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GOEWERMENTSKENNISGEWING

DEPARTEMENT VAN ARBEID

No. R. 54 14 Januarie 1972

WET OP NYWERHEIDSVERSOENING, 1956

YSTER-, STAAL-, INGENIEURS- EN METALLURGIESE NYWERHEID.—WYSIGING VAN GROEPSLEWE- EN VOORSORGFONDSOOREENKOMS (B-SKEMA)

Ek, Marais Viljoen, Minister van Arbeid, verklaar hierby—

(a) kragtens artikel 48 (1) (a) van die Wet op Nywerheidsversoening, 1956, dat die bepalings van die Ooreenkoms (hierna die Wysigingsooreenkoms genoem) wat in die Bylae hiervan verskyn en op die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid betrekking het, met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 28 Mei 1975 eindig, bindend is vir die werkgewersorganisasies en die vakverenigings wat die Wysigingsooreenkoms aangegaan het en vir die werkgewers en werknemers wat lede van genoemde organisasies of verenigings is; en

(b) kragtens artikel 48 (1) (b) van genoemde Wet, dat die bepalings van die Wysigingsooreenkoms met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 28 Mei 1975 eindig, bindend is vir alle ander werkgewers en werknemers as dié genoem in paragraaf (a) van hierdie kennisgewing, wat betrokke is by of in diens is in genoemde Nywerheid in die Republiek van Suid-Afrika.

M. VILJOEN, Minister van Arbeid.

A—71806

GOVERNMENT NOTICE

DEPARTMENT OF LABOUR

No. R. 54 14 January 1972

INDUSTRIAL CONCILIATION ACT, 1956

IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY.—AMENDMENT OF GROUP LIFE AND PROVIDENT FUND AGREEMENT (B SCHEME)

I, Marais Viljoen, Minister of Labour, hereby—

(a) in terms of section 48 (1) (a) of the Industrial Conciliation Act, 1956, declare that the provisions of the Agreement (hereinafter referred to as the Amending Agreement) which appears in the Schedule hereto and which relates to the Iron, Steel, Engineering and Metallurgical Industry, shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 28 May 1975, upon the employers' organisations and the trade unions which entered into the Amending Agreement and upon the employers and employees who are members of the said organisations or unions; and

(b) in terms of section 48 (1) (b) of the said Act, declare that the provisions of the Amending Agreement shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 28 May 1975, upon all employers and employees, other than those referred to in paragraph (a) of this notice, who are engaged or employed in the said Industry in the Republic of South Africa.

M. VILJOEN, Minister of Labour.

1—3360

BYLAE OOREENKOMS

ingevoelge die Wet op Nywerheidsversoenig, 1956, gesluit deur die

Association of Electrical Cable Manufacturers of South Africa;
Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
Edge Hand and Small Tool Manufacturers' Association;
Engineers' and Founders' Association (Transvaal, O.F.S. and Northern Cape);
Electrical Engineering and Allied Industries Association;
East London Engineers and Founders Employers' Association;
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Light Engineering Industries Association of South Africa;
Lift Engineering Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries' Association;
Non-Ferrous Metal Industries' Association of South Africa;
Precision Manufacturing Engineers' Association;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheet Metal Industries' Association of South Africa;
S.A. Association of Shipbuilders and Repairers;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Fasteners Manufacturers' Association;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Electro Plating Industries Association;
S.A. Production Founders' Association;
S.A. Reinforced Concrete Engineers' Association;
South African Wrought Non-Ferrous Metal Manufacturers' Association;
Transvaal and O.F.S. Foundry Association;
South African Industrial Refrigeration and Air Conditioning Contractors' Association;

aan die een kant (hierna die "werkgewers" of die "werkgewers-organisasies" genoem) en die

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Engineering Industrial Workers' Union;
Iron Moulders' Society of South Africa;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers', Firemen's and Operators' Association;
Suid-Afrikaanse Yster-, Staal- en Verwantenwerkhede-Unie;

aan die ander kant (hierna die "werknemers" of die "vakverenigings" genoem),

wat die partye is by die Nasionale Nywerheidsraad vir die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid, om die Ooreenkoms gepubliseer by Goewermentskennisgewing R. 298 van 28 Februarie 1964, soos verleng en gewysig by Goewermentskennisgewings R. 767 van 28 Mei 1965, R. 1948 van 10 Desember 1965, R. 14 van 6 Januarie 1967, R. 1397 van 16 Augustus 1968, R. 786 van 22 Mei 1970 en R. 1440 van 4 September 1970 [hierna die "Groepslewe- en Voorsorgfondsooreenkoms (B-skema)" genoem], soos volg te wysig:

Klousule 5 van die Groepslewe- en Voorsorgfondsooreenkoms (B-skema) word hierby gewysig deur die tweede subklousule (4) as subklousule "(5)" te hernoem en die volgende subklousule (6) by te voeg:

"(6) Indien enige bedrag wat ingevolge hierdie klousule verskuldig is, nog nie deur die Raad ontvang is teen die 15de dag van die maand wat volg op die maand waarvoor dit betaalbaar is nie, moet die werkgever rente betaal op sodanige bedrag of kleiner bedrag as wat onbetaald oorbly bereken teen 1 persent per maand of deel daarvan vanaf sodanige 15de dag tot op die dag waarop betaling in kontant werklik deur die betrokke Streekraad ontvang is: Met dien verstande dat die Raad na sy eie absolute goedvinde die regsbevoegdheid het om die betaling van sodanige rente of 'n deel daarvan, kwyt te skeld."

