiste draagbare vloeistofblussers moet hoogstens 14 liter en minstens 9 liter wees. Ander blussers mag nie die ekwivalente draagbaarheid van die vloeistofblusser van 14 liter oorskry nie en hul blusvermoë mag nie minder wees as die brandblusekwivalent van 'n vloeistofblusser van 9 liter nie. Die Administrasie moet die ekwivalente van brandblussers bepaal.

Regulation 80

Fire hydrants, fire hoses and nozzles

(1) (a) The number of fire hoses provided shall be equal to the number of fire hydrants arranged according to paragraph (2) and one spare hose. This number does not include any fire hoses required in any engine or boiler room. The Administration may increase the number of fire hoses required so as to ensure that hoses in sufficient number are available and accessible at all times, having regard to the size of the vessel.

(b) Fire hoses shall be of approved material and sufficient in length to project a jet of water to any of the spaces in which they may be required to be used. Their maximum length shall be 20 metres. Every fire hose shall be provided with a nozzle and the necessary couplings. Fire hoses shall together with any necessary fittings and tools be kept ready for use in conspicuous positions near the water service hydrants or connections.

(2) (a) The number and position of the hydrants shall be such that at least two jets of water not emanating from the same hydrant, one of which shall be from a single length of fire hose, may reach any part of the vessel normally accessible to the crew while the vessel is being navigated.

(b) All required hydrants shall be fitted with fire hoses having dual purpose nozzles as required by paragraph (5). One hydrant shall be located near the entrance of the space to be protected.

(3) Materials readily rendered ineffective by heat shall not be used for fire mains and hydrants unless adequately protected. The pipes and hydrants shall be so placed that the fire hoses may be easily coupled to them. In vessels where deck cargo may be carried, the positions of the hydrants shall be such that they are always readily accessible and the pipes shall be arranged as far as practicable to avoid risk of damage by such cargo. Unless one fire hose and nozzle is provided for each hydrant, there shall be complete interchangeability of fire hose couplings and nozzles.

(4) A cock or valve shall be fitted to serve each fire hose so that any fire hose may be removed while the fire pumps are operating.

(5) (a) Standard nozzle sizes shall be 12 millimetres, 16 millimetres and 19 millimetres or as near thereto as possible. Larger diameter nozzles may be permitted at the discretion of the Administration.

(b) For accommodation and service spaces, a nozzle size greater than 12 millimetres need not be used.

(c) For machinery spaces and exterior locations, the nozzle size shall be such as to obtain the maximum discharge possible from two jets at the pressure specified in Regulation 79 (2) (b) from the smallest pump, provided that a nozzle size greater than 19 millimetres need not be used.

Regulation 81

Fire extinguishers

(1) Fire extinguishers shall be of approved types. The capacity of required portable fluid extinguishers shall be not more than 14 litres and not less than 9 litres. Other extinguishers shall not be in excess of the equivalent portability of the 14 litre fluid extinguisher and shall not be less than the fire-extinguishing equivalent of a 9 litre fluid extinguisher. The Administration shall determine the equivalents of fire extinguishers.

(2) Reserweladings moet tot tevredenheid van die Administrasie voorsien word.

(3) Brandblussers wat 'n blusmiddel bevat wat na die mening van die Administrasie òf op sigself òf in verwagte gebruikstoestande giftige gas in so 'n mate vrystel dat dit mense in gevaar stel, word nie toegelaat nie.

(4) Brandblussers moet periodiek ondersoek word en aan sodanige toetse as wat die Administrasie vereis, onderwerp word.

(5) Normaalweg moet een van die draagbare brandblussers wat vir gebruik in 'n ruimte bedoel is, naby 'n ingang tot daardie ruimte gebêre word.

Regulasie 82

Draagbare brandblussers in beheerposte en akkommodasie- en diensruimtes

(1) Ten minste vyf goedgekeurde draagbare brandblussers moet tot tevredenheid van die Administrasie in beheerposte en akkommodasie- en diensruimtes voorsien word.

(2) Reserweladings moet tot tevredenheid van die Administrasie voorsien word.

Regulasie 83

Brandblustoestelle in masjinerieruimtes

(1) (a) Ruimtes met oliegestookte ketels of brandolie-eenhede moet tot tevredenheid van die Administrasie van een van die volgende vaste brandblusstelsels voorsien wees:

(i) 'n Drukwatersproeistelsel;

(ii) 'n brandsmoor-gasinstallasie;

(iii) 'n brandblusinstallasie waarby dampe van lae-toksisiteit verdampende vloeistowwe, byvoorbeeld broomchloordifluoormetaan (BCF) of broomchloortrifluoormetaan (BTM), gebruik word; of

(iv) 'n brandblusinstallasie waarby hoë-uitsettingskuim gebruik word.

Waar die masjien- en die ketelkamer nie heeltemal van mekaar geskei is nie, of as brandolie vanuit die ketelkamer na die enjinkamer kan dreineer, moet die masjien- en die ketelkamer as een kompartement beskou word.

(b) Elke ketelkamer moet tot tevredenheid van die Administrasie voorsien wees van minstens een stel draagbare lugskuimtoerusting.

(c) Ten minste twee goedgekeurde draagbare blussers wat skuim of 'n ekwivalent spuit, moet voorsien wees in elke stookruimte in elke ketelkamer en in elke ruimte waarin 'n deel van die brandolie installasie geleë is. Ten minste een goedgekeurde skuimblusser met 'n kapasiteit van minstens 136 liter of ekwivalent moet in elke ketelkamer voorsien wees. Hierdie blussers moet voorsien wees van slange op tolle sodat enige deel van die ketelkamer bereik kan word. Die Administrasie mag met inagneming van die grootte en aard van die ruimte wat beskerm moet word, die vereistes van hierdie subparagraaf verslap.

(d) In elke stookruimte moet daar 'n houer met sand, saagsels geweek in soda, of ander goedgekeurde droë materiaal wees in sodanige hoeveelheid as wat die Administrasie vereis. As alternatief kan 'n goedgekeurde draagbare blusser voorsien word.

(2) Ruimtes met binnebrandmasjinerie vir hoofaandrywing of ander doeleindes moet, wanneer sodanige masjinerie 'n totale kraglewering het van minstens 375 kilowatt, van die volgende toerusting voorsien wees:

(a) Een van die brandblusstelsels wat by paragraaf (1) (a) vereis word.

(b) Minstens een stel draagbare lugskuimtoerusting wat die Administrasie tevrede stel.

(2) Spare charges shall be provided to the satisfaction of the Administration.

(3) Fire extinguishers containing an extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use, gives off toxic gases in such quantities as to endanger persons shall not be permitted.

(4) Fire extinguishers shall be periodically examined and subjected to such tests as the Administration may require.

(5) Normally, one of the portable fire extinguishers intended for use in any space shall be stowed near an entrance to that space.

Regulation 82

Portable fire extinguishers in control stations and accommodation and service spaces

(1) At least five approved portable fire extinguishers shall be provided in control stations and accommodation and service spaces to the satisfaction of the Administration.

(2) Spare charges shall be provided to the satisfaction of the Administration.

Regulation 83

Fire-extinguishing appliances in machinery spaces

(1) (a) Spaces containing oil-fired boilers or fuel oil units shall be provided with one of the following fixed fire-extinguishing systems, to the satisfaction of the Administration:

(i) a pressure water-spraying installation;

(ii) a fire-smothering gas installation;

(iii) a fire-extinguishing installation using vapours from low toxicity vapourising liquids, e.g. bromochlorodifluoromethane (BCF) or bromotrifluoromethane (BTM); or

(iv) a fire-extinguishing installation using high expansion foam.

Where the engine and boiler rooms are not entirely separate, or if fuel oil can drain from the boiler room into the engine room, the combined engine and boiler rooms shall be considered as one compartment.

(b) Every boiler room shall be provided with at least one set of portable air-foam equipment to the satisfaction of the Administration.

(c) At least two approved portable extinguishers discharging foam or equivalent shall be provided in each firing space in each boiler room and each space in which a part of the fuel oil installation is situated. At least one approved foam-type extinguisher of at least 136 litres capacity or equivalent shall be provided in each boiler room. These extinguishers shall be provided with hoses on reels suitable for reaching any part of the boiler room. The Administration may relax the requirements of this subparagraph, having regard to the size and nature of the space to be protected.

(d) In each firing space there shall be a receptacle containing sand, sawdust impregnated with soda or other approved dry material, in such quantity as may be required by the Administration. Alternatively an approved portable extinguisher may be provided.

(2) Spaces containing internal combustion machinery used either for main propulsion or for other purposes, when such machinery has a total power output of not less than 375 kilowatts, shall be provided with the following arrangements:

(a) One of the fire-extinguishing systems required by paragraph (1) (a).

(b) At least one set of portable air-foam equipment to the satisfaction of the Administration.

(c) In elke sodanige ruimte, goedgekeurde skuimbrandblussers met 'n kapasiteit van minstens 45 liter elk, of 'n ekwivalent, in genoegsame getalle om dit moontlik te maak om skuim of 'n ekwivalent te rig op alle dele van die brand- en smeeroliedrukstelsels, ratwerk of ander brandgevare. Boonop moet daar 'n genoegsame getal draagbare skuimblussers of 'n ekwivalent wees wat so geplaas is dat daar 'n blusser binne 'n loopafstand van hoogstens 10 meter vanaf enige plek in die ruimte is, met dien verstande dat daar minstens twee sulke blussers binne elke sodanige ruimte is. Vir kleiner ruimtes mag die Administrasie hierdie vereistes verslap.

(3) Ruimtes met stoomturbines of omslote stoommasjiene vir hoofaandrywing of vir ander doeleindes moet, wanneer sodanige masjinerie 'n totale kraglewering van minstens 375 kilowatt het, van die volgende inrigtings voorsien word:

(a) Skuimbrandblussers met 'n kapasiteit van minstens 45 liter elk, of 'n ekwivalent, in genoegsame getalle om dit moontlik te maak om skuim of 'n ekwivalent te rig op enige deel van die druksmeerstelsel, op enige deel van die omhulsel wat drukgesmeerde onderdele van die turbines omsluit, masjiene of hulle ratwerk, en enige ander brandgevare, met dien verstande dat sodanige blussers nie vereis word waar beskerming ten minste gelykstaande met die vereistes van hierdie subparagraaf in sodanige ruimtes voorsien word deur 'n vaste brandblusstelsel wat ooreenkomstig paragraaf (1) (a) aangebring is nie; en

(b) 'n genoegsame getal draagbare skuimblussers, of hulle ekwivalent, wat so geplaas is dat daar 'n blusser binne 'n loopafstand van hoogstens 10 meter vanaf enige piek in die ruimte is, met dien verstande dat daar minstens twee sodanige blussers binne elke sodanige ruimte moet wees, en dat sodanige blussers nie bykomend vereis moet word by enige wat ooreenkomstig paragraaf (2) (c) voorsien word nie.

(4) Waar daar na die oordeel van die Administrasie 'n brandrisiko bestaan in enige masjinerieruimte waarvoor geen spesifieke bepalings oor brandblusapparaat in paragrawe (1), (2) en (3) voorgeskryf word nie, moet daar binne of langs daardie ruimte 'n getal goedgekeurde draagbare brandblussers of ander brandblusmiddels tot tevredenheid van die Administrasie voorsien wees.

(5) Waar vaste brandblusstelsels geïnstalleer word wat nie by hierdie Deel vereis word nie, moet sodanige stelsels die Adminitrasie tevrede stel.

(6) Vir enige masjinerieruimte van Kategorie A waartoe toegang op 'n lae vlak voorsien word vanuit 'n aangrensende astonnel, moet daar bykomend by enige waterdigte deur en aan die kant wég van daardie masjinerieruimte, 'n ligtestaal-vuurskermdeur aangebring word wat van beide kante van die deur oop- en toegemaak kan word.

Regulasie 84

Internasionale landaansluiting

(1) Ten minste een internasionale landaansluiting wat voldoen aan paragraaf (2), moet voorsien word.

(2) Die standaardafmeting van flense vir die internasionale landaansluiting moet met die volgende tabel strook:

Beskrywing	Afmeting
Buitedeursnee	178 millimeter
Binnedeursnee.....	64 millimeter
Boutsirkelmiddellyn.....	132 millimeter

(c) In each such space, approved foam-type fire extinguishers each of at least 45 litres capacity, or equivalent, sufficient in number to enable foam or its equivalent to be directed on to any part of the fuel and lubricating oil pressure systems, gearing and other fire hazards. In addition, there shall be provided a sufficient number of portable foam extinguishers or equivalent which shall be so located that an extinguisher is not more than 10 metres walking distance from any point in the space; provided that there shall be at least two such extinguishers in each such space. For smaller spaces the Administration may relax these requirements.

(3) Spaces containing steam turbines or enclosed steam engines used either for main propulsion, or for other purposes, when such machinery has a total power output of not less than 375 kilowatts shall be provided with the following arrangements:

(a) Foam fire extinguishers each of at least 45 litres capacity, or equivalent, sufficient in number to enable foam or its equivalent to be directed on to any part of the pressure lubrication system, on to any part of the casings enclosing pressure lubricated parts of the turbines, engines or associated gearing, and any other fire hazards. Provided that such extinguishers shall not be required if protection at least equivalent to that of this sub-paragraph is provided in such spaces by a fixed fire-extinguishing system fitted in compliance with paragraph (1) (a); and

(b) a sufficient number of portable foam extinguishers, or equivalent, which shall be so located that an extinguisher is not more than 10 metres walking distance from any point in the space; provided that there shall be at least two such extinguishers in each such space, and such extinguishers shall not be required in addition to any provided in compliance with paragraph (2) (c).

(4) Where, in the opinion of the Administration, a fire hazard exists in any machinery space for which no specific provisions for fire-extinguishing appliances are prescribed in paragraphs (1), (2) and (3) there shall be provided in, or adjacent to, that space a number of approved portable fire extinguishers or other means of fire extinction to the satisfaction of the Administration.

(5) Where fixed fire-extinguishing systems not required by this Part are installed, such systems shall be to the satisfaction of the Administration.

(6) For any machinery space of Category A to which access is provided at a low level from an adjacent shaft tunnel, there shall be provided in addition to any watertight door and on the side remote from that machinery space a light steel fire-screen door which shall be capable of being operated from each side of the door.

Regulation 84

International shore connection

(1) At least one international shore connection, complying with paragraph (2) shall be provided.

(2) Standard dimensions of flanges for the international shore connection shall be in accordance with the following table:

Description	Dimension
Outside diameter	178 millimetres
Inner diameter	64 millimetres
Bolt circle diameter.....	132 millimetres

Beskrywing	Afmeting
Gleuwe in flens.....	4 gate van 19 millimeter in deursnee ewe ver van mekaar gespasieer op 'n boutsirkel van bogenoemde omvang gegleuf tot by die flensperiferie
Flensdikte	14,5 millimeter minimum
Boute en moere.....	4 elk van 16 millimeter in deursnee en 50 millimeter lank

(3) Hierdie koppelstuk moet vervaardig wees van materiaal wat geskik is vir 'n werkdruk van 1,0 newton per vierkante millimeter.

(4) Die flens moet aan die een kant plat wees en aan die ander kant 'n permanent bevestigde koppeling hê wat op die vaartuig se brandkraan en -slang pas. Die koppelstuk, tesame met 'n pakstuk van materiaal wat geskik is vir 'n werkdruk van 1,0 newton per vierkante millimeter, asook vier boute van 16 millimeter dik en 50 millimeter lank en agt wasters moet aan boord van die vaartuig gehou word.

(5) Fasiliteite moet beskikbaar wees wat dit moontlik maak om sodanige aansluiting aan enige kant van die vaartuig te gebruik.

Regulasie 85

Uitrusting vir brandweermanne

(1) Op die vaartuig moet ten minste twee brandweermanuitrustings wees wat die Administrasie tevrede stel.

(2) Die brandweermanuitrustings moet maklik toeganklik en gereed vir gebruik in ver van mekaar verwyderde posisies gebêre word.

Regulasie 86

Brandbeheerplan

'n Brandbeheerplan tot tevredenheid van die Administrasie moet permanent vertoon word.

Regulasie 87

Geredelike beskikbaarheid van brandblusapparaat

Brandblusapparaat moet te alle tye in 'n goeie toestand en gereed vir onmiddellike gebruik gehou word.

Regulasie 88

Aanvaarding van substitute

Waar daar in hierdie Deel 'n spesiale tipe toestel, apparaat, blusmiddel of inrigting gespesifiseer word, kan enige ander tipe toestel, ens. toegelaat word, mits die Administrasie daarvan oortuig is dat dit nie minder doeltreffend is nie.

DEEL B—BRANDBEVEILIGINGSMAATREËLS IN VAARTUIE MET 'N LENGTE VAN MINDER AS 55 METER

Regulasie 89

Strukturele brandbeskerming

(1) Die romp, bobou, strukturele skotte, dekke en dekhuise moet van onbrandbare materiale gebou wees. Die Administrasie mag brandbare konstruksie toelaat, mits daar aan die vereistes van hierdie Regulasie en die bykomende brandblusvereistes van Regulasie 101 (3) voldoen word.

(2) (a) In vaartuie waarvan die romp van onbrandbare materiale gemaak is, moet die dekke en skotte wat masjinerieruimtes van Kategorie A van akkommodasieruimtes, diensruimtes of beheerposte skei, op Klas "A-60"-standaard gebou wees waar die masjinerieruimte van Kategorie A nie voorsien is van 'n vaste brandblusstelsel nie en op

Description	Dimension
Slots in flange	4 holes 19 millimetres in diameter equidistantly placed on a bolt circle of the above diameter, slotted to the flange periphery
Flange thickness.....	14.5 millimetres minimum
Bolts and nuts.....	4 each of 16 millimetres in diameter and 50 millimetres in length

(3) This connection shall be constructed of material suitable for 1,0 newton per square millimetre service pressure.

(4) The flange shall have a flat face on one side and the other shall have a coupling permanently attached thereto that will fit the vessel's hydrant and hose. The connection shall be kept aboard the vessel together with a gasket of any material suitable for 1,0 newton per square millimetre service pressure, together with four 16 millimetre bolts 50 millimetres in length and eight washers.

(5) Facilities shall be available enabling such a connection to be used on either side of the vessel.

Regulation 85

Fireman's outfits

(1) At least two fireman's outfits shall be carried to the satisfaction of the Administration.

(2) The fireman's outfits shall be stored so as to be easily accessible and ready for use and shall be stored in widely separated positions.

Regulation 86

Fire control plan

There shall be a permanently exhibited fire control plan to the satisfaction of the Administration.

Regulation 87

Ready availability of fire-extinguishing appliances

Fire-extinguishing appliances shall be kept in good order and available for immediate use at all times.

Regulation 88

Acceptance of substitutes

Where in this Part any special type of appliance, apparatus, extinguishing medium or arrangement is specified, any other type of appliance, etc., may be allowed, provided the Administration is satisfied that it is not less effective.

PART B—FIRE SAFETY MEASURES IN VESSELS OF LESS THAN 55 METRES IN LENGTH

Regulation 89

Structural fire protection

(1) The hull, superstructure, structural bulkheads, decks and deckhouses shall be constructed of non-combustible materials. The Administration may permit combustible construction provided the requirements of this Regulation and the additional fire-extinguishing requirements of Regulation 101 (3) are complied with.

(2) (a) In vessels, the hull of which is constructed of non-combustible materials, the decks and bulkheads separating machinery spaces of Category A from accommodation spaces, service spaces or control stations shall be constructed to "A-60" Class standard where the machinery

Klas "A-30"-standaard waar sodanige stelsel aangebring is. Dekke en skotte wat ander masjinerieruimtes skei van akkommodasieruimtes, diensruimtes en beheerposte moet op Klas "A-0"-standaard gebou wees. Dekke en skotte wat beheerposte van akkommodasie- en diensruimtes skei, moet op Klas "A"-standaard gebou wees, geïsoleer tot tevredenheid van die Administrasie, behalwe dat 'n Administrasie die aanbring van Klas "B-15"-verdelings vir die skeiding van ruimtes soos die skipper se kajuit van die stuurhuis mag toelaat.

(b) In vaartuie waarvan die romp van brandbare materiale gemaak is, moet die dekke en skotte wat masjinerieruimtes van akkommodasieruimtes, diensruimtes of beheerposte skei, op Klas "F"- of Klas "B-15"-standaard gebou wees. Verder moet masjinerieruimtegrense sover doenlik die deurgang van rook voorkom. Dekke en skotte wat beheerposte van akkommodasie- en diensruimtes skei, moet op Klas "F"-standaard gebou wees.

(3) (a) In vaartuie waarvan die romp van onbrandbare materiale gebou is, moet skotte van gange wat akkommodasieruimtes, diensruimtes en beheerposte bedien, Klas "B-15"-verdelings wees.

(b) In vaartuie waarvan die romp van brandbare materiale gemaak is, moet skotte van gange wat akkommodasieruimtes, diensruimtes en beheerposte bedien, Klas "F"-verdelings wees.

(c) 'n Skot vereis by subparagraaf (a) of (b) moet van dek tot dek strek tensy 'n deurlopende plafon van dieselfde klas as die skot aan albei kante van die skot aangebring is, in welke geval die skot by die deurlopende plafon kan doodloop.

(4) Binnetrappe wat akkommodasieruimtes, diensruimtes of beheerposte bedien, moet van staal of ander ekwivalente materiaal wees. Sodanige trappe moet binne omsluitings wees wat van Klas "F"-verdelings gemaak is in vaartuie waarvan die romp van brandbare materiale gemaak is, of Klas "B-15"-verdelings in vaartuie waarvan die romp van onbrandbare materiale gemaak is, met dien verstande dat waar 'n trap slegs deur een dek gaan, dit by slegs een vlak omsluit hoef te word.

(5) Deure en ander sluitings van openinge in skotte en dekke bedoel in paragrawe (2) en (3), deure van trapomsluitings bedoel in paragraaf (4) en deure in masjien- en ketelhulsels moet sover doenlik wat brandweerstand betref, ekwivalent wees aan dié verdelings waarin hulle aangebring is. Deure tot masjinerieruimtes van Kategorie A moet selfsluitend wees.

(6) Hyserskagte wat deur die akkommodasie- en diensruimtes gaan, moet van staal of ekwivalente materiaal gebou wees en moet toegerus wees met sluitmiddels wat die beheer van lugstrome en rook sal toelaat.

(7) (a) In vaartuie waarvan die romp van brandbare materiale gemaak is, moet die grensskotte en dekke van ruimtes wat 'n noodbron van krag bevat, en skotte en dekke tussen kombuise, verfkamers, lampkamers of enige pakkamers wat aansienlike hoeveelhede hoogs vlambare materiale bevat, en akkommodasieruimtes, diensruimtes of beheerposte van Klas "F"- of Klas "B-15"-verdelings gemaak wees.

(b) In vaartuie waarvan die romp van onbrandbare materiale gemaak is, moet die dekke en skotte bedoel in subparagraaf (a), van Klas "A"-verdelings wees, geïsoleer tot tevredenheid van die Administrasie, met inagneming van die brandgevaar, behalwe dat die Administrasie Klas "B-15"-verdelings mag aanvaar tussen 'n kombuis en akkommodasieruimtes, diensruimtes en beheerposte wanneer die kombuis slegs elektries verhitte oonde, elektries verhitte warmwatertoestelle of ander elektries verhitte toestelle bevat.

Category A is not provided with a fixed fire-extinguishing system and to "A-30" Class standard where such a system is fitted. Decks and bulkheads separating other machinery spaces from accommodation, service spaces and control stations shall be constructed to "A-O" Class standard. Decks and bulkheads separating control stations from accommodation and service spaces shall be constructed to "A" Class standard, insulated to the satisfaction of the Administration except that an Administration may permit the fitting of "B-15" Class divisions for separating such spaces as skipper's cabin from the wheelhouse.

(b) In vessels, the hull of which is constructed of combustible materials, the decks and bulkheads separating machinery spaces from accommodation spaces, service spaces or control stations shall be constructed to "F" Class or "B-15" Class standard. In addition, machinery space boundaries shall as far as practicable prevent the passage of smoke. Decks and bulkheads separating control stations from accommodation and service spaces shall be constructed to "F" Class standard.

(3) (a) In vessels, the hull of which is constructed of non-combustible materials, bulkheads of corridors serving accommodation spaces, service spaces and control stations shall be of "B-15" Class divisions.

(b) In vessels, the hull of which is constructed of combustible materials, bulkheads of corridors serving accommodation spaces, service spaces and control stations, shall be of "F" Class divisions.

(c) Any bulkhead required by subparagraph (a) or (b) shall extend from deck to deck unless a continuous ceiling of the same Class as the bulkhead is fitted on both sides of the bulkhead, in which case the bulkhead may terminate at the continuous ceiling.

(4) Interior stairways serving accommodation spaces, service spaces or control stations shall be of steel or other equivalent material. Such stairways shall be within enclosures constructed of "F" Class divisions in vessels the hull of which is constructed of combustible materials, or "B-15" Class divisions in vessels the hull of which is constructed of non-combustible materials, provided that where a stairway penetrates only one deck it need be enclosed at one level only.

(5) Doors and other closures of openings in bulkheads and decks referred to in paragraphs (2) and (3), doors fitted to stairway enclosures referred to in paragraph (4) and doors fitted in engine and boiler casings, shall be as far as practicable equivalent in resisting fire to the divisions in which they are fitted. Doors to machinery spaces of Category A shall be self-closing.

(6) Lift trunks which pass through the accommodation and service spaces shall be constructed of steel or equivalent material and shall be provided with means of closing which will permit control of draught and smoke.

(7) (a) In vessels, the hull of which is constructed of combustible materials, the boundary bulkheads and decks of spaces containing any emergency source of power and bulkheads and decks between galleys, paint rooms, lamp rooms or any store-rooms which contain appreciable quantities of highly flammable materials, and accommodation spaces, service spaces or control stations shall be constructed of "F" Class or "B-15" Class divisions.

(b) In vessels, the hull of which is constructed of non-combustible materials, the decks and bulkheads referred to in sub-paragraph (a) shall be of "A" Class divisions insulated to the satisfaction of the Administration, having in mind the risk of fire, except that the Administration may accept "B-15" Class divisions between a galley and accommodation spaces, service spaces and control stations when the galley contains electrically heated furnaces, electrically heated hot water appliances or other electrically heated appliances only.

(c) Hoogs vlambare produkte moet in houers wat na behore verseël is, gehou word.

(8) Waar skotte of dekke wat by paragrawe (2), (3), (5) of (7) vereis word Klas "A"-, Klas "B"- of Klas "F"-verdelings te wees, deurdring word vir die deurgang van elektriese kabels, pype, kokers, leidings, ens., moet toegesien word dat die brandintegriteit van die verdeling nie benadeel word nie.

(9) Lugruimtes wat ingesluit word agter plafonne, panele of bekledings in akkommodasieruimtes, diensruimtes en beheerposte moet verdeel wees deur styfpassende lugstroomstuiters hoogstens 7 meter uitmekaar.

(10) Vensters en dakvensters van masjinerieruimtes moet soos volg wees:

(a) Waar dakvensters oopgemaak kan word, moet hulle van buite die ruimte af toegemaak kan word. Dakvensters met glasruite moet buite toegerus wees met permanent aangehegte luike van staal of ander ekwivalente materiaal.

(b) Glas of soortgelyke materiale mag nie in masjinerieruimtegrense geïnstalleer word nie. Dit sluit nie die gebruik van draadversterkte glas vir dakvensters en glas in beheerposte binne die masjinerieruimtes uit nie.

(c) In dakventers bedoel in subparagraaf (a) moet draadversterkte ruite gebruik word.

(11) Isoleermateriale in akkommodasieruimtes, diensruimtes behalwe huishoudelike koelkompartemente, beheerposte en masjinerieruimtes moet onbrandbaar wees. Die oppervlak van isolasie aangebring aan die binnegrense van masjinerieruimtes van Kategorie A mag geen olie of oliedampe deurlaat nie.

(12) Brandbare isolasie in kompartemente wat vir die stuwing van vis gebruik word, moet deur styfpassende bekleding beskerm word.

Regulasie 90

Ventilasiestelsels

(1) Behalwe soos in Regulasie 91 (2) bepaal, moet middels voorsien word om waaiers te stop en hoofopeninge na ventilasiestelsels toe te maak van buite die ruimtes wat bedien word.

(2) Middels moet voorsien word om van 'n veilige posisie die ringruimtes om skoorstene toe te maak.

(3) Ventilasie-openinge mag toegelaat word in en onder die deure in gangskotte, behalwe dat sodanige openinge nie in en onder trapomsluitingsdeure toegelaat word nie. Die openinge mag slegs in die onderste helfte van 'n deur voorsien word. Waar daar so 'n opening in of onder 'n deur is, mag die totale netto oppervlak van sodanige opening of openinge nie 0,05 vierkante meter oorskry nie. Wanneer sodanige opening in 'n deur gesny is, moet dit toegerus wees met 'n rooster van onbrandbare materiaal.

(4) Ventilasieleidings vir masjinerieruimtes van Kategorie A of kombuise mag oor die algemeen nie deur akkommodasieruimtes, diensruimtes of beheerposte loop nie. Waar die Administrasie hierdie reëling toelaat, moet die leidings van staal of gelykwaardige materiaal wees en so ingerig wees dat die integriteit van die verdelings bewaar word.

(5) Ventilasieleidings van akkommodasieruimtes, diensruimtes of beheerposte mag oor die algemeen nie deur masjinerieruimtes van Kategorie A of deur kombuise loop nie. Waar die Administrasie hierdie reëling toelaat, moet die leidings van staal of ekwivalente materiaal wees en só ingerig wees dat die integriteit van die verdelings bewaar word.

(c) Highly flammable products shall be carried in suitably sealed containers.

(8) Where bulkheads or decks required by paragraphs (2), (3), (5) or (7) to be of "A" Class, "B" Class or "F" Class divisions, are penetrated for the passage of electrical cables, pipes, trunks, ducts, etc., arrangements shall be made to ensure that the fire integrity of the division is not impaired.

(9) Air spaces enclosed behind ceilings, panellings or linings in accommodation spaces, service spaces and control stations shall be divided by close-fitting draught stops spaced not more than 7 metres apart.

(10) Windows and skylights to machinery spaces shall be as follows:

(a) Where skylights can be opened they shall be capable of being closed from outside the space. Skylights containing glass panels shall be fitted with external shutters of steel or other equivalent material permanently attached.

(b) Glass or similar materials shall not be fitted in machinery space boundaries. This does not preclude the use of wire-reinforced glass for skylights and glass in control rooms within the machinery spaces.

(c) In skylights referred to in sub-paragraph (a) wire-reinforced glass shall be used.

(11) Insulating materials in accommodation spaces, service spaces except domestic refrigerating compartments, control stations and machinery spaces shall be non-combustible. The surface of insulation fitted on the internal boundaries of machinery spaces of Category A shall be impervious to oil or oil vapours.

(12) Within compartments used for stowage of fish, combustible insulation shall be protected by close-fitting cladding.

Regulation 90

Ventilation systems

(1) Except as provided for in Regulation 91 (2), means shall be provided to stop fans and close main openings to ventilation systems from outside the spaces served.

(2) Means shall be provided for closing, from a safe position, the annular spaces around funnels.

(3) Ventilation openings may be permitted in and under the doors in corridor bulkheads except that such openings shall not be permitted in and under stairway enclosure doors. The openings shall be provided only in the lower half of a door. Where such opening is in or under a door the total net area of any such opening or openings shall not exceed 0.05 square metres. When such opening is cut in a door it shall be fitted with a grille made of non-combustible material.

(4) Ventilation ducts for machinery spaces of Category A or galleys shall not in general pass through accommodation spaces, service spaces or control stations. Where the Administration permits this arrangement, the ducts shall be constructed of steel or equivalent material and arranged to preserve the integrity of the divisions.

(5) Ventilation ducts of accommodation spaces, service spaces or control stations shall not in general pass through machinery spaces of Category A or through galleys. Where the Administration permits this arrangement the ducts shall be constructed of steel or equivalent material and arranged to preserve the integrity of the divisions.

(6) Pakkamers wat aansienlike hoeveelhede hoogs vlambare produkte bevat, moet voorsien wees van ventilasie-inrigtings wat apart is van ander ventilasiestelsels. Ventilasie moet op hoë en lae vlakke gereël word en die in- en uitlate van ventilators moet op veilige plekke geplaas en met vonkvangers toegerus wees.

(7) Ventilasiestelsels wat masjinerieruimtes bedien, moet onafhanklik wees van stelsels wat ander ruimtes bedien.

(8) Waar kokers of leidings ruimtes aan albei kante van Klas "A"-skotte of -dekke bedien, moet dempers aangebring word om die verspreiding van brand en rook tussen kompartemente te voorkom. Handdempers moet van albei kante van die skot of dek bedien kan word. Waar die kokers of leidings met 'n vry deursneeoppervlakte van meer as 0,02 vierkante meter deur Klas "A"-skotte of -dekke gaan, moet outomatiese selfsluitende dempers aangebring wees. Kokers wat kompartemente bedien wat slegs aan een kant van sodanige skotte geleë is, moet aan Regulasie 70 (2) (b) voldoen.

Regulasie 91

Verwarmingsinstallasies

(1) Elektriese straalverwarmers moet vas geïnstalleer wees op 'n wyse wat brandrisiko tot 'n minimum sal beperk. Sodanige verwarmers mag nie 'n element hê wat so blootgestel is dat klerasie, gordyne of ander dergelike stowwe geskroei kan word of aan die brand kan raak as gevolg van die element se hitte nie.

(2) Verhitting deur middel van oop vure word nie toegelaat nie. Verwarmingstowe en ander soortgelyke toestelle moet stewig bevestig word, en voldoende beskerming en isolasie teen brand moet voorsien word onder en rondom sodanige toestelle en by hulle opneempype. Opneempype van stowe wat vaste brandstof brand, moet só ingerig en ontwerp wees dat die moontlikheid van blokkering deur verbrandingsprodukte geminimaliseer word en dit moet maklik skoongemaak kan word. Dempers vir die beperking van lugstrome in opneempype moet, wanneer dit in die geslote stand is, steeds 'n toereikende deel ooplaat. Ruimtes waarin stowe gesïnstalleer is, moet voorsien wees van ventilators van voldoende oppervlakte om genoegsame verbrandingslug vir die stoof te voorsien. Sodanige ventilators mag op geen manier toegemaak kan word nie en hul posisie moet sodanig wees dat geen afsluittoestelle ooreenkomstig Regulasie 20 vereis word nie.

(3) Oopvlam-gastoestelle, behalwe kookstowe en waterverwarmers, word nie toegelaat nie. Ruimtes wat sodanige stowe of waterverwarmers bevat, moet voldoende ventilasie hê om dampe en moontlike gaslekkasie na 'n veilige plek te verwyder. Alle pype wat gas van houer tot stoof of waterverwarmer vervoer, moet van staal of ander goedgekeurde materiaal wees. Outomatiese veiligheidsgasafsluittoestelle wat in werking gestel word wanneer daar 'n verlies van druk in die gashoofleiding is of wanneer vlamuitdowing by 'n toestel plaasvind, moet geïnstalleer wees.

Regulasie 92

*Diverse items**

(1) Blootgestelde oppervlakke binne akkommodasieruimtes, diensruimtes, beheerposte, gang- en trapomsluitings en die versteekte oppervlakke agter skotte, plafonne, paneelwerk en bekledings in akkommodasieruimtes, diensruimtes en beheerposte moet lae vlamverspreidingeienskappe hê.

* Kyk *Guidance Concerning the Use of Certain Plastic Materials* vervat in Aanbeveling 8 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

(6) Store-rooms containing appreciable quantities of highly flammable products shall be provided with ventilation arrangements which are separate from other ventilation systems. Ventilation shall be arranged at high and low levels and the inlets and outlets of ventilators shall be positioned in safe areas and fitted with spark arresters.

(7) Ventilation systems serving machinery spaces shall be independent of systems serving other spaces.

(8) Where trunks or ducts serve spaces on both sides of "A" Class bulkheads or decks dampers shall be fitted so as to prevent the spread of fire and smoke between compartments. Manual dampers shall be operable from both sides of the bulkhead or the deck. Where the trunks or ducts with a free cross-sectional area exceeding 0.02 square metres pass through "A" Class bulkheads or decks, automatic self-closing dampers shall be fitted. Trunks serving compartments situated only on one side of such bulkheads shall comply with Regulation 70 (2) (b).

Regulation 91

Heating installations

(1) Electric radiators shall be fixed in position and so constructed as to reduce fire risks to a minimum. No such radiator shall be fitted with an element so exposed that clothing, curtains or other similar materials can be scorched or set on fire by heat from the element.

(2) Heating by means of open fires shall not be permitted. Heating stoves and other similar appliances shall be firmly secured and adequate protection and insulation against fire shall be provided beneath and around such appliances and in way of their uptakes. Uptakes of stoves which burn solid fuel shall be so arranged and designed as to minimize the possibility of becoming blocked by combustion products and shall have a ready means for cleaning. Dampers for limiting draughts in uptakes shall, when in the closed position, still leave an adequate area open. Spaces in which stoves are installed shall be provided with ventilators of sufficient area to provide adequate combustion-air for the stove. Such ventilators shall have no means of closure and their position shall be such that no closing appliances in accordance with Regulation 20 are required.

(3) Open flame gas appliances, except cooking stoves and water heaters, shall not be permitted. Spaces containing any such stoves or water heaters shall have adequate ventilation to remove fumes and possible gas leakage to a safe place. All pipes conveying gas from container to stove or water heater shall be of steel or other approved material. Automatic safety gas shut-off devices shall be fitted to operate on loss of pressure in the gas main pipe or flame failure on any appliance.

Regulation 92

*Miscellaneous items**

(1) Exposed surfaces within accommodation spaces, service spaces, control stations, corridor and stairway enclosures and the concealed surfaces behind bulkheads, ceilings, panellings and linings in accommodation spaces, service spaces, and control stations shall have low flame-spread characteristics.

* See Guidance Concerning the Use of Certain Plastic Materials contained in Recommendation 8 of Attachment 3 to the Final Act of the Conference.

(2) Alle blootgestelde oppervlakke van glasversterkte plastiekbouwerk binne akkommodasie- en diensruimtes, beheerposte, masjinerieruimtes van Kategorie A en ander masjinerieruimtes met 'n soortgelyke brandrisiko moet 'n finale opboulaag van goedgekeurde hars met inherente brandvertragende eienskappe hê of moet bedek wees met 'n goedgekeurde brandvertragende verf of moet beskerm word deur onbrandbare materiale.

(3) Verwe, vernisse en ander afwerkings aan blootgestelde binne-oppervlakke moet nie buitensporige hoeveelhede rook of toksiese gasse of dampe kan produseer nie. Die Administrasie moet tevrede wees dat hulle nie van 'n aard is wat oormatige brandgevaar skep nie.

(4) Primêre dekbedekkings binne akkommodasie- en diensruimtes en beheerposte moet van goedgekeurde materiaal wees wat nie maklik sal ontbrand of sal lei tot gif- of ontploffingsgevaar by verhoogde temperature nie.*

(5) (a) In akkommodasie- en diensruimtes en beheerposte moet pype wat deur Klas "A"- of "B"-verdelings gaan, van goedgekeurde materiale gemaak wees betreffende die hittegraad wat sodanige verdelings moet kan weerstaan. Waar die Administrasie die vervoer van olie en brandbare vloeistowwe deur akkommodasie- en diensruimtes toelaat, moet die pype wat die olie of brandbare vloeistowwe vervoer, van 'n goedgekeurde materiaal gemaak wees wat die brandrisiko betref.

(b) Stowwe wat maklik deur hitte ondoeltreffend gemaak word, moet nie gebruik word vir oorboordse spuigate, sanitêre uitlate en ander uitlate naby die waterlyn wat in die geval van brand weens die faling van die materiaal 'n oorstromingsgevaar kan skep nie.