Namens die partye op hede die 9de dag van November 1971 in Johannesburg onderteken.

W. E. KIRKWOOD, Voorsitter.

R. F. BUDD, Ondervoorsitter.

W. R. GLASTONBURY, Algemene Sekretaris.

SCHEDULE AGREEMENT

in accordance with the provisions of the Industrial Conciliation Act, 1956, made and entered into between the

Association of Electrical Cable Manufacturers of South Africa;
Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
Edge Hand and Small Tool Manufacturers' Association;
Engineers' and Founders' Association (Transvaal, O.F.S. and Northern Cape);
Electrical Engineering and Allied Industries' Association;
East London Engineers' and Founders' Employers' Association;
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Light Engineering Industries Association of South Africa;
Lift Engineering Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries' Association;
Non-Ferrous Metal Industries Association of South Africa;
Precision Manufacturing Engineers' Association;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheet Metal Industries' Association of South Africa;
S.A. Association of Shipbuilders and Repairers;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Fasteners Manufacturers' Association;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Electro Plating Industries Association;
S.A. Production Founders' Association;
S.A. Reinforced Concrete Engineers' Association;
South African Wrought Non-Ferrous Metal Manufacturers' Association;
Transvaal and O.F.S. Foundry Association;
South African Industrial Refrigeration and Air Conditioning Contractors' Association;

of the one part (hereinafter referred to as "the employers" or "the employers' organisations") and the

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Engineering Industrial Workers' Union;
Iron Moulders' Society of South Africa;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers', Firemen's and Operators' Association;
Suid-Afrikaanse Yster-, Staal- en Verwantenwerkhede-Unie;

of the other part (hereinafter referred to as "the employees" or "the trade unions"),

being parties to the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry, to amend the Agreement published under Government Notice R. 298 of 28 February 1964, as extended and amended by Government Notices R. 767 of 28 May 1965, R. 1948 of 10 December 1965, R. 14 of 6 January 1967, R. 1397 of 16 August 1968, R. 786 of 22 May 1970 and R. 1440 of 4 September 1970 (hereinafter referred to as the "Group Life and Provident Fund B Scheme Agreement") as follows:

Section 5 of the Group Life and Provident Fund B Scheme Agreement is hereby amended by renumbering the second subsection (4) as subsection "(5)" and the addition of the following subsection (6):

"(6) Should any amount due in terms of this section not be received by the Council by the 15th day of the month following the month in respect of which it is payable, the employer shall pay interest on such amount or on such lesser amount as remains unpaid calculated at the rate of 1 per cent per month or part thereof from such 15th day until the day upon which payment in cash is actually received by the appropriate Regional Council: Provided that the Council shall be entitled in its absolute discretion to waive the payment of such interest or part thereof."

Signed at Johannesburg on behalf of the parties this 9th day of November 1971.

W. E. Kirkwood, Chairman.

R. F. BUDD, Vice-Chairman.

W. R. GLASTONBURY, Secretary.

No. R. 55

14 Januarie 1972

WET OP NYWERHEIDSVERSOENING, 1956

YSTER-, STAAL-, INGENIEURS- EN METALLURGIESE NYWERHEID.—WYSIGING VAN OPVOEDKUNDIGE EN OPLEIDINGSFONDSOOREENKOMS

Ek, Marais Viljoen, Minister van Arbeid, verklaar hierby—

(a) kragtens artikel 48 (1) (a) van die Wet op Nywerheidsversoening, 1956, dat die bepalings van die Ooreenkoms (hierna die Wysigingsooreenkoms genoem) wat in die Bylae hiervan verskyn en op die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid betrekking het, met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 20 September 1975 eindig, bindend is vir die werkgewersorganisasies en die vakverenigings wat die Wysigingsooreenkoms aangegaan het en vir die werkgewers en werknemers wat lede van genoemde organisasies of verenigings is;

(b) kragtens artikel 48 (1) (b) van genoemde Wet, dat die bepalings van die Wysigingsooreenkoms met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 20 September 1975 eindig, bindend is vir alle ander werkgewers en werknemers as dié genoem in paragraaf (a) van hierdie kennisgewing, wat betrokke is by of in diens is in genoemde Nywerheid in die Republiek van Suid-Afrika; en

(c) kragtens artikel 48 (3) (a) van genoemde Wet, dat die bepalings van die Wysigingsooreenkoms met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 20 September 1975 eindig, in die Republiek van Suid-Afrika *mutatis mutandis* bindend is vir alle Bantoes in diens in genoemde Nywerheid by dié werkgewers vir wie enigeen van genoemde bepalings ten opsigte van werknemers bindend is en vir daardie werkgewers ten opsigte van Bantoes in hul diens.