(6) Alle afvalhouers buiten dié wat by visverwerking gebruik word, moet van onbrandbare materiaal gemaak wees met geen openinge aan die sykante of die onderkant nie.

(7) Masjinerie wat brandolie-oorvoerpompe, brandolieeenheidspompe en ander soortgelyke brandstofpompe aandryf, moet toegerus wees met afstandskontroles wat aan die buitekant van die betrokke ruimte geplaas is, sodat hulle afgeskakel kan word in geval van 'n brand wat ontstaan in die ruimte waarin hulle geleë is.

(8) Drupbakke moet aangebring word waar nodig om te verhoed dat olie in die kimme inlek.

Regulasie 93

Berging van gassilinders en gevaarlike materiale

(1) Silinders vir saamgeperste, vloeibare of opgeloste gasse moet duidelik gemerk wees met voorgeskrewe identifikasiekleure, moet 'n duidelike leesbare identifikasie van die naam en chemiese formule van die inhoud hê en moet behoorlik vasgemaak wees.

(2) Silinders wat vlambare of ander gevaarlike gasse bevat en leë silinders moet, behoorlik vasgemaak, geberg wees op oop dekke, en alle kleppe, drukreëlaars en pype wat vanaf sodanige silinders lei, moet teen beskadiging beskerm word. Silinders moet beskerm word teen buitensporige temperatuurwisselinge, direkte sonstrale en die akkumulasie van sneeu. Die Administrasie mag egter toelaat dat sodanige silinders geberg word in kompartemente wat aan die vereistes van paragrawe (3) tot (5) voldoen.

* Vir vaartuie waarvan die dekke van staal gemaak is, kyk *Improved Provisional Guidelines on Test Procedures for Primary Deck Coverings* deur die Organisasie aangeneem by Resolusie A.214 (VII).

(2) All exposed surfaces of glass reinforced plastic construction within accommodation and service spaces, control stations, machinery spaces of Category A and other machinery spaces of similar fire risk shall have the final lay-up layer of approved resin having inherent fire-retardant properties or be coated with an approved fire-retardant paint or be protected by non-combustible materials.

(3) Paints, varnishes and other finishes used on exposed interior surfaces shall not be capable of producing excessive quantities of smoke or toxic gases or vapours. The Administration shall be satisfied that they are not of a nature to offer an undue fire hazard.

(4) Primary deck coverings within accommodation and service spaces and control stations, shall be of approved material which will not readily ignite or give rise to toxic or explosive hazards at elevated temperatures.*

(5) (a) In accommodation and service spaces and control stations, pipes penetrating "A" or "B" Class divisions shall be of approved materials having regard to the temperature such divisions are required to withstand. Where the Administration permits the conveying of oil and combustible liquids through accommodation and service spaces, the pipes conveying oil or combustible liquids shall be of an approved material having regard to the fire risk.

(b) Materials readily rendered ineffective by heat shall not be used for overboard scuppers, sanitary discharges, and other outlets which are close to the waterline and where the failure of the material in the event of fire would give rise to danger of flooding.

(6) All waste receptacles other than those used in fish processing shall be constructed of non-combustible materials with no openings in the sides and bottom.

(7) Machinery driving fuel oil transfer pumps, fuel oil unit pumps and other similar fuel pumps shall be fitted with remote controls situated outside the space concerned so that they can be stopped in the event of a fire arising in the space in which they are located.

(8) Drip trays shall be fitted where necessary to prevent oil leaking into bilges.

Regulation 93

Storage of gas cylinders and dangerous materials

(1) Cylinders for compressed, liquefied or dissolved gases shall be clearly marked by means of prescribed identifying colours, have a clearly legible identification of the name and chemical formula of their contents and be properly secured.

(2) Cylinders containing flammable or other dangerous gases and expended cylinders shall be stored, properly secured, on open decks and all valves, pressure regulators and pipes leading from such cylinders shall be protected against damage. Cylinders shall be protected against excessive variations in temperature, direct rays of the sun, and accumulation of snow. However, the Administration may permit such cylinders to be stored in compartments complying with the requirements of paragraphs (3) to (5).

* For vessels the decks of which are constructed of steel see Improved Provisional Guidelines on Test Procedures for Primary Deck Coverings adopted by the Organization by Resolution A. 214 (VII).

(3) Ruimtes wat hoogs vlambare vloeistowwe bevat, soos vlugtige verwe, paraffien, bensool, ens., en, waar toegelaat, vloeibare gas, mag slegs vanaf oop dekke direkte toegang hê. Drukversteltoestelle en ontlaskleppe moet binne die kompartement uitlaat. Waar grensskotte van sodanige kompartemente aan ander omslote ruimtes grens, moet hulle gasdig wees.

(4) Behalwe soos nodig vir diens binne die ruimte, word elektriese bedrading en toebehore nie toegelaat binne kompartemente wat gebruik word vir die berging van hoogs vlambare vloeistowwe of vloeibare gasse nie. Waar sodanige elektriese toebehore geïnstalleer word, moet hulle tot tevredenheid van die Administrasie geskik wees vir gebruik in 'n vlambare atmosfeer. Hittebronne moet van sodanige ruimtes weggehou word en "Rook Verbode"- en "Oop Ligte Verbode"-kennisgewings moet in 'n prominente posisie vertoon word.

(5) Aparte bergruimtes moet vir elke tipe saamgeperste gas voorsien word. Kompartemente wat vir die berging van sodanige gasse gebruik word, mag nie gebruik word vir die berging van ander brandbare produkte of vir gereedskap of voorwerpe wat nie deel is van die gasdistribusiestelsel nie. Die Administrasie mag egter hierdie vereistes verslap, met inagneming van die eienskappe, volume en beoogde gebruik van sodanige saamgeperste gasse.

Regulasie 94

Nooduitgange

(1) Trappe en lere na en van alle akkommodasieruimtes en in ruimtes waarin die bemanning normaalweg diens doen, masjinerieruimtes uitgesonderd, moet so geplaas wees dat dit as vinnige nooduitgange kan dien na die oop dek en daarvandaan na die oorlewingsvaartuie, en met betrekking tot hierdie ruimtes in die besonder—

(a) moet daar op alle akkommodasievlakke minstens twee nooduitgange ver uit mekaar wees, wat die normale toegange vanaf elke beperkte ruimte of groep ruimtes kan insluit—

(b) (i) moet die nooduitgang onder die bodek 'n trap wees, terwyl die tweede nooduitgang 'n koker of 'n trap mag wees; en

(ii) moet die nooduitgange bo die bodek trappe of deure na 'n oop dek wees of 'n kombinasie daarvan, en waar dit nie doenlik is om trappe of deure te installeer nie, mag een van hierdie nooduitgange groot genoeg patryspoorte of luike wees wat, waar nodig, teen ysaansetting beskerm word;

(c) mag die Administrasie by wyse van uitsondering slegs een nooduitgang toelaat, met behoorlike inagneming van die aard en ligging van ruimtes en die getal persone wat normaalweg daar geakkommodeer is of diens doen;

(d) mag 'n gang of deel van 'n gang waaruit daar slegs een ontsnappingsroete is, hoogstens 2,5 meter lank wees;

(e) moet die breedte en deurlopendheid van die nooduitgange die Administrasie tevrede stel; en

(f) moet twee nooduitgange vanuit 'n radiotelegraafstasie wat geen direkte toegang tot die oop dek het nie, tot tevredenheid van die Administrasie voorsien wees.

(2) Twee nooduitgange, wat so ver moontlik van mekaar geskei moet wees, moet voorsien word vanuit elke masjinerieruimte van Kategorie A. Vertikale ontsnappingsroetes moet staallere wees. Waar die grootte van die masjinerieruimtes dit ondoenlik maak, mag een van hierdie nooduitgange weggelaat word. In sulke gevalle moet spesiale aandag aan die oorblywende uitgang gegee word.

(3) Hysers mag nie geag word een van die vereiste nooduitgange te wees nie.

(3) Spaces containing highly flammable liquids, such as volatile paints, paraffin, benzole, etc., and, where permitted, liquefied gas, shall have direct access from open decks only. Pressure-adjusting devices and relief valves shall exhaust within the compartment. Where boundary bulkheads of such compartments adjoin other enclosed spaces they shall be gastight.

(4) Except as necessary for service within the space, electrical wiring and fittings shall not be permitted within compartments used for the storage of highly flammable liquids or liquefied gases. Where such electrical fittings are installed, they shall be to the satisfaction of the Administration for use in a flammable atmosphere. Sources of heat shall be kept clear of such spaces and "No Smoking" and "No Naked Light" notices shall be displayed in a prominent position.

(5) Separate storage shall be provided for each type of compressed gas. Compartments used for the storage of such gases shall not be used for storage of other combustible products nor for tools or objects not part of the gas distribution system. However, the Administration may relax these requirements considering the characteristics, volume and intended use of such compressed gases.

Regulation 94

Means of escape

(1) Stairways and ladders leading to and from all accommodation spaces and in spaces in which the crew is normally employed, other than machinery spaces, shall be so arranged as to provide ready means of escape to the open deck and thence to the survival craft. In particular in relation to these spaces:

(a) At all levels of accommodation at least two widely separated means of escape shall be provided which may include the normal means of access from each restricted space or group of spaces—

(b) (i) below the weather deck the means of escape shall be a stairway and the second escape may be a trunk or a stairway; and

(ii) above the weather deck the means of escape shall be stairways or doors to an open deck or a combination thereof. Where it is not practicable to fit stairways or doors, one of these means of escape may be by means of adequately sized portholes or hatches protected where necessary against ice accretion;

(c) exceptionally the Administration may permit only one means of escape, due regard being paid to the nature and location of spaces and to the number of persons who normally might be accommodated or employed there;

(d) a corridor or part of a corridor from which there is only one route of escape shall not exceed 2,5 metres in length;

(e) the width and continuity of the means of escape shall be to the satisfaction of the Administration; and

(f) two means of escape from a radiotelegraph station which has no direct access to the open deck shall be provided and these shall be to the satisfaction of the Administration.

(2) Two means of escape shall be provided from every machinery space of Category A which shall be as widely separated as possible. Vertical escapes shall be by means of steel ladders. Where the size of the machinery spaces makes it impracticable, one of these means of escape may be omitted. In such cases special consideration shall be given to the remaining exit.

(3) Lifts shall not be considered as forming one of the required means of escape.

Regulasie 95

Outomatiese brandalarm- en brandverklikstelsels

Waar die Administrasie ooreenkomstig Regulasie 89 (1) 'n brandbare konstruksie toegelaat het, of waar andersins aansienlik hoeveelhede brandbare materiale gebruik is in die konstruksie van akkommodasieruimtes, diensruimtes en beheerposte, moet spesiale oorweging gegee word aan die installering van 'n outomatiese brandalarm- en brandverklikstelsel in daardie ruimtes, met behoorlike inagneming van die grootte van daardie ruimtes, hul inrigting en ligging met betrekking tot beheerposte, asook, waar van toepassing, die vlamverspreidingseienskappe van die geïnstalleerde meublement.

Regulasie 96

Brandpompe

(1) Die minimum getal en tipe brandpompe wat aangebring moet word, moet soos volg wees:

(a) Een kragpomp wat nie van die hoofmasjinerie afhanklik is vir sy beweegkrag nie; of

(b) een kragpomp aangedryf deur die hoofmasjinerie, mits die skroefas maklik ontkoppel kan word of mits 'n reëlbaresteekskroef aangebring is.

(2) Sanitêre, lens-, ballas-, algemenediens- of enige ander pompe kan as brandpompe gebruik word indien hulle aan die vereistes van hierdie Hoofstuk voldoen en indien hulle nie die vermoë om lenspompwerk te hanteer, affekteer nie. Brandpompe moet so gekoppel wees dat hulle nie vir die pomp van olie of ander vlambare vloeistowwe gebruik kan word nie.

(3) Sentrifugale pompe of ander pompe wat aan die hoofbrandpyp gekoppel is waardeur terugvloeiing kan voorkom, moet met terugslagkleppe toegerus wees.

(4) Vaartuie wat nie met 'n kragnoodbrandpomp toegerus is nie en nie 'n vaste brandblusstelsel in die masjinerieruimtes het nie, moet tot tevredenheid van die Administrasie voorsien wees van bykomende brandblusmiddele.

(5) Indien aangebring moet kragnoodbrandpompe onafhanklik aangedrewe selfstandige pompe wees, òf met hul eie primêre kragbron en brandstoftoevoer aangebring in 'n toeganklike posisie buitekant die kompartement wat die hoofbrandpompe bevat, òf wat aangedryf word deur 'n selfstandige generator wat 'n noodgenerator van voldoende vermoë mag wees en wat in 'n veilige plek buitekant die masjienkamer geleë is, verkieslik bo die werkdek.

(6) Vir 'n noodbrandpomp, indien aangebring, moet die pomp, seewatersuigkleppe en ander nodige klippe bedienbaar wees van buite kompartemente wat hoofbrandpompe bevat, in 'n posisie wat nie maklik deur 'n brand in daardie kompartemente afgesny kan word nie.

(7) Die totale vermoë (Q) van hoofkragbrandpompe moet ten minste—

$Q = (0{,}15\sqrt{L(B+D)} + 2{,}25)^2$ kubieke meter per uur wees waar L, B en D in meter is.

(8) Waar twee onafhanklike kragbrandpompe aangebring is, moet die vermoë van elke pomp minstens 40 persent wees van die vermoë wat by paragraaf (7) vereis word.

(9) Waar hoofkragbrandpompe die hoeveelheid water vereis, by paragraaf (7) lewer deur die hoofbrandpyp, brandslange en spuitstukke, moet die druk wat by 'n brandkraan gehandhaaf word, minstens 0,25 newton per vierkante millimeter wees.

(10) Waar kragnoodbrandpompe die maksimum hoeveelheid water lewer in 'n straal vereis by Regulasie 98 (1), moet die druk wat by 'n brandkraan gehandhaaf word, die Administrasie tevrede stel.

Regulation 95

Automatic fire alarm and fire detection systems

Where the Administration has permitted under Regulation 89 (1) a combustible construction, or where otherwise appreciable amounts of combustible materials are used on the construction of accommodation spaces, service spaces and control stations, special consideration shall be given to the installation of an automatic fire alarm and fire detection system in those spaces, having due regard to the size of those spaces, their arrangement and location relative to control stations as well as, where applicable, the flame-spread characteristics of the installed furniture.

Regulation 96

Fire pumps

(1) The minimum number and type of fire pumps to be fitted shall be as follows:

(a) One power pump not dependent upon the main machinery for its motive power; or

(b) one power pump driven by main machinery provided that the propeller shafting can be readily disconnected or provided that a controllable pitch propeller is fitted.

(2) Sanitary, bilge, ballast, general service or any other pumps may be used as fire pumps if they comply with the requirements of this Chapter and do not affect the ability to cope with pumping of the bilges. Fire pumps shall be so connected that they cannot be used for pumping oil or other flammable liquids.

(3) Centrifugal pumps or other pumps connected to the fire main through which backflow could occur shall be fitted with non-return valves.

(4) Vessels not fitted with a power-operated emergency fire pump and without a fixed fire-extinguishing system in the machinery spaces shall be provided with additional fire-extinguishing means to the satisfaction of the Administration.

(5) When fitted, emergency power-operated fire pumps shall be independently driven self-contained pumps either with their own prime mover and fuel supply fitted in an accessible position outside the compartment which contains the main fire pumps, or be driven by a self-contained generator which may be an emergency generator of sufficient capacity and which is positioned in a safe place outside the engine room and preferably above the working deck.

(6) For any emergency fire pump, where fitted, the pump, sea-suction valves and other necessary valves shall be operable from outside compartments containing main fire pumps in a position not likely to be cut off by a fire in those compartments.

(7) The total capacity (Q) of main power-operated fire pumps shall be at least:

$Q = (0.15\sqrt{L(B + D)} + 2.25)^2$ cubic metres per hour where L, B and D are metres.

(8) Where two independent power-operated fire pumps are fitted, the capacity of each pump shall not be less than 40 per cent of the quantity required by paragraph (7).

(9) When main power fire pumps are delivering the quantity of water required by paragraph (7) through the fire main, fire hoses and nozzles, the pressure maintained at any hydrant shall be not less than 0.25 newtons per square millimetre.

(10) Where power-operated emergency fire pumps are delivering the maximum quantity of water through the jet required by Regulation 98 (1), the pressure maintained at any hydrant shall be to the satisfaction of the Administration.

Regulasie 97

Hoofbrandpype

(1) Waar meer as een brandkraan nodig is om die getal strale vereis by Regulasie 98 (1) te lewer, moet 'n hoofbrandpyp voorsien word.

(2) Materiale wat maklik ondoeltreffend gemaak word deur hitte, mag nie vir hoofbrandpype gebruik word nie, tensy dit voldoende beskerm word.

(3) Waar brandpompleweringsdruk die ontwerpwerkdruk van hoofbrandpype kan oorskry, moet ontlaskleppe aangebring word.

(4) Hoofbrandpype mag geen ander verbindings hê as dié wat vir brandbestryding vereis word nie, behalwe vir die doel van die was van die dek en ankerkettings of vir die bediening van die kettingbakkimwaterejekteur.

(5) Waar hoofbrandpype nie selfdreinerend is nie, moet geskikte aftapkrane aangebring word waar vriesskade verwag kan word.*

Regulasie 98

Brandkrane, brandslange en spuitstukke

(1) Brandkrane moet só geleë wees dat brandslange maklik en vinnig daaraan gekoppel kan word en sodat ten minste een straal gerig kan word op enige deel van die vaartuig wat normaalweg toeganklik is terwyl die skip vaar.

(2) Die straal wat by paragraaf (1) vereis word, moet van 'n enkele stuk slang afkomstig wees.

(3) Benewens die vereistes van paragraaf (1) moet masjinerieruimtes van Kategorie A voorsien wees van ten minste een brandkraan, volledig met brandslang en dubbeldoelspuitstuk. Hierdie brandkraan moet buite die ruimte en naby die ingang geleë wees.

(4) Vir elke vereiste brandkraan moet daar een brandslang wees. Hierbenewens moet ten minste een reserwebrandslang voorsien word.

(5) Die lengte van 'n brandslang mag nie 20 meter oorskry nie.

(6) Brandslange moet van 'n goedgekeurde materiaal gemaak wees. Elke brandslang moet voorsien wees van koppelstukke en 'n dubbeldoelspuitstuk.

(7) Behalwe waar brandslange permanent aan die hoofbrandweerpyp gekoppel is, moet die koppelstukke van brandslange en spuitstukke volkome verwisselbaar wees.

(8) Die spuitstukke by paragraaf (6) vereis, moet geskik wees vir die leweringsvermoë van die brandpompe wat aangebring is, maar moet in elk geval 'n diameter van minstens 12 millimeter hê.

Regulasie 99

Brandblussers

(1) Brandblussers moet van goedgekeurde tipes wees. Die inhoudsvermoë van vereiste draagbare vloeistofblussers moet hoogstens 14 liter en minstens 9 liter wees. Ander blussers mag nie die ekwivalente draagbaarheid van die vloeistofblusser van 14 liter oorskry nie en hul blusvermoë mag nie minder wees as die brandblusekwivalent van 'n vloeistofblusser van 9 liter nie. Die Administrasie moet die ekwivalente van brandblussers bepaal.

(2) Reserweladings moet tot tevredenheid van die Administrasie voorsien word.

* Kyk *Guidance for Precautions Against Freezing of Fire Mains*, vervat in Aanbeveling 7 van die Sluitingsoorkonde van die Konferensie.

Regulation 97

Fire mains

(1) Where more than one hydrant is required to provide the number of jets required by Regulation 98 (1), a fire main shall be provided.

(2) Materials readily rendered ineffective by heat shall not be used for fire mains, unless adequately protected.

(3) Where fire pump delivery pressure can exceed the designed working pressure of fire mains, relief valves shall be fitted.

(4) Fire mains shall have no connections other than those required for fire fighting, except for the purpose of washing the deck and anchor chains or operating the chain locker bilge ejector.

(5) Where fire mains are not self-draining, suitable drain cocks shall be fitted where frost damage may be expected.*

Regulation 98

Fire hydrants, fire hoses and nozzles

(1) Fire hydrants shall be positioned so as to allow easy and quick connection of fire hoses and so that at least one jet can be directed into any part of the vessel which is normally accessible during navigation.

(2) The jet required in paragraph (1) shall be from a single length of fire hose.

(3) In addition to the requirements of paragraph (1), machinery spaces of Category A shall be provided with at least one fire hydrant complete with fire hose and dual purpose nozzle. This fire hydrant shall be located outside the space and near the entrance.

(4) For every required fire hydrant there shall be one fire hose. At least one spare fire hose shall be provided in addition to this requirement.

(5) Single lengths of fire hose shall not exceed 20 metres.

(6) Fire hoses shall be of an approved material. Each fire hose shall be provided with couplings and a dual purpose nozzle.

(7) Except where fire hoses are permanently attached to the fire main, the couplings of fire hoses and nozzles shall be completely interchangeable.

(8) The nozzles as required by paragraph (6) shall be appropriate to the delivery capacity of the fire pumps fitted, but in any case shall have diameter of not less than 12 millimetres.

Regulation 99

Fire extinguishers

(1) Fire extinguishers shall be of approved types. The capacity of required portable fluid extinguishers shall be not more than 14 litres and not less than 9 litres. Other extinguishers shall not be in excess of the equivalent portability of the 14 litre fluid extinguisher and shall not be less than the fire-extinguishing equivalent of a 9 litre fluid extinguisher. The Administration shall determine the equivalent of fire extinguishers.

(2) Spare charges shall be provided to the satisfaction of the Administration.

* See Guidance for Precautions Against Freezing of Fire Mains contained in Recommendation 7 to the Final Act of the Conference.

(3) Brandblussers wat 'n blusmiddel bevat wat na die mening van die Administrasie òf op sigself òf in verwagte gebruikstoestande giftige gas in so 'n mate vrystel dat dit mense in gevaar stel, word nie toegelaat nie.

(4) Brandblussers moet periodiek ondersoek word en aan sodanige toetse as wat die Administrasie vereis, onderwerp word.

(5) Normaalweg moet een van die draagbare brandblussers wat vir gebruik in 'n ruimte bedoel is, naby 'n ingang tot daardie ruimte gebêre word.

Regulasie 100

Draagbare brandblussers in beheerposte en akkommodasie- en diensruimtes

(1) 'n Voldoende aantal goedgekeurde draagbare brandblussers moet voorsien word in beheerposte en akkommodasie- en diensruimtes om te verseker dat ten minste een blusser van 'n geskikte tipe geredelik beskikbaar is vir gebruik in enige deel van sodanige ruimtes. Die totale getal blussers in hierdie ruimtes mag egter nie minder as drie wees nie.

(2) Reserweladings moet tot tevredenheid van die Administrasie voorsien word.

Regulasie 101

Brandblustoestelle in masjinerieruimtes

(1) (a) Ruimtes met oliegestookte ketels, brandolie-eenhede of binnebrandmasjinerie met 'n totale kraglewering van minstens 375 kilowatt moet tot tevredenheid van die Administrasie van een van die volgende vaste brandblusstelsel voorsien wees:

(i) 'n Drukwatersproeistelsel;

(ii) 'n brandsmoor-gasinstallasie;

(iii) 'n brandblusinstallasie waarby dampe van lae-toksisiteit verdampende vloeistowwe, byvoorbeeld broomchloordifluoormetaan (BCF) of broomchloortrifluoormetaan (BTM), gebruik word; of

(iv) 'n brandblusinstallasie waarby hoëuitsettingskuim gebruik word.

(b) Waar die masjien- en die ketelkamer nie heeltemal van mekaar geskei is nie of as brandolie vanuit die ketelkamer na die masjienkamer kan dreineer, moet die masjien- en die ketelkamer as een kompartement beskou word.

(2) Installasies in paragraaf (1) (a) gelys, moet beheer word vanaf geredelik toeganklike posisies buite sodanige ruimtes wat nie maklik deur 'n brand in die beskermde ruimte afgesny sal word nie. Voorsorg moet getref word om die lewering van die krag en water nodig vir die werking van die stelsel, te verseker in geval van brand in die beskermde ruimte.

(3) Vaartuie wat hoofsaaklik of heeltemal van hout of veselversterkte plastiek gemaak is en toegerus is met oliegestookte ketels of binnebrandmasjinerie wat in die masjinerieruimte staan op 'n dek wat van sodanige materiaal gemaak is, moet voorsien word van een van die blusstelsels in paragraaf (1) genoem.

(4) Alle masjinerieruimtes van Kategorie A moet voorsien word van ten minste twee draagbare blussers van 'n tipe wat geskik is vir die blus van brande waarby brandolie betrokke is. Waar sodanige ruimtes masjinerie bevat wat 'n totale kraglewering van minstens 250 kilowatt het, moet ten minste drie sodanige blussers voorsien word. Een van die blussers moet naby die ingang van die ruimte gehou word.

(3) Fire extinguishers containing an extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use, gives off toxic gases in such quantities as to endanger persons shall not be permitted.

(4) Fire extinguishers shall be periodically examined and subjected to such tests as the Administration may require.

(5) Normally, one of the portable fire extinguishers intended for use in any space shall be stowed near an entrance to that space.

Regulation 100

Portable fire extinguishers in control stations and accommodation and service spaces

(1) A sufficient number of approved portable fire extinguishers shall be provided in control stations and accommodation and service spaces to ensure that at least one extinguisher of a suitable type is readily available for use in any part of such spaces. The total number of extinguishers in these spaces, however, shall not be less than three.

(2) Spare charges shall be provided to the satisfaction of the Administration.

Regulation 101

Fire-extinguishing appliances in machinery spaces

(1) (a) Spaces containing oil-fired boilers, fuel oil units or internal combustion machinery having a total power output of not less than 375 kilowatts shall be provided with one of the following fixed fire-extinguishing systems, to the satisfaction of the Administration:

(i) A pressure water-spraying installation;

(ii) a fire-smothering gas installation;

(iii) a fire-extinguishing installation using vapours from low toxicity vapourizing liquids, e.g. bromochlorodifluoromethane (BCF) or bromotrifluoromethane (BTM); or

(iv) a fire-extinguising installation using high expansion foam.

(b) Where the engine and boiler rooms are not entirely separated from each other or if fuel oil can drain from the boiler room into the engine room, the combined engine and boiler rooms shall be considered as one compartment.

(2) Installations listed in paragraph (1) (a) shall be controlled from readily accessible positions outside such spaces not likely to be cut off by a fire in the protected space. Arrangements shall be made to ensure the supply of power and water necessary for the operation of the system in the event of fire in the protected space.

(3) Vessels which are constructed mainly or wholly of wood or fibre reinforced plastic and fitted with oil-fired boilers or internal combustion machinery which are decked in way of the machinery space with such material, shall be provided with one of the extinguishing systems referred to in paragraph (1).

(4) In all machinery spaces of Category A at least two portable extinguishers shall be provided, of a type suitable for extinguishing fires involving fuel oil. Where such spaces contain machinery which has a total power output of not less than 250 kilowatts, at least three such extinguishers shall be provided. One of the extinguishers shall be stowed near the entrance to the space.

(5) Vaartuie met masjinerieruimtes wat nie deur 'n vaste brandblusstelsel beskerm word nie, moet voorsien word van ten minste 'n skuimblusser van 45 liter of sy ekwivalent, geskik vir die bestryding van olievure. Waar die grootte van die masjinerieruimtes hierdie bepaling onuitvoerbaar maak, mag die Administrasie 'n bykomende aantal draagbare brandblussers aanvaar.

Regulasie 102

Uitrusting vir brandweermanne

Die aantal uitrustings vir brandweermanne en hul ligging moet die Administrasie tevrede stel.

Regulasie 103

Brandbeheerplan

'n Brandbeheerplan tot tevredenheid van die Administrasie moet permanent vertoon word. In klein vaartuie mag die Administrasie van hierdie vereiste afsien.

Regulasie 104

Geredelike beskikbaarheid van brandblusapparaat

Brandblusapparaat moet te alle tye in 'n goeie toestand en gereed vir onmiddellike gebruik gehou word.

Regulasie 105

Aanvaarding van substitute

Waar in hierdie Deel enige spesiale tipe toestel, apparaat, blusmiddel of inrigting gespesifiseer word, kan enige ander tipe toestel, ens. toegelaat word, mits die Administrasie daarvan oortuig is dat dit nie minder doeltreffend is nie.

HOOFSTUK VI

BESKERMING VAN DIE BEMANNING

Regulasie 106

Algemene beskermingsmaatreëls

(1) 'n Reddingstoustelsel moet ontwerp word wat doeltreffend is vir alle behoeftes en die nodige drade, toue, harpe, oogboute en klampe moet voorsien wees.

(2) Dekopeninge wat voorsien is van luikhoofde of drumpels van minder as 600 millimeter hoog, moet voorsien wees van skerms, soos skarnier- of draagbare tralies of metaalgaas. Die Administrasie mag klein openinge soos visluike van hierdie vereistes vrystel.

(3) Dakvensters of ander soortgelyke openinge moet toegerus wees met beskermende stawe hoogstens 350 millimeter uitmekaar. Die Administrasie mag klein openinge van hierdie vereiste vrystel.

(4) Die oppervlak van alle dekke moet so ontwerp of behandel wees dat die moontlikheid dat personeel gly, geminimaliseer word. In die besonder moet dekke van werkgebiede, soos dié in masjinerieruimtes, in kombuise, by windasse en waar vis hanteer word, asook by die onder- en bopunt van lere en voor deure, van glyvry oppervlakke voorsien wees.

Regulasie 107

Dekopeninge

(1) Geskarnierde deksels van luikopeninge, mangate en ander openinge moet daarteen beskerm word dat hulle per ongeluk toegaan. In die besonder moet swaar deksels op noodluike met teenwigte toegerus wees en so gemaak wees dat dit van albei kante van die deksel oopgemaak kan word.

(2) Afmetings van toegangsluike mag nie minder as 600 millimeter by 600 millimeter of 600 millimeter in diameter wees nie.

(3) Waar uitvoerbaar, moet handrelings bo die vlak van die dek oor noodopeninge voorsien wees.

(5) Vessels having machinery spaces not protected by a fixed fire-extinguishing system shall be provided with at least a 45 litre foam extinguisher or its equivalent suitable for fighting oil fires. Where the size of the machinery spaces makes this provision impracticable, the Administration may accept an additional number of portable fire extinguishers.

Regulation 102

Fireman's outfits

The number of fireman's outfits and their location shall be to the satisfaction of the Administration.

Regulation 103

Fire control plan

There shall be a permanently exhibited fire control plan to the satisfaction of the Administration. In small vessels the Administration may dispense with this requirement.

Regulation 104

Ready availability of fire-extinguishing appliances

Fire-extinguishing appliances shall be kept in good order and available for immediate use at all times.

Regulation 105

Acceptance of substitutes

Where in this Part any special type of appliance, apparatus, extinguishing medium or arrangement is specified, any other type of appliance, etc., may be allowed provided the Administration is satisfied that it is not less effective.

CHAPTER VI

PROTECTION OF THE CREW

Regulation 106

General protection measures

(1) A lifeline system shall be designed to be effective for all needs and the necessary wires, ropes, shackles, eye bolts and cleats shall be provided.

(2) Deck openings provided with coamings or sills of less than 600 millimetres in height shall be provided with guards, such as hinged or portable railings or nettings. The Administration may exempt small openings such as fish scuttles from compliance with these requirements.

(3) Skylights, or other similar openings shall be fitted with protective bars not more than 350 millimetres apart. The Administration may exempt small openings from compliance with this requirement.

(4) The surface of all decks shall be so designed or treated as to minimize the possibility of personnel slipping. In particular, decks of working areas, such as in machinery spaces, in galleys, at winches and where fish is handled as well as at the foot and head of ladders and in front of doors, shall be provided with anti-skid surfaces.

Regulation 107

Deck openings

(1) Hinged covers of hatchways, manholes and other openings shall be protected against accidental closing. In particular, heavy covers on escape hatches shall be equipped with counterweights, and so constructed as to be capable of being opened from each side of the cover.

(2) Dimensions of access hatches shall not be less than 600 millimetres by 600 millimetres or 600 millimetres diameter.

(3) Where practicable, hand-holds shall be provided above the level of the deck over escape openings.

Regulasie 108

Verskansing en relings

(1) Doeltreffende verskansing of relings moet aangebring word op alle blootgestelde dele van die werkdek en op boboudekke as hulle werkplatforms is. Die hoogte van verskansings of relings bo die dek moet ten minste 1 meter wees. Waar hierdie hoogte die normale werking van die vaartuig sou belemmer, mag 'n kleiner hoogte deur die Administrasie goedgekeur word.

(2) Die minimum vertikale afstand van die boonste bedryfswaterlyn tot die laagste punt van die borand van die verskansing, of tot die kant van die werkdek as relings aangebring is, moet voldoende beskerming van die bemanning verseker teen water wat op die dek oorgekry word, met inagneming van die see- en weerstoestande waarin die vaartuig werksaam kan wees, die werkgebiede, die tipe vaartuig en sy visvangmetode, en moet die Administrasie tevrede stel.*

(3) Vry hoogte onder die laagste reling van die relings mag nie 230 millimeter oorskry nie, terwyl die ander nie meer as 380 millimeter uitmekaar mag wees nie. Die afstand tussen stutte mag nie 1,5 meter oorskry nie. In 'n vaartuig met geronde dolboorde moet relingstutte op die plat dek geplaas word. Relings moet vry wees van skerp punte, kante en hoeke en moet sterk genoeg wees.

(4) Middels tot tevredeheid van die Administrasie, soos relings, reddingstoue, loopbrûe of onderdekse gange, moet voorsien wees vir die beskerming van die bemanning wanneer hulle tussen akkommodasie-, masjinerie- en ander werkruimtes beweeg. Stormrelings moet soos nodig aangebring word aan die buitekant van alle dekhuise en hulsels om veiligheid van deurgang of werk vir die bemanning te verseker.

(5) Hektreilers moet voorsien wees van geskikte beskerming soos deure, hekke of nette aan die bopunt van die hekhelling op dieselfde hoogte as die aangrensende verskansing of relings. Wanneer sodanige beskerming nie in posisie is nie, moet 'n ketting of ander manier van beskerming oor die helling voorsien word.

Regulasie 109

Trappe en lere

Vir die veiligheid van die bemanning moet trappe en lere van voldoende grootte en sterkte met handrelings en glyvry loopvlakke tot tevredenheid van die Administrasie voorsien wees.

HOOFSTUK VII

REDDINGSTOESTELLE

Regulasie 110

Aantal en tipes oorlewingsvaartuie en redbote

(1) Elke vaartuig moet van ten minse twee oorlewingsvaartuie voorsien wees.

(2) Die aantal, kapasiteit en tipe oorlewingsvaartuie en redbote van vaartuie met 'n lengte van 75 meter en meer moet aan die volgende voldoen:

(a) Oorlewingsvaartuie van voldoende totale kapasiteit aan elke kant van die vaartuig om ten minste al die persone aan boord te akkommodeer, moet voorsien

* Kyk *Guidance on a Method of Calculation of the Minimum Distance from the Deepest operating Waterline to the Lowest Point of the Top of the Bulwark or to the Edge of the Working Deck* vervat in Aanbeveling 9 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

Regulation 108

Bulwarks, rails and guards

(1) Efficient bulwarks or guard rails shall be fitted on all exposed parts of the working deck and on superstructure decks if they are working platforms. The height of bulwarks or guard rails above deck shall be at least 1 metre. Where this height would interfere with the normal operation of the vessel, a lesser height may be approved by the Administration.

(2) The minimum vertical distance from the deepest operating waterline to the lowest point of the top of the bulwark, or to the edge of the working deck if guard rails are fitted shall ensure adequate protection of the crew from water shipped on deck, taking into account the sea states and the weather conditions in which the vessel may operate, the areas of operation, type of vessel and its method of fishing and shall be to the satisfaction of the Administration.*

(3) Clearance below the lowest course of guard rails shall not exceed 230 millimetres. Other courses shall not be more than 380 millimetres apart, and the distance between stanchions shall not be more than 1,5 metres. In a vessel with rounded gunwales, guard rail supports shall be placed on the flat of the deck. Rails shall be free from sharp points, edges and corners and shall be of adequate strength.

(4) Means to the satisfaction of the Administration, such as guard rails, lifelines, gangways or underdeck passages, shall be provided to protect the crew in moving between accommodation, machinery and other working spaces. Storm rails shall be fitted as necessary to the outside of all deckhouses and casings to secure safety of passage or work for the crew.

(5) Stern trawlers shall be provided with suitable protection such as doors, gates or nets at the top of the stern ramp at the same height as the adjacent bulwark or guard rails. When such protection is not in position a chain or other means of protection shall be provided across the ramp.

Regulation 109

Stairways and ladders

For the safety of the crew, stairways and ladders of adequate size and strength with handrails and non-slip treads shall be provided to the satisfaction of the Administration.

CHAPTER VII

LIFE-SAVING APPLIANCES

Regulation 110

Numbers and types of survival craft and rescue boats

(1) Every vessel shall be provided with at least two survival craft.

(2) The number, capacity and type of survival craft and rescue boats of vessels of 75 metres in length and over shall comply with the following:

(a) Survival craft of sufficient aggregate capacity as will accommodate on each side of the vessel at least the total number of persons on board shall be provided.

* See Guidance on a Method of Calculation of the Minimum Distance from the Deepest Operating Waterline to the Lowest Point of the Top of the Bulwark or to the Edge of the Working Deck contained in Recommendation 9 of Attachment 3 to the Final Act of the Conference.

wees. Die Administrasie moet die aantal vrydryf-reddingsvlotte wat aan boord moet wees, bepaal. Daar moet egter ten minste genoeg vrydryf-reddingsvlotte wees om ten minste 50 persent van al die persone aan boord te akkommodeer: Met dien verstande egter dat indien die vaartuig voldoen aan onderafdelingsvereistes, skadestabiliteits-kriteria en kriteria vir verhoogde strukturele brandbeskerming bykomend by dié by Regulasie 40 en Hoofstuk V vasgestel, en die Administrasie van mening is dat 'n vermindering van die getal oorleweringsvaartuie en hul kapasiteit veiligheid nie sal affekteer nie, die Administrasie hierdie afname mag toelaat mits die totale kapasiteit van oorlewingsvaartuie aan elke kant van die vaartuig voldoende is om ten minste 50 persent van al die persone aan boord te akkommodeer. Verder moet vrydryf-reddingsvlotte vir ten minste 50 persent van al die persone aan boord voorsien wees.

(b) Ten minste een van die oorlewingsvaartuie bedoel in subparagraaf (a) moet deur 'n motor aangedryf word.

(c) 'n Motorredboot moet voorsien wees tensy die vaartuig van 'n geskikte oorlewingsvaartuig voorsien is wat aan die vereistes vir 'n motorredboot voldoen.

(d) Indien die totale aantal persone aan boord 100 of meer is, moet ten minste twee van die oorlewingsvaartuie bedoel in subparagraaf (a) motoraangedrewe wees, een aan elke kant van die vaartuig.

(e) Indien die totale aantal persone aan boord 200 of meer is, moet ten minste twee van die oorlewingsvaartuie bedoel in subparagraaf (a) onbuigsame motoraangedrewe reddingsbote wees, een aan elke kant van die vaartuig.

(3) Vaartuie met 'n lengte van 45 meter en meer, maar minder as 75 meter, moet voorsien wees van die volgende:

(a) Oorlewingsvaartuie van voldoende totale kapasiteit aan elke kant van die vaartuig om ten minste al die mense aan boord te akkommodeer, en dit sluit in vrydryf-reddingsvlotte met voldoende totale kapasiteit om ten minste 50 persent van al die persone aan boord te akkommodeer;

(b) 'n redboot, tensy die vaartuig voorsien is van 'n geskikte oorlewingsvaartuig wat aan die vereistes vir 'n redboot voldoen; en

(c) een motoraangedrewe oorlewingsvaartuig aan elke kant van die vaartuig indien die totale aantal persone aan boord 100 of meer is.