M. VILJOEN, Minister van Arbeid.

BYLAE
OOREENKOMS

ingevolge die Wet op Nywerheidsversoening, 1956, gesluit deur die

Association of Electric Cable Manufacturers of South Africa;
Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
East London Engineers' and Founders' Employers' Association;
Edge Hand and Small Tool Manufacturers' Association;
Electrical Engineering and Allied Industries Association;
Electronics and Telecommunications Industries Association;
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape);
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Lift Engineering Association of South Africa;
Light Engineering Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries Association;
Non-Ferrous Metal Industries Association of South Africa;
Plastic Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Precision Manufacturing Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheetmetal Industries Association of South Africa;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Burglar Alarm Systems Association;
S.A. Electro Plating Industries Association;
S.A. Fasteners Manufacturers' Association;
S.A. Industrial Refrigeration and Air Conditioning Contractors' Association;

No. R. 55

14 January 1972

INDUSTRIAL CONCILIATION ACT, 1956

IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY.—AMENDMENT OF EDUCATION AND TRAINING FUND AGREEMENT

I, Marais Viljoen, Minister of Labour, hereby—

(a) in terms of section 48 (1) (a) of the Industrial Conciliation Act, 1956, declare that the provisions of the Agreement (hereinafter referred to as the Amending Agreement) which appears in the Schedule hereto and which relates to the Iron, Steel, Engineering and Metallurgical Industry, shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 20 September 1975, upon the employers' organisations and the trade unions which entered into the Amending Agreement and upon the employers and employees who are members of the said organisations or unions;

(b) in terms of section 48 (1) (b) of the said Act, declare that the provisions of the Amending Agreement shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 20 September 1975, upon all employers and employees, other than those referred to in paragraph (a) of this notice, who are engaged or employed in the said Industry in the Republic of South Africa; and

(c) in terms of section 48 (3) (a) of the said Act, declare that, in the Republic of South Africa and with effect from the second Monday after the date of publication of this notice and for the period ending on 20 September 1975, the provisions of the Amending Agreement shall *mutatis mutandis* be binding upon all Bantu employed in the said Industry by the employers upon whom any of the said provisions are binding in respect of employees and upon those employers in respect of Bantu in their employ.

M. VILJOEN, Minister of Labour.

SCHEDULE
AGREEMENT

in accordance with the provisions of the Industrial Conciliation Act, 1956, made and entered into between the

Association of Electric Cable Manufacturers of South Africa;
Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
East London Engineers' and Founders' Employers' Association;
Edge Hand and Small Tool Manufacturers' Association;
Electrical Engineering and Allied Industries Association;
Electronics and Telecommunications Industries Association;
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape);
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Lift Engineering Association of South Africa;
Light Engineering Industries Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries Association;
Non-Ferrous Metal Industries Association of South Africa;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Precision Manufacturing Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheetmetal Industries Association of South Africa;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Burglar Alarm Systems Association;
S.A. Electro Plating Industries Association;
S.A. Fasteners Manufacturers' Association;
S.A. Industrial Refrigeration and Air Conditioning Contractors' Association;

S.A. Machine Tool Manufacturers' Association;
 S.A. Production Founders' Association;
 S.A. Radio and Television Manufacturers' Association;
 S.A. Reinforced Concrete Engineers' Association;
 S.A. Association of Shipbuilders and Repairers;
 S.A. Tube Makers' Association;
 S.A. Wire and Wire Rope Manufacturers' Association;
 S.A. Wrought Non-Ferrous Metal Manufacturers' Association;
 Transvaal and Orange Free State Foundry Association;

aan die een kant (hierna die "werkgewers" of die "werkgewers-organisasies" genoem), en die

Amalgamated Engineering Union of South Africa;
 Amalgamated Society of Woodworkers of South Africa;
 Engineering Industrial Workers' Union;
 Iron Moulders' Society of South Africa;
 S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
 S.A. Electrical Workers' Association;
 S.A. Engine Drivers', Firemen's and Operators' Association;
 S.A. Yster-, Staal- en Verwante Nywerhede-Unie;

aan die ander kant (hierna die "werknemers" of die "vakverenigings" genoem), wat partye is by die Nasionale Nywerheidsraad vir die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid, om die Ooreenkoms gepubliseer by Goewermentskennisgewing R. 1481 van 11 September 1970 (hierna die "Opvoedkundige en Opleidingsfondsooreenkoms" genoem), soos volg te wysig:

Klousule 4 van die Opvoedkundige en Opleidingsfondsooreenkoms word hierby gewysig deur subklousule (5) as subklousule "(6)" te hernoem en die volgende subklousule as subklousule (5) in te voeg:

"(5) Indien enige bedrag wat ingevolge hierdie klousule verskuldig is, nog nie deur die Raad ontvang is teen die 15de dag van die maand wat volg op die maand waarvoor dit betaalbaar is nie, moet die werkgever rente betaal op sodanige bedrag of kleiner bedrag as wat onbetaald oorbly, bereken teen 1 persent per maand of deel daarvan vanaf sodanige 15de dag tot op die dag waarop betaling in kontant werklik deur die betrokke Streekraad ontvang is: Met dien verstande dat die Raad na sy eie absolute goedvinde die regsbevoegdheid het om die betaling van sodanige rente of 'n deel daarvan, kwyf te skeld."

Namens die partye op hede die 9de dag van November 1971 in Johannesburg onderteken.

W. E. KIRKWOOD, Voorsitter.

R. F. BUDD, Ondervoorsitter.

W. R. GLASTONBURY, Sekretaris.

No. R. 56

14 Januarie 1972

WET OP NYWERHEIDSVERSOENING, 1956

YSTER-, STAAL-, INGENIEURS- EN METALLURGIESE NYWERHEID.—WYSIGING VAN TECHNOLOGIESE FONDSOOREENKOMS

Ek, Marais Viljoen, Minister van Arbeid, verklaar hierby—

(a) kragtens artikel 48 (1) (a) van die Wet op Nywerheidsversoening, 1956, dat die bepalings van die Ooreenkoms (hierna die Wysigingsooreenkoms genoem) wat in die Bylae hiervan verskyn en op die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid betrekking het, met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 3 November 1973 eindig, bindend is vir die werkgewersorganisasies en die vakverenigings wat die Wysigingsooreenkoms aangegaan het en vir die werkgewers en werknemers wat lede van genoemde organisasies of verenigings is;

(b) kragtens artikel 48 (1) (b) van genoemde Wet, dat die bepalings van die Wysigingsooreenkoms met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 3 November 1973 eindig, bindend is vir alle ander werkgewers en werknemers as dié genoem in paragraaf (a) van hierdie kennisgewing, wat betrokke is by of in diens is in genoemde Nywerheid in die Republiek van Suid-Afrika; en

S.A. Machine Tool Manufacturers' Association;
 S.A. Production Founders' Association;
 S.A. Radio and Television Manufacturers' Association;
 S.A. Reinforced Concrete Engineers' Association;
 S.A. Association of Shipbuilders and Repairers;
 S.A. Tube Makers' Association;
 S.A. Wire and Wire Rope Manufacturers' Association;
 S.A. Wrought Non-Ferrous Metal Manufacturers' Association;
 Transvaal and Orange Free State Foundry Association;

of the one part (hereinafter referred to as "the employers" or "the employers' organisation"), and the

Amalgamated Engineering Union of South Africa;
 Amalgamated Society of Woodworkers of South Africa;
 Engineering Industrial Workers' Union;
 Iron Moulders' Society of South Africa;
 S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
 S.A. Electrical Workers' Association;
 S.A. Engine Drivers', Firemen's and Operators' Association;
 S.A. Yster-, Staal- en Verwante Nywerhede-Unie;

of the other part (hereinafter referred to as "the employees" or "the trade unions") being parties to the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry to amend the Agreement published under Government Notice R. 1481 of 11 September 1970 (hereinafter referred to as "the Education and Training Fund Agreement"), as follows:

Section 4 of the Education and Training Fund Agreement is hereby amended by renumbering subsection (5) as subsection "(6)" and the insertion of the following subsection as subsection (5), viz:

"(5) Should any amount due in terms of this section not be received by the Council by the 15th day of the month following the month in respect of which it is payable, the employer shall pay interest on such amount or on such lesser amount as remains unpaid calculated at the rate of 1 per cent per month or part thereof from such 15th day until the day upon which payment in cash is actually received by the appropriate Regional Council: Provided that the Council shall be entitled in its absolute discretion to waive the payment of such interest or part thereof."

Signed at Johannesburg on behalf of the parties this 9th day of November 1971.