(4) Vaartuie met 'n lengte van minder as 45 meter moet voorsien wees van die volgende:

(a) Oorlewingsvaartuie met voldoende totale kapasiteit om ten minste 200 persent van al die persone aan boord te akkommodeer. Genoeg van hierdie oorlewingsvaartuie om ten minste al die mense aan boord te akkommodeer, moet van albei kante van die vaartuig te water gelaat kan word. Die Administrasie mag egter 'n vermindering in die kapasitiet van of aantal oorlewingsvaartuie wat vereis word, toelaat indien hy daarvan oortuig is dat die aard en toestande van die vaart en die weerstoestande nie die veiligheid van die vaartuig en sy bemanning nadelig sal beïnvloed nie. Oorlewingsvaartuie om ten minste 100 persent van al die persone aan boord te akkommodeer, moet egter voorsien wees;

(b) 'n redboot, behalwe waar die Administrasie oortuig is dat dit onnodig is vanweë die grootte en maneuvreerbaarheid van die vaartuig, die nabye beskikbaarheid van soek-en-redfasiliteite en metereologiese waarskuwingstelsels, of die seisoenale aard van die werksaamhede, of vanweë die feit dat die vaartuig werk in gebiede wat nie onderhewig is aan noodweer nie.

The Administration shall determine the number of float-free liferafts to be carried. However, there shall be at least sufficient float-free liferafts to accommodate at least 50 per cent of the persons on board. Provided, however, that if the vessel complies with subdivision requirements, damage stability criteria and criteria of increased structural fire protection, additional to those stipulated by Regulation 40 and by Chapter V, and the Administration considers that a decrease of the number of survival craft and their capacity will not affect safety, the Administration may allow this decrease provided the aggregate capacity of survival craft situated on each side of the vessel is sufficient to accommodate at least 50 per cent of the persons on board. In addition, float-free liferafts for at least 50 per cent of the total number of persons on board shall provided.

(b) At least one of the survival craft referred to in subparagraph (a) shall be motor-propelled.

(c) A motor rescue boat shall be provided unless the vessel is provided with a suitable survival craft which fulfils the requirements for a motor rescue boat.

(d) Where the total number of persons on board is 100 or more, at least two of the survival craft referred to in sub-paragraph (a) shall be motor-propelled, one on each side of the vessel.

(e) Where the total number of persons on board is 200 or more, at least two of the survival craft referred to in sub-paragraph (a), shall be rigid motor-propelled lifeboats, one on each side of the vessel.

(3) Vessels of less than 75 metres in length but of 45 metres in length and over shall be provided with—

(a) survival craft of sufficient aggregate capacity to accommodate on each side of the vessel at least the total number of persons on board, which shall include float-free liferafts of sufficient aggregate capacity to accommodate at least 50 per cent of the total number or persons on board;

(b) a rescue boat, unless the vessel is provided with a suitable survival craft which fulfils the requirement for a rescue boat; and

(c) one motor-propelled survival craft on each side of the vessel where the total number of persons on board is 100 or more.

(4) Vessels of less than 45 metres in length shall be provided with—

(a) survival craft of sufficient aggregate capacity to accommodate at least 200 per cent of the total number of persons on board. Sufficient of these survival craft to accommodate at least the total number of persons on board shall be capable of being launched from either side of the vessel. However, the Administration may permit a reduction in the capacity or number of survival craft required if satisfied that the nature and conditions of voyage and the conditions of the weather would not adversely affect the safety of the vessel and its crew. However, survival craft to accommodate at least 100 per cent of the persons on board shall be provided; and

(b) a rescue boat, except where the Administration is satisfied that because of the size and manoeuvrability of the vessel, the near availability of search and rescue facilities and meteorological warning systems, the operation of the vessel in areas not susceptible to heavy weather or the seasonal charateristics of the operation, such provision is unnecessary.

(5) Waar die afstand van die inskepingsdek tot by die waterlyn van die vaartuig in die ligste bedryfstoestand 4,5 meter oorskry, moet oorlewingsvaartuie, behalwe vrydryf-reddingsvlotte, deur middel van davits te water gelaat kan word met die volle getal persone aan boord of voorsien wees van ekwivalente goedgekeurde inskepingsmiddels.

Regulasie 111

Merk van oorlewingsvaartuie

(1) Die afmetings van 'n reddingsboot en die getal persone wat hy toegelaat word om te akkommodeer, moet in duidelike, blywende skrif daarop aangedui word. Die naam en registrasiehawe van die vaartuig waarby die reddingsboot hoort, moet aan albei kante van die boeg geverf wees.

(2) Die getal persone, die reeksnommer en die vervaardiger se naam moet op elke opblaasbare reddingsvlot en sy sak of houer aangedui word.

(3) Elke onbuigsame reddingsvlot moet die naam en registrasiehawe op hê van die vaartuig wat hom aan boord het, asook die getal persone wat hy toegelaat is om te akkommodeer.

(4) Op geen reddingsvaartuig mag 'n groter getal persone aangegee word as dié wat ooreenkomstig die bepalings van Regulasies 112 en 113 verkry is nie.

Regulasie 112

Konstruksie en kapasiteit van reddingsbote

(1) Reddingsbote moet tot tevredenheid van die Administrasie gebou wees en so 'n vorm en sodanige afmetings hê dat hulle voldoende vryboord en stabiliteit in 'n seegang sal hê met die volle getal persone en uitrusting aan boord en voldoen aan die bepalings van Artikels 1 en 2 van Byvoegsel 2, soos van toepassing. Reddingsbote met hul volle getal persone en uitrusting aan boord moet, wanneer dit oorstroom en aan die see blootgestel is, daartoe in staat wees om vlot te wees met positiewe stabiliteit.

(2) Die inhoudsvermoë van 'n onbuigsame reddingsboot moet bepaal word deur die reël gegee in Artikel 3 van Byvoegsel 2 of deur enige ander metode wat ten minste dieselfde graad van akkuraatheid gee. Die inhoudsvermoë van 'n reddingsboot met 'n vierkantige agterstewe moet bereken word asof die reddingsboot 'n gepunte agterstewe het.

(3) Die getal persone wat 'n onbuigsame reddingsboot toegelaat mag word om te akkommodeer—

(a) moet gelyk wees aan die grootste heelgetal wat verkry word deur die inhoudsvermoë in kubieke meter te deel deur 'n faktor—

(i) van 0,283 vir 'n boot met 'n lengte van 7,3 meter of meer;

(ii) van 0,396 vir 'n boot met 'n lengte van 4,9 meter; en

(iii) verkry deur lineêre interpolasie tussen 0,396 en 0,283 vir bote langer as 4,9 meter maar korter as 7,3 meter; en

(b) mag in geen geval die getal volwasse persone met reddingsbaadjies aan wat behoorlik kan sit sonder om op enige manier die gebruik van spane of die werking van die ander aandrywingstoerusting te belemmer, oorskry nie.

(4) Die getal persone wat 'n opgeblaasde reddingsboot toegelaat mag word om te akkommodeer, is die kleinste van die volgende getalle:

(a) Die grootste heelgetal wat verkry word deur die volume van die hoofdryfbuise gemeet in kubieke meter, verminder met 0,40 kubieke meter, wat vir hierdie doel nie die dwarsbanke of die hartlynbuis, as dit aangebring is, insluit nie, deur 0,12 te deel; of

(5) Where the distance from the embarkation deck to the waterline of the vessel in the lightest operating condition exceeds 4.5 metres, survival craft, except float-free liferafts, shall be capable of being davit launched with a full complement of persons or be provided with equivalent approved means of embarkation.

Regulation 111

Marking of survival craft

(1) The dimensions of a lifeboat and the number of persons which it is permitted to carry shall be marked on it in clear permanent characters. The name and port of registry of the vessel to which the lifeboat belongs shall be painted on each side of the bow.

(2) An inflatable liferaft and its valise or container shall be marked with the number of persons, the serial number and the manufacturer's name.

(3) Every rigid liferaft shall be marked with the name and port of registry of the vessel in which it is carried and with the number of persons it is permitted to carry.

(4) No survival craft shall be marked for a greater number of persons than that obtained in the manner specified in Regulations 112 and 113.

Regulation 112

Construction and capacity of lifeboats

(1) Lifeboats shall be constructed to the satisfaction of the Administration and be of such form and proportions that they shall have adequate freeboard and stability in a seaway when loaded with their full complement of persons and equipment and comply with the provisions of Sections 1 and 2 of Appendix 2, as applicable. Lifeboats loaded with their full complement of persons and equipment shall, when flooded and open to the sea, be capable of keeping afloat with positive stability.

(2) The cubic capacity of a rigid lifeboat shall be determined by the rule given in Section 3 of Appendix 2 or by any other method giving at least the same degree of accuracy. The capacity of a square-sterned lifeboat shall be calculated as if the lifeboat had a pointed stern.

(3) The number of persons which a rigid lifeboat shall be permitted to accommodate shall—

(a) be equal to the greatest whole number obtaines by dividing the capacity in cubic metres by a factor—

(i) of 0,283 for a boat of 7,3 metres in length or over;

(ii) of 0,396 for a boat of 4,9 metres in length; and

(iii) obtained by linear interpolation between 0,396 and 0,283 for boats over 4,9 metres but less than 7,3 metres; and

(b) in no case exceed the number of adult persons wearing life-jackets who can be properly seated without in any way interfering with the use of oars or the operation of other propulsion equipment.

(4) The number of persons which an inflated lifeboat shall be permitted to accommodate shall be the lesser of the following numbers:

(a) the greatest whole number obtained by dividing by 0,12 the volume of the main buoyancy tubes measured in cubic metres reduced by 0,40 cubic metres which for this purpose shall include neither the thwarts nor the centreline tube if fitted; or

(b) die grootste heelgetal wat verkry word deur die oppervlakte van die vloer gemeet in vierkante meter, wat vir hierdie doel die dwarsbanke en hartlynbuis, as dit aangebring is, mag insluit, deur 0.32 te deel.

In geen geval mag dit die getal volwasse persone met reddingsbaadjies aan wat behoorlik kan sit sonder om op enige manier die gebruik van spane of die werking van ander aandrywingstoerusting te belemmer, oorskry nie. Geen opgeblaasde reddingsboot met 'n dravermoë van minder as 10 persone mag goedgekeur word nie.

Regulasie 113

Konstruksie en kapasiteit van reddingsvlotte

(1) Die konstruksie van opblaasbare reddingsvlotte moet aan die bepalings van Artikel 4.2 van Byvoegsel 2 voldoen.

(2) Die aantal persone wat 'n opblaasbare reddingsvlot toegelaat word om te akkommodeer, is die kleinste van die volgende getalle:

(a) Die grootste heelgetal wat verkry word deur die volume, gemeet in kubieke meter, van die hoofdryfbuise (wat vir hierdie doel nòg die boë nòg die dwarsbank of -banke, indien aangebring, insluit, wanneer dit opgeblaas is, deur 0,096 te deel; of

(b) die grootste heelgetal wat verkry word deur die oppervlakte, gemeet in vierkante meter, van die vloer (wat vir hierdie doel die dwarsbank of -banke, indien aangebring, mag insluit) van die reddingsvlot wanneer dit opgeblaas is, deur 0,372 te deel.

Geen opblaasbare reddingsvlot wat 'n dravermoë van minder as ses persone of meer as 25 persone het, mag egter goedgekeur word nie.

(3) Onbuigsame reddingsvlotte moet aan die bepalings van Artikel 4.1 van Byvoegsel 2 voldoen en—

(a) moet so gebou wees dat, indien hulle van hul bêreposisie in die water laat val word, nòg die reddingsvlot nòg sy toerusting beskadig sal word; en

(b) moet te alle tye doeltreffend en stabiel wees met watter kant dit ook al bo dryf.

(4) Die aantal persone wat 'n onbuigsame reddingsvlot geskik geag word om te akkommodeer, is die kleinste van die volgende getalle:

(a) Die grootste heelgetal wat verkry word deur die volume, gemeet in kubieke meter, van die lugkaste of drywende materiaal deur 0,096 te deel; of

(b) die grootste heelgetal wat verkry word deur die dekoppervlakte van die reddingsvlot, gemeet in vierkante meter, deur 0,372 te deel.

Regulasie 114

Konstruksie en merk van redbote

(1) Redbote moet, indien hulle nie gebou is as reddingsbote ooreenkomstig die bepalings van Artikels 1 en 2 van Byvoegsel 2 soos toepaslik nie, ooreenkomstig die bepalings van Artikel 5 van daardie Byvoegsel gebou wees.

(2) Redbote moet van sodanige vorm en afmetings wees dat hulle voldoende vryboord en stabiliteit in 'n seegang het wanneer hulle die volle getal persone en toerusting aan boord het en moet met positiewe stabiliteit vlot kan bly wanneer hulle oorstroom en aan die see blootgestel is.

(3) Die lengte van redbote en die aantal persone wat 'n boot toegelaat word om te akkommodeer, word deur die Administrasie bepaal. Redbote mag egter nie 'n lengte van minder as 3,8 meter hê nie, behalwe dat waar die Administrasie dit weens die grootte van die vaartuig of om ander redes onredelik of ondoenlik ag om sulke bote aan boord te hê, hy 'n korter redboot, maar nie korter as 3,3 meter nie, mag aanvaar.

(b) the greatest whole number obtained by dividing by 0,32 the area of the floor measured in square metres which for this purpose may include the thwarts and centreline tube if fitted.

In no case shall it exceed the number of adult persons wearing life-jackets who can be properly seated without in any way interfering with the use of oars or the operation of other propulsion equipment. No inflated lifeboat shall be approved which has a carrying capacity of less than 10 persons.

Regulation 113

Construction and capacity of liferafts

(1) The construction of inflatable liferafts shall comply with the provisions of Section 4.2 of Appendix 2.

(2) The number of persons which an inflatable liferaft shall be permitted to accommodate shall be the lesser of the following numbers:

(a) The greatest whole number obtained by dividing by 0,096 the volume measured in cubic metres of the main buoyancy tubes (which for this purpose shall include neither the arches nor the thwart or thwarts if fitted) when inflated; or

(b) the greatest whole number obtained by dividing by 0,372 the area measured in square metres of the floor (which for this purpose may include the thwart or thwarts if fitted) of the liferaft when inflated.

However, no inflatable liferaft shall be approved which has a carrying capacity of less than six persons or more than 25 persons.

(3) Rigid liferafts shall comply with the provisions of Section 4.1 of Appendix 2 and—

(a) be so constructed that if they are dropped into the water from their stowed position neither the liferaft nor its equipment will be damaged; and

(b) at all times be effective and stable when floating either way up.

(4) The number of persons which a rigid liferaft shall be deemed fit to accommodate shall be the lesser of the following numbers:

(a) The greatest whole number obtained by dividing by 0,096 the volume measured in cubic metres of the air cases or buoyant material; or

(b) the greatest whole number obtained by dividing by 0,372 the deck area of the liferaft measured in square metres.

Regulation 114

Construction and marking of rescue boats

(1) Rescue boats, if not constructed as lifeboats in accordance with the provisions of Sections 1 and 2 of Appendix 2 as appropriate, shall be constructed in accordance with the provisions of Section 5 of that Appendix.

(2) Rescue boats shall be of such form and proportions that they shall have adequate freeboard and stability in a seaway when loaded with the full complement of persons and equipment and shall be capable of keeping afloat with positive stability when flooded and open to the sea.

(3) The length of rescue boats and the number of persons which a boat shall be permitted to accommodate shall be determined by the Administration. However, rescue boats shall not be less than 3,8 metres in length except where, owing to the size of the vessel, or for other reasons where the carriage of such boats is considered unreasonable or impracticable, the Administration may accept a rescue boat of a lesser length but not less than 3,3 metres.

(4) Onbuigsame redbote moet duidelik in permanente skrif gemerk wees met die afmetings van die boot en die aantal persone waarvoor die boot gesertifiseer is. Die naam en registrasiehawe van die vaartuig waarby die boot hoort, moet op elke kant van die boeg geskilder wees.

(5) Opblaasbare redbote moet gemerk wees met die aantal persone waarvoor die boot gesertifiseer is, die vervaardigingsdatum, die fabrikant se naam of merkteken, die reeksnommer van die boot en die naam en registrasiehawe van die vaartuig waarby die boot hoort.

Regulasie 115

Toerusting vir oorlewingsvaartuie en redbote

(1) Reddingsbote moet voorsien wees van die toerusting gespesifiseer in Artikel 6.1 tot en met 6.4 van Byvoegsel 2, soos toepaslik.

(2) Reddingsvlotte moet voorsien wees van die toerusting gespesifiseer in Artikel 6.5 van Byvoegsel 2, soos toepaslik.

(3) Redbote moet voorsien wees van die toerusting gespesifiseer in Artikel 6.6 en 6.7 van Byvoegsel 2, tensy hulle deel uitmaak van die aantal oorlewingsvaartuie ooreenkomstig Regulasie 110, in welke geval hulle voorsien moet wees van die toerusting gespesifiseer in Artikel 6.1 tot en met 6.4 van Byvoegsel 2, soos toepaslik.

Regulasie 116

Beskikbaarheid en stuwing van oorlewingsvaartuie en redbote

(1) Oorlewingsvaartuie moet—

(a) (i) in 'n noodgeval geredelik beskikbaar wees;

(ii) selfs onder ongunstige toestande met betrekking tot kop- of stuurlas en met 'n slagsy van 15 grade veilig en vinnig te water gelaat kan word; en

(iii) vinnig ingehaal kan word, indien dit ook aan die vereistes vir 'n redboot voldoen; en

(b) so gestu word dat—

(i) die opstelling van persone by die inskepingsdek nie belemmer word nie;

(ii) die snelle hantering daarvan nie belemmer word nie;

(iii) inskeping vinnig en ordelik kan geskied; en

(iv) die hantering van enige ander oorlewingsvaartuig nie belemmer word nie.

(2) Oorlewingsvaartuie en tewaterlatingstoestelle moet in 'n werkende toestand en vir onmiddellike gebruik beskikbaar wees voordat die vaartuig die hawe verlaat en moet te alle tye wanneer dit op see is, so gehou word.

(3) (a) Oorlewingsvaartuie moet tot tevredenheid van die Administrasie ooreenkomstig Artikel 7 van Byvoegsel 2 gestu word.

(b) Elke reddingsboot moet aan 'n afsonderlike stel davits of goedgekeurde tewaterlatingstoestel bevestig wees.

(c) Oorlewingsvaartuie moet so na moontlik aan die akkommodasie- en diensruimtes geplaas en in geskikte posisies gestu wees om veilige tewaterlating te verseker, met besondere inagneming van die afstand vanaf die skroef en steil oorhangende gedeeltes van die romp, om sover doenlik te verseker dat hulle langs die reguit kant van die vaartuig te water gelaat kan word. Indien hulle voor geplaas is, moet hulle agter die aanvaringskot in 'n beskutte posisie gestu word en die Administrasie moet in hierdie verband spesiale aandag aan die sterkte van die davits skenk.

(4) Rigid rescue boats shall be clearly marked in permanent characters with the dimensions of the boat and the number of persons for which the boat is certified. The name and port of registry of the vessel to which the boat belongs shall be painted on each side of the bow.

(5) Inflatable rescue boats shall be marked with the number of persons for which the boat is certified, date of manufacture, maker's name or mark, serial number of the boat and name and port of registry of the vessel to which the boat belongs.

Regulation 115

Equipment for survival craft and rescue boats

(1) Lifeboats shall be provided with the equipment specified in Sections 6.1 to 6.4 inclusive of Appendix 2, as appropriate.

(2) Liferafts shall be provided with the equipment specified in Section 6.5 of Appendix 2, as appropriate.

(3) Rescue boats shall be provided with the equipment specified in Sections 6.6 and 6.7 of Appendix 2 unless included in the number of survival craft in accordance with Regulation 110, in which case they shall be provided with the equipment specified in Sections 6.1 to 6.4 inclusive of Appendix 2, as appropriate.

Regulation 116

Availability and stowage of survival craft and rescue boats

(1) Survival craft shall—

(a) (i) be readily available in case of emergency;

(ii) be capable of being launched safely and rapidly even under unfavourable conditions of trim and against 15 degrees of list; and

(iii) be capable of rapid recovery if fulfilling also the requirements for a rescue boat; and

(b) be so stowed that—

(i) the marshalling of persons at the embarkation deck is not impeded;

(ii) their prompt handling is not impeded;

(iii) embarkation can be effected rapidly and in good order; and

(iv) the operation of any other survival craft is not interfered with.

(2) Survival craft and launching appliances shall be in working order and available for immediate use before the vessel leaves port and kept so at all times when at sea.

(3) (a) Survival craft shall be stowed in accordance with Section 7 of Appendix 2 to the satisfaction of the Administration.

(b) Every lifeboat shall be attached to a separate set of davits or approved launching appliance.

(c) Survival craft shall be positioned as close to accommodation and service spaces as possible, stowed in suitable positions to ensure safe launching, with particular regard to clearance from the propeller and steeply overhanging portions of the hull, so ensuring as far as practicable that they can be launched down the straight side of the vessel. If positioned forward they shall be stowed abaft the collision bulkhead in a sheltered position and in this respect the Administration shall give special consideration to the strength of the davits.

(d) Die metode van tewaterlating en inhaal van redbote moet goedgekeur word met inagneming van die redboot se gewig, insluitende sy toerusting en 50 persent van die aantal persone waarvoor dit gesertifiseer is, die konstruksie en grootte van die redboot en sy stuwingsposisie bo die waterlyn in die vaartuig se ligste bedryfstoestand. Elke redboot wat op 'n hoogte van meer as 4,5 meter bo die waterlyn in die vaartuig se ligste bedryfstoestand gestu word, moet egter van goedgekeurde inrigtings vir tewaterlating en inhaal voorsien wees.

(e) Davits moet van 'n goedgekeurde ontwerp wees en aan die vereistes van Artikel 7 van Byvoegsel 2 voldoen.

(f) (i) Die reddingsvlotte moet so gestu wees dat hulle in 'n noodgeval geredelik beskikbaar is en wel op so 'n wyse dat hulle uit hulle stuwing kan vrydryf, opblaas en van die vaartuig kan losbreek indien dit sou sink. Reddingsvlotte wat met davits te water gelaat word, hoef egter nie vry te dryf nie.

(ii) Indien woeltoue gebruik word, moet dit toegerus wees met 'n outomatiese (hidrostatiese) vrylatingstelsel van 'n goedgekeurde tipe.

Regulasie 117

Inskeping in oorlewingsvaartuie

Geskikte maatreëls moet getref word vir inskeping in die oorlewingsvaartuie, welke maatreëls die volgende moet insluit:

(a) Ten minste een leer, of ander goedgekeurde middel, aan elke kant van die vaartuig om toegang tot die reddingsvaartuig te verleen wanneer dit op die water is, behalwe waar die Administrasie tevrede is dat die afstand van die inskepingspunt na die drywende oorlewingsvaartuig sodanig is dat 'n leer onnodig is:

(b) middels om die stuplek van oorlewingsvaartuie en hul tewaterlatingstoestelle te verlig gedurende die voorbereiding vir en die proses van tewaterlating, en ook om die water waarin die reddingsvaartuie te water gelaat word, te verlig totdat die proses van tewaterlating voltooi is, en die krag hiervoor moet vanaf die noodbron vereis by Regulasie 55 voorsien word;

(c) middels om alle persone aan boord te waarsku dat die vaartuig verlaat staan te word; en

(d) middels om te verhoed dat water in die reddingsvaartuig uitgelaat word.

Regulasie 118

Reddingsbaadjies

(1) Vir elke persoon aan boord moet daar 'n reddingsbaadjie van 'n goedgekeurde tipe wees wat aan die vereistes van Artikel 8.1 van Byvoegsel 2 voldoen. Elke reddingsbaadjie moet na behore gemerk wees om aan te toon dat dit goedgekeur is.

(2) Reddingsbaadjies moet so geplaas wees dat hulle geredelik toeganklik is en hul posisie moet duidelik aangedui wees.

Regulasie 119

Reddingsboeie

(1) Ten minste die volgende aantal reddingsboeie moet voorsien word:

(a) 8 reddingsboeie in vaartuie met 'n lengte van 75 meter of meer;

(b) 6 reddingsboeie in vaartuie met 'n lengte van minder as 75 meter maar 45 meter en meer;

(c) 4 reddingsboeie in vaartuie met 'n lengte van minder as 45 meter.

Sulke reddingsboeie moet aan die vereistes van Artikel 8.2 van Byvoegsel 2 voldoen.

(d) The method of launching and recovering of rescue boats shall be approved taking into account the weight of the rescue boat including its equipment and 50 per cent of the number of persons it is certificated to carry, the construction and size of the rescue boat and its position of stowage above the waterline in the vessel's lightest operating condition. However, every rescue boat stowed at a height of more than 4.5 metres above the waterline in the vessel's lightest operating condition shall be provided with approved arrangements for launching and recovery.

(e) Davits shall be of an approved design complying with the requirements of Section 7 of Appendix 2.

(f) (i) The liferafts shall be so stowed as to be readily available in case of emergency in such a manner as to permit them to float free from their stowage, inflate and break free from the vessel in the event of its sinking. However, davit launched liferafts need not float free.

(ii) Lashings, if used, shall be fitted with an automatic (hydrostatic) release system of an approved type.

Regulation 117

Embarkation into survival craft

Suitable arrangements shall be made for embarkation into the survival craft which shall include—

(a) at least one ladder, or other approved means, on each side of the vessel to afford access to the survival craft when waterborne except where the Administration is satisfied that the distance from the point of embarkation to the waterborne survival craft is such that a ladder is unnecessary;

(b) means for illuminating the stowage position of survival craft and their launching appliances during preparation for and the process of launching, and also for illuminating the water into which the survival craft are launched until the process of launching is completed, the power for which to be supplied from the emergency source required by Regulation 55;

(c) arrangements for warning all persons on board that the vessel is about to be abandoned; and

(d) means for preventing any discharge of water into the survival craft.

Regulation 118

Life-jackets

(1) For every person on board, a life-jacket of an approved type shall be carried complying with the requirements of Section 8.1 of Appendix 2. Each life-jacket shall be suitably marked showing that it has been approved.

(2) Life-jackets shall be so placed as to be readily accessible and their position shall be plainly indicated.

Regulation 119

Lifebuoys

(1) At least the following number of lifebuoys shall be provided:

(a) 8 lifebuoys in vessels of 75 metres in lenght and over;

(b) 6 lifebuoys in vessels of less than 75 metres in length but 45 metres in length and over;

(c) 4 lifebuoys in vessels of less than 45 metres in length.

Such lifebuoys shall comply with the requirements of Section 8.2 of Appendix 2.

(2) Ten minste die helfte van die aantal reddingsboeie bedoel in paragraaf (1) moet voorsien wees van selfontbrandligte, wat naby die reddingsboeie waarby hulle hoort, moet wees, saam met die nodige aanhegtingsmiddels.

(3) Die selfontbrandligte vereis by paragraaf (2), moet sodanig wees dat hulle nie deur water uitgedoof kan word nie. Hulle moet minstens 45 minute lank kan brand en 'n ligintensiteit van minstens 2 kandela in alle rigtings van die boonste hemisfeer hê.

(4) In vaartuie met 'n lengte van 45 meter of meer moet ten minste twee van die reddingsboeie wat van selfontbrandligte ooreenkomstig paragraaf (2) voorsien is, ook voorsien wees van 'n doeltreffende selfaktiverende rooksein wat ten minste 15 minute lank rook van 'n hoogs sigbare kleur kan lewer, en, waar doenlik, vinnig vanaf die stuurhuis vrygelaat kan word.

(5) Ten minste een reddingsboei aan elke kant van die vaartuig moet met 'n drywende reddingstou van ten minste 27,5 meter lank toegerus wees. Sulke reddingsboeie mag nie selfontbrandligte hê nie.

(6) Alle reddingsboeie moet so geplaas wees dat dit geredelik toeganklik is vir die persone aan boord, moet altyd vinnig gelos kan word en mag hoegenaamd nie permanent bevestig wees nie.

Regulasie 120

Lynwerptoestelle

(1) Elke vaartuig moet 'n lynwerptoestel van 'n goedgekeurde tipe hê.

(2) 'n Lynwerptoestel moet 'n lyn minstens 230 meter ver met redelike akkuraatheid kan werp en moet minstens vier projektiele en vier lyne insluit.

(3) Die vuurpyle, saam met die middele om hulle te ontsteek, en die lyne moet in 'n waterdigte kas gehou word.

Regulasie 121

Noodseine

(1) Elke vaartuig moet tot tevredenheid van die Administrasie toegerus wees met middels waarmee doeltreffende noodseine bedags en snags gegee kan word, insluitende ten minste 12 valskermfakkels wat 'n helderrooi lig op 'n groot hoogte kan gee.

(2) Noodseine moet van 'n goedgekeurde tipe wees. Hulle moet so geplaas wees dat hulle geredelik toeganklik is en hul posisie moet duidelik aangedui wees.

Regulasie 122

Draagbare radiotoerusting

'n Draagbare radiosendontvanger of 'n nood-posisieaanduidingradiobaken (EPIRB), elkeen van 'n goedgekeurde tipe, moet tot tevredenheid van die Administrasie aan boord wees en so geplaas wees dat dit geredelik toeganklik is, en die posisie daarvan moet duidelik aangedui wees.

Regulasie 123

Radiotelegraafinstallasies en soekligte in motorreddingsbote

(1) Waar die totale aantal persone aan boord van 'n vaartuig 200 of meer is, moet 'n radiotelegraafinstallasie wat aan die bepalings van Regulasie 137 en aan die toepaslike bepalings van Byvoegsel 2 voldoen, in ten minste een van die motorreddingsbote aangebring wees.

(2) 'n Soeklig wat aan die toepaslike bepalings van Byvoegsel 2 voldoen, moet in elke motorreddingsboot aangebring wees, indien dit voorsien is.

(2) At least half of the number of lifebuoys referred to in paragraph (1) shall be provided with self-igniting lights, which shall be near the lifebuoys to which they belong, with the necessary means of attachment.

(3) The self-igniting lights required by paragraph (2) shall be such that they cannot be extinguished by water. They shall be capable of burning for not less than 45 minutes and shall have a luminous intensity of not less than 2 candelas in all directions of the upper hemisphere.

(4) In vessels of 45 metres in length and over at least two of the lifebuoys provided with self-igniting lights in accordance with paragraph (2) shall also be provided with an efficient self-activating smoke signal capable of producing smoke of a highly visible colour for at least 15 minutes, and shall where practicable be capable of quick release from the wheelhouse.

(5) At least one lifebuoy on each side of the vessel shall be fitted with a buoyant lifeline of at least 27,5 metres in length. Such lifebuoys shall not have self-igniting lights.

(6) All lifebuoys shall be so placed as to be readily accessible to the persons on board and shall always be capable of being rapidly cast loose and shall not be permanently secured in any way.

Regulation 120

Line-throwing appliances

(1) Every vessel shall carry a line-throwing appliance of an approved type.

(2) A line-throwing appliance shall be capable of carrying a line not less than 230 metres with reasonable accuracy and shall include not less than four projectiles and four lines.

(3) The rockets, with the means of igniting them, and the lines shall be kept in a watertight case.

Regulation 121

Distress signals

(1) Every vessel shall be provided, to the satisfaction of the Administration, with means of making effective distress signals by day and by night, including at least 12 parachute signals capable of giving a bright red light at a high altitude.

(2) Distress signals shall be of an approved type. They shall be so placed as to be readily accessible and their position shall be plainly indicated.

Regulation 122

Portable radio equipment

A portable radio transmitter/receiver or an emergency position-indicating radio beacon (EPIRB), each of an approved type, shall be carried and located to the satisfaction of the Administration so as to be readily accessible and its position shall be plainly indicated.

Regulation 123

Radiotelegraph installations and searchlights in motor lifeboats

(1) Where the total number of persons on board a vessel is 200 or more a radiotelegraph installation complying with the provisions of Regulation 137 and with the relevant provisions of Appendix 2 shall be fitted in at least one of the motor lifeboats.

(2) A searchlight complying with the relevant provisions of Appendix 2 shall be fitted in each motor lifeboat, if provided.

Regulasie 124

Trukaatsstroke op reddingstoestelle

Alle oorlewingsvaartuie, redbote, reddingsbaadjies en reddingsboeie moet tot tevredenheid van die Administrasie met trukaatsstroke toegerus wees.*

HOOFSTUK VIII

NOODPROSEDURES, MONSTERINGS EN DRILOEFENINGE

Regulasie 125

Monsterrol en skipverlaatprosedure

(1) Behoudens paragraaf (2) moet 'n monsterrol opgestel word wanneer die vaartuig die hawe verlaat en die volgende inligting moet ingesluit word:

(a) Pligte wat aan die verskillende bemanningslede toegewys is in die geval van 'n noodsituasie in verband met—

(i) die toemaak van enige waterdigte deure, kleppe en sluitmeganismes van spuigate, oorboordse stortgeute, patryspoorte en branddeure;

(ii) die toerusting van 'n oorlewingsvaartuig (insluitende draagbare radio-apparaat vir oorlewingsvaartuie);

(iii) die tewaterlating van die oorlewingsvaartuie;

(iv) die algemene gereedmaking van ander reddingstoestelle;

(v) die bemanning van vuurspanne belas met die brandbestryding; en

(vi) die spesiale pligte wat toegewys is ten opsigte van die hantering van brandblustoerusting en -installasies; en

(b) die seine om die bemanning na hul reddingsvaartuie en brandstasies op te roep en besonderhede van hierdie seine, insluitende die noodsein om die bemanning na monsterstasies op te roep, wat 'n reeks van sewe of meer kort stote gevolg deur een lang stoot op die fluit of sirene moet wees.

(2) In vaartuie met 'n lengte van minder as 45 meter mag die Administrasie 'n verslapping van die vereistes van paragraaf (1) toestaan indien hy daarvan oortuig is dat geen monsteringslys vanweë die klein aantal bemanningslede nodig is nie.

(3) Die lys noodseine moet in die stuurhuis en in die bemanningsakkommodasie aangeplak wees. Afskrifte van die monsterrol moet in verskeie dele van die vaartuig en, in die besonder, in die bemanningsakkommodasie aangeplak wees.

(4) Noodseine wat in die monsterrol gespesifiseer is, moet met die fluit of sirene gegee word. Vaartuie met 'n lengte van 45 meter of meer moet toegerus wees met 'n stelsel elektriese alarmklokke wat vanuit die stuurhuis beheer kan word.

Regulasie 126

Oefenmonsterings en driloefeninge

(1) 'n Monstering van die bemanning vir skipverlaat- en branddriloefeninge moet met tussenpose van hoogstens een maand plaasvind, met dien verstande dat hierdie monsterings binne 24 uur nadat die hawe verlaat is, moet plaasvind as 25 persent van die bemanning sedert die laaste monstering vervang is.

* Kyk *Recommendation on Retro-Reflective Tapes on Life-Saving Appliances* aangeneem deur die Organisasie by Resolusie A.274(viii).

Regulation 124

Retro-reflective tapes on life-saving appliances

All survival craft, rescue boats, life-jackets and lifebuoys shall be fitted with retro-reflective tapes to the satisfaction of the Administration.*

CHAPTER VIII

EMERGENCY PROCEDURES, MUSTERS AND DRILLS

Regulation 125

Muster list and abandon ship procedure

(1) Subject to paragraph (2) a muster list shall be drawn up when the vessel leaves port and shall include the following information:

(a) Duties assigned to different members of the crew in the event of an emergency in connection with—

(i) the closing of any watertight doors, valves and closing mechanisms of scuppers, overboard shoots, sidescuttles and fire doors;

(ii) the equipping of survival craft (including portable radio apparatus for survival craft);

(iii) the launching of the survival craft;

(iv) the general preparation of other life-saving appliances;

(v) the manning of fire parties assigned to deal with fires; and

(vi) the special duties assigned in respect of the operation of fire-fighting equipment and installations; and

(b) the signals for summoning the crew to their survival craft and fire stations and particulars of these signals including the emergency signal for summoning the crew to muster stations which shall be a succession of seven or more shorts blasts followed by one long blast on the whistle or siren.

(2) In vessels of less than 45 metres in length the Administration may permit relaxation of the requirements of paragraph (1) if satisfied that, due to the small number of crew members, no muster list is necessary.

(3) The list of emergency signals shall be posted up in the wheelhouse and in the crew accommodation. Copies of the muster list shall be posted up in several parts of the vessel and, in particular, in the crew accommodation.

(4) Emergency signals specified in the muster list shall be made with the whistle or siren. Vessels of 45 metres in length and over shall be fitted with an electrical system of alarm bells capable of being operated from the wheelhouse.

Regulation 126

Practice musters and drills

(1) A muster of the crew for abondon ship drill and fire drill shall take place at intervals of not more than one month, provided that these musters shall take place within 24 hours of leaving port whenever 25 per cent of the crew has been replaced since the last muster.

* See Recommendation on Retro-Reflective Tapes on Life-Saving Appliances adopted by the Organization by Resolution A.274 (VIII).

(2) Wanneer monsterings gehou word, moet die lewensreddings-, brandbestrydings- en ander veiligheidstoerusting nagegaan word om te verseker dat dit volledig en in 'n bevredigende werkende toestand is.

(3) Die datums waarop monsterings gehou word, moet in sodanige logboek aangeteken word as wat deur die Administrasie voorgeskryf word, en indien geen monstering binne die voorgeskrewe tussenpoos gehou word nie of slegs 'n gedeeltelike monstering gehou word, moet 'n inskrywing gemaak word wat die omstandighede en omvang van die monstering meld. 'n Verslag van die ondersoek van die reddingstoerusting moet in die logboek ingeskryf word, saam met 'n register van bote wat gebruik is.

(4) In vaartuie wat met reddingsbote toegerus is, moet verskillende bote by opeenvolgende driloefeninge uitgeswaai word. Die reddingsbote moet, waar doenlik, ten minste elke vier maande in die water neergelaat word, by welke geleenthede inspeksies uitgevoer moet word betreffende die betroubaarheid van alle apparaat en stelsels en die waterdigte integriteit van die bote sowel as die werking van die lostoestelle.

(5) Die monsterings moet so gereël wees dat verseker word dat die bemanning die pligte wat hulle moet uitvoer, insluitende instruksies oor die hantering en beheer van reddingsvlotte, indien dit voorsien word, verstaan en daarin geoefen is.

Regulasie 127

Opleiding in noodprosedures

(1) Die Administrasie moet sodanige maatreëls tref as wat hy nodig ag om te verseker dat bemannings voldoende opgelei is in hul pligte tydens 'n noodgeval. Sodanige opleiding moet die volgende, soos toepaslik, insluit:

(a) Ten opsigte van seine:

(i) begrip van die presiese seine vereis in die monsteringslys; en

(ii) die betekenis van die noodsein en handeling wat verrig moet word wanneer dit gehoor word;

(b) ten opsigte van reddingsbote en redbote:

(i) die gereedmaak, uitswaai (insluitende die middels om die boot langs die vaartuig te hou terwyl die bemanning ingeskeep word), en neerlaat van die boot in die water, en die wegbeweeg met die boot van die vaartuig of;

(ii) roei en stuur wanneer die boot in die water is;

(iii) begrip van die bevele wat gewoonlik by boothantering gebruik word;

(iv) kennis van die toerusting wat aan boord is en hoe om dit te gebruik; en

(v) begrip van die werking van die enjin, indien dit aangebring is;

(c) ten opsigte van reddingsvlotte:

(i) metodes van tewaterlating en die opblaas van reddingsvlotte en voorsorgmaatreëls wat voor, tydens en na tewaterlating getref moet word;

(ii) hoe om aan boord van reddingsvlotte, sowel dié wat met davits te water gelaat word as dié wat in die water opblaas, te gaan en aan boord van onbuigsame reddingsvlotte te gaan;

(iii) die regbring van 'n omgekeerde vlot;

(iv) kennis van die gebruik van die seeanker;

(v) kennis van die toerusting aan boord en hoe om dit te gebruik;

(2) When holding musters, the life-saving, fire-fighting and other safety equipment shall be examined to ensure that they are complete and in satisfactory working order.

(3) The dates on which musters are held shall be recorded in such log book as may be prescribed by the Administration, and if no muster is held within the prescribed interval or a part muster only is held, an entry shall be made stating the circumstances and extent of the muster held. A report of the examination of the life-saving equipment shall be entered in the log book together with a record of boats used.

(4) In vessels fitted with lifeboats, different boats shall be swung out at successive drills. The lifeboats shall, where practicable, be lowered into the water at least every four months at which time checks shall be carried out for the reliability of all apparatus and systems and the watertight integrity of the boats as well as operation of the releasing devices.

(5) The musters shall be so arranged as to ensure that the crew thoroughly understand and are practised in the duties they have to perform including instructions in the handling and operation of liferafts where these are carried.

Regulation 127

Training in emergency procedures

(1) The Administration shall take such measures as it may deem necessary to ensure that crews are adequately trained in their duties in the event of emergencies. Such training shall include, as appropriate:

(a) In respect of signals:

(i) understanding the definite signals required in the muster list; and

(ii) the meaning of and action to be taken on hearing the emergency signal;

(b) in respect of lifeboats and rescue boats:

(i) the preparation, swinging out (including the means for holding the boat alongside the vessel whilst embarking the crew), lowering the boat into the water and getting the boat away from the vessel;

(ii) rowing and steering when the boat is afloat;

(iii) understanding the orders commonly used during the operation of boat handling;

(iv) knowledge of the equipment carried and how to use such equipment; and

(v) understanding the operation of the engine, if fitted;

(c) in respect of liferafts:

(i) methods of launching and inflating liferafts and precautions to be taken before, during and after launching;

(ii) boarding liferafts, both davit launched and inflated afloat, and boarding rigid liferafts;

(iii) righting an inverted raft;

(iv) knowledge of how to use the sea anchor;

(v) knowledge of the equipment carried and how to use such equipment;

(vi) begrip van die rede waarom dryfbuise bygevul en die bodem opgeblaas moet word; en

(vii) begrip van die instruksies oor hoe om op 'n reddingsvlot te oorleef;

(d) ten opsigte van oorlewing in die water:

(i) die gevare van hipotermie en hoe om die gevolge daarvan te minimaliseer; en

(ii) die gebruik van reddingsbaadjies, ander persoonlike dryfkledingstukke en drywende klerasie; en

(e) ten opsigte van brandbestryding;

(i) die gebruik van brandslange met verskillende spuitstukke;

(ii) die gebruik van brandblussers;

(iii) kennis van die ligging van branddeure; en

(iv) die gebruik van asemhalingsapparaat.

(2) Die Administrasie moet aandag gee aan die nodigheid om inligting of opleiding, of beide, te verskaf ten opsigte van die oppik van persone vanaf vaartuie en oorlewingsvaartuie per helikopter.

HOOFSTUK IX

RADIOTELEGRAFIE EN RADIOTELEFONIE

DEEL A—TOEPASSING EN DEFINISIES

Regulasie 128

Toepassing

(1) Tensy uitdruklik anders bepaal, is hierdie Hoofstuk op sowel nuwe as bestaande vaartuie van toepassing. Die Administrasie mag egter ten opsigte van bestaande vaartuie die implementering van die vereistes uitstel vir 'n periode van hoogstens ses jaar vanaf die datum van inwerkingtreding van die Konvensie.

(2) Geen bepaling in hierdie Hoofstuk verhoed die gebruik deur 'n vaartuig of 'n oorlewingsvaartuig in nood van enige middel tot sy beskikking om aandag te trek, sy posisie bekend te maak en hulp te verkry nie.

Regulasie 129

Uitdrukkings en omskrywings

(1) Vir die doel van hierdie Hoofstuk het die volgende uitdrukkings die betekenisse soos hieronder omskryf:

(a) "Radioregulasies" beteken die radioregulasies wat as bylae verskyn of geag word as bylae te verskyn by die Internasionale Konvensie betreffende Telekommunikasie wat van krag is.

(b) "Radiotelegraaf-outo-alarm" beteken 'n goedgekeurde outo-alarmontvangstoestel wat op die radiotelegraafalarmsein reageer.

(c) "Radiotelefoon-outo-alarm" beteken 'n goedgekeurde outo-alarmontvangstoestel wat op die radiotelefoonalarmsein reageer.

(d) "Radio-offisier" beteken 'n persoon wat ten minste 'n algemene radiokommunikasiebedienersertifikaat vir die maritieme mobiele diens of 'n radiotelegraafbedienersertifikaat van die eerste of tweede klas hou wat aan die Radioregulasies voldoen, en wat werksaam is in die radiotelegraafstasie van 'n vaartuig wat met so 'n stasie toegerus is ooreenkomstig Regulasie 130 of Regulasie 131.

(e) "Radiobediener" beteken 'n persoon wat 'n spesiale radiotelegraafbedienersertifikaat hou wat aan die Radioregulasies voldoen.

(f) "Radiotelefoonbediener" beteken 'n persoon wat 'n toepaslike sertifikaat hou wat aan die Radioregulasies voldoen.

(vi) understanding the reason for "topping up" buoyancy tubes and for inflating the floor; and

(vii) understanding the instruction on how to survive in a liferaft;

(d) in respect of survival in the water:

(i) the dangers of hypothermia and how to minimize its effects; and

(ii) the use of life-jackets, other personal buoyancy garments and buoyant clothing; and

(e) in respect of fire fighting:

(i) the use of fire hoses with different nozzles;

(ii) the use of fire extinguishers;

(iii) knowledge of the location of fire doors; and

(iv) the use of breathing apparatus.

(2) The Administration shall give consideration to the need for providing information or training, or both, in respect of lifting persons from vessels and survival craft by helicopter.

CHAPTER IX

RADIOTELEGRAPHY AND RADIOTELEPHONY

PART A—APPLICATION AND DEFINITIONS

Regulation 128

Application

(1) Unless expressly provided otherwise, this Chapter shall apply to both new and existing vessels. However, for existing vessels, the Administration may defer implementation of the requirements for a period not exceeding 6 years from the date of entry into force of the Convention.

(2) No provision in this Chapter shall prevent the use by a vessel or survival craft in distress of any means at its disposal to attract attention, make known its position and obtain help.

Regulation 129

Terms and definitions

(1) For the purpose of this Chapter the following terms shall have the meanings defined below:

(a) "Radio Regulations" means the Radio Regulations annexed to, or regarded as being annexed to, the International Telecommunication Convention in force.

(b) "Radiotelegraph auto alarm" means an approved automatic alarm receiving apparatus which responds to the radiotelegraph alarm signal.

(c) "Radiotelephone auto alarm" means an approved automatic alarm receiving apparatus which responds to the radiotelephone alarm signal.

(d) "Radio Officer" means a person holding at least a radiocommunication operator's general certificate for the maritime mobile service or a first or second class radiotelegraph operator's certificate complying with the Radio Reguations, who is employed in the radiotelegraph station of a vessel which is provided with such a station in compliance with Regulation 130 or Regulation 131.

(e) "Radio Operator" means a person holding a radiotelegraph operator's special certificate complying with the Radio Regulations.

(f) "Radiotelephone operator" means a person holding an appropriate certificate complying with the Radio Regulations.

(g) "Nuwe installasie" beteken 'n installasie wat in sy geheel op of na die datum van inwerkingtreding van die Konvensie aan boord van 'n vaartuig geïnstalleer is.

(h) "Bestaande installasie" beteken enige installasie wat nie 'n nuwe installasie is nie.

(i) "Myl" beteken 1 852 meter.

(2) "Radiotelefoonstasie", "Radiotelefooninstallasie" en "Waghouding—radiotelefoon" word geag betrekking te hê op die mediumfrekwensieband, tensy uitdruklik anders bepaal.

(3) Alle ander terme wat in hierdie Hoofsuk gebruik word en wat ook in die Radioregulasies omskryf word, het dieselfde betekenis as wat in daardie Regulasies daaraan geheg is.

Regulasies 130

Radiotelegraafstasie

Vaartuie met 'n lengte van 75 meter en meer moet, tensy kragtens Regulasie 132 vrygestel, toegerus wees met 'n radiotelegraafstasie wat aan die bepalings van Regulasies 136 en 137 voldoen.

Regulasie 131

Radiotelefoonstasie

(1) Behoudens paragraaf (2) moet elke vaartuig, tensy kragtens Regulasie 132 vrygestel, toegerus wees met 'n radiotelefoonstasie wat aan Regulasies 142 en 143 voldoen.

(2) In spesiale omstandighede mag die Administrasie eis of toelaat dat 'n vaartuig met een van die volgende radiostasies as 'n alternatief vir die vereistes van paragraaf (1) toegerus word:

(a) In 'n vaartuig met 'n lengte van minder as 75 meter, 'n radiotelegraafstasie wat aan Regulasies 136 en 137 voldoen; of

(b) in 'n vaartuig van enige grootte wat, terwyl dit op see is, binne baie hoëfrekwensie- (BHF-) dekking van kusstasies bly, 'n BHF-radiotelefoonstasie wat aan Regulasie 144 voldoen.

By die oorweging van sulke spesiale omstandighede moet die Administrasie let op die veiligheidstoestande op see, insluitende die maksimum afstand van die vaartuig vanaf die kus, die tydsduur wat die vaartuig op see is, die afwesigheid van algemene seevaartgevare wat waarskynlik teëgekom kan word en die vermoë van die vaartuig om doeltreffend aan die maritieme noodstelsel deel te neem.

Regulasie 132

Vrystellings

(1) In spesiale omstandighede mag die Administrasie 'n volledige, gedeeltelike of voorwardelike vrystelling van die vereistes van Regulasies 130 of 131 aan 'n individuele vaartuig toestaan.

(2) Elke Administrasie moet so gou moontlik na 1 Januarie elke jaar 'n verslag aan die Organisasie voorlê wat al die vrystellings toon wat kragtens paragraaf (1) gedurende die vorige kalenderjaar toegestaan is en die redes daarvoor.

DEEL B—WAGTE

Regulasie 133

Waghouding—radiotelegraaf

(1) 'n Vaartuig wat met 'n radiotelegraafstasie ooreenkomstig Regulasies 130 of 131 (2) (a) toegerus is, moet, terwyl dit op see is, ten minste een radio-offisier of radiobediener hê, en, indien dit nie met 'n radiotelegraaf-outo-alarm toegerus is nie, moet sodanige radio-offisier of radiobediener, behoudens die bepalings van paragraaf (3), onafgebroke waghouding op die radiotelegraafnoodfrekwensie handhaaf deur van kopfone of 'n luidspreker gebruik te maak.

(g) "New installation" means an installation wholly installed on board a vessel on or after the date of entry into force of the Convention.

(h) "Existing installation" means any installation which is not a new installation.

(i) "Mile" means 1 852 metres.

(2) "Radiotelephone station", "Radiotelephone installation" and "Watches—radiotelephone" relate to the Medium Frequency Band, unless expressly provided otherwise.

(3) All other terms which are used in this Chapter and which are also defined in the Radio Regulations shall have the meanings as defined in those Regulations.

Regulation 130

Radiotelegraph station

Vessels of 75 metres in length and over, unless exempted under Regulation 132, shall be fitted with a radiotelegraph station complying with the provisions of Regulations 136 and 137.

Regulation 131

Radiotelephone station

(1) Subject to paragraph (2), every vessel unless exempted under Regulation 132 shall be fitted with a radiotelephone station complying with Regulations 142 and 143.

(2) In special circumstances the Administration may require or permit a vessel to be fitted with one of the following radio stations as an alternative to the requirements of paragraph (1):

(a) In a vessel of less than 75 metres in length a radiotelegraph station complying with Regulations 136 and 137; or

(b) in a vessel of any size which remains, while at sea, within Very High Frequency (VHF) coverage of coast stations, a VHF radiotelephone station complying with Regulation 144.

In considering such special circumstances, the Administration shall have regard to the safety conditions at sea, including the maximum distance of the vessel from shore, the length of time the vessel is at sea, the absence of general navigational hazards likely to be encountered and the ability of the vessel to participate effectively in the maritime distress system.

Regulation 132

Exemptions

(1) In exceptional circumstances, the Administration may grant to an individual vessel a complete, partial or conditional exemption from the requirements of Regulations 130 or 131.

(2) Each Administration shall submit to the Organization as soon as possible after the first of January in each year a report showing all exemptions granted under paragraph (1) during the previous calendar year and the reasons therefor.

PART B—WATCHES

Regulation 133

Watches—Radiotelegraph

(1) A vessel fitted with a radiotelegraph station in accordance with Regulations 130 or 131 (2) (a) shall, while at sea, carry at least one radio officer or radio operator, and, if not fitted with a radiotelegraph auto alarm, such radio officer or radio operator shall, subject to the provisions of paragraph (3), listen continuously on the radiotelegraph distress frequency using headphones or a loudspeaker.

(2) (a) Terwyl 'n vaartuig wat toegerus is met 'n radiotelegraafstasie ooreenkomstig Regulasie 130 en met 'n radiotelegraaf-outo-alarm, op see is, moet 'n radio-offisier wat kopfone of 'n luidspreker gebruik, behoudens die bepalings van paragraaf (3), altesaam minstens agt uur per dag op die radiotelegraafnoodfrekwensie luister.

(b) Terwyl 'n vaartuig met 'n lengte van minder as 75 meter wat met 'n radiotelegraafstasie ooreenkomstig Regulasie 131 (2) (a) en met 'n radiotelegraaf-outo-alarm toegerus is, op see is, moet 'n radio-offisier of 'n radiobediener wat kopfone of 'n luidspreker gebruik, behoudens die bepalings van paragraaf (3), gedurende sodanige periodes as wat deur die Administrasie bepaal word, op die radiotelegraafnoodfrekwensie luister.

(3) (a) Gedurende die periode wanneer 'n radio-offisier of 'n radiobediener by hierdie Regulasie verplig is om op die radiotelegraafnoodfrekensie te luister, mag die radio-offisier of radiobediener ophou om aldus te luister terwyl hy verkeer op ander frekwensies hanteer of wanneer die radio-offisier ander noodsaaklike radiopligte uitvoer, maar slegs indien dit ondoenlik is om deur middel van 'n gedeelde kopfoon of luidspreker te luister. Die luisterwaghouding moet altyd deur 'n radio-offisier of radiobediener wat kopfone of 'n luidspreker gebruik, gehandhaaf word gedurende die stilteperiodes waarvoor daar in die Radioregulasies voorsiening gemaak is. Die term "noodsaaklike radiopligte" van die radio-offisier sluit dringende herstelwerk in van—

(i) radiokommunikasietoerusting vir veiligheidsdoeleindes; en

(ii) radionavigasietoerusting op bevel van die skipper.

(b) Verder mag die radio-offisier op ander vaartuie as multi-radio-offisiervissersvaartuie in uitsonderlike gevalle, d.i. wanneer dit ondoenlik is om met gedeelde kopfone of luidsprekers te luister, op bevel van die skipper ophou luister sodat hy instandhoudingswerk kan uitvoer wat nodig is om ophande synde wanfunksionering te voorkom van—

(i) radiokommunikasietoerusting vir veiligheidsdoeleindes;

(ii) radionavigasietoerusting; en

(iii) ander elektroniese navigasietoerusting, insluitende die herstel daarvan;

Met dien verstande dat—

(iv) die radio-offisier, na goeddunke van die Administrasie, behoorlik gekwalifiseer is om hierdie pligte uit te voer;

(v) 'n ontvangerkieser aangebring word wat aan die vereistes van die Radioregulasies voldoen; en

(vi) die luisterwaghouding altyd deur 'n radio-offisier wat kopfone of 'n luidspreker gebruik, gehandhaaf word gedurende die stilteperiodes waarvoor daar in die Radioregulasies voorsiening gemaak is.

(4) In vaartuie wat met 'n radiotelegraaf-outo-alarm toegerus is, moet hierdie radiotelegraaf-outo-alarm, terwyl die vaartuig op see is, in werking wees wanneer daar nie luisterwaghouding ooreenkomstig paragrawe (2) of (3) gehandhaaf word nie en, wanneer moontlik, gedurende rigtingsoekwerksaamhede.

(5) Die luisterperiodes waarvoor hierdie Regulasie voorsiening maak, insluitende dié bepaal deur die Administrasie, moet verkieslik gehandhaaf word gedurende periodes wat by die Radioregulasies vir die radiotelegraafdiens voorgeskryf word.

(2) (a) While a vessel fitted with a radiotelegraph station in accordance with Regulation 130 and fitted with a radiotelegraph auto alarm is at sea, a radio officer using headphones or a loudspeaker shall, subject to the provisions of paragraph (3), listen on the radiotelegraph distress frequency for at least 8 hours a day in the aggregate.

(b) While a vessel of less than 75 metres in length fitted with a radiotelegraph station in accordance with Regulation 131 (2) (a) and fitted with a radiotelegraph auto alarm is at sea, a radio officer or radio operator using headphones or a loudspeaker shall, subject to the provisions of paragraph (3), listen on the radiotelegraph distress frequency during such periods as may be determined by the Administration.

(3) (a) During the period when a radio officer or radio operator is required by this Regulation to listen on the radiotelegraph distress frequency, the radio officer or radio operator may discontinue such listening during the time when he is handling traffic on other frequencies, or when the radio officer is performing other essential radio duties, but only if it is impracticable to listen by split headphones or loudspeaker. The listening watch shall always be maintained by a radio officer or radio operator using headphones or loudspeaker during the silence periods provided for by the Radio Regulations. The term "essential radio duties" of the radio officer includes urgent repairs of—

(i) equipment for radiocommunication used for safety; and

(ii) radio navigational equipment by order of the skipper.

(b) In addition, on vessels other than multi-radio officer fishing vessels, the radio officer may, in exceptional cases, i.e. when it is impractical to listen by split headphones or loudspeaker, discontinue listening by order of the skipper in order to carry out maintenance required to prevent imminent malfunction of—

(i) equipment for radiocommunication used for safety;

(ii) radio navigational equipment; and

(iii) other electronic navigational equipment including its repair; provided that:

(iv) the radio officer, at the discretion of the Administration, is appropriately qualified to perform these duties;

(v) a receiving selector is fitted which meets the requirements of the Radio Regulations; and

(vi) the listening watch is always maintained by a radio officer using headphones or loudspeaker during the silence periods provided for by the Radio Regulations.

(4) In vessels fitted with a radiotelegraph auto alarm this radiotelegraph auto alarm shall, while the vessel is at sea, be in operation whenever there is no listening watch being maintained under paragraphs (2) or (3) and, whenever practicable, during direction-finding operations.

(5) The listening periods provided for by this Regulation, including those which are determined by the Administration, shall preferably be maintained during periods prescribed for the radiotelegraph service by the Radio Regulations.

Regulasie 134

Waghouding—radiotelefoon

(1) (a) Op 'n vaartuig wat met slegs 'n radiotelefoonstasie ooreenkomstig Regulasie 131 toegerus is, moet, terwyl dit op see is, onafgebroke waghouding vir veiligheidsdoeleindes gehandhaaf word op die radiotelefoonnoodfrekwensie op die plek aan boord van waar die vaartuig gewoonlik genavigeer word, deur middel van 'n radiotelefoonnoodfrekwensiewaghoudingsontvanger wat van 'n luidspreker, 'n gefiltreerde luidspreker of radiotelefoon-outo-alarm gebruik maak.

(b) 'n Vaartuig bedoel in subparagraaf (a), moet radiotelefoonbedieners wat 'n toepaslike sertifikaat vir radiotelefonie hou (wat enige bemanningslid kan wees), soos volg hê:

(i) Vaartuie met 'n lengte van 45 meter of meer, ten minste twee bedieners; en

(ii) vaartuie met 'n lengte van minder as 45 meter, ten minste een bediener.

Indien 'n vaartuig een radiotelefoonbediener het wat uitsluitlik vir pligte in verband met radiotelefonie in diens is, hoef daar nie 'n tweede bediener te wees nie.

(2) Op 'n vaartuig wat met 'n radiotelegraafstasie ooreenkomstig Regulasies 130 of 131 (2) (a) toegerus is, moet, terwyl dit op see is, onafgebroke waghouding gehandhaaf word op die radiotelefoonnoodfrekwensie op 'n plek wat deur die Administrasie bepaal moet word, deur middel van 'n radiotelefoonnoodfrekwensiewaghoudingsontvanger wat van 'n luidspreker, 'n gefiltreerde luidspreker of radiotelefoon-outo-alarm gebruik maak.

Regulasie 135

Waghouding—BHF-radiotelefoon

(1) Op 'n vaartuig wat met 'n BHF-radiotelefoonstasie ooreenkomstig Regulasie 131 (2) (b) toegerus is, moet, terwyl dit op see is, luisterwaghouding gehandhaaf word op die BHF-radiotelefoonnoodfrekwensie, behalwe wanneer die BHF-radiotelefoonstasie met kommunikasie op 'n werkfrekwensie besig is.

(2) Op 'n vaartuig wat toegerus is met 'n BHF-radiotelefoonstasie wat deur 'n Party vereis word om die veiligheid van seevaart in die waters naby sy kus te bevorder, moet luisterwaghouding in die stuurhuis gehandhaaf word vir sodanige periodes en op sodanige kanale as wat deur daardie Party voorgeskryf word.

DEEL C—TEGNIESE VEREISTES

Regulasie 136

Radiotelegraafstasies

(1) Die radiotelegraafstasie moet so geplaas wees dat geen hinderlike steurings van 'n meganiese of ander bron van buite die behoorlike ontvangs van radioseine sal belemmer nie. Die stasie moet so hoog doenlik in die vaartuig geleë wees ten einde die groots moontlike mate van veiligheid te verseker.

(2) Die radiotelegraafbedieningskamer moet groot genoeg en oor voldoende ventilasie beskik sodat die radiotelegraafstasie doeltreffend bedien kan word en mag nie vir enige doel wat die funksionering van die radiotelegraafstasie sal belemmer, gebruik word nie.

(3) Die slaapakkommodasie van ten minste een radiooffisier moet so naby as doenlik aan die radiotelegraaf-bedieningskamer wees.

(4) 'n Doeltreffende tweerigtingstelsel vir oproepe en spraakkommunikasie wat onafhanklik van die hoofkommunikasiestelsel van die vaartuig moet wees, moet voorsien word tussen die radiotelegraafbedieningskamer en die stuurhuis en een ander plek, as daar een is, van waar die vaartuig gestuur word.

Regulation 134

Watches—Radiotelephone

(1) (a) On a vessel fitted only with a radiotelephone station in accordance with Regulation 131, a continuous watch shall, for safety purposes, while at sea, be maintained on the radiotelephone distress frequency in the place on board from which the vessel is usually navigated, by means of a radiotelephone distress frequency watch receiver, using a loudspeaker, a filtered loudspeaker or radiotelephone auto alarm.

(b) A vessel referred to in sub-paragraph (a) shall carry radiotelephone operators holding an appropriate certificate for radiotelephony (who may be any member of the crew) as follows:

(i) Vessels of 45 metres in length and over, at least two operators; and

(ii) vessels of less than 45 metres in length, at least one operator.

If a vessel carries one radiotelephone operator exclusively employed for duties related to radiotelephony, a second operator need not be carried.

(2) On a vessel fitted with a radiotelegraph station in accordance with Regulations 130 or 131 (2) (a) a continuous watch shall be maintained, while at sea, on the radiotelephone distress frequency in a place to be determined by the Administration, by means of a radiotelephone distress frequency watch receiver, using a loudspeaker, a filtered loudspeaker or radiotelephone auto alarm.

Regulation 135

Watches—VHF Radiotelephone

(1) On a vessel fitted with a VHF radiotelephone station, in accordance with Regulation 131 (2) (b), a listening watch shall be maintained, while at sea, on the VHF radiotelephone distress frequency except when the VHF radiotelephone station is engaged in communications on a working frequency.

(2) On a vessel fitted with a VHF radiotelephone station required by a Party in order to promote the safety of navigation in waters near its coast, a listening watch shall be maintained in the wheelhouse for such periods and on such channels as may be prescribed by that Party.

PART C—TECHNICAL REQUIREMENTS

Regulation 136

Radiotelegraph stations

(1) The radiotelegraph station shall be so located that no harmful interference from extraneous mechanical or other noise will be caused to the proper reception of radio signals. The station shall be placed as high in the vessel as is practicable, so that the greatest possible degree of safety may be secured.

(2) The radiotelegraph operating room shall be of sufficient size and of adequate ventilation to enable the radiotelegraph station to be operated efficiently, and shall not be used for any purpose which will interfere with the operation of the radiotelegraph station.

(3) The sleeping accommodation of at least one radio officer shall be situated as near as practicable to the radiotelegraph operating room.

(4) An efficient two-way system for calling and voice communication shall be provided between the radiotelegraph operating room and the wheelhouse and one other place, if any, from which the vessel is navigated and which shall be independent of the main communication system of the vessel.

(5) Die radiotelegraafstasie moet op sodanige plek aangebring word dat dit teen die skadelike gevolge van water of temperatuuruiterstes beskerm sal wees. Dit moet geredelik toeganklik wees vir sowel onmiddellike gebruik in 'n noodgeval as hersteldoeleindes.

(6) 'n Betroubare horlosie met 'n wyserplaat van minstens 125 mm in deursnee en 'n konsentriese sekondewyser, en met 'n voorwerk gemerk met die stilteperiodes voorgeskryf vir die radiotelegraafdiens by die Radioregulasies, moet voorsien word. Dit moet stewig in die radiotelegraafbedieningskamer in so 'n posisie gemonteer wees dat die hele wyserplaat maklik en akkuraat deur die radio-offisier of radiobediener vanaf die radiotelegraafbedieningsposisie en vanaf die posisie vir die toets van die radiotelegraafouto-alarmontvanger waargeneem kan word.

(7) 'n Betroubare noodlig moet in die radiotelegraafbedieningskamer voorsien word wat uit 'n elektriese lamp bestaan wat permanent opgestel is om bevredigende verligting van die bedieningskontroles van die radiotelegraafstasie en van die horlosie by paragraaf (6) vereis, te bied. Hierdie lamp moet, indien dit vanuit die reserwe-energiebron voorsien word, deur tweewegskakelaars beheer word wat naby die hoofingang na die radiotelegraafbedieningskamer en by die radiotelegraafbedieningsposisie geplaas is, tensy die uitleg van die radiotelegraafbedieningskamer dit nie regverdig nie. Hierdie skakelaars moet duidelik geëtiketteer wees om hul doel aan te dui.

(8) Hetsy 'n elektriese inspeksielamp wat op die reserweenergiebron werk en van 'n buigsame leiding van voldoende lengte voorsien is, of 'n flitslig moet voorsien en in die radiotelegraafbedieningskamer gehou word.

(9) Die radiotelegraafstasie moet van sodanige instandhoudingshandboeke, reserwedele, gereedskap en toetsuitrusting voorsien wees as wat nodig is om die radiotelegraafstasie op see in doeltreffende werkende orde te hou. Die toetsuitrusting moet ten minste 'n draagbare multimeter insluit wat wisselstrome en spanning, gelykstrome en spanning, en weerstandwaardes wat waarskynlik teëgekom sal word in die versiening van die stasie, akkuraat kan meet.

(10) Indien 'n afsonderlike noodradiotelegraafbedieningskamer voorsien is, is die vereistes van paragrawe (4), (5), (6), (7) en (8) daarop van toepassing.

Regulasie 137

Radiotelegraafinstallasies

(1) Tensy uitdruklik in hierdie regulasie anders bepaal—

(a) moet die radiotelegraafinstallasie, behalwe in 'n vaartuig wat met 'n reserwe-Medium Frekwensie (MF)-radiotelegraafinstallasie toegerus is, elektries afsonderlik en elektries onafhanklik wees van die radiotelefooninstallasie bedoel in Regulasie 143;

(b) moet die installasie 'n sender, 'n ontvanger en 'n hoofenergiebron insluit;

(c) moet 'n hoofantenne voorsien en aangebring wees en, indien dit tussen stutte hang wat geneig is om te piets, moet dit na behore teen brekasie beskerm word;

(d) moet 'n reserweantenne verskaf word wat volledig vir onmiddellike installasie gemonteer is; en

(e) moet voldoende antennedraad en isolators in alle gevalle voorsien word sodat 'n geskikte lugdraad opgerig kan word.

(2) (a) Die sender moet vinnig met die hoofantenne en die reserweantenne gekoppel en daarop ingestel kan word wanneer dit opgerig is.

(b) Die ontvanger moet vinnig met enige antenne waarmee dit gebruik moet word, gekoppel kan word.

(5) The radiotelegraph station shall be installed in such a position that it will be protected against the harmful effects of water or extremes of temperature. It shall be readily accessible both for immediate use in case of distress and for repair.

(6) A reliable clock with a dial not less than 125 millimetres in diameter and a concentric seconds hand, the face of which is marked to indicate the silence periods prescribed for the radiotelegraph service by the Radio Regulations, shall be provided. It shall be securely mounted in the radiotelegraph operating room in such a position that the entire dial can be easily and accurately observed by the radio officer or radio operator from the radiotelegraph operating position and from the position for testing the radiotelegraph auto alarm receiver.

(7) A reliable emergency light shall be provided in the radiotelegraph operating room, consisting of an electric lamp permanently arranged so as to provide satisfactory illumination of the operating controls of the radiotelegraph station and of the clock required by paragraph (6). This lamp shall, if supplied from the reserve source of energy, be controlled by two-way swithes placed near the main entrance to the radiotelegraph operating room and at the radiotelegraph operating position, unless the layout of the radiotelegraph operating room does not warrant it. These switches shall be clearly labelled to indicate their purpose.

(8) Either an electric inspection lamp, operated from the reserve source of energy and provided with a flexible lead of adequate length, or a flashlight shall be provided and kept in the radiotelegraph operating room.

(9) The radiotelegraph station shall be provided with such maintenance manuals, spare parts, tools and testing equipment as will enable the radiotelegraph station to be maintained in efficient working condition while at sea. The testing equipment shall include at least a portable multimeter capable of accurately measuring alternating currents and voltages, direct currents and voltages, and resistance values likely to be encountered in servicing the station.

(10) If a separate emergency radiotelegraph operating room is provided the requirements of paragraphs (4), (5), (6), (7) and (8) shall apply to it.

Regulation 137

Radiotelegraph installations

(1) Except as otherwise expressly provided in this Regulation—

(a) other than in a vessel fitted with a reserve Medium Frequency (MF) radiotelegraph installation, the radiotelegraph installation shall be electrically separate and electrically independent of the radio-telephone installation referred to in Regulation 143;

(b) the installation shall include a transmitter, a receiver and a main source of energy;

(c) a main antenna shall be provided and installed and, if suspended between supports liable to whipping, shall be suitably protected against breakage;

(d) a spare antenna completely assembled for immediate installation shall be carried; and

(e) sufficient antenna wire and insulators shall in all cases be provided to enable a suitable antenna to be erected.

(2) (a) The transmitter shall be capable of being quickly connected with and tuned to the main antenna and the spare antenna when erected.

(b) The receiver shall be capable of being quickly connected with any antenna with which it is required to be used.

(3) Die sender moet op die radiotelegraafnoodfrekwensie kan uitsend deur van 'n klas uitsending wat in die Radioregulasies vir daardie frekwensie toegewys is, gebruik te maak. Daarbenewens moet die sender op ten minste twee werkfrekwensies van die gemagtigde bande tussen 405 kilohertz en 535 kilohertz kan uitsend deur gebruik te maak van 'n klas uitsending wat in die Radioregulasies vir hierdie frekwensies toegewys is.

(4) Indien gemoduleerde uitsending by die Radioregulasies voorgeskryf word, moet die sender 'n modulasiediepte van minstens 70 persent en 'n toonfrekwensie tussen 450 hertz en 1 350 hertz hê.

(5) Wanneer die sender aan die hoofantenne gekoppel is, moet dit op 500 kilohertz 'n minimum normale bereik hê soos in hierdie paragraaf gespesifiseer, en moet bedags en onder normale toestande en omstandighede duidelik waarneembare seine van skip tot skip oor die volgende minimum normale bereike* kan uitsend:

(a) 150 myl in vaartuie met 'n lengte van 75 meter of meer;

(b) 100 myl in vaartuie met 'n lengte van minder as 75 meter maar 45 meter en meer; en

(c) 50 myl in vaartuie met 'n lengte van minder as 45 meter.

(Duidelik waarneembare seine sal normaalweg ontvang word as die waarde van die wortel van gemiddelde kwadraat van die veldsterkte by die ontvanger ten minste 50 mikrovolt per meter is.)

(6) (a) Die ontvanger moet die radiotelegraafnoodfrekwensie en die klasuitsending wat in die Radioregulasies vir daardie frekwensie toegewys is, kan ontvang.

(b) Daarbenewens moet die ontvanger dit moontlik maak om sodanige van die frekwensies en klasse uitsendings as wat gebruik word vir die uitsending van tydseine, metereologiese berigte en sodanige ander mededelinge betreffende die veiligheid van skeepvaart as wat die Administrasie nodig ag, te ontvang.

(7) Die ontvanger moet voldoende sensitiwiteit hê om seine in kopfone en deur middel van 'n luidspreker voort te bring wanneer die ontvangerinset tot so laag as 50 mikrovolt is.

(8) Terwyl die vaartuig op see is, moet daar te alle tye voldoende elektriese energie beskikbaar wees om die installasie oor die normale bereik wat by paragraaf (5) vereis word, te laat werk, asook om batterye te laai wat deel van die radiotelegraafstasie uitmaak. Die spanning van die kragtoevoer vir die installasie moet, in die geval van nuwe vaartuie, binne ongeveer 10 persent van die aangeslane spanning gehou word. In die geval van bestaande vaartuie moet dit so na moontlik aan die aangeslane spanning gehou word en, indien moontlik, binne ongeveer 10 persent.

(9) Waar 'n reserwe-MF-radiotelegraafinstallasie aangebring is of waar 'n radiotelegraafinstallasie aangebring is as die hoofinstallasie kragtens die bepalings van Regulasie 131 (2) (a), moet 'n reserwe-energiebron wat aan Regulasie 143 (9), (10), (11), (12) voldoen, met voldoende vermoë om die sender en ontvanger ten minste ses uur lank onafgebroke te laat werk, voorsien word.

(10) Terwyl die skip op see is, moet die akkumulatorbatterye daagliks in hulle normale toestand van volle lading gebring word.

* Kyk *Guidance for Determining the Minimum Normal Range of Transmitters* vervat in aanbeveling 10 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

(3) The transmitter shall be capable of transmitting on the radiotelegraph distress frequency using a class of emission assigned by the Radio Regulations for that frequency. In addition, the transmitter shall be capable of transmitting on at least two working frequencies in the authorized bands between 405 kilohertz and 535 kilohertz, using classes of emission assigned by the Radio Regulations for these frequencies.

(4) The transmitter shall, if modulated emission is prescribed by the Radio Regulations, have a depth of modulation of not less than 70 per cent and a note frequency between 450 hertz and 1 350 hertz.

(5) The transmitter shall, when connected to the main antenna, have a minimum normal range on 500 kilohertz as specified in this paragraph and shall be capable of transmitting clearly perceptible signals from ship to ship by day and under normal conditions and circumstances over the following minimum normal ranges*:

(a) 150 miles in vessels of 75 metres in length and over;

(b) 100 miles in vessels of a length of less than 75 metres but of 45 metres and over; and

(c) 50 miles in vessels of less than 45 metres in length.

(Clearly perceptible signals will normally be received if the root mean square value of the field strength at the receiver is at least 50 microvolts per metre.)

(6) (a) The receiver shall be capable of receiving the radiotelegraph distress frequency and the classes of emission assigned by the Radio Regulations for that frequency.

(b) In addition, the receiver shall permit the reception of such of the frequencies and classes of emission used for the transmission of time signals, meteorological messages and such other communications relating to safety of navigation as may be considered necessary by the Administration.

(7) The receiver shall have sufficient sensitivity to produce signals in headphones or by means of a loudspeaker when the receiver input is as low as 50 microvolts.

(8) There shall be available at all times, while the vessel is at sea, a supply of electrical energy sufficient to operate the installation over the normal range required by paragraph (5) as well as for the purpose of charging any batteries forming part of the radiotelegraph station. The voltage of the supply for the installation shall, in the case of new vessels, be maintained within plus or minus 10 per cent of the rated voltage. In the case of existing vessels, it shall be maintained as near the rated voltage as possible and, if practicable, within plus or minus 10 per cent.

(9) Where a reserve MF radiotelegraph installation is fitted or a radiotelegraph installation is fitted as the main installation under the provisions of Regulation 131 (2) (a), a reserve source of energy complying with Regulation 143 (9), (10), (11) and (12), with sufficient capacity to operate the transmitter and receiver for at least 6 hours continuously, shall be provided.

(10) While the vessel is at sea, accumulator batteries shall be brought up to the normal fully charged condition daily.

* See Guidance for Determining the Minimum Normal Range of Transmitters contained in Recommendation 10 of Attachment 3 to the Final Act of the Conference.

(11) Alle stappe moet gedoen word om radiosteurings veroorsaak deur elektriese en ander toestelle aan boord, sover moontlik uit te skakel en te onderdruk. Indien nodig moet stappe gedoen word om te verseker dat die antennes wat aan omroepontvangers gekoppel is, nie die doeltreffende en korrekte werking van die radiotelegraafinstallasie belemmer nie. Besondere aandag moet aan hierdie vereiste by die ontwerp van nuwe vaartuie geskenk word.

(12) Benewens 'n middel om die radiotelegraafalarmsein met die hand uit te send, moet 'n outomatiese radiotelegraafalarmseinsleuteltoestel voorsien word wat in staat is om sleutelskakelings te bewerkstellig ten einde die radiotelegraafalarmsein uit te send. Die toestel moet te enigertyd buite werking gestel kan word ten einde dit moontlik te maak om die sender onmiddellik met die hand te bedien. Indien dit met elektrisiteit werk, moet hierdie sleuteltoestel vanuit die reserwe-energiebron bedien kan word.

(13) Alle uitrusting wat deel van die radiotelegraafstasie uitmaak, moet betroubaar wees en moet so gebou wees dat hulle maklik vir instandhoudingsdoeleindes toeganklik is.

Regulasie 138

Radiotelegraaf-outo-alarms

(1) 'n Radiotelegraaf-outo-alarm moet aan die volgende minimum vereistes voldoen:

(a) By afwesigheid van steuring van enige aard moet dit sonder verstelling met die hand in werking gestel kan word deur enige radiotelegraafalarmsein uitgesend op die radiotelegraafnoodfrekwensie deur enige kusstasie, of enige skip of vaartuig se nood- of oorlewingsvaartuigsender wat ooreenkomstig die Radioregulasies werk, met dien verstande dat die sterkte van die sein by die ontvangerinset sterker as 100 mikrovolt en swakker as 1 volt is.

(b) By afwesigheid van steuring van enige aard moet dit deur òf drie òf vier opeenvolgende strepe in werking gestel word wanneer die strepe in lengte wissel van 3,5 tot so na moontlik aan 6 sekondes en 'n rus in lengte wissel tussen 1,5 sekondes en die laagste moontlike waarde, verkieslik minstens 10 millisekondes.

(c) Dit mag nie deur lugsteurings of enige ander sein as die radiotelegraafalarmsein geaktiveer word nie, met dien verstande dat die ontvange seine nie inderdaad 'n sein uitmaak wat binne die toleransiegrense waarna in subparagraaf (b) verwys is, val nie.