W. E. KIRKWOOD, Chairman.

R. F. BUDD, Vice-Chairman.

W. R. GLASTONBURY, Secretary.

No. R. 56

14 January 1972

INDUSTRIAL CONCILIATION ACT, 1956

IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY.—AMENDMENT OF TECHNOLOGICAL FUND AGREEMENT

I, Marias Viljoen, Minister of Labour, hereby—

(a) in terms of section 48 (1) (a) of the Industrial Conciliation Act, 1956, declare that the provisions of the Agreement (hereinafter referred to as the Amending Agreement) which appears in the Schedule hereto and which relates to the Iron, Steel, Engineering and Metallurgical Industry, shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 3 November 1973, upon the employers' organisations and the trade unions which entered into the Amending Agreement and upon the employers and employees who are members of the said organisations or unions;

(b) in terms of section 48 (1) (b) of the said Act, declare that the provisions of the Amending Agreement shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 3 November 1973, upon all employers and employees, other than those referred to in paragraph (a) of this notice, who are engaged or employed in the said Industry in the Republic of South Africa; and

(c) kragtens artikel 48 (3) (a) van genoemde Wet, dat die bepalings van die Wysigingsooreenkoms met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 3 November 1973 eindig, in die Republiek van Suid-Afrika *mutatis mutandis* bindend is vir alle Bantoes in diens in genoemde Nywerheid by dié werkgewers vir wie enigene van genoemde bepalings ten opsigte van werknemers bindend is en vir daardie werkgewers ten opsigte van Bantoes in hul diens.

M. VILJOEN, Minister van Arbeid.

BYLAE

OOREENKOMS

ingevolge die Wet op Nywerheidsversoenig, 1956, gesluit deur die

Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
Edge Hand and Small Tool Manufacturers' Association;
Engineers' and Founders' Association (Transvaal, O.F.S. and Northern Cape);
Electrical Engineering and Allied Industries' Association;
East London Engineers' and Founders' Employers' Association;
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Light Engineering Industries, Association of South Africa;
Lift Engineering Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries' Association;
Non-Ferrous Metal Industries' Association of South Africa;
Precision Manufacturing Engineers' Association;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheet Metal Industries' Association of South Africa;
S.A. Association of Shipbuilders and Repairers;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Fasteners Manufacturers' Association;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Electroplating Industries' Association;
S.A. Production Founders' Association;
S.A. Reinforced Concrete Engineers' Association;
South African Wrought Non-Ferrous Metal Manufacturers' Association;
Transvaal and O.F.S. Foundry Association;
South African Industrial Refrigeration and Air Conditioning Contractors' Association;

(hierna "die werkgewers" of "die werkgewersorganisasies" genoem), aan die een kant en die

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Iron Moulders' Society of South Africa;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers' and Firemen's Association;
S.A. Yster-, Staal- en Verwante Nywerhede-Unie;

(hierna "die werknemers" of "die vakverenigings" genoem), aan die ander kant,

wat die partye is by die Nasionale Nywerheidsraad vir die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid, om die Ooreenkoms gepubliseer by Goewermentskennisgewing 1666 van 25 Oktober 1963, soos gewysig en verleng by Goewermentskennisgewings R. 16 van 6 Januarie 1967 en R. 1957 van 25 Oktober 1968 (hierna die "Tegnologiese Fondsooreenkoms" genoem), soos volg te wysig:

Klousule 4 van die Tegnologiese Fondsooreenkoms word hierby gewysig deur die hernommering van subklousule (c) as subklousule "(f)" en die invoeging van die volgende subklousule as subklousule (e):

"(e) Indien enige bedrag wat ingevolge hierdie klousule verskuldig is, nog nie deur die Raad ontvang is teen die 15de dag van die maand wat volg op die maand waarvoor dit betaalbaar is nie, moet die werkgewer rente betaal op sodanige bedrag of kleiner bedrag as wat onbetaald oorbly, bereken teen 1 persent per

(c) in terms of section 48 (3) (a) of the said Act, declare that, in the Republic of South Africa and with effect from the second Monday after the date of publication of this notice and for the period ending on 3 November 1973, the provisions of the Amending Agreement shall *mutatis mutandis* be binding upon all Bantu employed in the said Industry by the employers upon whom any of the said provisions are binding in respect of employees and upon those employers in respect of Bantu in their employ.

M. VILJOEN, Minister of Labour.

SCHEDULE

AGREEMENT

in accordance with the provisions of the Industrial Conciliation Act, 1956, made and entered into between the

Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
Edge Hand and Small Tool Manufacturers' Association;
Engineers' and Founders' Association (Transvaal, O.F.S. and Northern Cape);
Electrical Engineering and Allied Industries' Association;
East London Engineers' and Founders' Employers' Association;
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Light Engineering Industries' Association of South Africa;
Lift Engineering Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries' Association;
Non-Ferrous Metal Industries' Association of South Africa;
Precision Manufacturing Engineers' Association;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheet Metal Industries' Association of South Africa;
S.A. Association of Shipbuilders and Repairers;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Fasteners Manufacturers' Association;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Electroplating Industries' Association;
S.A. Production Founders' Association;
S.A. Reinforced Concrete Engineers' Association;
South African Wrought Non-Ferrous Metal Manufacturers' Welders';
Transvaal and O.F.S. Foundry Association;
South African Industrial Refrigeration and Air Conditioning Contractors' Association;

of the one part (hereinafter referred to as "the employers" or "the employers' organisations"), and the