(d) Die kiesskerpte van die radiotelegraaf-outo-alarm moet sodanig wees dat dit 'n feitlik eenvormige sensitiwiteit oor 'n band wat tot minstens 4 kilohertz en hoogstens 8 kilohertz aan elke kant van die radiotelegraafnoodfrekwensie reik, voorsien en buite hierdie band 'n sensitiwiteit toon wat so vinnig moontlik in ooreenstemming met die beste ingenieurspraktyk afneem.

(e) Indien moontlik moet die radiotelegraaf-outo-alarm hom by die aanwesigheid van lugsteurings of steurende seine outomaties instel sodat dit binne 'n redelik kort tyd die toestand nader waarin dit die radiotelegraafalarmsein die maklikste kan onderskei.

(f) Wanneer dit deur 'n radiotelegraafalarmsein in werking gestel is, of in die geval van onklaarraking van die apparaat, moet dit 'n aanhoudende, hoorbare waarskuwing in die radiotelegraafbedieningskamer, in die radio-offisier of radiobediener se slaapakkomodasie en in die stuurhuis laat hoor. Indien moontlik moet 'n waarskuwing ook in die geval van onklaarraking van enige deel van die hele alarmontvangstelsel gegee word. Slegs een skakelaar om die waarskuwing te laat ophou, mag voorsien word en dit moet in die radiotelegraafbedieningskamer wees.

(11) All steps shall be taken to eliminate so far as is possible the causes of, and to suppress, radio interference from electrical and other apparatus on board. If necessary, steps shall be taken to ensure that the antennae attached to broadcast receivers do not cause interference to the efficient or correct working of the radiotelegraph installation. Particular attention shall be paid to this requirement in the design of new vessels.

(12) In addition to a means for manually transmitting the radiotelegraph alarm signal, an automatic radiotelegraph alarm signal keying device shall be provided capable of keying the transmitter so as to transmit the radiotelegraph alarm signal. The device shall be capable of being taken out of operation at any time in order to permit immediate manual operation of the transmitter. If electrically operated, this keying device shall be capable of operation from the reserve source of energy.

(13) All items of equipment forming part of the radiotelegraph station shall be reliable, and shall be so constructed that they are readily accessible for maintenance purposes.

Regulation 138

Radiotelegraph auto alarms

(1) A radiotelegraph auto alarm shall comply with the following minimum requirements:

(a) In the absence of interference of any kind it shall be capable of being actuated, without manual ajustment, by any radiotelegraph alarm signal transmitted on the radiotelegraph distress frequency by any coast station, ship's or vessel's emergency or survival craft transmitter operating in accordance with the Radio Regulations, provided that the strength of the signal at the receiver input is greater than 100 microvolts and less than 1 volt.

(b) In the absence of interference of any kind it shall be actuated by either three or four consecutive dashes when the dashes vary in length from 3,5 to as near 6 seconds as possible and the spaces vary in length between 1,5 seconds and the lowest practicable value, preferably not greater than 10 milliseconds.

(c) It shall not be actuated by atmospherics or by any signal other than the radiotelegraph alarm signal, provided that the received signals do not in fact constitute a signal falling within the tolerance limits referred to in sub-paragraph (b).

(d) The selectivety of the radiotelegraph auto alarm shall be such as to provide a practically uniform sensitivity over a band extending not less than 4 kilohertz and not more than 8 kilohertz on each side of the radiotelegraph distress frequency and to provide outside this band a sensitivity which decreases as rapidly as possible in conformity with the best engineering practice.

(e) If practicable, it shall, in the presence of atmospherics or interfering signals, automatically adjust itself so that within a reasonably short time, it approaches the condition in which it can most readily distinguish the radiotelegraph alarm signal.

(f) When actuated by a radiotelegraph alarm signal, or in the event of failure of the apparatus, it shall cause a continuous audible warning to be given in the radiotelegraph operating room, in the radio officer's or radio operator's sleeping accommodation and in the wheelhouse. If practicable, warning shall also be given in the case of failure of any part of the whole alarm receiving system. Only one switch for stopping the warning shall be provided and this shall be situated in the radiotelegraph operating room.

(g) Vir die doel van gereelde toetsing van die radiotelegraaf-outo-alarm moet die apparaat 'n generator insluit wat vooraf op die radiotelegraafnoodfrekwensie ingestel is, asook 'n sleuteltoestel waarmee 'n radiotelegraafalarmsein van die minimum sterkte aangedui in subparagraaf (a) voortgebring word. Middels moet ook voorsien word om kopfone aan te sluit met die oog daarop om na seine wat op die radiotelegraaf-outo-alarmstelsel ontvang word, te luister.

(h) Dit moet bestand wees teen vibrasies, vogtigheid en temperatuurveranderinge wat gelykstaande is met die strawwe toestande wat aan boord van vaartuie op see ondervind word, en moet onder sulke toestande aanhou funksioneer.

(2) Voordat 'n nuwe tipe radiotelegraaf-outo-alarm goedgekeur word, moet die Administrasie hom deur praktiese toetse wat gedoen word onder werkomstandighede gelykstaande met dié van die praktyk, daarvan vergewis dat die apparaat aan paragraaf (1) voldoen.

(3) Op vaartuie wat met 'n radiotelegraaf-outo-alarm toegerus is, moet die doeltreffendheid van die alarm ten minste een keer elke 24 uur terwyl dit op see is, deur 'n radio-offisier of radiobediener getoets word. As dit nie in werkende toestand is nie, moet die radio-offisier of radiobediener dié feit aan die skipper of offisier op wag rapporteer.

(4) 'n Radio-offisier of radiobediener moet die behoorlike funksionering van die radiotelegraaf-outo-alarmontvanger, gekoppel aan sy normale antenne, van tyt tot tyd nagaan deur te luiser na seine en hulle te vergelyk met soortgelyke seine wat op die radiotelegraafnoodfrekwensie op die hoofinstallasie ontvang word.

(5) Die radiotelegraaf-outo-alarm moet sover doenlik, wanneer dit aan 'n antenne gekoppel is, nie die akkuraatheid van die rigtingsoeker beïnvloed nie.

Regulasie 139

Rigtingsoekers

(1) (a) Die rigtingsoekapparaat wat by Regulasie 153 vereis word, moet doeltreffend wees en in staat wees om seine met die minimum ontvangergeruis te ontvang en om peilings te neem waaruit die ware peiling en rigting bepaal kan word.

(b) Dit moet in staat wees om seine te ontvang op die radiotelegraaffrekwensies wat by die Radioregulasies vir noodseine en rigtingbepaling en vir maritieme radiobakens toegewys is.

(c) By afwesigheid van steuring moet die rigtingsoekapparaat 'n sensitiwiteit hê wat voldoende is om akkurate peilings op 'n sein met 'n veldsterkte van tot so laag as 50 mikrovolt per meter moontlik te maak.

(d) Die rigtingsoekapparaat moet sover doenlik so geleë wees dat doeltreffende peiling so min moontlik deur meganiese of ander geraas belemmer sal word.

(e) Die rigtingsoekantennestelsel moet sover moontlik op so 'n wyse opgerig wees dat die doeltreffende vasstelling van peilings so min moontlik deur die nabyheid van ander antennes, laaibome, hysdrade of ander groot metaalvoorwerpe belemmer sal word.

(f) 'n Doeltreffende tweerigtingmiddel vir oproepe en spraakkommunikasie moet tussen die rigtingsoeker en die stuurhuis voorsien word.

(g) Alle rigtingspeilers moet tot tevredenheid van die Administrasie by eerste installering gekalibreer word. Die kalibrering moet deur kontrolepeilings geverifieer word of deur 'n verdere kalibrering telkens wanneer daar veranderinge aangebring word in die posisie van antennes of van strukture op dek wat die akkuraatheid van die rigtingsoeker

(g) For the purpose of regularly testing the radiotelegraph auto alarm, the apparatus shall include a generator pre-tuned to the radiotelegraph distress frequency and a keying device by means of which a radiotelegraph alarm signal of the minimum strength referred to in sub-paragraph (a) is produced. Means shall also be provided for attaching headphones for the purpose of listening to signals received on the radiotelegraph auto alarm.

(h) It shall be capable of withstanding vibration, humidity and changes of temperature, equivalent to severe conditions experienced on board vessels at sea, and shall continue to operate under such conditions.

(2) Before the new type of radiotelegraph auto alarm is approved, the Administration shall be satisfied, by practical tests made under operating conditions equivalent to those obtaining in practice, that the apparatus complies with paragraph (1).

(3) In vessels fitted with a radiotelegraph auto alarm, its efficiency shall be tested by a radio officer or radio operator at least once every 24 hours while at sea. If it is not in working order, the radio officer or radio operator shall report that fact to the skipper or officer on watch.

(4) A radio officer or radio operator shall periodically check the proper functioning of the radiotelegraph auto alarm receiver, with its normal antenna connected, by listening to signals and by comparing them with similar singals received on the radiotelegraph distress frequency on the main installation.

(5) As far as practicable, the radiotelegraph auto alarm, when connected to an antenna, shall not affect the accuracy of the direction-finder.

Regulation 139

Direction-finders

(1) (a) The direction-finding apparatus required by Regulation 153 shall be efficient and capable of receiving signals with the minimum of receiver noise and of taking bearings from which the true bearing and direction may be determined.

(b) It shall be capable of receiving signals on the radiotelegraph frequencies assigned by the Radio Regulations for the purposes of distress and direction-finding and for maritime radio beacons.

(c) In the absence of interference the direction-finding apparatus shall have a sensitivity sufficient to permit accurate bearings being taken on a signal having a field strength as low as 50 microvolts per metre.

(d) As far as is practicable, the direction-finding apparatus shall be so located that as little interference as possible from mechanial or other noise will be caused to the efficient determination of bearings.

(e) As far as is practicable, the direction-finding antennae system shall be erected in such a manner that the efficient determination of bearings will be hindered as little as possible by the close proximity of other antennae, derricks, wire halyards or other large metal ojbects.

(f) An efficient two-way means of calling and voice communication shall be provided between the direction-finder and the wheelhouse.

(g) All direction-finders shall be calibrated to the satisfaction of the Administration on first installation. The calibration shall be verified by check bearings or by a further calibration whenever any changes are made in the position of any antennae or of any structures on deck which might

merkbaar kan beïnvloed. Die besonderhede van kalibrering moet met tussenpose van 'n jaar of so na moontlik daaraan, gekontroleer word. 'n Register van die kalibrerings en van die kontrolering van hul akkuraatheid moet gehou word.

(2) (a) Die rigtingsoekapparaat en radiotoerusting vir aanpeiling op die radiotelefoonnoodfrekwensie moet in staat wees om op daardie frekwensie ondubbelsinnige rigtingpeilings te neem in 'n boog van 30 grade aan elke kant van die boeg. Die installering en toetsing van hierdie uitrusting moet tot tevredenheid van die Administrasie gedoen word.*

(b) Alle redelike stappe moet gedoen word om die aanpeilingsvermoë te verseker. Waar die aanpeilingsvermoë as gevolg van tegniese probleme nie bereik kan word nie, mag die Administrasie individuele vaartuie van hierdie vereiste vrystel.

Regulasie 140

Radiotelegraafinstallasie wat in motorreddingsbote aangebring moet word

(1) Die radiotelegraafinstallasie vereis by Regulasie 123 moet 'n sender, 'n ontvanger en 'n energiebron insluit. Dit moet so ontwerp wees dat dit in 'n noodgeval deur 'n onopgeleide persoon gebruik kan word.

(2) Die sender moet op die radiotelegraafnoodfrekwensie kan uitsend deur gebruik te maak van 'n klas uitsending wat in die Radioregulasies vir daardie frekwensie toegewys is. Die sender moet ook kan uitsend op die frekwensie, en in die klas uitsending, wat in die Radioregulasies in die bande tussen 4 000 kilohertz en 27 500 kilohertz vir gebruik deur oorlewingsvaartuie toegewys is.

(3) Indien gemoduleerde uitsending by die Radioregulasies voorgeskryf word, moet die sender 'n modulasiediepte van minstens 70 persent en 'n toonfrekwensie tussen 450 hertz en 1 350 hertz hê.

(4) Benewens 'n sleutel vir uitsending met die hand moet die sender met 'n outomatiese sleuteltoestel vir die uitsending van die radiotelegraafalarm- en noodseine toegerus wees.

(5) Die sender moet op die radiotelegraafnoodfrekwensie met behulp van die vaste antenne 'n minimum normale bereik hê van 25 myl, soos in Regulasie 137 (5) gespesifiseer.†

(6) Die ontvanger moet die radiotelegraafnoodfrekwensie en die klasse uitsending wat in die Radioregulasies vir daardie frekwensie toegewys is, kan ontvang.

(7) Die energiebron moet bestaan uit 'n akkumulatorbattery van voldoende vermoë om die sender onder normale werktoestande vier uur lank onafgebroke te voorsien. Indien die battery van 'n tipe is wat gelaai moet word, moet middels vir die laai daarvan vanaf die vaartuig se kragbron beskikbaar wees. Verder moet daar 'n middel wees om dit te laai nadat die reddingsboot te water gelaat is.

(8) Wanneer die krag vir die radiotelegraafinstallasie en vir die soeklig wat by Regulasie 123 vereis word, vanaf dieselfde battery verkry word, moet daardie battery voldoende vermoë hê om die addisionele krag vir die soeklig te voorsien.

(9) 'n Antenne van die vaste tipe moet saam met middels om dit op die maksimum moontlike hoogte te steun, voorsien word. Indien moontlik, moet daar verder 'n antenne wat deur 'n vlieër of ballon gedra word, voorsien word.

* Sien die betrokke Aanbeveling van die International Radio Consultative Committee (CCIR)

† Kyk *Guidance for Determining the Minimum Normal Range of Transmitters*, vervat in Aanbeveling 10 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

affect appreciably the accuracy of the direction-finder. The calibration particulars shall be checked at yearly intervals, or as near thereto as possible. A record shall be kept of the calibrations and of the checks made of their accuracy.

(2) (a) The direction-finding apparatus and radio equipment for homing on the radiotelephone distress frequency shall be capable of taking direction-finding bearings on that frequency without ambiguity of sense within an arc of 30 degrees on either side of the bow. Installation and testing of this equipment shall be to the satisfaction of the Administration.*

(b) All reasonable steps shall be taken to ensure the homing capability. Where due to technical difficulties the homing capability cannot be achieved, the Administration may exempt individual vessels from this requirement.

Regulation 140

Radiotelegraph installation for fitting in motor lifeboats

(1) The radiotelegraph installation required by Regulation 123 shall include a transmitter, a receiver and a source of energy. It shall be so designed that it can be used in an emergency by an unskilled person.

(2) The transmitter shall be capable of transmitting on the radiotelegraph distress frequency using a class of emission assigned by the Radio Regulations for that frequency. The transmitter shall also be capable of transmitting on the frequency, and of using a class of emission, assigned by the Radio Regulations for use by survival craft in the bands between 4 000 kilohertz and 27 500 kilohertz.

(3) The transmitter shall, if modulated emission is prescribed by the Radio Regulations, have a depth of modulation of not less than 70 per cent and a note frequency between 450 hertz and 1 350 hertz.

(4) In addition to a key for manual transmissions the transmitter shall be fitted with an automatic keying device for the transmission of the radiotelegraph alarm and distress signals.

(5) On the radiotelegraph distress frequency the transmitter shall have a minimum normal range as specified in Regulation 137 (5) of 25 miles using the fixed antenna.†

(6) The receiver shall be capable of receiving the radiotelegraph distress frequency and the classes of emission assigned by the Radio Regulations for that frequency.

(7) The source of energy shall consist of an accumulator battery with sufficient capacity to supply the transmitter for four hours continuously under normal working conditions. If the battery is of a type that requires charging, means shall be available for charging it from the vessel's power supply. In addition there shall be a means for charging it after the lifeboat has been launched.

(8) When the power for the radiotelegraph installation and the searchlight required by Regulation 123 are drawn from the same battery, it shall have sufficient capacity to provide for the additional load of the searchlight.

(9) A fixed-type antenna shall be provided together with means for supporting it at the maximum practicable height. In addition an antenna supported by a kite or balloon shall be provided if practicable.

* See the relevant Recommendation of the International Radio Consultative Committee (CCIR).

† See Guidance for Determining the Minimum Normal Range of Transmitters contained in Recommendation 10 of Attachment 3 to the Final Act of the Conference.

(10) Op see moet 'n radio-offisier weekliks die sender toets deur van 'n geskikte kunsantenne gebruik te maak, en hy moet die battery ten volle laai indien dit 'n tipe is wat gelaai moet word.

Regulasie 141

Draagbare radio-apparaat vir oorlewingsvaartuie en nood-posisieaanduidingradiobaken (EPIRB)

Die Administrasie moet die tegniese kriteria, onderhoud en toetse vir die draagbare sender/ontvanger en nood-posisieaanduidingradiobaken vereis by Regulasie 122 voorskryf.

Regulasie 142

Radiotelefoonstasies

(1) Die radiotelefoonstasie moet in die boonste deel van die vaartuig wees en so geleë wees dat dit in die grootste moontlike mate beskut is teen geraas wat die korrekte ontvangs van boodskappe en seine kan belemmer.

(2) Daar moet doeltreffende kommunikasie tussen die radiotelefoonstasie en die stuurhuis wees.

(3) 'n Betroubare horlosie met 'n wyserplaat van minstens 125 millimeter in deursnee en gemerk met die stiltepériodes voorgeskryf vir die radiotelefoondiens by die Radioregulasies, moet voorsien word. Dit moet stewig gemonteer word in so 'n posisie dat die hele wyserplaat maklik en akkuraat deur die bediener waargeneem kan word.

(4) 'n Instruksiekaart wat 'n duidelike opsomming van die radiotelefoonnoodprosedure gee, moet vertoon word waar dit goed vanaf die radiotelefoonbedieningsposisie gesien kan word.

(5) 'n Betroubare noodlig, onafhanklik van die stelsel wat die normale verligting van die radiotelefooninstallasie verskaf en permanent so opgestel dat dit genoegsame verligting van die bedieningskontroles van die radiotelefooninstallasie, die horlosie en die instruksiekaart bied, moet voorsien word.

(6) Waar 'n ernergiebron uit 'n battery of batterye bestaan, moet die radiotelefoonstasie toegerus wees met 'n middel om die ladingstoestand te bepaal.

Regulasie 143

Radiotelefooninstallasies

(1) Die radiotelefooninstallasie moet uitsendings- en ontvangstoerusting en geskikte energiebronne (waarna in hierdie Regulasie as onderskeidelik "die sender", "die ontvanger", "die radiotelefoonnoodfrekwensiewaghoudingsontvanger" en "die energiebron" verwys word) insluit.

(2) Die sender moet op die radiotelefoonnoodfrekwensie kan uitsend en op ten minste een ander frekwensie in die bande tussen 1 605 kilohertz en 2 850 kilohertz deur van die klasse uitsending wat by die Radioregulasies vir hierdie frekwensies toegewys is, gebruik te maak. Tydens normale funksionering moet 'n dubbelsybanduitsending of 'n enkelsybanduitsending met volle draer (d.i. A3H) 'n modulasiediepte van ten minste 70 persent by spitsintensiteit hê. Modulasie van 'n enkelsybanduitsending met verminderde of onderdrukte draer (A3A, A3J) moet sodanig wees dat die ongewenste uitsending nie die waardes wat in die Radioregulasies gegee word, oorskry nie.

(10) At sea a radio officer shall at weekly intervals test the transmitter using a suitable artificial antenna, and shall bring the battery up to full charge if it is of a type which requires charging.

Regulation 141

Portable radio apparatus for survival craft and emergency position-indicating radio beacon (EPIRB)

The Administration shall prescribe the technical criteria, maintenance and tests for the portable transmitter/receiver and emergency position indicating radio beacon, required by Regulation 122.

Regulation 142

Radiotelephone stations

(1) The radiotelephone station shall be placed in the upper part of the vessel and so located that it is sheltered to the greatest possible extent from noise which might impair the correct reception of messages and signals.

(2) There shall be efficient communication between the radiotelepnone station and the wheelhouse.

(3) A reliable clock with a dial not less than 125 millimetres in diameter, the face of which is marked to indicate the silence periods prescribed for the radiotelephone service by the Radio Regulations, shall be provided. It shall be securely mounted in such a position that the entire dial can be easily and accurately observed by the operator.

(4) A card of instructions giving a clear summary of the radiotelephone distress procedure shall be displayed in full view of the radiotelephone operating position.

(5) A reliable emergency light shall be provided, independent of the system which supplies the normal lighting of the radiotelephone installation and permanently arranged so as to be capable of providing adequate illumination of the operating controls of the radiotelephone installation, the clock and the card of instructions.

(6) Where a source of energy consists of a battery or batteries, the radiotelephone station shall be provided with a means of assessing the charge condition.

Regulation 143

Radiotelephone installations

(1) The radiotelephone installation shall include transmitting and receiving equipment and appropriate sources of energy (referred to in this Regulation as the transmitter, the receiver, the radiotelephone distress frequency watch receiver, and the source of energy respectively).

(2) The transmitter shall be capable of transmitting on the radiotelephone distress frequency and on at least one other frequency in the bands between 1 605 kilohertz and 2 850 kilohertz, using the classes of emission assigned by the Radio Regulations for these frequencies. In normal operation a double sideband transmission or a single sideband transmission with full carrier (i.e. A3H) shall have a depth of modulation of at least 70 per cent at peak intensity. Modulation of a single sideband transmission with reduced or suppressed carrier (A3A, A3J) shall be such that the unwanted emission shall not exceed the values given in the Radio Regulations.

(3) (a) In vaartuie met 'n lengte van 45 meter en meer moet die sender 'n minimum normale bereik van 150 myl hê en bedags en onder normale toestande en omstandighede duidelik waarneembare seine van skip tot skip oor hierdie bereik kan oorsend.* (Duidelik waarneembare seine sal normaalweg ontvang word as die waarde van die wortel van gemiddelde kwadraat van die veldsterkte wat by die ontvanger gelewer word deur 'n ongemoduleerde draer, ten minste 25 mikrovolt per meter vir A3- en A3H-uitsendings is.)

(b) In vaartuie met 'n lengte van minder as 45 meter moet die sender 'n krag in die antenne van ten minste 15 watt vir A3-uitsending of 60 watt vir A3H-uitsending lewer. In elke geval moet die sender 'n minimum normale bereik van ten minste 75 myl hê.

(4) Die sender moet toegerus wees met 'n toestel vir die ontwikkeling van die radiotelefoonalarmsein deur outomatiese middels wat so ontwerp is dat dit nie per abuis in werking gestel kan word nie. Die toestel moet te enigertyd uit werking gehaal kan word om die onmiddellike uitsending van 'n noodboodskap moontlik te maak. Reëlings moet getref word om periodiek die behoorlike funksionering van die toestel op ander frekwensies as die radiotelefoonnoodfrekwensie na te gaan met behulp van 'n geskikte kunsantenne.

(5) Die toestel vereis by paragraaf (4) moet aan die volgende vereistes voldoen:

(a) Die frekwensie van die toleransie van elke toon moet ongeveer 1,5 persent wees;

(b) die toleransie op die duur van elke toon moet ongeveer 50 millisekondes wees;

(c) die interval tussen opeenvolgende tone mag nie 50 millisekondes oorskry nie; en

(d) die verhouding van die amplitude van die sterker toon tot dié van die swakker toon moet binne die bestek van 1 tot 1,2 wees.

(6) Die ontvanger vereis by paragraaf (1) moet die radiotelefoonnoodfrekwensie en ten minste een ander frekwensie wat vir maritieme radiotelefoonstasies in bande tussen 1 605 kilohertz en 2 850 kilohertz beskikbaar is, kan ontvang deur die klasse uitsending wat in die Radioregulasies vir hierdie frekwensie toegewys is, te gebruik. Daarbenewens moet die ontvanger, deur van die klasse uitsending wat in die Radioregulasies toegewys is, gebruik te maak, die ontvangs van sodanige ander frekwensies moontlik maak as wat gebruik word vir die uisending deur radiotelefonie van metereologiese berigte en sodanige ander mededelings in verband met veiligheid van skeepvaart as wat die Administrasie nodig ag. Die ontvanger moet sensitiwiteit hê om seine deur middel van 'n luidspreker voort te bring wanneer die ontvangerinset tot so laag as 50 mikrovolt is.

(7) Die radiotelefoonnoodfrekwensiewaghoudingsontvanger moet vooraf op hierdie frekwensie ingestel wees. Dit moet van 'n filtreereenheid of 'n toestel wat die luidspreker stil maak, voorsien word in die afwesigheid van 'n radiotelefoonalarmsein. Die toestel moet maklik in- en uitgeskakel kan word en mag gebruik word wanneer toestande na die oordeel van die skipper sodanig is dat die handhawing van luisterwaghouding die veilige navigasie van die vaartuig sal belemmer.

(8) Om vinnige oorskakeling van uitsending na ontvangs moontlik te maak wanneer handskakeling gebruik word, moet die kontrole vir die skakeltoestel, waar doenlik, op die mikrofoon of die handtelefoon aangebring wees.

* Kyk *Guidance for Determining the Minimum Normal Range of Transmitters*, vervat in Aanbeveling 10 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

(3) (a) In vessels of 45 metres in length and over, the transmitter shall have a minimum normal range of 150 miles and shall be capable of transmitting clearly perceptible signals from ship to ship by day and under normal conditions and circumstances over this range.* (Clearly perceptible signals will normally be received if the root mean square value of the field strength produced at the receiver by an unmodulated carrier is at least 25 microvolts per metre for A3 and A3H emissions.)

(b) In vessels of less than 45 metres in length the transmitter shall produce a power in the antenna of at least 15 watts for A3 emission or 60 watts for A3H emission. In any case the transmitter shall have a minimum normal range of at least 75 miles.

(4) The transmitter shall be fitted with a device for generating the radiotelephone alarm signal by automatic means so designed as to prevent actuation by mistake. The device shall be capable of being taken out of operation at any time in order to permit the immediate transmission of a distress message. Arrangements shall be made to check periodically the proper functioning of the device on frequencies other than the radiotelephone distress frequency using a suitable artificial antenna.

(5) The device required by paragraph (4) shall comply with the following requirements:

(a) The tolerance of the frequency of each tone shall be plus or minus 1,5 per cent;

(b) the tolerance on the duration of each tone shall be plus or minus 50 milliseconds;

(c) the interval between successive tones shall not exceed 50 milliseconds; and

(d) the ratio of the amplitude of the stronger tone to that of the weaker shall be within the range of 1 to 1.2.

(6) The receiver required by paragraph (1) shall be capable of receiving the radiotelephone distress frequency and at least one other frequency available for maritime radiotelephone stations in the bands between 1 605 kilohertz and 2 850 kilohertz, using the classes of emission assigned by the Radio Regulations for these frequencies. In addition the receiver shall permit the reception of such other frequencies, using the classes of emission assigned by the Radio Regulations, as are used for the transmission by radiotelephony of meteorological messages and such other communications relating to the safety of navigation as may be considered necessary by the Administration. The receiver shall have sufficient sensitivity to produce signals by means of a loudspeaker when the receiver input is as low as 50 microvolts.

(7) The radiotelephone distress frequency watch receiver shall be pre-set to this frequency. It shall be provided with a filtering unit or a device to silence the loudspeaker in the absence of a radiotelephone alarm signal. The device shall be capable of being easily switched in and out and may be used when, in the opinion of the skipper, conditions are such that maintenance of the listening watch would interfere with the safe navigation of the vessel.

(8) To permit rapid change-over from transmission to reception when manual switching is used, the control for the switching device shall, where practicable, be located on the microphone or the telephone handset.

* See Guidance for Determining the Minimum Normal Range of Transmitters contained in Recommendation 10 of Attachment 3 of the Final Act to the Conference.

(9) (a) Terwyl die vaartuig op see is moet daar te alle tye 'n hoofengergiebron wees wat voldoende is om die installasie oor die normale bereik vereis by paragraaf (3) te laat werk.

(b) 'n Reserwe-energiebron moet—

(i) in vaartuie met 'n lengte van 45 meter of meer in die boonste deel van die vaartuig aangebring word; en

(ii) in vaartuie met 'n lengte van minder as 45 meter so hoog doenlik aangebring word,

en dit moet in alle omstandighede voldoende vermoë hê om die sender en ontvanger ten minste ses uur lank onafgebroke in normale werktoestande te laat werk.*

(c) Indien die reserwe-energiebron verskeie van die radio-installasies genoem in paragraaf (10) voorsien, moet die vermoë daarvan voldoende wees om die sender en ontvanger van hierdie installasies onafgebroke en gelyktydig ten minste ses uur lank te laat werk, tensy skakeltuig die selektiewe bediening van die radio-installasies toelaat.

(d) Die reserwe-energiebron mag ook as die hoofenergiebron gebruik word mits die wyse van installasie en gebruik sodanig is dat hierdie vereiste te alle tye wanneer die vaartuig op see is, nagekom word.

(e) 'n Reserwe-energiebron word nie vir die radiotelefooninstallasie vereis indien 'n reserwe-mediumfrekwensieradiotelegraafinstallasie met 'n reserwe-energiebron aangebring is nie.

(10) Die reserwe-energiebron moet gebruik word om alleen die volgende te voorsien:

(a) Die radiotelefooninstallasie;

(b) die radiotelegraafinstallasie of die reserweradiotelegraafinstallasie, insluitende die radiotelegraaf-outoalarm en die toestel vereis by Regulasie 137 (12) vir die sleuteling van radiotelegraafalarmseine, indien dit met elektrisiteit werk;

(c) die BHF-installasie;

(d) die noodlig vereis by Regulasie 142 (5); en

(e) die toestel vereis by paragraaf (4) om die radiotelefoonalarmsein te ontwikkel.

(11) Nieteenstaande die bepalings van paragraaf (10) mag die Administrasie die gebruik van die reserwe-energiebron vir 'n rigtingsoeker, indien aangebring, magtig, asook vir 'n aantal laevermoë-noodbane wat geheel en al tot die boonste deel van die vaartuig beperk is, soos noodverligting op die inskepingstasie vir oorleweringsvaartuie, op voorwaarde dat die addisionele ladings maklik ontkoppel kan word en dat die energiebron genoegsame vermoë het om dit te dra.

(12) Terwyl die vaartuig op see is, moet enige battery wat voorsien is, gelaai gehou word ten einde aan die vereistes van paragraaf (9) te voldoen en dit moet in elk geval binne 'n periode van 16 uur tot 'n ten volle gelaaide toestand gebring kan word.

(13) 'n Antenne moet voorsien en aangebring wees en, indien dit tussen stutte hang wat geneig is om te piets, moet dit teen brekasie beskerm word. Daarbenewens moet daar 'n reserwe-antenne aan boord wees wat volledig vir onmiddellike vervanging gemonteer is of, waar dit nie doenlik is nie, voldoende antennedraad en isolators om 'n reserweantenne te kan oprig. Die nodige gereedskap om 'n antenne op te rig, moet ook voorsien word.

* Kyk *Guidance for Determining the Electrical Load of the Reserve Source of Energy of Radio Installations*, vervat in Aanbeveling 11 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

(9) (a) While the vessel is at sea, there shall be available at all times a main source of energy sufficient to operate the installation over the normal range required in paragraph (3).

(b) A reserve source of energy shall be provided—

(i) in the upper part of vessels of 45 metres in length and over; and

(ii) in a position as high as practicable in vessels of less than 45 metres in length,

which under all circumstances shall have sufficient capacity to operate the transmitter and receiver for at least 6 hours continuously under normal working conditions.*

(c) If the reserve source of energy supplies several of the radio installations mentioned in paragraph (10) its capacity shall be sufficient to operate the transmitter and receiver of these installations continuously and simultaneously for at least 6 hours unless one switchgear permits the selective operation of the radio installations.

(d) The reserve source of energy may also be used as the main source of energy, provided that the manner of installation and use is such that these requirements are met at all times when the vessel is at sea.

(e) A reserve source of energy is not required for the radiotelephone installation if a reserve medium frequency radiotelegraph installation with a reserve source of energy is fitted.

(10) The reserve source of energy shall be used to supply only—

(a) the radiotelephone installation:

(b) the radiotelegraph installation or the reserve radiotelegraph installation, including the radiotelegraph auto alarm and the device required by Regulation 137 (12) for keying radiotelegraph alarm signals if electrically operated;

(c) the VHF installation;

(d) the emergency light required by Regulation 142 (5); and

(e) the device required by paragraph (4) for generating the radiotelephone alarm signal.

(11) Notwithstanding the provisions of paragraph (10), the Administration may authorize the use of the reserve source of energy for a direction-finder, if fitted, and for a number of low-power emergency circuits which are wholly confined to the upper part of the vessel such as emergency lighting on the embarkation station for survival craft, on condition that the additional loads can be readily disconnected, and that the source of energy is of sufficient capacity to carry them.

(12) While the vessel is at sea, any battery provided shall be kept charged so as to meet the requirements of paragraph (9) and in any case shall be capable of being brought to a fully charged state within a period of 16 hours.

(13) An antenna shall be provided and installed and, if suspended between supports liable to whipping, shall be protected against breakage. In addition, a spare antenna shall be carried on board completely assembled for immidiate replacement or, where this is not practicable, sufficient antenna wire and insulators to enable a spare antenna to be erected. The necessary tools to erect an antenna shall also be provided.

* See Guidance for Determining the Electrical Load of the Reserve Source of Energy of Radio Installations contained in Recommendation 11 of Attachment 3 to the Final Act of the Conference.

Regulasie 144

BHF-radiotelefoonstasies

(1) Wanneer 'n BHF-radiotelefoonstasie voorsien word, moet dit 'n permanente installasie wees wat in die boonste deel van die vaartuig geleë is, en 'n BHF-radiotelefooninstallasie insluit wat aan die bepalings van hierdie Regulasie voldoen en bestaan uit 'n sender en ontvanger, 'n kragbron wat hulle teen hul aangeslane kragpeile in werking kan stel, en 'n antenne wat vir die doeltreffende uitstraal en ontvang van seine op die werkfrekwensie geskik is.

(2) So 'n BHF-installasie moet voldoen aan die vereistes gestel in die Radioregulasies vir toerusting wat in die Maritieme Mobiele BHF- Internasionale Radiotelefoondiens gebruik word en moet op die kanale gespesifiseer in die Radioregulasies en soos vereis deur die betrokke Administrasie kan werk.

(3) Die senderradiofrekwensiedraerkraglewering moet ten minste 10 watt wees wat tot 1 watt verminder moet kan word. Die antenne moet sover doenlik sonder obstruksie in alle rigtings wees.*

(4) Beheer van die BHF-kanale wat vir seevaartveiligheid vereis word, moet onmiddellik en gerieflik in die stuurhuis by die kommandoposisie beskikbaar wees, en waar nodig moet daar ook fasiliteite beskikbaar wees om radiokommunikasie van die vleuels van die stuurhuis af moontlik te maak.

(5) Waar 'n BHF-radiotelefoonstasie as die hoofsinstallasie kragtens die bepalings van Regulasie 131 (2) (b) aangebring is, moet 'n reserwe-energiebron voorsien word wat aan Regulasie 143 (9), (10), (11) en (12) voldoen, met voldoende vermoë om die sender en ontvanger ten minste ses uur lank onafgebroke te laat werk.

Regulasie 145

Radiotelefoon-outo-alarms

(1) Die radiotelefoon-outo-alarm moet aan die volgende minimum vereistes voldoen:

(a) Die frekwensies van maksimum respons van die ingestemde kringe en ander toonseleksietoestelle moet aan 'n toleransie van ongeveer 1,5 persent van elke geval onderhewig wees, en die respons mag nie onder 50 persent van die maksimum respons vir frekwensies binne 3 persent van die frekwensie van maksimum respons val nie;

(b) by afwesigheid van ruis en steuring moet die outomatiese ontvangstoerusting vanaf die alarmsein kan werk binne 'n periode van minstens 4 en hoogstens 6 sekondes;

(c) die outomatiese ontvangstoerusting moet op die alarmsein reageer onder toestande van onderbroke steuring wat deur atmosferiese steurings en ander kragtige seine as die alarmsein veroorsaak word, verkieslik sonder dat enige handverstelling tydens enige waghoudingsperiode wat deur die toerusting gehandhaaf word, vereis word;

(d) die outomatiese ontvangstoerusting mag nie deur atmosferiese steurings of deur ander kragtige seine as die alarmsein in werking gestel word nie;

(e) die outomatiese ontvangstoerusting moet tot buite die bestek waarbinne spraakoorsending bevredigend is, doeltreffend wees;

* Sien *Guidance on Transmitter Radio Frequency Power and Receiver Sensitivity of VHF Radiotelephone Installations*, vervat in Aanbeveling 12 van Bylae 3 van die Sluitingsoorkonde van die Konferensie.

Regulation 144

VHF radiotelephone stations

(1) When a VHF radiotelephone station is provided it shall be a permanent installation situated in the upper part of the vessel and include a VHF radiotelephone installation complying with the provisions of this Regulation and comprising a transmitter and receiver, a source of power capable of actuating them at their rated power levels, and an antenna suitable for efficiently radiating and receiving signals at the operating frequencies.

(2) Such a VHF installation shall conform to the requirements laid down in the Radio Regulations for equipment used in the Maritime Mobile VHF International Radiotelephone Service and shall be capable of operation on those channels specified by the Radio Regulations and as may be required by the Administration concerned.

(3) The transmitter radio frequency carrier power output shall be at least 10 watts with a reduction capability to 1 watt. The antenna shall, as far as is practicable, have an unobstructed view in all directions.*

(4) Control of the VHF channels required for navigational safety shall be immediately available in the wheelhouse convenient to the conning position and, where necessary, facilities shall also be available to permit radiocommunications from the wings of the wheelhouse.

(5) Where a VHF radiotelephone station is fitted as the main installation under the provisions of Regulation 131 (2) (b), a reserve source of energy shall be provided complying with Regulation 143 (9), (10) (11) and (12) with sufficient capacity to operate the transmitter and receiver for at least 6 hours continuously.

Regulation 145

Radiotelephone auto alarms

(1) The radiotelephone auto alarm shall comply with the following minimum requirements:

(a) The frequencies of maximum response of the tuned circuits, and other tone selecting devices, shall be subject to a tolerance of plus or minus 1.5 per cent of each instance; and the response shall not fall below 50 per cent of the maximum response for frequencies within 3 per cent of the frequency of maximum response;

(b) in the absence of noise and interference, the automatic receiving equipment shall be capable of operating from the alarm signal in a period of not less than 4 and not more than 6 seconds;

(c) the automatic receiving equipment shall respond to the alarm signal under conditions of intermittent interference caused by atmospherics and powerful signals other than the alarm signal, preferably without any manual adjustment being required during any period of watch maintained by the equipment;

(d) the automatic receiving equipment shall not be actuated by atmospherics or by powerful signals other than the alarm signal;

(e) the automatic receiving equipment shall be effective beyond the range at which speech transmission is satisfactory;

* See Guidance on Transmitter Radio Frequency Power and Receiver Sensitivity of VHF Radiotelephone Installations contained in recommendation 12 of Attachment 3 of the Final Act to the Conference.

(f) outomatiese ontvangstoerusting moet vibrasie, humiditeit, temperatuursveranderinge en wisselinge in kragtoevoerspanning gelykstaande met die strawwe toestande wat aan boord van vaartuie op see ondervind word, kan weestaan, en moet onder sulke toestande kan aanhou funksioneer; en

(g) die outomatiese ontvangstoerusting moet sover doenlik 'n waarskuwing gee wanneer daar foute is wat kan voorkom dat die apparaat sy normale funksie verrig tydens waghouding.

(2) Voordat 'n nuwe tipe radiotelefoon-outo-alarm goedgekeur word, moet die Administrasie hom deur praktiese toetse onder werktoestande gelykstaande met dié van die praktyk vergewis dat die apparaat aan paragraaf (1) voldoen.

DEEL D—RADIOLOGBOEKE

Regulasie 146

Radiologboeke

(1) Die radiologboek (dagboek van die radiodiens) wat by die Radioregulasies vereis word vir 'n vaartuig wat met 'n radiotelegraafstasie ooreenkomstig Regulasies 130 of 131 (2) (a) toegerus is, moet op see in die radiotelegraafbedieningskamer gehou word. Elke radioa-offisier of radiobediener moet sy naam, die tye waarop hy op wag gaan en van wag af kom, en alle insidente in verband met die radiodiens wat tydens sy wag voorkom en wat van belang lyk vir die veiligheid van menselewens op see, opteken. Daarbenewens moet die volgende in die logboek opgeteken word:

(a) Die besonderhede wat by die Radioregulasies vereis word;

(b) besonderhede van die onderhoud van die batterye, insluitende 'n rekord van die laai daarvan, in sodanige vorm as wat die Administrasie voorskryf;

(c) 'n daaglikse verklaring in verband met die nakoming van Regulasie 137 (10);

(d) in vaartuie wat met 'n radiotelegraaf-outo-alarm toegerus is, besonderhede van toetse wat ingevolge Regulasie 138 (3) gedoen is;

(e) besonderhede van die onderhoud van die batterye, insluitende 'n rekord van die laai daarvan (indien van toepassing) vereis by Regulasie 140 (10), en besonderhede van die toetse vereis by daardie paragraaf ten opsigte van die senders wat in motorreddingsbote aangebring is;

(f) besonderhede van die onderhoud en toets van draagbare radio-apparaat vir oorlewingsvaartuie en EPIRB's wat die Administrasie vereis ooreenkomstig Regulasie 141; en

(g) die tyd waarop luisterwaghouding ooreekomstig Regulasie 133 (3) gestaak word, tesame met die rede daarvoor, en die tyd waarop luisterwaghouding hervat word.

(2) Die radiologboek vereis by die Radioregulasies vir 'n vaartuig wat met 'n radiotelefoonstasie ooreenkomstig Regulasie 131 toegerus is, moet gehou word op die plek waar luisterwaghouding gehandhaaf word. Elke gekwalifiseerde bediener en elke bemanningslid wat luisterwaghouding ooreenkomstig Regulasie 134 uitvoer, moet, tesame met sy naam, die besonderhede van alle insidente in verband met die radiodiens wat tydens sy wag voorkom en wat van belang lyk vir die veiligheid van menselewens op see, in die logboek opteken. Verder moet die volgende in die logboek opgeteken word:

(a) die besonderhede wat by die Radioregulasies vereis word;

(f) automatic receiving equipment shall be capable of withstanding vibration, humidity, changes of temperature and variations in power supply voltage equivalent to the severe conditions experienced on board vessels at sea, and shall continue to operate under such conditions; and

(g) the automatic receiving equipment shall, as far as practicable, give warning of faults that would prevent the apparatus from performing its normal functions during watch hours.

(2) Before a new type of radiotelephone auto alarm is approved, the Administration shall be satisfied by practical tests, made under operating conditions equivalent to those obtained in practice, that the apparatus complies with paragraph (1).

PART D—RADIO LOGS

Regulation 146

Radio logs

(1) The radio log (diary of the radio service) required by the Radio Regulations for a vessel which is fitted with a radiotelegraph station in accordance with Regulations 130 or 131 (2) (a) shall be kept in the radiotelegraph operating room while at sea. Every radio officer or radio operator shall enter in the log his name, the times at which he goes on and off watch, and all incidents connected with the radio service which occur during his watch which may appear to be of importance to safety of life at sea. In addition, there shall be entered in the log—

(a) the details required by the Radio Regulations;

(b) details of the maintenance, including a record of the charging of the batteries, in such form as may be prescribed by the Administration;

(c) a daily statement with regard to the fulfilment of Regulation 137 (10);

(d) in vessels fitted with a radiotelegraph auto alarm, details of tests made under Regulation 138 (3);

(e) details of the maintenance of the batteries, including a record of the charging (if applicable) required by Regulation 140 (10), and details of the tests required by that paragraph in respect of the transmitters fitted in motor lifeboats;

(f) details of the maintenance and tests of portable radio apparatus for survival craft and EPIRB required by the Administration in accordance with Regulation 141; and

(g) the time at which the listening watch is discontinued in accordance with Regulation 133 (3) together with the reason and the time at which the listening watch is resumed.

(2) The radio log required by the Radio Regulations for a vessel which is fitted with a radiotelephone station in accordance with Regulation 131 shall be kept at the place where the listening watch is maintained. Every qualified operator and every crew member carrying out a listening watch in accordance with Regulation 134 shall enter in the log, with his name, the details of all incidents connected with the radio service which occur during this watch which may appear to be of importance to safety of life at sea. In addition, there shall be entered in the log—

(a) the details required by the Radio Regulations:

(b) the time at which the listening watch begins when the vessel leaves port, and the time at which it ends when the vessel reaches port;

(b) die tyd waarop luisterwaghouding begin wanneer die vaartuig die hawe verlaat, en die tyd waarop dit eindig wanneer die vaartuig die hawe bereik;

(c) die tyd waarop luisterwaghouding om die een of ander rede gestaak word, tesame met die rede daarvoor, en die tyd waarop luisterwaghouding hervat word;

(d) besonderhede oor die onderhoud van die batterye (indien voorsien), insluitende 'n rekord van die laai daarvan vereis by Regulasie 143 (12); en

(e) besonderhede van die instandhouding en toets van draagbare radio-apparaat vir oorlewingsvaartuie en EPIRB's wat die Administrasie vereis ooreenkomstig Regulasie 141.

(3) Die radiologboek wat vir 'n vaartuig vereis word wat met 'n BHF-radiotelefoonstasie ooreenkomstig Regulasie 131 (2) (b) toegerus is, moet gehou word op die plek waar luisterwaghouding gehandhaaf word. Elke gekwalifiseerde bediener en elke bemanningslid wat luisterwaghouding uitvoer, moet die besonderhede van alle berigte in verband met nood in die logboek opteken. Daarbenewens moet sodanige besonderhede as wat die Administrasie vereis, in die logboek opgeteken word.

(4) Radiologboeke moet vir inspeksie deur die beamptes wat deur die Administrasie gemagtig is om sodanige inspeksie uit te voer, beskikbaar wees.

HOOFSTUK X

SKEEPSNAVIGASIETOERUSTING

Regulasie 147

Vrystellings

Die Administrasie mag enige vaartuig van enige van die vereistes van hierdie Hoofstuk vrystel waar hy van oordeel is dat die aard van die vaart of die vaartuig se nabyheid aan land nie sodanige vereistes regverdig nie.

Regulasie 148

Kompasse

(1) Vaartuie met 'n lengte van 45 meter of meer moet toegerus wees met die volgende:

(a) 'n Standaard magnetiese kompas in 'n geskikte kompashuis op die hartlyn van die vaartuig, tot tevredenheid van die Administrasie.

(b) 'n Tweede magnetiese kompas in 'n geskikte kompashuis naas die hoofstuurposisie sodat die stuurman daarvolgens kan stuur. Waar 'n geprojekteerde of gereflekteerde beeld van die standaardkompas vereis by subparagraaf (a) egter vir hierdie doel voorsien word, moet die tweede magnetiese kompas tot tevredenheid van die Administrasie in 'n geskikte posisie aangebring word.

(2) Vaartuie met 'n lengte van minder as 45 meter moet toegerus wees met die volgende:

(a) 'n Standaard magnetiese kompas in 'n geskikte kompashuis op die hartlyn van die vaartuig, met 'n geprojekteerde of gereflekteerde beeld wat naas die hoofstuurposisie voorsien word sodat die stuurman daarvolgens kan stuur. Die installasie moet tot tevredenheid van die Administrasie aangebring word.

(b) 'n Tweede magnetiese kompas in 'n kompashuis by die hoofstuurposisie indien geen geprojekteerde of gereflekteerde beeld van die standaardkompas vir die stuurman voorsien is waarvolgens hy kan stuur nie.

(c) the time at which the listening watch is for any reason discontinued together with the reason and the time at which the listening watch is resumed;

(d) details of the maintenance of the batteries (if provided), including a record of the charging required by Regulation 143 (12); and

(e) details of the maintenance and tests of portable radio apparatus for survival craft and EPIRB required by the Administration in accordance with Regulation 141.

(3) The radio log required for a vessel which is fitted with a VHF radiotelephone station in accordance with Regulation 131 (2) (b) shall be kept at the place where the listening watch is maintained. Every qualified operator and every crew member carrying out a listening watch shall enter in the log the details of all communications connected with distresss. In addition, there shall be entered in the log such details as may be required by the Administration.

(4) Radio logs shall be available for inspection by the officers authorized by the Administration to make such inspection.

CHAPTER X

SHIPBORNE NAVIGATIONAL EQUIPMENT

Regulation 147

Exemptions

The Administration may exempt any vessel from any of the requirements of this Chapter where it considers that the nature of the voyage or the vessel's proximity to land, does not warrant such requirements.

Regulation 148

Compasses

(1) Vessels of 45 metres in length and over shall be fitted with—

(a) a standard magnetic compass in a suitable binnacle positioned on the vessel's centreline, to the satisfaction of the Administration; and

(b) a second magnetic compass in a suitable binnacle adjacent to the main steering position for the helmsman to steer by. However, where a projected or reflected image of the standard compass required in subparagraph (a) is provided for this purpose the second magnetic compass shall be fitted in a suitable position to the satisfaction of the Administration.

(2) Vessels of less than 45 metres in length shall be fitted with—

(a) a standard magnetic compass in a suitable binnacle positioned on the vessel's centreline with a projected or reflected image provided adjacent to the main steering position for the helmsman to steer by. The installation shall be fitted to the satisfaction of the Administration; and

(b) a second magnetic compass in a binnacle at the main steering position, where a projected or reflected image of the standard compass is not provided for the helmsman to steer by.

(3) 'n Girokompas moet tot bevrediging van die Administrasie aangebring word—*

(a) in vaartuie met 'n lengte van 75 meter of meer; en

(b) in vaartuie met 'n lengte van minder as 75 meter waarmee beoog word om te werk in breedtes waar die horisontale komponent van die aarde se totale magnetiese krag onvoldoende is om genoegsame rigtingstabiliteit vir die magnetiese kompas te bied.

Die girokompas vereis by subparagrawe (a) of (b) moet geplaas wees dat die stuurman dit by die hoofstuurposisie òf regstreeks òf van 'n herhaler af kan lees en moet tot tevredenheid van die Administrasie toegerus wees met 'n herhaler of herhalers vir die neem van peilings.

(4) Indien 'n girokompas aangebring is wat die stuurman by die hoofstuurposisie òf regstreeks òf van 'n herhaler af kan lees, hoef die tweede magnetiese kompas waarna in subparagrawe (1) (b) en (2) (b) verwys is, nie aangebring te word nie, met dien verstande dat die geprojekteerde of gereflekteerde beeld van die standaard magnetiese kompas vir die stuurman beskikbaar is sodat hy daarvolgens kan stuur.

(5) Middels moet voorsien word wat dit moontlik maak om bedags en snags peilings te neem.

(6) Magnetiese kompasse moet behoorlik gekompenseer wees en 'n lys of kromme van nadeviasies moet aan boord van die vaartuig voorsien wees.

(7) Waar 'n send- magnetiese kompas en 'n herhaler aangebring is, moet dit tot tevredenheid van die Administrasie van 'n noodkragtoevoer voorsien wees.

(8) Verligting en fasiliteite vir demping moet voorsien word sodat die kompaskaart te alle tye gelees kan word. Indien verligting deur die vaartuig se hoofkragtoevoer voorsien word, moet noodverligting beskikbaar wees.

(9) Indien daar slegs een magnetiese kompas aan boord is, moet 'n reserwe-magnetiesekompasbak wat met die magnetiese kompas uitruilbaar is, aan boord gehou word.

(10) 'n Spreekbuis of ander toereikende kommunikasiemiddel tussen die standaardkompasposisie en die normale navigasiebeheerposisie of noodstuurposisie moet, indien daar een is, tot tevredenheid van die Administrasie voorsien word.

Regulasie 149

Dieplodingtoerusting

(1) Vaartuie met 'n lengte van 45 meter of meer moet tot tevredenheid van die Administrasie van 'n eggolodingstoestel voorsien wees.†

(2) Vaartuie met 'n lengte van minder as 45 meter moet met 'n geskikte middel, tot tevredenheid van die Administrasie, vir die bepaling van die diepte van water onder die vaartuig toegerus wees.

Regulasie 150

Radartoerusting

(1) Vaartuie met 'n lengte van 45 meter en meer moet tot tevredenheid van die Administrasie, met radartoerusting toegerus wees.‡

(2) Indien radar in vaartuie met 'n lengte van minder as 45 meter aangebring is, moet die installasie die Administrasie tevrede stel.

* Kyk *Recommendation on Performance Standards for Gyro-Compasses*, aangeneem deur die Organisasie by Resolusie A. 280 (VIII).

† Kyk *Recommendation on Performance Standards for Echo-Sounding Equipment*, aangeneem deur die Organisasie by Resolusie A. 224 (VII).

‡ Kyk *Recommendation on Navigational Radar Equipment*, aangeneem deur die Organisasie by Resolusie A.222 (VII).

(3) A gyro-compass to the satisfaction of the Administration shall be fitted*—

(a) in vessels of 75 metres in length and over; and

(b) in vessels of less than 75 metres in length intended for operation in latitudes where the horizontal component of the earth's total magnetic force is insufficient to provide adequate directional stability to the magnetic compass.

The gyro-compass required by subparagraphs (a) or (b) shall be so positioned that it can be read by the helmsman, either directly or from a repeater at the main steering position, and shall be fitted with a repeater or repeaters for taking bearings, to the satisfaction of the Administration.

(4) Where a gyro-compass is fitted which can be read by the helmsman either directly or from a repeater at the main steering position, the second magnetic compass referred to in subparagraphs (1) (b) and (2) (b) need not be fitted, provided that the projected or reflected image of the standard magnetic compass is available for the helmsman to steer by.

(5) Means shall be provided to enable compass bearings to be taken by day and night.

(6) Magnetic compasses shall be properly compensated and a list or curve of residual deviations provided on board the vessel.

(7) Where a transmitting magnetic compass and repeater is fitted it shall be provided with an emergency electrical supply to the satisfaction of the Administration.

(8) Illumination and facilities for dimming shall be provided to enable reading of the compass card at all times. If illumination is provided by the vessel's main electrical supply, emergency illumination shall be available.

(9) Where only one magnetic compass is carried, a spare magnetic compass bowl which is interchangeable with the magnetic compass shall be carried.

(10) A voice pipe or other adequate means of communication between the standard compass position and the normal navigation control position or emergency steering position, if fitted, shall be provided to the satisfaction of the Administration

Regulation 149

Depth sounding equipment

(1) Vessels of 45 metres in length and over shall be provided with an echosounding device to the satisfaction of the Administration.†

(2) Vessels of less than 45 metres in length shall be provided with suitable means to the satisfaction of the Administration for determining the depth of water under the vessel.

Regulation 150

Radar equipment

(1) Vessels of 45 metres in length and over shall be fitted with radar equipment to the satisfaction of the Administration.‡

(2) In vessels of less than 45 metres in length where radar is fitted the installation shall be to the satisfaction of the Administration.

* See Recommendation on Performance Standards for Gyro-Compasses adopted by the Organization by Resolution A.280 (VIII).

† See Recommendation on Performance Standards for Echo-Sounding Equipment adopted by the Organization by Resolution A. 224 (VII).

‡ See Recommendation on Navigational Radar Equipment adopted by the Organization by Resolution A. 222 (VII).

Regulasie 151

Seevaartinstrumente en -publikasies

Geskikte seevaartinstrumente, voldoende en bygewerkte kaarte, vaaraanwysings, lyste van ligte, kennisgewings aan seevaarders, getytabelle en ander seevaartpublikasies wat vir die voorgenome vaart nodig is en die Administrasie tevrede stel, moet aan boord van die vaartuig wees.

Regulasie 152

Seintoerusting

(1) 'n Dagligseinlamp waarvan die werking nie van slegs die hoofbron van elektriese krag afhanklik is nie, moet voorsien word. Die kragvoorsiening moet in elk geval 'n draagbare battery insluit.

(2) Vaartuie met 'n lengte van 45 meter en meer moet van 'n volledige stel vlae en wimpels voorsien wees sodat mededelings gestuur kan word met behulp van die Internasionale seinboek wat van krag is.

(3) Die Internasionale seinboek wat van krag is, moet aan boord van alle vaartuie gehou word.

Regulasie 153

Rigtingsoekers

Vaartuie met 'n lengte van 75 meter en meer moet met radiorigtingsoekapparaat wat aan die vereistes van Regulasie 139 voldoen, toegerus wees.*

Regulasie 154

Snelheids- en afstandsmeter

Vaartuie met 'n lengte van 75 meter en meer moet met 'n geskikte instrument vir die meet van snelheid en afstand deur die water toegerus wees.

BYVOEGSEL 1

SERTIFIKATE

1. Vorm van Veiligheidsertifikaat vir Vissersvaartuie

INTERNASIONALE VISSERSVAARTUIGVEILIGHEID-SERTIFIKAAT

(Amptelike Seël) *(Land)*

Uitgereik kragtens die bepalings van die

TORREMOLINOS INTERNASIONALE KONVENSIE OOR DIE VEILIGHEID VAN VISSERSVAARTUIE, 1977

Naam van vaartuig	Onderskeidende nommer of letters	Registrasiehawe	Lengte (L)†

Nuwe/Bestaande vaartuig‡

Datum van boukontrak of kontrak vir groot ombouing .....

Datum waarop die kiel gelê is of van die aanvang van die konstruksie ooreenkomstig Regulasie 2 (1) (c) van die Aanhangsel van die Konvensie of waarop groot ombouing begin is.....

Datum van aflewering of voltooiing van groot ombouing.....

* Kyk *Recommendation on Performance Standards for Radio Direction-finding Systems,* aangeneem deur die Organisasie by Resolusie A.223 (VII).

† Lengte (L) soos gedefinieer in Regulasie 2 (5) van die Aanhangsel van die Konvensie.

‡ Skrap soos van toepassing.

Regulation 151

Nautical instruments and publications

Suitable nautical instruments, adequate and up-to-date charts, sailing directions, lists of lights, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage, to the satisfaction of the Adminstration, shall be carried.

Regulation 152

Signalling equipment

(1) A daylight signalling lamp shall be provided the operation of which is not solely dependent upon the main source of electrical power. The power supply shall in any case include a portable battery.

(2) Vessels of 45 metres in length and over shall be provided with a full complement of flags and pennants to enable communications to be sent using the International Code of Signals in force.

(3) In all vessels the International Code of Signals in force shall be carried.

Regulation 153

Direction-finders

Vessels of 75 metres in length and over shall be fitted with radio direction-finding apparatus complying with the requirements of Regulation 139.*

Regulation 154

Speed and distance indicator

Vessels of 75 metres in length and over shall be fitted with a suitable instrument for measuring speed and distance through the water.

APPENDIX 1

CERTIFICATES

1. Form of Safety Certificate for Fishing Vessels

INTERNATIONAL FISHING VESSEL SAFETY CERTIFICATE

(Official Seal) *(Country)*

Issued under the provisions of the
TORREMOLINOS INTERNATIONAL CONVENTION FOR THE SAFETY OF FISHING VESSELS, 1977

Name of Vessel	Distinctive Number or Letters	Port of Registry	Length (L)†

New/existing vessel‡

Date of building or major conversion contract .....

Date on which keel was laid or of commencement of construction in accordance with Regulation 2 (1) (c) of the Annex to the Convention or on which major conversion was commenced .....

Date of delivery or completion of major conversion .....

* See Recommendation on Performance Standards for Radio Direction-finding Systems adopted by the Organization by Resolution A.223 (VII).

† Length (L) as defined in Regulation 2 (5) of the Annex to the Convention.

‡ Delete as appropriate.

Die *(naam)* Regering sertifiseer

Ek, die ondergetekende *(naam)* sertifiseer

I. dat bogenoemde vaartuig behoorlik ondersoek is ooreenkomstig die bepalings van Regulasie 6 van die Aanhangsel van die Konvensie waarna hierbo verwys is, en dat die ondersoek getoon het dat die toestand van die romp, masjinerie en toerusting, soos in bogenoemde Regulasie omskryf, in alle opsigte bevredigend is en dat die vaartuig aan die toepaslike vereistes van die Aanhangsel van die Konvensie voldoen;

II. dat die maksimum toelaatbare bedryfsdiepgang wat ooreenstem met elke werktoestand vir hierdie vaartuig, vervat is in die goedgekeurde stabiliteitsboekie gedateer ..... 19..;

III. dat die ondersoek getoon het dat die reddingstoestelle voorsiening maak vir 'n totale getal van ..... persone en nie meer nie, t.w.:

... oorlewingsvaartuie wat ..... persone kan akkommodeer (insluitende ..... motoraangedrewe oorlewingsvaartuie, ... reddingsvlotte waarvoor goedgekeurde tewaterlatingstoestelle vereis word, en ..... vrydryf-reddingsvlotte wat ..... persone kan akkommodeer);

... redbote ingesluit/nie ingesluit nie* in die totale getal oorlewingsvaartuie hierbo getoon;

... reddingsboeie;

... reddingsbaadjies;

IV. dat die radiotelegraaf-/radiotelefoonstasie van die vaartuig soos volg beman word:

	Vereistes van Regulasies	Werklike bepalings
Aantal bedieners		
Ure geluister		

Hierdie Sertifikaat is geldig tot....., onderworpe aan periodieke ondersoeke ooreenkomstig Regulasie 6 van die Aanhangsel van die Konvensie en die volgende tussenondersoeke vereis ooreenkomstig Regulasie 6 (1) (c).....

.....

Hierdie Sertifikaat is/is nie* onderworpe aan 'n Vrystellingsertifikaat.

Uitgereik te ..... *(plek van uitreiking van sertifikaat)*

..... 19 ....

(Handtekening van behoorlik gemagtigde beampte wat die sertifikaat uitreik)

(Seël of stempel van uitreikingsowerheid, soos van toepassing)

Die geldigheid van hierdie Sertifikaat is ooreenkomstig die bepalings van Regulasie 11 van die Aanhangsel van die Konvensie tot ..... verleng.

Plek ..... Geteken.....

(Handtekening van behoorlik gemagtigde beampte)

Datum .....

* Skrap soos van toepassing.

The *(Name)* Government certifies

I, the undersigned *(Name)* certify

I. that the above-mentioned vessel has been duly surveyed in accordance with the provisions of Regulation 6 of the Annex to the Convention referred to above, and that the survey showed that the condition of the hull, machinery and equipment, as defined in the above Regulation was in all respects satisfactory and that the vessel complied with the applicable requirements of the Annex to the Convention.

II. that the maximum permissible operating draught associated with each operating condition for this vessel is contained in the approved stability booklet dated ..... 19.....

III. That the survey showed that the life-saving appliances provided for a total number of ..... persons and no more, viz:

... survival craft capable of accommodating ..... persons (including ..... motor-propelled survival craft, ... liferafts for which approved launching devices are required and ..... float-free liferafts capable of accommodating ..... persons);

... rescue boats included/not included* in the total number of survival craft shown above;

... lifebuoys;

... life-jackets.

IV. That the radiotelegraph/radiotelephone station of the vessel is manned as follows:

	Requirements of Regulations	Actual provisions
Number of operators		
Hours of listening		

This Certificate is valid until ..... subject to periodical surveys in accordance with Regulation 6 of the Annex to the Convention and the following intermediate surveys required in accordance with Regulation 6 (1) (c).....

.....

.....

.....

This Certificate is/is not* subject to an Exemption Certificate.

Issued at ....*(place of issue of certificate)*

.....19.... .....

(Signature of duly authorized official issuing the certificate)

(Seal or stamp of issuing authority, as appropriate)

The validity of the Certificate has been extended until..... in accordance with the provisions of Regulation II of the Annex to the Convention.

Place ..... Signed .....

(Signature of duly authorized official)

Date.....

* Delete as appropriate.

(Agterkant van Veiligheidsertifikaat)

Ondersoek van struktuur en masjinerie [Regulasie 6 (1) (b) (i) of 6 (1) (c)]	Ondersoek van toerusting [Regulasie 6 (1) (b) (ii) of 6 (1) (c)]	Ondersoek van radio-installasies en radiorigtingsoekers [Regulasie 6 (1) (b) (iii)]
Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*
Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*
Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*
Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*
Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*	Periodieke / Tussen } * ondersoek Datum .... Plek .... Geteken............ *(handtekening van behoorlike gemagtigde beampte)*

* Skrap wat nie van toepassing.

(Reverse of Safety Certificate)

Survey of Structure and Machinery [Regulation 6 (1) (b) (i) or 6 (1) (c)]	Survey of equipment [Regulation 6 (1) (b) (ii) or 6 (1) (c)]	Survey of radio installations and radio direction-finder [Regulation 6 (1) (b) (iii)]
Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } survey Date .... Place .... Signed .... *(signature of duly authorised official)*
Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*
Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*
Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*
Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*	Periodical / Intermediate } *survey Date .... Place .... Signed .... *(signature of duly authorised official)*

*Delete whichever is inappropriate.

2. Vorm van Vrystellingsertifikaat

INTERNASIONALE VISSERSVAARTUIGVRYSTELLING-SERTIFIKAAT

(Amptelike Seël) *(Land)*

Uitgereik kragtens die bepalings van die

TORREMOLINOS INTERNASIONALE KONVENSIE VIR DIE VEILIGHEID VAN VISSERSVAARTUIE, 1977

Naam van vaartuig	Onderskeidende nommer of letters	Registrasie-hawe	Lengte (L)*

Die (*Naam*) Regering sertifiseer

Ek, die ondergetekende (*Naam*) sertifiseer

Kragtens die bevoegdheid verleen by Regulasie..... van die Aanhangsel van die Konvensie waarna hierbo verwys is, dat bogenoemde vaartuig van die vereistes van ..... van die Konvensie vrygestel is.†

Voeg hier in die voorwaardes, indien enige, waarop die vrystellingsertifikaat toegestaan is.

Hierdie vrystellingsertifikaat is geldig tot .....

.....

Uitgereik te ..... *(plek van uitreiking van sertifikaat)*

..... 19 ....

(Handtekening van behoorlik gemagtigde beampte wat die sertifikaat uitreik)

(Seël of stempel van uitreikingsowerheid, soos van toepassing)

Die geldigheid van hierdie vrystellingsertifikaat word ooreenkomstig die bepalings van Regulasie 11 van die Aanhangsel van die Konvensie tot .....verleng.

Plek ..... Geteken.....

(Handtekening van behoorlik gemagtigde beampte)

Datum .....

BYVOEGSEL 2

SPESIFIKASIE VIR REDDINGSTOESTELLE

1. **Konstruksie van reddingsbote.**

1.1 ***Onbuigsame reddingsbote.***

1.1.1 Reddingsbote mag slegs onbuigsame kante en interne dryfvermoë hê. Die Administrasie mag reddingsbote met 'n onbuigsame skuiling goedkeur, met dien verstande dat dit maklik van sowel binne as buite oopgemaak kan word, en dat dit nie vinnige inskeping en ontskeping of die tewaterlating en hantering van die reddingsboot belemmer nie.

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* Lengte (L) soos in Regulasie 2 (5) van die Aanhangsel van die Konvensie gedefinieer.

† Voeg hier in verwysings na Regulasies, en spesifiseer besondere paragrawe.

2. Form of Exemption Certificate

INTERNATIONAL FISHING VESSEL EXEMPTION CERTIFICATE

(Official Seal) *(Country)*

Issued under the provisions of the

TORREMOLINOS INTERNATIONAL CONVENTION FOR THE SAFETY OF FISHING VESSELS, 1977

Name of Vessel	Distinctive Number or Letters	Port of Registry	Lenght (L)*

The *(Name)* Government certifies

I, the undersigned *(Name)* certify

That the above-mentioned vessel is, under the authority conferred by Regulation ..... of the Annex to the Convention referred to above, exempted from the requirements of † ..... of the Convention.

Insert here the conditions, if any, on which the exemption certificate is granted.

This Exemption Certificate is valid until.....

Issued at .....*(place of issue of certificate)*

..... 19..... .....

(Signature of duly authorised official issuing the certificate)

(Seal or stamp of issuing authority, as appropriate)

The validity of this Exemption Certificate has been extended until .....in accordance with the provisions of Regulation 11 of the Annex to the Convention.

Place ..... Signed .....

(Signature of duly authorised official)

Dated .....

APPENDIX 2

SPECIFICATION FOR LIFE-SAVING APPLIANCES

1. Construction of Lifeboats.

1.1 ***Rigid lifeboats.***

1.1.1 Lifeboats shall have rigid sides and internal buoyancy only. The Administration may approve lifeboats with a rigid shelter, provided that it may be readily opened from both inside and outside, and does not impede rapid embarkation and disembarkation or the launching and handling of the lifeboat.

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* Length (L) as defined in Regulation 2 (5) of the Annex to the Convention.

†. Insert here references to Regulations, specifying particular paragraphs.

1.1.2 Reddingsbote mag nie 'n lengte van minder as 7,3 meter hê nie, behalwe waar die Administrasie, as gevolg van die grootte van die vaartuig, of om ander redes, die dravermoë van sulke reddingsbote onredelik of onprakties ag. Geen reddingsboot mag 'n lengte van minder as 4,9 meter hê nie.

1.1.3 Geen reddingsboot waarvan die massa wanneer dit sy volle lading mense en toerusting aan boord het, 20 3000 kilogram oorskry of wat 'n dravermoë, bereken ooreenkomstig Regulasie 112 (3), van meer as 150 persone het, mag goedgekeur word nie.

1.1.4 Reddingsbote wat toegelaat word om meer as 60 persone te dra, moet motorreddingsbote wees wat aan die vereistes van Artikel 2.1 van hierdie Byvoegsel voldoen.

1.1.5 Reddingsbote moet sterk genoeg wees om met hul volle lading mense en toerusting aan boord veilig in die water neergelaat te word en nie 'n nadefleksie te ondergaan as dit aan 'n oorbelasting van 25 persent onderwerp word nie.

1.1.6 Reddingsbote moet 'n gemiddelde seeg hê wat ten minste gelyk aan 4 persent van hul lengte is. Die seeg moet min of meer parabolies in vorm wees.

1.1.7 Reddingsbote moet inherente dryfvermoë hê, of moet toegerus wees met waterdigte lugkaste of ander gelykwaardige korrosievry drywende materiaal wat nie nadelig deur olie of olieprodukte beïnvloed mag word nie, wat voldoende is om die reddingsboot en sy toerusting te laat dryf wanneer die reddingsboot oorstroom en aan die see blootgestel is. 'n Bykomende volume waterdigte lugkaste of ander gelykwaardige korrosievry drywende materiaal wat nie nadelig deur olie of olieprodukte beïnvloed mag word nie, gelyk aan ten minste een tiende van die inhoudsvermoë van die reddingsboot moet voorsien word. Die Administrasie mag toelaat dat die waterdigte lugkaste gevul word met 'n korrosievry drywende materiaal wat nie nadelig deur olie of olieprodukte beïnvloed mag word nie.

1.1.8 Dwarsbanke en sybanke moet so laag doenlik in die reddingsboot aangebring word.

1.1.9 Die blokkoëffisiënt van die inhoudsvermoë, bepaal ooreenkomstig Artikel 3 van hierdie Byvoegsel van reddingsbote, behalwe houtreddingsbote wat van planke gemaak is, mag nie minder as 0,64 wees nie, met dien verstande dat enige sodanige reddingsboot 'n blokkoëffisiënt van minder as 0,64 mag hê indien die Administrasie oortuig is dat die metrasentriese hoogte en vryboord voldoende is wanneer die reddingsboot met sy volle getal persone en toerusting gelaai is.

1.1.10 Maatreëls moet getref word vir die geskikte plasing en bevestiging in die bedryfsposisie van die antenne van die draagbare radiotoerusting waarna in Regulasie 122 verwys word.

1.2 ***Opgeblaasde reddingsbote.***

1.2.1 Die reddingsboot se dryfvermoë moet uit ten minste twee opgeblaasde buise bestaan wat op mekaar aan weerskante van die reddingsboot geplaas is.

1.2.2 Die dryfbuise moet van 'n goedgekeurde materiaal gemaak wees.

1.2.3 (a) Die minimum deursnee van die dryfbuise moet minstens—

(i) 350 millimeter wees vir reddingsbote wat gesertifiseer is om hoogstens 15 persone te dra; en

(ii) 400 millimeter wees vir reddingsbote wat gesertifiseer is om meer as 15 persone te dra.

(b) Waar die dryfbuise verskillende deursneë het, moet die buis met die grootste deursnee die onderste buis wees.

1.2.4 Die dryfvermoë van die reddingsboot moet, wanneer dit met volle getal persone en toerusting gelaai is, so ingerig wees deur verdeling in 'n aantal afsonderlike kompartement, dat die reddingsboot na 'n verlies van 50 persent van die dryfvermoë in enige deel of dele van die dryfbuise stabiel sal bly en sy vorm behoorlik sal behou om voldoende ruimte vir sy volle getal persone te verskaf. Elke kompartement moet afsonderlik opgeblaas kan word.

1.2.5 Reddingsbote moet so gebou wees dat hulle hul vorm en styfheid in alle bedryfs- en ladingstoestande sal behou.

1.1.2 Lifeboats shall be not less than 7.3 metres in lenght except where owing to the size of the vessel, or for other reasons, the Administration considers the carriage of such lifeboats unreasonable or impracticable. No lifeboat shall be less than 4.9 metres in length.

1.1.3 No lifeboat shall be approved the mass of which when fully laden with persons and equipment exceeds 20 300 kilogrammes or which has a carrying capacity calculated in accordance with Regulation 112 (3) of more than 150 persons.

1.1.4 Lifeboats permitted to carry more than 60 persons shall be motor lifeboats complying with the requirements of Section 2.1 of this Appendix.

1.1.5 Lifeboats shall be of sufficient strength to enable them to be safely lowered into the water with their full complement of persons and equipment and will not suffer residual deflection if subjected to an overload of 25 per cent.

1.1.6 Lifeboats shall have a mean sheer at least equal to 4 per cent of their length. The sheer shall be approximately parabolic in form.

1.1.7 Lifeboats shall have inherent buoyancy, or shall be fitted with watertight air cases or other equivalent non-corrodible buoyant material which shall not be adversely affected by oil or oil products, sufficient to float the lifeboat and its equipment when the lifeboat is flooded and open to the sea. An additional volume of watertight air cases or other equivalent non-corrodible buoyant material, which shall not be adversely affected by oil or oil products, equal to at least one tenth of the cubic capacity of the lifeboat shall be provided. The Administration may permit the watertight air cases to be filled with a non-corrodible buoyant material which shall not be adversely affected by oil or oil products.

1.1.8 Thwarts and side seats shall be fitted as low in the lifeboat as practicable.

1.1.9 The block coefficient of the cubic capacity, as determined in accordance with Section 3 of this Appendix, of lifeboats, except wooden lifeboats made of planks, shall be not less than 0.64 provided that any such lifeboat may have a block coefficient of less than 0.64 if the Administration is satisfied that the metracentric height and freeboard are adequate when the lifeboat is loaded with its full complement of persons and equipment.

1.1.10 Arrangements shall be provided for adequately siting and securing in the operating position the antenna provided with the portable radio equipment referred to in Regulation 122.

1.2 ***Inflated lifeboats.***

1.2.1 The lifeboat's buoyancy shall consist of at least two inflated tubes arranged one on top of the other on both sides of the lifeboat.

1.2.2 The buoyancy tubes shall be made of approved material.

1.2.3 (a) The minimum diameter of the buoyancy tubes shall not be less than:

(i) 350 millimetres for lifeboats certified to carry not more than 15 persons; and

(ii) 400 millimetres for lifeboats certified to carry more than 15 persons.

(b) Where the buoyancy tubes are of different diameters the tube with the larger diameter shall be the lower tube.

1.2.4 The buoyancy of the lifeboat, when loaded with the full complement of persons and equipment, shall be so arranged as to ensure by division into a number of separate compartments that, after a loss of 50 per cent of its buoyancy in any part or parts of its buoyancy tubes, the lifeboat remains stable and maintains adequately its shape to provide sufficient space for its full complement of persons. Each compartment shall be capable of being inflated separately.

1.2.5 Lifeboats shall be so constructed as to maintain their shape and rigidity in all operating and loading conditions.

1.2.6 Reddingsbote moet so gebou wees dat hulle blootstelling van 30 dae op see in alle seetoestande kan weerstaan en 'n voldoende duursaamheidsgrens hê om te verseker dat hul werkverrigting nie beïnvloed sal word deurdat dit gedurende die periode tussen normale inspeksies op 'n blootgestelde dek geberg word nie.

1.2.7 Die bodem van 'n reddingsboot moet waterdig wees en 'n doeltreffende werkplatform van voldoende sterkte verskaf wat alle spanninge waaraan dit in alle bedryfstoestande onderworpe mag wees, kan weerstaan, insluitende die neerlaat van die reddingsboot met sy volle getal persone en toerusting aan boord.

1.2.8 Die stabilitiet van 'n reddingsboot moet voldoende en positief wees wanneer dit sy volle getal persone en toerusting aan boord het.

1.2.9 Die verhouding van lengte tot breedte van 'n reddingsboot moet nie 2,2, oorskry nie, tensy die Administrasie daarvan oortuig is dat afwyking van hierdie verhouding nie die seewaardigheid van die reddingsboot in gevaar sal stel nie.

1.2.10 Reddingsbote moet sterk genoeg wees om, met hul volle getal persone en toerusting aan boord, veilig in die water neergelaat te word. Hulle moet sterk genoeg wees om 'n 25-persent-oorbelastingstoets sonder beduidende distorsie of enige gevolglike permanente vervorming te weerstaan.

1.2.11 Materiale wat by die bou van reddingsbote gebruik word, mag nie deur olie of olieprodukte beïnvloed word nie en moet 'n hoë weerstand teen ultraviolet lig hê. Die reddingsboot moet deur 'n temperatuurbestek van plus 66 grade Celsius tot minus 30 grade Celsius kan funksioneer.

1.2.12 Roei- en sitbanke moet so laag moontlik in die reddingsboot geplaas wees. 'n Voldoende aantal behoorlik geplaaste omslaanweersakke moet aangebring wees, tensy die Administrasie daarvan oortuig is dat die stabiliteit en seewaardigheid van die reddingsboot voldoende is wanneer dit nie met omslaanweersakke toegerus is nie.

1.2.13 'n Geskikte bedekking vir die beskerming van die insittendes teen besering as gevolg van blootstelling moet voorsien word. Die bedekking en die boonste dryfbuis moet 'n hoogs sigbare kleur hê.

1.2.14 'n Voldoende aantal sterk stroke moet voorsien word, om toebehore aan te heg en toerusting vas te maak.

1.2.15 Skuurstroke moet onder aan die bodem van die boot en die onderste dryfbuis aangebring word.

1.2.16 Maatreëls moet getref word vir die behoorlike plasing en vasmaak in die bedienposisie van die antenne van die draagbare radiotoerusting waarna in Regulasie 122 verwys word.

2. **Motorreddingsbote.**

Die bepalings van hierdie Artikel is bykomend by die bepalings van Artikel 1 van hierdie Byvoegsel.

2.1 ***Onbuigsame motorreddingsbote.***

2.1.1 Motorreddingsbote moet met 'n kompressieontstekingsenjin toegerus word, wat so onderhou moet word dat dit te alle tye vir gebruik gereed is en maklik in alle toestande aangesit kan word; voldoende brandstof moet voorsien word vir ten minste 24 uur se onafgebroke werking teen die spoed gespesifiseer in paragraaf 2.1.3 van hierdie Artikel.