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Iron Moulders' Society of South Africa;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers' and Firemen's Association;
Suid-Afrikaanse Yster-, Staal- en Verwante Nywerhede-Unie;

of the other part (hereinafter referred to as "the employees" or "the trade unions"),

being parties to the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry, to amend the Agreement published under Government Notice 1666 of 25 October 1963, as amended, and extended by Government Notices R. 16 of 6 January 1967 and R. 1957 of 25 October 1968 (hereinafter referred to as the "Technological Fund Agreement"), as follows:

Clause 4 of the Technological Fund Agreement is hereby amended by renumbering subclause (e) as subclause "(f)" and the insertion of the following subclause as subclause (e), viz.:

"(e) Should any amount due in terms of this section not be received by the Council by the 15th day of the month following the month in respect of which it is payable, the employer shall pay interest on such amount or on such lesser amount as remains unpaid calculated at the rate of 1 per cent per month or part

maand of deel daarvan vanaf sodanige 15de dag tot op die dag waarop betaling in kontant werklik deur die betrokke Streekraad ontvang is: Met dien verstande dat die Raad na sy eie absolute goedvinde die regsbevoegdheid het om die betaling van sodanige rente of 'n deel daarvan, kwyt te skeld".

Namens die partye op hede die 9de dag van November 1971 in Johannesburg onderteken.

W. E. KIRKWOOD, Voorsitter.

R. F. BUDD, Ondervoorsitter.

W. R. GLASTONBURY, Sekretaris.

No. R. 57

14 Januarie 1972

WET OP NYWERHEIDSVERSOENING, 1956

YSTER-, STAAL-, INGENIEURS- EN METALLURGIESE NYWERHEID.—WYSIGING VAN GROEPS-PENSIOENFONDSOOREENKOMS

Ek, Marais Viljoen, Minister van Arbeid, verklaar hierby—

(a) kragtens artikel 48 (1) van die Wet op Nywerheidsversoening, 1956, dat die bepalings van die Ooreenkoms (hierna die Wysigingsooreenkoms genoem) wat in die Bylae hiervan verskyn en op die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid betrekking het, met ingang van die tweede Maandag na dié datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 6 Mei 1976 eindig, bindend is vir die werkgewersorganisasies en die vakverenigings wat die Wysigingsooreenkoms aangegaan het en vir die werkgewers en werknemers wat lede van genoemde organisasies of verenigings is;

(b) kragtens artikel 48 (1) (b) van genoemde Wet, dat die bepalings van die Wysigingsooreenkoms met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 6 Mei 1976 eindig, bindend is vir alle ander werkgewers en werknemers as dié genoem in paragraaf (a) van hierdie kennisgewing, wat betrokke is by of in diens is in genoemde Nywerheid in die landdrosdistrikte Alberton, Bellville, Benoni, Bloemfontein [uitgesonderd daardie gedeelte wat voor 1 Januarie 1972 (Goewermentskennisgewing 2076 van 19 November 1971) binne die landdrosdistrik Thaba Nchu geval het], Boksburg, Bothaville, Brakpan, Die Kaap, Durban (uitgesonderd daardie gedeelte wat voor die publikasie van Goewermentskennisgewing 1401 van 16 Augustus 1968 binne die landdrosdistrik Umlazi geval het), Oos-Londen [met inbegrip van daardie gedeelte van die landdrosdistrik Mdantsane wat voor 1 Oktober 1971 (Goewermentskennisgewing 1481 van 27 Augustus 1971) binne die landdrosdistrik Oos-Londen geval het], Germiston, Heidelberg (Transvaal), Johannesburg, Kempton Park, Kimberley, Klerksdorp, Kroonstad, Krugersdorp, Middelburg (Transvaal), Newcastle, Nigel, Odendaalsrus, Parys, Pietermaritzburg, Pinetown, Port Elizabeth, Potgietersrus, Pretoria (met inbegrip van daardie gedeelte van die landdrosdistrik Cullinan wat voor die publikasie van Goewermentskennisgewing 970 van 30 Mei 1968 binne die landdrosdistrik Pretoria geval het), Randfontein, Roodepoort, Sasolburg, Simonstad, Springs, Uitenhage, Vanderbijlpark, Vereeniging, Welkom, Westonaria, Witbank en Wynberg; en

(c) kragtens artikel 48 (3) (a) van genoemde Wet, dat die bepalings van die Wysigingsooreenkoms met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 6 Mei 1976 eindig, in die gebiede gespesifiseer in paragraaf (b) van hierdie kennisgewing

thereof from such 15th day until the day upon which payment in cash is actually received by the appropriate Regional Council: Provided that the Council shall be entitled in its absolute discretion to waive the payment of such interest or part thereof."

Signed at Johannesburg on behalf of the parties on this 9th day of November 1971.