2.1.2 Die enjin en sy toebehore moet na behore toegemaak wees ten einde werking onder ongunstige weerstoestande te verseker, en die enjinhulsel moet brandvas wees. Voorsiening moet vir agteruitvaart gemaak word.

2.1.3 Die motorreddingsboot se snelheid vorentoe in kalm water wanneer dit met sy volle getal persone en toerusting gelaai is, moet ten minste ses knope wees.

2.1.4 Daar moet voldoende beskerming teen die skroef wees vir persone in die water.

2.1.5 Die volume van die interne dryfmiddels van 'n motorreddingsboot moet bo dié wat by paragraaf 1.1.7 van hierdie Byvoegsel vereis word, vergroot word in die mate, indien enige, waarin die volume van die interne dryfmiddels wat nodig is om die enjin en sy toebehore en, indien aangebring, die soeklig en radiotelegraafinstallasie en hul toebehore te dra, die volume te bowe gaan van die interne dryftoestelle wat, bereken teen 0,0283 kubieke meter per persoon nodig is om die bykomende persone te dra wat die reddingsboot sou kon akkommodeer indien die motor en sy toebehore en, indien aangebring, die soeklig en radiotelegraafinstallasie en hul toebehore verwyder sou word.

2.1.6 Die radio-installasie vereis by Regulasie 137 moet geïnstalleer word in 'n kajuit wat groot genoeg is om sowel die toerusting as die persoon wat dit gebruik, te akkommodeer. Die inrigting moet sodanig wees dat die doeltreffende werking van die sender en ontvanger nie belemmer sal word deur die enjin terwyl dit loop nie, of 'n battery ook al gelaai word of nie. Die radiobattery mag nie gebruik word om krag aan enige enjinaansitmotor of ontstekingstelsel te verskaf nie. Die motorreddingsbootenjin moet toegerus word met 'n dinamo vir die herlaai van die radiobattery, of vir ander dienste.

2.1.7 Die soeklig vereis by Regulasie 123 moet 'n lamp, 'n doeltreffende weerkaatser en 'n kragbron insluit wat 'n ligkleurige voorwerp met 'n wydte van ongeveer 18 meter op 'n afstand van 180 meter doeltreffend kan verlig vir 'n totale periode van ses uur en moet ten minste drie uur lank onafgebroke kan werk.

1.2.6 Lifeboats shall be so constructed as to be capable of withstanding exposure for 30 days afloat in all sea conditions and have a sufficient margin of durability to ensure that their performance will not be affected by being stowed on an exposed deck during the period between normal inspections.

1.2.7 The floor of lifeboats shall be waterproof and provide an efficient working platform of adequate strength capable of withstanding all stresses to which it may be subjected in all operating conditions, including lowering of the lifeboat loaded with its full complement of persons and equipment.

1.2.8 The stability of a lifeboat shall be adequate and positive when loaded with its full complement of persons and equipment.

1.2.9 The ratio of length to width of a lifeboat shall not exceed 2.2, unless the Administration is satisfied that departure from this ratio will not impair the seaworthiness of the lifeboat. to be safely lowered into the water with their full complement of persons and equipment. They shall be strong enough to withstand a 25 per cent overload test without significant distortion or any resultant permanent deformation.

1.2.10 Lifeboats shall be of sufficient strength to enable them to be safely lowered into the water with their full complement of persons and equipment. They shall be strong enough to withstand a 25 per cent overload test without significant distortion or any resultant permanent deformation.

1.2.11 Materials used in the construction of lifeboats shall be unaffected by oil or oil products and be highly resistant to ultraviolet light. The lifeboat shall be capable of operating throughout a temperature range of plus 66 degrees celsius to minus 30 degrees celsius.

1.2.12 Rowing and seating thwarts shall be arranged as low as possible in the lifeboat. An adequate number of suitably positioned anti-capsizing bags shall be fitted, unless the Administration is satisfied that the stability and seaworthiness of the lifeboat when not fitted with anti-capsizing bags is sufficient.

1.2.13 A suitable cover for protecting the occupants against injury from exposure shall be provided. The cover and the upper buoyancy tube shall be of a highly visible colour.

1.2.14 An adequate number of strong patches shall be provided for attaching fittings and securing equipment.

1.2.15 Rubbing strips shall be fitted underneath the bottom of the boat and along the lower buoyancy tube.

1.2.16 Arrangements shall be provided for adequately siting and securing in the operating position the antenna provided with the portable radio equipment referred to in Regulation 122.

2. **Motor lifeboats.**

The provisions of this Section are in addition to the provisions of Section 1 of this Appendix.

2.1 ***Rigid motor lifeboats.***

2.1.1 Motor lifeboats shall be fitted with a compression ignition engine which shall be kept so as to be at all times ready for use and be capable of being readily started in all conditions; sufficient fuel for at least 24 hours continuous operation at the speed specified in paragraph 2.1.3 of this Section shall be provided.

2.1.2 The engine and its accessories shall be suitably enclosed to ensure operation under adverse weather conditions, and the engine casing shall be fire-resisting. Provision shall be made for going astern.

2.1.3 The speed ahead of the motor lifeboat in smooth water when loaded with its full complement of persons and equipment shall be at least 6 knots.

2.1.4 Adequate protection from the propeller shall be provided for persons in the water.

2.1.5 The volume of the internal buoyancy appliances of a motor lifeboat shall be increased above that required by paragraph 1.1.7 of this Appendix by the amount, if any, by which the volume of the internal buoyancy appliances required to support the engine and its accessories, and, if fitted, the searchlight and radiotelegraph installation and their accessories, exceeds the volume of the internal buoyancy appliances required, at the rate of 0.0283 cubic metres per person, to support the additional persons which the lifeboat could accommodate if the motor and its accessories, and, if fitted, the searchlight and radiotelegraph installation and their accessories, were removed.

2.1.6 The radio installation required by Regulation 137 shall be installed in a cabin large enough to accommodate both the equipment and the person using it. The arrangements shall be such that the efficient operation of the transmitter and receiver shall not be interfered with by the engine while it is running, whether a battery is on charge or not. The radio battery shall not be used to supply power to any engine starting motor or ignition system. The motor lifeboat engine shall be fitted with a dynamo for recharging the radio battery, and for other services.

2.1.7 The searchlight required by Regulation 123 shall include a lamp, an efficient reflector and a source of power which will give effective illumination of a light-coloured object having a width of about 18 metres at a distance of 180 metres for a total period of 6 hours and shall be capable of working for at least 3 hours continuously.

2.2 ***Opgeblaasde motorreddingsbote.***

2.2.1 'n Opgeblaasde motorreddingsboot moet met 'n kompressieontstekingsmotor wat permanent aan die reddingsboot bevestig is, toegerus word. Die motor moet te alle tye gereed vir gebruik gehou word en moet maklik in alle toestande aangesit kan word; voldoende brandstof vir ten minste 24 uur se onafgebroke werking teen 'n spoed gespesifiseer in paragraaf 2.2.3 van hierdie Artikel moet verskaf word.

2.2.2 Die motor en sy toebehore moet van sodanige konstruksie wees as wat werking onder ongunstige weerstoestande sal verseker. Voorsiening moet vir agteruitvaart gemaak word. Daar moet voldoende beskerming teen die skroef wees vir persone in die water.

2.2.3 Die motorreddingsboot se snelheid vorentoe in kalm water wanneer dit met sy volle getal persone en toerusting gelaai is, moet ten minste ses knope wees.

2.2.4 Die reserwedryfvermoë moet bo dié vereis by paragraaf 1.2.4 van hierdie Byvoegsel verhoog word met 'n volume wat voldoende is om die motor en sy toebehore te dra.

3. **Inhoudsvermoë van onbuigsame reddingsbote.**

3.1 Die inhoudsvermoë in kubieke meter van 'n reddingsboot wat met behulp van die reël van Stirling bereken word, kan beskou word as uitgedruk deur die volgende formule:

$$\frac{L_1}{12}\ (4A + 2B + 4C)$$

waar L_1 die lengte is van die reddingsboot in meter vanaf die binnekant van die plankwerk of beplating by die voorstewe tot by die ooreenstemmende punt by die agterstewe; in die geval van 'n reddingsboot met 'n plat agterstewe, word die lengte tot by die binnekant van die spieël gemeet; en A, B en C dui die oppervlaktes van die dwarsdeursneë by onderskeidelik 'n kwartlengte van voor, midskeeps en 'n kwartlengte van agter, wat ooreenkom met die drie punte wat verkry word wanneer L_1 in vier gelyke dele verdeel word.

(Die oppervlaktes aan die twee ente van die reddingsboot word as weglaatbaar beskou.)

Die oppervlaktes A, B en C word geag in vierkante meter gegee te word deur die opeenvolgende toepassing van die volgende formule op elkeen van die drie dwarsdeursneë:

$$\frac{h}{12}\ (a + 4b + 2c + 4d + e)$$

waar h die holte in meter aan die binnekant van die plankwerk of beplating vanaf die kiel tot op die vlak van die dolboord is, of, in sekere gevalle, tot 'n laer vlak soos hierna bepaal; en a, b, c, d en e dui die horisontale breedtes aan van die reddingsboot gemeet in meter by die boonste en onderste punt van die holte, en by die drie punte wat verkry word deur h in vier gelyke dele te verdeel (a en e is die breedtes by die verste punte, en c by die middelpunt van h).

3.2 Indien die seeg van die dolboord, gemeet by die twee punte geleë by 'n kwart van die lengte van die reddingsboot van die ente af, een persent van die lengte van die reddingsboot oorskry, word die holte gebruik in die berekening van die oppervlakte van die dwarsdeursneë A of C geag die holte midskeeps plus een persent van die lengte van die reddingsboot te wees.

3.3 Indien die holte van die reddingsboot midskeeps 45 persent van die breedte oorskry, word die holte gebruik in die berekening van die oppervlakte van die midskeepse dwarsdeursnee B geag gelyk aan 45 persent van die breedte te wees, en word die holte gebruik in die berekening van die oppervlaktes van die kwartlengtedeursneë A en C verkry deur hierdie laaste syfer te vergroot deur 'n hoeveelheid gelyk aan een persent van die lengte van die reddingsboot, met dien verstande dat die holte gebruik in die berekening in geen geval, die werklike holte by hierdie punte oorskry nie.

3.4 Indien die holte van die reddingsboot meer as 1,22 meter is, moet die aantal persone wat deur die toepassing van hierdie Aanhangsel verkry word op die wyse gespesifiseer in Regulasie 1 en 2, eweredig verminder word in die verhouding waarin 1,22 meter tot die werklike holte staan, totdat die reddingsboot bevredigend op see getoets is met daardie aantal persone, wat almal reddingsbaadjies van 'n goedgekeurde tipe dra, aan boord.

3.5 Die Administrasie moet deur middel van geskikte formules 'n perk plaas op die aantal persone wat toegelaat word in reddingsbote met baie skerp ente en in reddingsbote met 'n baie vol vorm.

3.6 Die Administrasie kan aan 'n reddingsboot wat van houtplanke gebou is, 'n inhoudsvermoë toewys wat gelyk is aan die produk van die lengte, die breedte en die holte vermenigvuldig met 0,6, indien dit blyk dat hierdie formule nie 'n groter inhoudsvermoë gee as dié wat deur bogenoemde metode verkry word nie. Die afmetings moet dan op die volgende wyse gemeet word:

Lengte: Vanaf die snypunt van die buitekant van die beplanking en die voorstewe tot by die ooreenstemmende punt by die agterstewe of, in die geval van 'n boot met 'n plat agterstewe, tot by die agterkant van die agterbalk.

Breedte: Vanaf die buitekant van die beplanking by die punt waar die breedte van die boot die grootste is.

2.2 ***Inflated motor lifeboats.***

2.2.1 An inflated motor lifeboat shall be fitted with a compression ignition motor permanently attached to the lifeboat. The motor shall be kept at all times ready for use and be capable of being readily started in all conditions; sufficient fuel for at least 24 hours continuous operation at a speed specified in paragraph 2.2.3 of this Section shall be provided.

2.2.2 The motor and its accessories shall be of such construction as to ensure operation under adverse weather conditions. Provision shall be made for going astern. Adequate protection from the propeller shall be provided for persons in the water.

2.2.3 The speed ahead of the motor lifeboat in smooth water when loaded with its full complement of persons and equipment shall be at least 6 knots.

2.2.4 The reserve buoyancy shall be increased above that required by paragraph 1.2.4 of this Appendix by an amount sufficient to support the motor and its accessories.

3. **Capacity of rigid lifeboats.**

3.1 The capacity in cubic metres of a lifeboat calculated by the aid of Stirling's Rule may be considered as given by the following formula:

$$\frac{L_1}{12}\ (4A + 2B + 4C)$$

where L_1 is length of the lifeboat in metres from the inside of the planking or plating at the stem to the corresponding point at the stern post; in the case of a lifeboat with a square stern, the length is measured to the inside of the transom; and A, B and C denote respectively the areas of the cross sections at the quarter-length forward, amidships, and the quarter-length aft, which correspond to the three points obtained by dividing L_1 into four equal parts. (The areas corresponding to the two ends of the lifeboat are considered negligible.)

The areas A, B and C shall be deemed to be given in square metres by the successive application of the following formula to each of the three cross sections:

$$\frac{h}{12}\ (a + 4b + 2c + 4d + e)$$

where h is the depth measured in metres inside the planking or plating from the keel to the level of the gunwale, or, in certain cases, to a lower level as determined hereafter; and a, b, c, d, e denote the horizontal breadths of the lifeboat measured in metres at the upper and lower points of the depth and at the three points obtained by dividing h into four equal parts (a and e being the breadths at the extreme point, and c at the middle point of h).

3.2 If the sheer of the gunwale, measured at the two points situated at a quarter of the length of the lifeboat from the ends, exceeds 1 per cent of the length of the lifeboat the depth employed in calculating the area of the cross sections A or C shall be deemed to be the depth amidships plus 1 per cent of the length of the lifeboat.

3.3 If the depth of the lifeboat amidships exceeds 45 per cent of the breadth, the depth employed in calculating the area of the amidship cross section B shall be deemed to be equal to 45 per cent of the breadth, and the depth employed in calculating the areas of the quarter-length sections A and C is obtained by increasing this last figure by an amount equal to 1 per cent of the length of the lifeboat, provided that in no case shall the depths employed in the calculation exceed the actual depths at these points.

3.4 If the depth of the lifeboat is greater than 1.22 metres the number of persons given by the application of this Appendix in the manner specified in Regulation 112 shall be reduced in proportion to the ratio of 1.22 metres to the actual depth until the lifeboat has been satisfactorily tested afloat with that number of persons on board, all wearing life-jackets of an approved type.

3.5 The Administration shall impose, by suitable formulae, a limit for the number of persons allowed in lifeboats with very fine ends and in lifeboats very full in form.

3.6 The Administration may assign to a lifeboat constructed of wooden planks a capacity equal to the product of the length, the breadth and the depth multiplied by 0.6 if it is evident that this formula does not give a greater capacity than that obtained by the above method. The dimensions shall then be measured in the following manner:

Length: From the intersection of the outside of the planking with the stem to the corresponding point at the stern post or, in the case of a square-sterned boat, to the afterside of the transom.

Breadth: From the outside of the planking at the point where the breadth of the boat is greatest.

Holte: Midskeeps aan die binnekant van die beplanking van die kiel tot op die vlak van die dolboord, maar die holte wat gebruik word om die inhoudsvermoë te bereken, mag in geen geval 45 persent van die breedte oorskry nie.

In alle gevalle het die eienaar van die vaartuig die reg om te eis dat die inhoudsvermoë van die reddingsboot deur presiese afmeting bepaal word.

3.7 Die inhoudsvermoë van 'n motorreddingsboot moet van die bruto inhoudsvermoë verkry word deur 'n volume gelyk aan dié wat beslaan word deur die motor en sy toebehore en indien aangebring, die radiotelegraafinstallasie en soeklig met hul toebehore, af te trek.

4. Reddingsvlotte.

4.1 ***Onbuigsame reddingsvlotte.***

4.1.1 'n Reddingsvlot se konstruksie moet so wees dat sy lugkaste of dryfmateriaal so na moontlik aan die kante geplaas is.

4.1.2 Die dekoppervlakte van die reddingsvlot moet binne die deel van die reddingsvlot wat aan die insittendes beskerming verskaf, geleë wees. Die aard van die dek moet sodanig wees dat dit sover moontlik die instroming van water voorkom en dit moet die insittendes doeltreffend uit die water hou.

4.1.3 Die reddingsvlot moet toegerus wees met 'n bedekking of gelykwaardige inrigting van 'n hoogs sigbare kleur wat die insittendes teen besering as gevolg van blootstelling kan beskerm in watter posisie die reddingsvlot ook al is.

4.1.4 Die totale massa van 'n reddingsvlot en sy toerusting mag nie 180 kilogram oorskry nie, behalwe dat sodanige totale massa oorskry mag word indien die reddingsvlot van beide kante van die vaartuig af te water gelaat kan word of indien middels verskaf word om dit meganies in die water te plaas aan enige kant van die vaartuig.

4.1.5 Die reddingsvlot moet toegerus wees met 'n vanglyn en 'n reddingstou moet stewig rondom die buitekant vasgestrop wees. 'n Reddingstou moet ook aan die binnekant rondom die reddingsvlot aangebring wees.

4.1.6 Die reddingsvlot moet by elke opening met doeltreffende middels toegerus wees om persone in die water in staat te stel om aan boord te klim.

4.1.7 Die reddingsvlot moet so gebou wees dat dit nie deur olie of olieprodukte aangetas sal word nie.

4.1.8 'n Drywende lig van die elektriese batterytipe moet met 'n taliereep aan die reddingsvlot vasgemaak wees.

4.1.9 Die reddingsvlot moet met inrigtings toegerus wees wat dit in staat stel om maklik gesleep te word.

4.1.10 Die reddingsvlot moet so gebêre word dat dit sal vrydryf indien die vaartuig sink.

4.1.11 Maatreëls moet getref word vir die behoorlike plasing en vasmaak in die bedienposisie van die antenne van die draagbare radiotoerusting waarna in Regulasie 122 verwys word.

4.1.12 'n Reddingsvlot wat ontwerp is om met 'n tewaterlatingstoestel gebruik te word, moet behoorlik vir die beoogde doel gebou word en moet sterk genoeg wees om veilig in die water neergelaat te word wanneer dit sy volle getal persone en toerusting aan boord het.

4.2 ***Opblaasbare reddingsvlotte.****

4.2.1 'n Reddingsvlot moet so gebou wees dat dit stabiel sal wees in 'n seegang wanneer dit ten volle opgeblaas is en met die bedekking na bo drywe.

4.2.2 Die reddingsvlot moet so gebou wees dat nóg die reddingsvlot nóg sy toerusting beskadig sal word indien dit van 'n hoogte van 18 meter in die water laat val word. Indien die reddingsvlot op die vaartuig op 'n hoogte bo die water van meer as 18 meter gebêre word, moet dit van 'n tipe wees wat onderwerp is aan 'n bevredigende valtoets vanaf 'n hoogte van ten minste gelyk aan die hoogte waarop dit gebêre sal word.

4.2.3 Die konstruksie van die reddingsvlot moet 'n bedekking insluit wat outomaties in posisie kom wanneer die reddingsvlot opgeblaas word. Hierdie bedekking moet die insittendes teen besering vanweë blootstelling kan beskerm, en middels om reën op te vang, moet voorsien wees. Bo-op die bedekking moet 'n lamp aangebring wees wat sy energie van 'n seegeaktiveerde sel verkry en 'n soortgelyke lamp moet ook binne-in die reddingsvlot aangebring wees. Die bedekking van die reddingsvlot moet van 'n hoogs sigbare kleur wees.

4.2.4 Die reddingsvlot moet met 'n vanglyn toegerus wees en 'n tou moet stewig rondom die buitekant vasgestrop wees. 'n Reddingstou moet ook aan die binnekant rondom die reddingsvlot aangebring wees.

4.2.5 Die reddingsvlot moet geredelik deur een persoon regop gedraai kan word indien dit in 'n omgekeerde posisie opblaas.

4.2.6 Die reddingsvlot moet by elke opening met doeltreffende middels toegerus wees om persone in die water in staat te stel om aan boord te klim.

* Kyk *Recommendation on the Conditions for Approval of Servicing Stations for Inflatable Liferafts*, aangeneem deur die Organisasie by Resolusie A.333 (IX).

Depth: Amidships inside the planking from the keel to the level of the gunwale, but the depth used in calculating the cubic capacity may not in any case exceed 45 per cent of the breadth.

In all cases the owner of the vessel has the right to require that the cubic capacity of the lifeboat shall be determined by exact measurement.

3.7 The cubic capacity of a motor lifeboat shall be obtained from the gross capacity by deducting a volume equal to that occupied by the motor and its accessories and, when carried, the radiotelegraph installation and searchlight with their accessories.

4. Liferafts.

4.1 ***Rigid liferafts.***

4.1.1 A liferaft shall be so constructed that its air cases or buoyant material are placed as near as possible to its sides.

4.1.2 The deck area of the liferaft shall be situated within that part of the liferaft which affords protection to its occupants. The nature of the deck shall be such as to prevent so far as practicable the ingress of water and it shall effectively support the occupants out of the water.

4.1.3 The liferaft shall be fitted with a cover or equivalent arrangement of a highly visible colour, which shall be capable of protecting the occupants against injury from exposure whichever way up the liferaft is floating.

4.1.4 The total mass of a liferaft and its equipment shall not exceed 180 kilogrammes except that such total weight may be exceeded where the liferaft is capable of being launched from both sides of the vessel or if means are provided for putting it into the water mechanically on either side of the vessel.

4.1.5 The liferaft shall have a painter attached and a lifeline securely becketed round the outside. A lifeline shall also be fitted round the inside of the liferaft.

4.1.6 The liferaft shall be fitted at each opening with efficient means to enable persons in the water to climb on board.

4.1.7 The liferaft shall be so constructed as not to be affected by oil or oil products.

4.1.8 A buoyant light of the electric battery type shall be attached to the liferaft by a lanyard.

4.1.9 The liferaft shall be fitted with arrangements enabling it to be readily towed.

4.1.10 The liferaft shall be so stowed as to float free in the event of the vessel sinking.

4.1.11 Arrangements shall be provided for adequately siting and securing in the operating position the antenna provided with the portable radio equipment referred to in Regulation 122.

4.1.12 A liferaft designed for use with a launching appliance shall be properly constructed for the purpose for which it is intended and shall be of sufficient strength to permit it to be safely lowered into the water when loaded with its full complement of persons and equipment.

4.2 ***Inflatable liferafts.****

4.2.1 A liferaft shall be so constructed that, when fully inflated and floating with the cover uppermost, it shall be stable in a seaway.

4.2.2 The liferaft shall be so constructed that if it is dropped into the water from a height of 18 metres, neither the liferaft nor its equipment will be damaged. If the liferaft is to be stowed on the vessel at a height above the water of more than 18 metres, it shall be of a type which has been satisfactorily drop-tested from a height at least equal to the height at which it is to be stowed.

4.2.3 The construction of the liferaft shall include a cover which shall automatically be set in place when the liferaft is inflated. This cover shall be capable of protecting the occupants against injury from exposure, and means shall be provided for collecting rain. The top of the cover shall be fitted with a lamp which derives its luminosity from a sea-activated cell and a similar lamp shall also be fitted inside the liferaft. The cover of the liferaft shall be of a highly visible colour.

4.2.4 The liferaft shall be fitted with a painter and shall have a line securely becketed round the outside. A lifeline shall also be fitted around the inside of the liferaft.

4.2.5 The liferaft shall be capable of being readily righted by one person if it inflates in an inverted position.

4.2.6 The liferaft shall be fitted at each opening with efficient means to enable persons in the water to climb on board.

* See Recommendation on the Conditions for the Approval of Servicing Stations for Inflatable Liferafts, adopted by the Organization by Resolution A.333 (IX).

4.2.7 Die reddingsvlot moet in 'n ransel of ander houer gehou word wat so gemaak is dat dit die strawwe toestande kan weerstaan wat op see teëgekom word. Die reddingsvlot in sy ransel of ander houer moet inherente dryfvermoë hê.

4.2.8 Die dryfvermoë van die reddingsvlot moet so ingerig wees dat daar deur 'n verdeling in 'n gelyke getal afsonderlike kompartemente, waarvan die helfte in staat moet wees om die aantal persone wat die reddingsvlot toegelaat word om te bevat, bo die water te hou, of deur enige ander ewe doeltreffende middel verseker word dat daar 'n redelike dryfvermoëgrens is indien die reddingsvlot beskadig sou word of gedeeltelik nie sou opblaas nie.

4.2.9 Die totale massa van die reddingsvlot, sy ransel of ander houer en sy toerusting mag nie 180 kilogram oorskry nie.

4.2.10 Die bodem van die reddingsvlot moet waterdig wees en moet voldoende teen koue geïsoleer kan word.

4.2.11 Die reddingsvlot moet met 'n gas opgeblaas word wat nie skadelik vir die insittendes is nie en die opblasing moet outomaties plaasvind òf deur 'n tou te trek òf deur 'n metode wat net so eenvoudig en doeltreffend is. Middels moet verskaf word waardeur die byvullingspomp of blaasbalk vereis by paragraaf 6.5.7 van hierdie Aanhangsel gebruik kan word om die druk te handhaaf.

4.2.12 Die reddingsvlot moet van goedgekeurde materiaal en konstruksie wees, en moet so gemaak wees dat dit 30 dae lank op see in alle seetoestande teen blootstelling bestand sal wees.

4.2.13 Materiale wat in die konstruksie van reddingsvlotte gebruik word, moet nie deur olie of olieprodukte aangetas word nie. Die reddingsvlot moet oor 'n temperatuurbestek van plus 66 grade Celsius tot minus 30 grade Celsius kan funksioneer.

4.2.14 Die reddingsvlot moet met inrigtings toegerus wees wat dit in staat stel om maklik gesleep te word.

4.2.15 Maatreëls moet getref word vir voldoende plasing en vasmaak in die bedienposisie van die antenne van die draagbare radiotoerusting waarna in Regulasie 122 verwys word.

4.2.16 'n Reddingsvlot wat ontwerp is om met 'n tewaterlatingstoestel gebruik te word, moet behoorlik vir die beoogde doel gebou word en moet sterk genoeg wees om veilig in die water neergelaat te word wanneer dit sy volle getal persone en toerusting aan boord het.

5. **Redbote.**

5.1 ***Onbuigsame redbote.***

5.1.1 Redbote moet oop en met onbuigsame kante gebou wees. Die Administrasie mag redbote met 'n onbuigsame skuiling goedkeur, met dien verstande dat dit maklik van sowel binne as buite oopgemaak kan word en dat dit nie die doel van die redboot, die vinnige inskeping en ontskeping daarvan, of die tewaterlating, hantering en inhaal van die redboot belemmer nie.

5.1.2 Dwarsbanke en sybanke moet so laag doenlik in die redboot aangebring word, en buikplanke moet aangebring word.

5.1.3 Interne dryftoestelle moet aangebring en so geplaas wees dat dit stabiliteit verseker onder ongunstige weerstoestande wanneer die redboot vol gelaai is.

5.1.4 Interne dryftoestelle moet aangebring word wat òf uit lugkaste òf uit drywende materiaal moet bestaan wat nie nadelig deur olie of olieprodukte beïnvloed mag word nie en wat die redboot nie nadelig mag beïnvloed nie.

5.5 Die totale volume van die interne dryftoestelle moet sodanig wees dat dit ten minste gelyk is aan die som van die volume van—

(a) dit wat vereis word om die reddingsboot en al sy toerusting te laat dryf wanneer die redboot oorstroom en aan die see blootgestel is sodat die bokant van die dolboord midskeeps nie onder water is nie; en

(b) dit wat gelykstaande is met 7,5 persent van die inhoudsvermoë van die redboot, wat op dieselfde wyse bepaal moet word as dié wat vir reddingsbote in Regulasie 112 voorgeskryf is.

5.1.6 Waar 'n enjin aangebring word, moet daar voldoende beskerming teen die skroef wees vir persone in die water.

5.1.7 Motorredbote moet met 'n kompressieontstekingsenjin toegerus wees wat so onderhou moet word dat dit te alle tye gereed vir gebruik is en maklik in alle toestande aangesit kan word. Die snelheid vorentoe van die motorredboot in kalm water wanneer dit sy volle getal persone aan boord het, moet ten minste ses knope wees.

5.2 ***Opblaasbare redbote.***

5.2.1 Die redboot moet so gebou wees dat dit 30 dae lank op see in alle seetoestande teen blootstelling bestand sal wees.

5.2.2 Die redboot moet oor 'n temperatuurbestek van plus 66 grade Celsius tot minus 30 grade Celsius kan funksioneer.

5.2.3 Materiale, komponente en bybehore wat by die bou van 'n redboot gebruik word, moet goedgekeur en bestand wees teen die uitwerking van vog, biologiese werking en olie of olieprodukte en moet hoogs bestand wees teen ultraviolet lig en moet 'n toereikende duursaamheidsgrens hê om te verseker dat hul werking nie beïnvloed sal word wanneer hulle gedurende die periode tussen normale inspeksies op 'n blootgestelde dek gebêre word sonder ander onderhoud as dit wat die vaartuig se bemanning kan uitvoer nie.

4.2.7 The liferaft shall be contained in a valise or other container so constructed as to be capable of withstanding hard wear under conditions met with at sea. The liferaft in its valise or other container shall be inherently buoyant.

4.2.8 The buoyancy of the liferaft shall be so arranged as to ensure by a division into an even number of separate compartments, half of which shall be capable of supporting out of the water the number of persons which the liferaft is permitted to accommodate, or by some other equally efficient means, that there is a reasonable margin of buoyancy if the liferaft is damaged or partially fails to inflate.

4.2.9 The total mass of the liferaft, its valise or other container and its equipment shall not exceed 180 kilogrammes.

4.2.10 The floor of the liferaft shall be waterproof and shall be capable of being sufficiently insulated against cold.

4.2.11 The liferaft shall be inflated by a gas which is not injurious to the occupants and the inflation shall take place automatically either on the pulling of a line or by some equally simple and efficient method. Means shall be provided whereby the topping-up pump or bellows required by paragraph 6.5.7 of this Appendix may be used to maintain pressure.

4.2.12 The liferaft shall be of approved material and construction, and shall be so constructed as to be capable of withstanding exposure for 30 days afloat in all sea conditions.

4.2.13 Materials used in the construction of liferafts shall be unaffected by oil or oil products. The liferaft shall be capable of operating over a temperature range of plus 66 degrees celsius to minus 30 degrees celsius.

4.2.14 The liferaft shall be fitted with arrangements enabling it to be readily towed.

4.2.15 Arrangements shall be provided for adequately siting and securing in the operating position the antenna provided with the portable radio equipment referred to in Regulation 122.

4.2.16 A liferaft designed for use with a launching appliance shall be properly constructed for the purpose for which it is intended and shall be of sufficient strength to permit it to be safely lowered into the water when loaded with its full complement of persons and equipment.

5. **Rescue boats.**

5.1 ***Rigid rescue boats.***

5.1.1 Rescue boats shall be open and constructed with rigid sides. The Administration may approve rescue boats with a rigid shelter, provided that it may be readily opened from inside and outside and does not impede the function of the rescue boat, its rapid embarkation and disembarkation, or the launching, handling and recovering of the rescue boat.

5.1.2 Thwarts and side seats shall be fitted as low as practicable in the rescue boat and bottom boards shall be fitted.

5.1.3 Internal buoyancy appliances shall be fitted which shall be so placed as to secure stability when the rescue boat is fully laden under adverse weather conditions.

5.1.4 Internal buoyancy appliances shall be fitted which shall consist either of air cases or buoyant material which shall not be adversely affected by oil or oil products and which shall not adversely affect the rescue boat.

5.1.5 The total volume of the internal buoyancy appliances shall be such that it will be at least equal to the sum of the volume of—

(a) that required to float the rescue boat and its full equipment when the rescue boat is flooded and open to the sea so that the top of the gunwale amidships is not submerged; and

(b) that equal to 7,5 per cent of the cubic capacity of the rescue boat which shall be determined in the same manner as that prescribed for lifeboats in Regulation 112.

5.1.6 Where an engine is fitted adequate protection from the propeller shall be provided for persons in the water.

5.1.7 Motor rescue boats shall be fitted with a compression ignition engine which shall be kept so as to be at all times ready for use and be capable of being readily started in all conditions. The speed ahead of the motor rescue boat in smooth water when loaded with its full complement of persons shall be at least 6 knots.

5.2 ***Inflatable rescue boats.***

5.2.1 The rescue boat shall be so constructed as to be capable of withstanding exposure for 30 days afloat in all sea conditions.

5.2.2 The rescue boat shall be capable of operating throughout a temperature range of plus 66 degrees celsius to minus 30 degrees celsius.

5.2.3 Materials, components and accessories used in the construction of rescue boats shall be approved and resistant to the effect of humidity, biological action and oil or oil products and highly resistant to ultraviolet light and have sufficient margin of durability to ensure that their performance will not be affected by being stowed on an exposed deck during the period between normal inspections without other maintenance than the vessel's crew can carry out.

5.2.4 Die dryfkompartemente wat die grens van die redboot uitmaak, moet, wanneer opgeblaas, minstens 0,17 kubieke meter volume hê vir elke persoon wat die redboot gesertifiseer is om te akkommodeer. Die deursnee van die hoofdryfkompartement van 'n enkelbuisredboot moet minstens 400 millimeter wees.

5.2.5 Dryfvermoë moet op so 'n wyse deur 'n aantal afsonderlike kompartemente voorsien word dat wanneer een kompartement afblaas, die doeltreffende funksionering van die redboot nie in gevaar gestel word nie.

5.2.6 Elke dryfkompartement moet met 'n terugslagklep vir handopblasing en middele om dit af te blaas, toegerus wees. 'n Veiligheidsontlasklep moet ook aangebring word tensy die Administrasie daarvan oortuig is dat sodanige toestel nie nodig is nie.

5.2.7 Waar meer as een buis aangebring is, mag die volume van een van die buise nie 60 persent van die totale volume oorskry nie.

5.2.8 'n Redboot wat met roeispane aangedryf word, moet van dolle en roeibanke voorsien wees. Roeibanke moet so laag doenlik in die boot aangebring word.

5.2.9 Die bodem van die redboot moet waterdig wees en 'n doeltreffende werkplatform bied.

5.2.10 Onder die bodem en op kwesbare plekke aan die buitekant van die redboot moet daar tot tevredenheid van die Administrasie skuurstroke aangebring word.

5.2.11 Waar 'n agterbalk aangebring is, moet dit nie met meer as 25 persent van die totale lengte van die redboot ingespring wees nie.

5.2.12 Tensy die redboot 'n voldoende seeg het, moet 'n boegbedekking wat oor ten minste 15 persent van die totale lengte van die boot strek, aangebring word.

5.2.13 Die boonste deel van die redboot of 'n boegbedekking moet van 'n hoogs sigbare kleur wees.

5.2.14 Geskikte stroke moet aangebring wees waaraan die vanglyne voor en agter en die vasgestropte reddingstoue binne en buite die redboot vasgemaak kan word.

5.2.15 Waar 'n enjin aangebring word, moet daar voldoende beskerming teen die skroef wees vir persone in die water.

5.2.16 Die redboot moet te alle tye in 'n ten volle opgeblaasde toestand gehou word, tensy goedgekeurde middels voorsien word om die redboot vinnig op te blaas en om die onopgeblaasde redboot teen beskadiging te beskerm.

5.2.17 Die redboot moet maklik reggebring kan word indien dit onderstebo dryf.

6. Toerusting vir oorlewingsvaartuie en redbote.

Die toerusting, met uitsondering van enige bootshake, wat vir wegkeerdoeleindes gereed gehou word, moet in die vaartuig of boot vasgemaak wees. Die vasmaaktoestelle moet so ingerig wees dat verseker word dat die toerusting veilig gebêre kan word en dat dit geen hindernis is by vinnige inskeping en hantering tydens die tewaterlatingsaksie nie. Klein stukke toerusting moet gehou word in 'n sak of houer wat aan die vaartuig of boot vasgemaak is of in 'n sluitkas wat opvallend gemerk is. In onbuigsame reddingsvlotte moet die toerusting so gebêre word dat dit geredelik beskikbaar is, in watter posisie die vlot ook al is. Alle stukke toerusting moet so klein en lig doenlik wees.

6.1 ***Toerusting vir onbuigsame reddingsbote.***

6.1.1 Een drywende roeispaan per bank, twee reserwe drywende roeispane en 'n drywende stuurspaan; een en 'n halwe stel roeipenne of -mikke wat aan die boot vasgemaak is met 'n taliereep of ketting.

6.1.2 'n Bootshaak.

6.1.3 Twee proppe vir elke propgat (proppe word nie vereis wanneer behoorlike outomatiese kleppe aangebring is nie) wat met talierepe of kettings aan die boot vasgemaak is.

6.1.4 'n Hoos en twee emmers van goedgekeurde materiaal.

6.1.5 'n Roer wat aan die boot bevestig is en 'n roerpen.

6.1.6 'n Mas of maste met gegalvaniseerde draadstae saam met oranje seile.

6.1.7 'n Reddingstou wat aan die buitekant rondom die boot vasgestrop is; 'n goedgekeurde middel wat persone in staat stel om aan die boot vas te klou indien dit omgekeer is, in die vorm van kimkiele of kielrelings, saam met gryptoue wat van dolboord tot dolboord onder die kiel vasgemaak is; of ander goedgekeurde inrigtings.

6.1.8 Twee handbyle, een aan elke ent van die boot.

6.1.9 'n Lamp met genoeg olie vir 12 uur.

6.1.10 'n Waterdigte houer met twee dosies vuurhoutjies wat nie maklik deur die wind uitgeblus kan word nie.

6.1.11 'n Kompashuis met 'n doeltreffende kompas wat glim of met geskikte middels vir verligting toegerus is.

6.1.12 'n Seeanker van goedgekeurde grootte met 'n tou van voldoende sterkte en lengte.

6.1.13 Twee vanglyne van voldoende lengte en sterkte. Een moet met 'n strop en dwarspen aan die voorpunt van die boot vasgemaak wees sodat dit geredelik losgemaak kan word en die ander moet stewig aan die voorstewe van die boot bevestig en gereed vir gebruik wees.

5.2.4 The buoyancy compartments forming the boundary of the rescue boat shall on inflation provide at least 0,17 cubic metres of volume for each person the rescue boat is certified to accommodate. The diameter of the main buoyancy compartment of a single-tube rescue boat shall be at least 400 millimetres.

5.2.5 Buoyancy shall be provided by a number of separate compartments in such a manner that the deflation of any one compartment does not impair the effective function of the rescue boat.

5.2.6 Each buoyancy compartment shall be fitted with a non-return valve for manual inflation and means for deflation. A safety relief valve shall also be fitted unless the Administration is satisfied that such an appliance is not necessary.

5.2.7 Where more than one tube is fitted the volume of either tube shall not exceed 60 per cent of the total volume.

5.2.8 A rescue boat propelled by oars shall be provided with rowlocks and thwarts. Thwarts shall be fitted as low as practicable in the boat.

5.2.9 The floor of the rescue boat shall be waterproof and shall provide an efficient working platform.

5.2.10 Underneath the bottom and on vulnerable places on the outside of the rescue boat, rubbing strips shall be provided to the satisfaction of the Administration.

5.2.11 Where a transom is fitted it shall not be inset by more than 25 per cent of the overall length of the rescue boat.

5.2.12 Unless the rescue boat has adequate sheer a bow cover extending for at least 15 per cent of the overall length of the boat shall be provided.

5.2.13 The upper part of the rescue boat or a bow cover shall be of a highly visible colour.

5.2.14 Suitable patches shall be provided for securing the painters fore and aft and the becketed lifelines inside and outside the rescue boat.