W. E. KIRKWOOD, Chairman.

R. F. BUDD, Vice-Chairman.

W. R. GLASTONBURY, Secretary.

No. R. 57

14 January 1972

INDUSTRIAL CONCILIATION ACT, 1956

IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY.—AMENDMENT OF GROUP PENSION FUND AGREEMENT

I, Marais Viljoen, Minister of Labour, hereby—

(a) in terms of section 48 (1) (a) of the Industrial Conciliation Act, 1956, declare that the provisions of the Agreement (hereinafter referred to as the Amending Agreement) which appears in the Schedule hereto and which relates to the Iron, Steel, Engineering and Metallurgical Industry, shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 6 May 1976, upon the employers' organisations and the trade unions which entered into the Amending Agreement and upon the employers and employees who are members of the said organisations or unions;

(b) in terms of section 48 (1) (b) of the said Act, declare that the provisions of the Amending Agreement shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 6 May 1976, upon all employers and employees, other than those referred to in paragraph (a) of this notice, who are engaged or employed in the said Industry in the Magisterial Districts of Alberton, Bellville, Benoni, Bloemfontein [excluding that portion which, prior to 1 January 1972 (Government Notice 2076 of 19 November 1971), fell within the Magisterial District of Thaba Nchu], Boksburg, Bothaville, Brakpan, Durban (excluding that portion which, prior to the publication of Government Notice 1401 of 16 August 1968, fell within the Magisterial District of Umlazi), East London [including that portion of the Magisterial District of Mdantsane which, prior to 1 October 1971 (Government Notice 1481 of 27 August 1971), fell within the Magisterial District of East London], Germiston, Heidelberg (Transvaal), Johannesburg, Kempton Park, Kimberley, Klerksdorp, Kroonstad, Krugersdorp, Middelburg (Transvaal), Newcastle, Nigel, Odendaalsrus, Parys, Pietermaritzburg, Pinetown, Port Elizabeth, Potgietersrus, Pretoria (including that portion of the Magisterial District of Cullinan which, prior to the publication of Government Notice 970 of 30 May 1968, fell within the Magisterial District of Pretoria), Randfontein, Roodepoort, Sasolburg, Simonstown, Springs, The Cape, Uitenhage, Vanderbijlpark, Vereeniging, Welkom, Westonaria, Witbank and Wynberg; and

(c) in terms of section 48 (3) (a) of the said Act, declare that, in the areas specified in paragraph (b) of this notice and with effect from the second Monday

mutatis mutandis bindend is vir alle Bantoes in diens in genoemde Nywerheid by dié werkgewers vir wie enigteen van genoemde bepalings ten opsigte van werknemers bindend is en vir daardie werkgewers ten opsigte van Bantoes in hul diens.

M. VILJOEN, Minister van Arbeid.

BYLAE OOREENKOMS

ingevolge die Wet op Nywerheidsversoenings, 1956, gesluit deur die

Association of Electric Cable Manufacturers of South Africa;
Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
East London Engineers' and Founders' Employers' Association;
Edge Hand and Small Tool Manufacturers' Association;
Electrical Engineering and Allied Industries Association;
Electronics and Telecommunications Industries Association;
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape);
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Lift Engineering Association of South Africa;
Light Engineering Industries Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries Association;
Non-Ferrous Metal Industries Association of South Africa;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Precision Manufacturing Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheetmetal Industries Association of South Africa;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Association of Shipbuilders and Repairers;
S.A. Burglar Alarm Systems Association;
S.A. Electro Plating Industries Association;
S.A. Fasteners Manufacturers' Association;
S.A. Machine Tool Manufacturers' Association;
South African Industrial Refrigeration and Air Conditioning Contractors' Association;
S.A. Production Founders' Association;
S.A. Radio and Television Manufacturers' Association;
S.A. Reinforced Concrete Engineers' Association;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Wrought Non-Ferrous Metal Manufacturers' Association;
Transvaal and Orange Free State Foundry Association;

(hierna die "werkgewers" of die "werkgewersorganisasies" genoem), aan die een kant, en die

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Electrical and Allied Trades Union of South Africa;
Engineering Industrial Workers' Union;
Iron Moulders' Society of South Africa;
Radio, Television, Electronic and Allied Workers' Union;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers', Firemen's and Operators' Association;
Suid-Afrikaanse Yster, Staal en Verwante Nywerhede-Unie;

(hierna die "werknemers" of die "vakverenigings" genoem), aan die ander kant, wat die partye is by die Nasionale Nywerheidsraad vir die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid, om die Ooreenkoms gepubliseer by Goewermentskenisgewing R. 655 van 28 April 1971 (hierna die "Groepspensioenfondsooreenkoms" genoem), soos volg te wysig:

Klousule 5 van die Groepspensioenfondsooreenkoms word hierby gewysig deur die byvoeging van die volgende subklousule (8):

"(8) Indien enige bedrag wat ingevolge hierdie klousule verskuldig is, nog nie deur die Raad ontvang is teen die 15de dag van die maand wat volg op die maand waarvoor dit betaalbaar is nie, moet die werkgewer rente betaal op sodanige bedrag of kleiner bedrag as wat onbetaald oorbly, bereken teen 1 persent per maand of deel daarvan vanaf sodanige 15de dag tot op die dag waarop betaling in kontant werklik deur die betrokke

after the date of publication of this notice and for the period ending on 6 May 1976, the provisions of the Amending Agreement shall *mutatis mutandis* be binding upon all Bantu employed in the said Industry by the employers upon whom any of the said provisions are binding in respect of employees and upon those employers in respect of Bantu in their employ.