5.2.15 Where an engine is fitted adequate protection from the propeller shall be provided for persons in the water.

5.2.16 The rescue boat shall be maintained at all times in a fully inflated condition unless approved means for rapidly inflating the rescue boat and for protecting the uninflated rescue boat against damage is provided.

5.2.17 The rescue boat shall be capable of being readily righted if floating in an inverted position.

6. Equipment for survival craft and rescue boats.

The equipment, with the exception of any boat hooks which shall be kept ready for fending purposes, shall be secured within the craft or boat. The fastening devices shall be so arranged as to ensure safe stowage of the equipment and to prevent any obstruction for a rapid embarkation and handling during the launching operation. Small items of equipment shall be kept in a bag or container fastened to the craft or boat or in a locker conspicuously marked. In rigid liferafts the equipment shall be so stowed as to be readily available whichever way up the raft is floating. All items of equipment should be as small and light as practicable.

6.1 ***Equipment for rigid lifeboats.***

6.1.1 A single banked complement of buoyant oars, two spare buoyant oars, and a buoyant steering oar; a set and a half of crutches or thole pins attached to the boat by lanyard or chain.

6.1.2 A boat hook.

6.1.3 Two plugs for each plug hole (plugs are not required when proper automatic valves are fitted) attached to the boat by lanyards or chains.

6.1.4 A bailer and two buckets of approved material.

6.1.5 A rudder attached to the boat and a tiller.

6.1.6 A mast or masts with galvanized wire stays together with orange coloured sails.

6.1.7 A lifeline becketed round the outside of the boat; an approved means to enable persons to cling to the boat if upturned in the form of bilge keels or keel rails, together with grab lines secured from gunwale to gunwale under the keel; or other approved arrangements.

6.1.8 Two hatchets, one at each end of the boat.

6.1.9 A lamp with oil sufficient for 12 hours.

6.1.10 A watertight container with two boxes of matches not readily extinguishable by wind.

6.1.11 An efficient compass in binnacle, to be luminized or fitted with suitable means of illumination.

6.1.12 A sea anchor of approved size with a line of adequate strength and length.

6.1.13 Two painters of adequate length and strength. One shall be secured to the forward end of the boat with a strop and toggle so that it can be readily released and the other shall be firmly secured to the stem of the boat and be ready for use.

6.1.14 'n Houer met 4,5 liter plantaardige, vis- of dierlike olie wat die olie maklik op die wateroppervlak kan versprei en aan die seeanker vasgemaak kan word.

6.1.15 Vier valskermnoodfakkels van 'n goedgekeurde tipe wat 'n helderrooi lig op 'n groot hoogte kan gee en ses handnoodfakkels van 'n goedgekeurde tipe wat 'n helderrooi lig kan gee.

6.1.16 Twee drywende rookseine van 'n goedgekeurde tipe (vir gebruik gedurende die dag) wat 'n hoeveelheid oranje rook kan vrylaat.

6.1.17 'n Goedgekeurde noodhulpuitrusting in 'n waterdigte kis.

6.1.18 'n Waterdigte elektriese flits wat geskik is vir die sein van die Morsekode, saam met 'n reserwestel batterye en 'n reserwegloeilamp in 'n waterdigte houer.

6.1.19 'n Dagligseinspieël van 'n goedgekeurde tipe.

6.1.20 'n Groot knipmes met 'n bliksnyer wat met 'n taliereep aan die reddingsboot vasgemaak gehou moet word.

6.1.21 Twee ligte drywende werplyne.

6.1.22 'n Handpomp van 'n goedgekeurde tipe.

6.1.23 'n Fluit of ekwivalente middel om 'n hoorbare sein te gee.

6.1.24 'n Goedgekeurde radarreflektor.*

6.1.25 'n Visgereistel.

6.1.26 'n Goedgekeurde bedekking van 'n hoogs sigbare kleur wat die insittendes teen besering vanweë blootstelling kan beskerm.

6.1.27 'n Kopie van 'n geskikte reddingseintabel.

6.1.28 Instruksies oor hoe om in die boot te oorleef.

6.1.29 Middels om persone in die water in staat te stel om in die boot in te klim.

6.1.30 'n Voedselrantsoen van altesaam minstens 8 000 kilojoule vir elke persoon wat die boot gesertifiseer is om te akkommodeer, welke voedsel in lugdigte houers in 'n waterdigte houer gehou moet word.

6.1.31 Waterdigte houers wat drie liter vars water bevat vir elke persoon wat die boot gesertifiseer is om te akkommodeer, of waterdigte houers wat twee liter vars water vir elke persoon bevat, saam met 'n goedgekeurde ontsoutingsapparaat wat een liter vars water per persoon kan voorsien; 'n roesvry skep met taliereep; 'n roesvry maatbeker vir drinkdoeleindes.

6.2 ***Toerusting vir onbuigsame motorreddingsbote.***

6.2.1 Al die toerusting wat in artikel 6.1 van hierdie Byvoegsel gelys is; motorreddingsbote hoef egter nie 'n mas of seile of meer as die helfte van die getal roeispane te hê nie, maar hulle moet twee bootshake hê.

6.2.2 Draagbare brandblustoerusting van 'n goedgekeurde tipe wat skuim of ander geskikte stof uitlaat om olievure te blus.

6.2.3 Die toerusting waarna in Regulasie 123 verwys is, indien van toepassing.

6.3 ***Toerusting vir opgeblaasde reddingsbote.***

6.3.1 Een drywende roeispaan per bank, twee reserwe drywende roeispane en 'n drywende stuurspaan; 'n stel dolle en 'n stuurdol wat stewig aan die boot vasgeheg is.

6.3.2 'n Bootshaak met bolpunt.

6.3.3 Twee proppe vir elke propgat (proppe word nie vereis wanneer behoorlike outomatiese kleppe aangebring is nie) wat met taliërepe aan die boot vasgemaak is.

6.3.4 'n Spons, 'n hoos en twee emmers van goedgekeurde materiaal.

6.3.5 'n Reddingstou wat aan die buitekant rondom die boonste buis vasgestrop is en 'n reddingstou wat aan die binnekant rondom die boonste buis van die boot vasgestrop is, saam met gryptoue wat van dolboord tot dolboord onder die kiel vasgemaak is, of ander goedgekeurde inrigtings.

6.3.6 'n Lamp met genoeg olie vir 12 uur.

6.3.7 'n Waterdigte houer met twee dosies vuurhoutjies wat nie maklik deur die wind uitgeblus kan word nie.

6.3.8 'n Kompashuis met 'n doeltreffende kompas wat glim of met geskikte middels vir verligting toegerus is.

6.3.9 'n Seeanker van goedgekeurde grootte met 'n tou van voldoende sterkte en lengte.

6.3.10 Twee vanglyne van voldoende lengte en sterkte. Een moet met 'n strop en dwarspen aan die voorpunt van die boot vasgemaak wees sodat dit geredelik losgemaak kan word en die ander moet stewig aan die voorstewe van die boot bevestig en gereed vir gebruik wees.

6.3.11 'n Houer met 4,5 liter plantaardige, vis- of dierlike olie wat die olie maklik op die wateroppervlak kan versprei en aan die seeanker vasgemaak kan word.

6.3.12 Vier valskermnoodfakkels van 'n goedgekeurde tipe wat 'n helderrooi lig op 'n groot hoogte kan gee; ses handnoodfakkels van 'n goedgekeurde tipe wat 'n helderrooi lig kan gee.

* Kyk *Recommendation on Performance Standards for Radar Reflectors* aangeneem deur die Organisasie by Resolusie A.277 (VIII).

6.1.14 A vessel containing 4,5 litres of vegetable, fish or animal oil, capable of easily distributing oil on the water surface and capable of being attached to the sea anchor.

6.1.15 Four parachute distress signals of an approved type capable of giving a bright red light at a high altitude and six hand-held distress flare signals of an approved type capable of giving a bright red light.

6.1.16 Two buoyant smoke signals of an approved type (for daytime use) capable of giving off a volume of orange coloured smoke.

6.1.17 An approved first-aid outfit in a watertight case.

6.1.18 A waterproof electric torch suitable for Morse signalling, together with a spare set of batteries and a spare bulb in a watertight container.

6.1.19 A daylight signalling mirror of an approved type.

6.1.20 A jack-knife fitted with a tin-opener to be kept attached to the lifeboat with a lanyard.

6.1.21 Two light buoyant heaving lines.

6.1.22 A manual pump of an approved type.

6.1.23 A whistle or equivalent sound signal.

6.1.24 An approved radar reflector.*

6.1.25 A set of fishing tackle.

6.1.26 An approved cover of a highly visible colour capable of protecting the occupants against injury from exposure.

6.1.27 A copy of a suitable rescue signal table.

6.1.28 Instructions on how to survive in the boat.

6.1.29 Means to enable persons in the water to climb into the boat.

6.1.30 A food ration totalling not less than 8 000 kilojoules for each person the boat is certified to carry, to be kept in airtight receptacles within a watertight container.

6.1.31 Watertight receptacles containing 3 litres of fresh water for each person the boat is certified to carry, or watertight receptacles containing 2 litres of fresh water for each person together with an approved de-salting apparatus capable of providing 1 litre of fresh water per person; a rust-proof dipper with lanyard; a rust-proof graduated drinking vessel.

6.2 ***Equipment for rigid motor lifeboats.***

6.2.1 All the equipment listed in Section 6.1 of this Appendix; however, motor lifeboats need not carry a mast or sails or more than half the complement of oars, but they shall carry two boat hooks.

6.2.2 Portable fire-extinguishing equipment of an approved type capable of discharging foam or other suitable substance for extinguishing oil fires.

6.2.3 The equipment referred to in Regulation 123 if applicable.

6.3 ***Equipment for inflated lifeboats.***

6.3.1 A single banked complement of buoyant oars, two spare buoyant oars and a buoyant steering oar; a set of rowlocks and a steering rowlock firmly attached to the boat.

6.3.2 A boat hook with ball point.

6.3.3 Two plugs for each plug hole (plugs are not required when proper automatic valves are fitted) attached by lanyards to the boat.

6.3.4 A sponge, a bailer and two buckets of approved material.

6.3.5 A lifeline becketed round the outside of the upper tube and a lifeline becketed round the inside of the upper tube of the boat together with grab lines secured from gunwale to gunwale under the keel or other approved arrangements.

6.3.6 A lamp with oil sufficient for 12 hours.

6.3.7 A watertight container with two boxes of matches not readily extinguishable by wind.

6.3.8 An efficient compass in binnacle, to be luminized or fitted with suitable means of illumination.

6.3.9 A sea anchor of approved size with a line of adequate strength and length.

6.3.10 Two painers of adequate length and strength. One shall be secured to the forward end of the boat with a strop and toggle so that it can be readily released and the other shall be firmly secured to the stem of the boat and be ready for use.

6.3.11 A vessel containing 4.5 litres of vegetable, fish or animal oil, capable of easily distributing oil on the water surface and capable of being attached to the sea anchor.

6.3.12 Four parachute distress signals of an approved type capable of giving a bright red light at a high altitude; six hand-held distress flare signals of an approved type giving a bright red light.

* See Recommendation on Performance Standards for Radar Reflectors adopted by the Organisation by Resolution A.277 (VIII).

6.3.13 Twee drywende rookseine van 'n goedgekeurde tipe (vir gebruik bedags) wat 'n hoeveelheid oranje rook kan vrylaat.

6.3.14 Goedgekeurde noodhulpuitrusting in 'n waterdigte kis.

6.3.15 'n Waterdigte elektriese flits wat geskik is vir die sein van die Morsekode, saam met 'n reserwestel batterye en 'n reserwegloeilamp in 'n waterdigte houer.

6.3.16 'n Dagligseinspieël van 'n goedgekeurde tipe.

6.3.17 'n Veiligheidsmes wat met 'n taliereep aan die boot vasgemaak gehou moet word.

6.3.18 Twee ligte drywende werplyne.

6.3.19 'n Fluit of ekwivalente middel om 'n hoorbare sein te gee.

6.3.20 'n Goedgekeurde radarreflektor.*

6.3.21 'n Visgereistel.

6.3.22 'n Goedgekeurde bedekking van 'n hoogs sigbare kleur wat die insittendes teen besering vanweë blootstelling kan beskerm.

6.3.23 'n Afskrif van 'n geskikte reddingseintabel.

6.3.24 Instruksies oor hoe om in die boot te oorleef.

6.3.25 'n Goedgekeurde hersteluitrusting om lekplekke in dryfkompartemente te herstel.

6.3.26 'n Byvulpomp of blaasbalk.

6.3.27 'n Drukmeter om die vuldruk te beheer.

6.3.28 Middels om persone in die water in staat te stel om in die boot in te klim.

6.3.29 Inrigtings wat dit moontlik maak dat die boot maklik gesleep kan word.

6.3.30 'n Voedselrantsoen van altesaam minstens 8 000 kilojoule vir elke persoon wat die boot gesertifiseer is om te akkommodeer, welke voedsel in lugdigte houers in 'n waterdigte houer gehou moet word.

6.3.31 Waterdigte houers wat drie liter vars water bevat vir elke persoon wat die boot gesertifiseer is om te akkommodeer, of waterdigte houers wat twee liter vars water vir elke persoon bevat, saam met 'n goedgekeurde ontsoutingsapparaat wat een liter vars water per persoon kan voorsien; 'n roesvry skep met taliereep; 'n roesvry maatbeker vir drinkdoeleindes.

6.3.32 Drie veiligheidsbliksnyers.

6.4 ***Toerusting vir opgeblaasde motorreddingsbote.***

6.4.1 Al die toerusting wat in artikel 6.3 van hierdie Byvoegsel gelys is.

6.4.2 Draagbare brandblustoerusting van 'n goedgekeurde tipe wat skuim of ander geskikte stof kan uitlaat om olievure te blus.

6.4.2 Die toerusting waarna in Regulasie 123 verwys is, indien van toepassing.

6.5 ***Toerusting vir reddingsvlotte.***

6.5.1 Twee skepspane.

6.5.2 'n Drywende reddingsgooiring aan 'n drywende tou van minstens 30 meter.

6.5.3 Vir reddingsvlotte wat nie meer as 12 persone mag bevat nie: 'n veiligheidsmes en een hoos. Vir reddingsvlotte wat 13 persone of meer mag bevat: twee veiligheidsmesse en twee hose.

6.5.4 Twee sponse.

6.5.5 Twee seeankers, waarvan een permanent aan die reddingsvlot vasgeheg en die ander 'n reserwe met tou is.

6.5.6 'n Hersteluitrusting waarmee lekplekke in dryfkompartemente herstel kan word, tensy die reddingsvlot aan artikel 4.1 van hierdie Byvoegsel voldoen.

6.5.7 'n Byvulpomp of blaasbalk, tensy die reddingsvlot aan artikel 4.1 van hierdie Byvoegsel voldoen.

6.5.8 Drie veiligheidsbliksnyers.

6.5.9 Goedgekeurde noodhulpuitrusting in 'n waterdigte kis.

6.5.10 'n Waterdigte elektriese flits wat geskik is vir die sein van die Morsekode, saam met 'n reserwestel batterye en 'n reserwegloeilamp in 'n waterdigte houer.

6.5.11 'n Dagligseinspieël van 'n goedgekeurde tipe en 'n seinfluit.

6.5.12 Twee valskermnoodfakkels van 'n goedgekeurde tipe wat 'n helderrooi lig op 'n groot hoogte kan gee.

6.5.13 Ses handnoodfakkels van 'n goedgekeurde tipe wat 'n helderrooi lig kan gee.

6.5.14 'n Visgereistel.

6.5.15 'n Voedselrantsoen van altesaam minstens 8 000 kilojoule vir elke persoon wat die reddingsvlot mag akkommodeer, welke voedsel in lugdigte houers gehou moet word.

6.5.16 Waterdigte houers wat 1,5 liter vars water bevat vir elke persoon wat die reddingsvlot mag akkommodeer, waarvan 0,5 liter per persoon deur 'n geskikte ontsoutingsapparaat vervang mag word wat 'n gelyke hoeveelheid vars water kan lewer, en 'n roesvry maatbeker vir drinkdoeleindes.

* Kyk *Recommendation on Performance Standards for Radar Reflectors*, aangeneem deur die Organisasie by Resolusie A.277(VIII).

6.3.13 Two buoyant smoke signals of an approved type (for daytime use) capable of releasing a volume of orange coloured smoke.

6.3.14 An approved first-aid outfit in a watertight case.

6.3.15 A waterproof electric torch suitable for Morse signalling together with a spare set of batteries and a spare bulb in a watertight container.

6.3.16 A daylight signalling mirror of an approved type.

6.3.17 A safety knife to be kept attached by a lanyard to the boat.

6.3.18 Two light buoyant heaving lines.

6.3.19 A whistle or equivalent sound signal.

6.3.20 An approved radar reflector.*

6.3.21 A set of fishing tackle.

6.3.22 An approved cover of highley visible colour capable of protecting the occupants against injury from exposure.

6.3.23 A copy of suitable rescue signal table.

6.3.24 Instructions on how to survive in the boat.

6.3.25 An approved repair outfit for repairing punctures in buoyancy compartments.

6.3.26 A topping-up pump or bellows.

6.3.27 A pressure guage for controlling the filling pressure.

6.3.28 Means to enable persons in the water to climb into the boat.

6.3.29 Arrangements to enable the boat to be readily towed.

6.3.30 A food ration totalling not less than 8 000 kilojoules for each person the boat is certified to carry, to be kept in airtight receptacles within a watertight container.

6.3.31 Watertight receptacles containing 3 litres of fresh water for each person the boat is certified to carry, or watertight receptacles containing 2 litres of fresh water for each person together with an approved de-salting apparatus capable of providing 1 litre of fresh water per person; a rust-proof dipper with lanyard; a rust-proof graduated drinking vessel.

6.3.32 Three safety tin-openers.

6.4 ***Equipment for inflated motor lifeboats.***

6.4.1 All the equipment listed in Section 6.3 of this Appendix.

6.4.2 Portable fire extinguishing equipment of an approved type capable of discharging foam or other suitable substance for extinguishing oil fires.

6.4.3 The equipment referred to in Regulation 123, if applicable.

6.5 ***Equipment for liferafts.***

6.5.1 Two paddles.

6.5.2 A buoyant rescue quoit, attached to at least 30 metres of buoyant line.

6.5.3 For liferafts which are permitted to accommodate not more than 12 persons: a safety knife and one bailer. For liferafts which are permitted to accommodate 13 persons or more: two safety knives and two bailers.

6.5.4 Two sponges.

6.5.5 Two sea anchors, one permanently attached to the liferaft and a spare with line.

6.5.6 A repair outfit capable of repairing punctures in buoyancy compartments unless the liferaft complies with the requirements of Section 4.1 of this Appendix.

6.5.7 A topping-up pump or bellows, unless the liferaft complies with Section 4.1 of this Appendix.

6.5.8 Three safety tin-openers.

6.5.9 An approved first-aid outfit in a waterproof case.

6.5.10 A waterproof electric torch suitable for Morse signalling, together with a spare set of batteries and a spare bulb in a watertight container.

6.5.11 A daylight signalling mirror of an approved type and a signalling whistle.

6.5.12 Two parachute distress signals of an approved type capable of giving a bright red light at a high altitude.

6.5.13 Six hand-held distress flare signals of an approved type capable of giving a bright red light.

6.5.14 A set of fishing tackle.

6.5.15 A food ration totalling not less than 8 000 kilojoules for each person the liferaft is permitted to carry, to be kept in airtight receptacles.

6.5.16 Watertight receptacles containing 1.5 litres of fresh water for each person the liferaft is permitted to accommodate, of which 0.5 litre per person may be replaced by a suitable de-salting apparatus capable of producing an equal amount of fresh water, and a rust-proof graduated drinking vessel.

* See Recommendation on Performance Standards for Radar Reflectors adopted by the Organisation by Resolution A.277 (VIII).

6.5.17 Ses tablette teen seesiekte of goedgekeurde ekwivalente medisyne vir elke persoon wat die reddingsvlot mag akkommodeer.

6.5.18 Instruksies oor hoe om in die reddingsvlot te oorleef.

6.5.19 'n Afskrif van 'n geskikte reddingseintabel.

6.6 ***Toerusting vir onbuigsame redbote.***

6.6.1 Een drywende roeispaan per bank en 'n reserwe drywende roeispaan, maar minstens drie roeispane; 'n stel roeipenne of -mikke wat aan die boot vasgemaak is met 'n taliereep of ketting.

6.6.2 'n Bootshaak.

6.6.3 Twee proppe vir elke propgat (proppe word nie vereis wanneer behoorlike outomatiese kleppe aangebring is nie) wat met talierepe of kettings aan die boot vasgemaak is.

6.6.4 'n Hoos en 'n emmer.

6.6.5 'n Roer wat aan die boot bevestig is en 'n roerpen.

6.6.6 'n Reddingstou wat aan die buitekant rondom die boot vasgestrop is. Middels wat persone in staat stel om aan die boot vas te klou wanneer dit omgekeer is, in die vorm van kimkiele of kielrelings.

6.6.7 'n Vanglyn van voldoende lengte en sterkte wat met 'n strop en dwarspen aan die voorpunt van die boot vasgemaak is sodat dit geredelik losgemaak kan word.

6.6.8 'n Waterdigte elektriese flits wat geskik is vir die sein van die Morsekode, saam met 'n reserwestel batterye en 'n reserwegloeilamp in 'n waterdigte houer.

6.6.9 'n Handbyl.

6.6.10 Twee drywende reddingsgooiringe, elk aan 'n ligte drywende tou van 30 meter.

6.6.11 'n Seeanker van goedgekeurde grootte met 'n tou van voldoende sterkte en lengte.

6.6.12 'n Fluit of ekwivalente middel om 'n hoorbare sein te gee.

6.6.13 'n Groot knipmes.

6.6.14 'n Goedgekeurde soeklig, tensy die Administrasie daarvan oortuig is dat die dagligseinlamp voorgeskryf by Regulasie 152 draagbaar en vir hierdie doel geskik is.

6.7 ***Toerusting vir opblaasbare redbote.***

6.7.1 Ten minste vier drywende roeispane of skepspane.

6.7.2 'n Dreineerprop waar nodig, wat met 'n taliereep aan die boot vasgemaak is.

6.7.3 'n Hoos en twee sponse.

6.7.4 'n Reddingstou wat aan die buitekant rondom die boot vasgestrop is en 'n reddingstou wat aan die binnekant rondom die boot vasgestrop is.

6.7.5 'n Mik of stuurring in die agterbalk, waar aangebring.

6.7.6 Twee vanglyne van voldoende lengte en grootte.

6.7.7 Twee drywende reddingsgooiringe elk aan 'n ligte drywende tou van 30 meter.

6.7.8 'n Seeanker van goedgekeurde grootte met 'n tou van voldoende sterkte en lengte.

6.7.9 'n Waterdigte elektriese flits wat geskik is vir die sein van die Morsekode, saam met 'n reserwestel baterye en 'n reserwegloeilamp in 'n waterdigte houer.

6.7.10 'n Veiligheidsmes.

6.7.11 'n Fluit of ekwivalente middel om 'n hoorbare sein te gee.

6.7.12 'n Hersteluitrusting in 'n geskikte houer vir die herstel van lekplekke.

6.7.13 'n Byvulpomp of blaasbalk.

6.7.14 'n Goedgekeurde soeklig, tensy die Administrasie daarvan oortuig is dat die dagligseinlamp voorgeskryf by Regulasie 152 draagbaar en vir hierdie doel geskik is.

6.8 ***Vrystelling ten opsigte van oorlewingsvaartuigtoerusting.***

Waar vaaruie gebruik word vir vaarte van sodanige duur en in sodanige toestande dat, na die oordeel van die Administrasie, items van die oorlewingsvaartuigtoerusting gespesifiseer in artikel 6 van hierdie Byvoegsel onnodig is, mag die Administrasie toelaat dat daar soos volg van hulle afgesien word:

(a) Vir onbuigsame reddingsbote, items waarna in paragrawe 6, 19, 20, 24, 29 en 30 van artikel 6.1 verwys is;

(b) vir opgeblaasde reddingsbote, items waarna in paragrawe 16, 20, 29 en 30 van artikel 6.3 verwys is;

(c) vir reddingsvlotte, sommige van die items van artikel 6.5.

7. **Stuwings- en davitvereistes vir oorlewingsvaartuie.**

7.1 Behalwe waar 'n alternatiewe tewaterlatingstoestel goedgekeur word, moet davits soos volg wees:

(a) Radiale of swaartekragtipe davits vir reddingsbote met 'n massa van hoogstens 2 300 kilogram wanneer hulle volledig uitgerus en beman is;

6.5.17 Six anti-seasickness tablets or approved equivalent medicine for each person which the liferaft is permitted to accommodate.

6.5.18 Instructions on how to survive in the liferaft.

6.5.19 A copy of a suitable rescue signal table.

6.6 ***Equipment for rigid rescue boats.***

6.6.1 A single banked complement of buoyant oars and a spare buoyant oar but not less than three oars; a set of thole pins or crutches attached to the boat by lanyard or chain.

6.6.2 A boat hook.

6.6.3 Two plugs for each plug hole (plugs are not required when proper automatic valves are fitted) attached to the boat by lanyards or chains.

6.6.4 A bailer and a bucket.

6.6.5 A rudder attached to the boat and a tiller.

6.6.6 A lifeline becketed round the outside of the boat. Means to enable persons to cling to the boat if upturned in the form of bilge keels or keel rails.

6.6.7 A painter of adequate length and strength secured to the forward end of the boat with a stop and toggle so that it can be readily released.

6.6.8 A waterproof electric torch suitable for Morse signalling, together with a spare set of batteries and a spare bulb in a watertight container.

6.6.9 A hatchet.

6.6.10 Two buoyant rescue quoits each attached to 30 metres of ligth buoyant line.

6.6.11 A sea anchor of approved size with a line of adequate strength and length.

6.6.12 A whistle or equivalent sound signal.

6.6.13 A jack-knife.

6.6.14 An approved searchlight, unless the Administration is satisfied that the daylight signalling lamp prescribed by Regulation 152 is portable and suitable for this purpose.

6.7 ***Equipment for inflatable rescue boats.***

6.7.1 At least four buoyant oars or paddles.

6.7.2 A drain plug where necessary attached to the boat by a lanyard.

6.7.3 A bailer and two sponges.

6.7.4 A lifeline becketed round the outside of the boat and a lifeline becketed round the inside of the boat.

6.7.5 A crutch or steering grommet in the transom where fitted.

6.7.6 Two painters of adequate length and size.

6.7.7 Two buoyant rescue quoits each attached to 30 metres of light buoyant line.

6.7.8 A sea anchor of approved size with a line of adequate strenght and length.

6.7.9 A waterproof electric torch suitable for Morse signalling, together with a spare set of batteries and a spare bulb in a watertight container.

6.7.10 A safety knife.

6.7.11 A whistle or equivalent sound signal.

6.7.12 A repair outfit in a suitable container for repairing punctures.

6.7.13 A topping-up pump or bellows.

6.7.14 An approved searchlight, unless the Administration is satisfied that the daylight signalling lamp prescribed by Regulation 152 is portable and suitable for this purpose.

6.8 ***Dispensation in respect of survival craft equipment.***

Where vessels are engaged on voyages of such duration and in such conditions that, in the opinion of the Administration, items of the survival craft equipment specified in Section 6 of this Appendix are unnecessary, the Administration may allow them to be dispensed with as follows:

(a) For rigid lifeboats, items referred to in paragraphs 6, 19, 20, 24, 29 and 30 of Section 6.1;

(b) for inflated lifeboats, items referred to in paragraphs 16, 20, 29 and 30 of Section 6.3;

(c) for liferafts, some of the items of Section 6.5.

7. **Stowage and davit requirements for survival craft.**

7.1 Except where an alternative launching appliance is approved, davits shall be as follows:

(a) Luffing or gravity type davits for operating lifeboats having a mass of not more than 2 300 kilogrammes in their turning out condition;

(b) swaartekragtipe davits vir reddingsbote met 'n massa van meer as 2 300 kilogram wanneer hulle volledig uitgerus en beman is.

7.2 Davits, lopers, blokke en ander uitrusting moet so sterk wees dat die reddingsbote uitgeswaai kan word terwyl hulle deur 'n tewaterlatingsbemanning van twee persone beman word en dan met die volle getal persone en toerusting aan boord veilig neergelaat kan word terwyl die vaartuig 'n slagsy van 15 grade na enige kant en 'n kop- of stuurlas van 10 grade het.

7.3 Waar meganies aangedrewe toestelle aangebring is vir die inhaal van oorlewingsvaartuie, moet doeltreffende handtoerusting ook voorsien word. Waar davits ingehaal word deur kragbediening van die lopers, moet veiligheidstoestelle aangebring word wat die krag outomaties afsny voordat die davits teen die stuiters kom om die oorspanning van die draadtoulopers of davits te voorkom.

7.4 Reddingsbote, asook reddingsvlotte wat met davits te water gelaat word, moet met draadtoulopers saam met windasse van 'n goedgekeurde tipe bedien word. Die Administrasie mag manillatoulopers of lopers van 'n ander goedgekeurde materiaal met of sonder windasse toelaat in die geval van redbote waar die afstand van die dek na die waterlyn van die vaartuig in die ligste bedryfstoestand hoogstens 4,5 meter is, en in ander gevalle waar hulle daarvan oortuig is dat manillatoulopers of lopers van 'n ander goedgekeurde materiaal voldoende is.

7.5 Skaatse of ander geskikte middele moet voorsien word om met 'n slagsy van 15 grade die tewaterlating van reddingsbote te vergemaklik.

7.6 Middels moet voorsien word om reddingsbote, of reddingsvlotte wat met davits te water gelaat word, teen die vaartuig se kant te bring en hulle daar te hou sodat persone veilig aan boord kan gaan.

7.7 Ten minste twee reddingstoue moet aan die middelleiers tussen die davits aangebring word en die lopers en die reddingstoue moet lank genoeg wees om die water te bereik terwyl die vaartuig in sy ligste bedryfstoestand is en 'n slagsy van 15 grade na enige kant het. Die onderste loperblokke moet met 'n geskikte ring of lang skakel toegerus wees wat aan die slingerhake gehaak kan word, tensy 'n goedgekeurde tipe ontkoppelingsinrigting aangebring is.

7.8 Die lopers vir reddingsbote aan davits moet gereed wees vir gebruik en maatreëls moet getref word om die reddingsbote vinnig, maar nie noodwendig gelyktydig nie, van die lopers af los te kry. Die punt waar die reddingsbote aan die lopers bevestig is, moet op sodanige hoogte bo die dolboord wees dat stabiliteit verseker word wanneer die reddingsbote neergelaat word.

8. **Vereistes vir reddingsbaadjies en reddingsboeie.**

8.1 ***Reddingsbaadjies.***

8.1.1 Hulle moet met behoorlike vakmanskap en van behoorlike materiale gemaak wees.

8.1.2 Hulle moet so gemaak wees dat hulle sover doenlik alle risiko uitsluit dat hulle verkeerd aangetrek kan word, behalwe dat hulle binnestebuite gedra moet kan word.

8.1.3 Hulle moet die gesig van 'n uitgeputte of bewustelose persoon uit die water kan lig en dit bo die water kan hou met die liggaam skuins agteroor, uit die vertikale posisie uit, geleun.

8.1.4 Hulle moet in staat wees om die liggaam in die water van enige posisie na 'n veilige dryf-posisie, met die liggaam effens teruggeleun van die vertikale posisie, te draai.

8.1.5 Hulle moet nie nadelig deur olie of olieprodukte aangetas word nie.

8.1.6 Hulle moet 'n hoogs sigbare kleur hê.

8.1.7 Hulle moet met 'n goedgekeurde fluitjie wat stewig aan 'n koord vasgemaak is, toegerus wees.

8.1.8 Die dryfvermoë van die reddingsbaadjies wat vereis word om voorgaande werkverrigting te lewer, moet nie met meer as vyf persent daal na 24 uur se onderdompeling in varswater nie.

8.1.9 Reddingsbaadjies waarvan die dryfvermoë van opblasing afhang, moet—

(a) twee afsonderlike, opblaasbare afdelings hê;

(b) sowel meganies as met die mond opgeblaas kan word; en

(c) aan die vereistes van paragrawe 8.1.1 tot 8.1.8 van hierdie Byvoegsel voldoen met enige van die twee afdelings afsonderlik opgeblaas.

8.1.10 Reddingsbaadjies moet tot tevredenheid van die Administrasie getoets wees.*

8.2 ***Reddingsboeie.***

8.2.1 Hulle moet van soliede kurk of enige ander ekwivalente materiaal gemaak wees.

8.2.2 Hulle moet ten minste 14,5 kilogram yster in varswater 24 uur lank kan dra.

8.2.3 Hulle moet nie nadelig deur olie of olieprodukte aangetas word nie.

8.2.4 Hulle moet 'n hoogs sigbare kleur hê.

8.2.5 Die naam en registrasie hawe of visvangletters en -nommers van die vaartuig wat hulle aan boord het, moet in blokletters daarop aangebring wees.

* Kyk *Recommendation for Testing Life-jackets*, aangeneem deur die Organisasie by Resolusie A. 169 (ES.IV).

(b) gravity type davits for operating lifeboats having a mass of more than 2 300 kilogrammes in their turning out condition.

7.2 Davits, falls, blocks and all other gear shall be of such strength that the lifeboats can be turned out manned by a launching crew of two persons and then safely lowered with the full complement of persons and equipment, with the vessel listed to 15 degrees either way and with a 10 degrees trim.

7.3 Where mechanically powered appliances are fitted for the recovery of survival craft, efficient hand gear shall also be provided. Where davits are recovered by action of the falls by power, safety devices shall be fitted which will automatically cut off the power before the davits come against the stops in order to avoid overstressing the wire rope falls or davits.

7.4 Lifeboats and davit launched liferafts shall be serviced by wire rope falls together with winches of an approved type. The Administration may permit manilla rope falls or falls of another approved material with or without winches in the case of rescue boats where the distance from the deck to the waterline of the vessel in the lightest operating condition is not more than 4,5 metres and in other cases where they are satisfied that manilla rope falls or falls of another approved material are adequate.

7.5 Skates or other suitable means shall be provided to facilitate launching of lifeboats against a list of 15 degrees.

7.6 Means shall be provided for bringing lifeboats or davit launched liferafts against the vessel's side and there holding them so that persons may be safely embarked.

7.7 At least two lifelines shall be fitted to the davit span and the falls and lifelines shall be long enough to reach the water with the vessel in its lightest operating condition and listed to 15 degrees either way. Lower fall blocks shall be fitted with a suitable ring or long link for attaching to the sling hooks unless an approved type of disengaging gear is fitted.

7.8 Lifeboats attached to davits shall have the falls ready for service and arrangements shall be made for speedily, but not necessarily simultaneously, detaching the lifeboats from the falls. The point of attachment of the lifeboats to the falls shall be at such height above the gunwale as to ensure stability when lowering the lifeboats.

8. **Requirements for life-jackets and lifebuoys.**

8.1 ***Life-jackets.***

8.1.1 They shall be constructed with proper workmanship and materials.

8.1.2 They shall be so constructed as to eliminate so far as possible all risk of their being put on incorrectly, except that they shall be capable of being worn inside out.

8.1.3 They shall be capable of lifting the face of an exhausted or unconscious person out of the water and holding it above the water with the body inclined backwards from its vertical position.

8.1.4 They shall be capable of turning the body in the water from any position to a safe floating position with the body inclined backwards from its vertical position.

8.1.5 They shall not be adversely affected by oil or oil products.

8.1.6 They shall be of a highly visible colour.

8.1.7 They shall be fitted with an approved whistle, firmly secured by a cord.

8.1.8 The buoyancy of the life-jackets required to provide the foregoing performance shall not be reduced by more than 5 per cent after 24 hours submergence in fresh water.

8.1.9 Life-jackets, the buoyancy of which depends on inflation, shall—

(a) have two separate inflatable compartments;

(b) be capable of being inflated both mechanically and by mouth; and

(c) comply with the requirements of paragraphs 8.1.1 to 8.1.8 of this Appendix with either compartment inflated separately.

8.1.10 Life-jackets shall be tested to the satisfaction of the Administration.*

8.2 ***Lifebuoys.***

8.2.1 They shall be of solid cork or any other equivalent material.

8.2.2 They shall be capable of supporting in fresh water for 24 hours at least 14.5 kilogrammes of iron.

8.2.3 They shall not be adversely affected by oil or oil products.

8.2.4 They shall be of a highly visible colour.

8.2.5 They shall be marked in block letters with the name and port of registry or fishing letters and numbers of the vessel in which they are carried.

* See Recommendation for Testing Life-jackets adopted by the Organisation by Resolution A.169 (ES.IV).

8.2.6 Reddingsboeie wat van plastiek of ander sintetiese verbindings gemaak is, moet hul dryfeienskappe en duursaamheid behou wanneer hulle in kontak kom met seewater of olieprodukte of onder temperatuurwisseling of klimaatsveranderinge wat tydens vaarte op die oop see voorkom.

8.2.7 Elke reddingsboei moet toegerus wees met gryptoue van goeie gehalte onkinkbare tou wat goed by vier punte ewe ver van mekaar af vasgemaak is, sodat vier lusse tou gevorm word.

8.2.8 Die masse van 'n reddingsboei moet nie 6,15 kilogram oorskry wanneer dit pas gemaak is nie. Reddingsboeie wat toegerus is met liggies wat self aangaan en selfaktiverende rookseine, moet 'n massa van minstens 4 kilogram hê.

8.2.9 Reddingsboeie mag nie met biesies, kurkskaafsels, korrelkurk of enige ander los korrelrige materiaal gevul wees nie, en hul dryfvermoë mag nie van lugkompartemente wat opgeblaas moet word, afhang nie.

8.2.6 Lifebuoys made of plastic or other synthetic compounds shall be capable of retaining their buoyant properties and durability in contact with seawater or oil products, or under variation of temperature or climatic changes prevailing in open sea voyages.

8.2.7 Every lifebuoy shall be fitted with grab lines which shall be of good quality unkinkable line and well secured at four equidistant points, providing four loops of line.

8.2.8 The mass of a lifebuoy shall not exceed 6.15 kilogrammes when newly constructed. Lifebuoys provided with self-igniting lights and self-activating smoke signals shall have a mass of not less than 4 kilogrammes.

8.2.9 Lifebuoys shall not be filled with rushes, cork shavings, granulated cork or any other loose granulated material, and their buoyancy shall not depend upon air compartments which require to be inflated.

IMPORTANT!!

Placing of languages:

Government Gazettes

1. Notice is hereby given that the interchange of languages in the *Government Gazette* will be effected annually from the first issue in October.

2. For the period 1 October 1988 to 30 September 1989, English is to be placed FIRST.

3. This arrangement is in conformity with Gazettes containing Acts of Parliament etc. where the language sequence remains constant throughout the sitting of Parliament.

4. ***It is therefore expected of you, the advertiser, to see that your copy is in accordance with the above-mentioned arrangement in order to avoid unnecessary style changes and editing to correspond with the correct style.***

—oOo—

BELANGRIK!!

Plasing van tale:

Staatskoerante

1. Hiermee word bekendgemaak dat die omruil van tale in die *Staatskoerant* jaarliks geskied met die eerste uitgawe in Oktober.

2. Vir die tydperk 1 Oktober 1988 tot 30 September 1989 word Engels EERSTE geplaas.

3. Hierdie reëling is in ooreenstemming met dié van die Parlement waarby koerante met Wette ens. die taalvolgorde deurgaans behou vir die duur van die sitting.

4. ***Dit word dus van u, as adverteerder, verwag om u kopie met bogenoemde reëling te laat strook om onnodige omskakeling en stylredigering in ooreenstemming te bring.***

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