M. VILJOEN, Minister of Labour.

SCHEDULE AGREEMENT

in accordance with the provisions of the Industrial Conciliation Act, 1956, made and entered into between the

Association of Electric Cable Manufacturers of South Africa;
Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
East London Engineers' and Founders' Employers' Association;
Edge Hand and Small Tool Manufacturers' Association;
Electrical Engineering and Allied Industries Association;
Electronics and Telecommunications Industries Association;
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape);
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Lift Engineering Association of South Africa;
Light Engineering Industries Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries Association;
Non-Ferrous Metal Industries Association of South Africa;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Precision Manufacturing Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheetmetal Industries Association of South Africa;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Association of Shipbuilders and Repairers;
S.A. Burglar Alarm Systems Association;
S.A. Electro Plating Industries Association;
S.A. Fasteners Manufacturers' Association;
S.A. Machine Tool Manufacturers' Association;
South African Industrial Refrigeration and Air Conditioning Contractors' Association;
S.A. Production Founders' Association;
S.A. Radio and Television Manufacturers' Association;
S.A. Reinforced Concrete Engineers' Association;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Wrought Non-Ferrous Metal Manufacturers' Association;
Transvaal and Orange Free State Foundry Association;

(hereinafter referred to as "the employers" or "the employers' organisations"), of the one part, and the

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Electrical and Allied Trades Union of South Africa;
Engineering Industrial Workers' Union;
Iron Moulders' Society of South Africa;
Radio, Television, Electronic and Allied Workers' Union;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers', Firemen's and Operator's Association;
Suid-Afrikaanse Yster, Staal en Verwante Nywerhede-Unie;

(hereinafter referred to as "the employees" or "the trade unions") of the other part, being parties to the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry to amend the Agreement published under Government Notice R. 655 of 28 April 1971 (hereinafter referred to as "the Group Pension Fund Agreement"), as follows:

Section 5 of the Group Pension Fund Agreement is hereby amended by the addition of the following subsection (8):

"(8) Should any amount due in terms of this section not be received by the Council by the 15th day of the month following the month in respect of which it is payable, the employer shall pay interest on such amount or on such lesser amount as remains unpaid calculated at the rate of 1 per cent per month or part thereof from such 15th day until the day upon which payment in cash is actually received by the appropriate Regio-

Streekraad ontvang is: Met dien verstande dat die Raad na sy eie absolute goedvinde die regsbevoegdheid het om die betaling van sodanige rente of 'n deel daarvan kwyt te skeld."

Namens die partye op hede die 9de dag van November 1971 in Johannesburg onderteken.

W. E. KIRKWOOD, Voorsitter.

R. F. BUDD, Ondervoorsitter.

W. R. GLASTONBURY, Sekretaris.

No. R. 58

14 Januarie 1972

WET OP NYWERHEIDSVERSOENING, 1956

YSTER-, STAAL-, INGENIEURS- EN METALLURGIESE NYWERHEID.—WYSIGING VAN GROEPSLEWE- EN VOORSORGFONDSOOREENKOMS (A-SKEMA)

Ek, Marais Viljoen, Minister van Arbeid, verklaar hierby—

(a) kragtens artikel 48 (1) (a) van die Wet op Nywerheidsversoening, 1956, dat die bepalings van die Ooreenkoms (hierna die Wysigingsooreenkoms genoem) wat in die Bylae hiervan verskyn en op die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid betrekking het, met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 28 Mei 1975 eindig, bindend is vir die werkgewersorganisasies en die vakverenigings wat die Wysigingsooreenkoms aangegaan het en vir die werkgewers en werknemers wat lede van genoemde organisasies of verenigings is; en

(b) kragtens artikel 48 (1) (b) van genoemde Wet, dat die bepalings van die Wysigingsooreenkoms met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 28 Mei 1975 eindig, bindend is vir alle ander werkgewers en werknemers as dié genoem in paragraaf (a) van hierdie kennisgewing, wat betrokke is by of in diens is in genoemde Nywerheid in die Republiek van Suid-Afrika.

M. VILJOEN, Minister van Arbeid.

BYLAE

OOREENKOMS

ingevolge die Wet op Nywerheidsversoening, 1956, gesluit deur die

Association of Electrical Cable Manufacturers of South Africa;
Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
Edge Hand and Small Tool Manufacturers' Association;
Engineers' and Founders' Association (Transvaal, O.F.S. and Northern Cape);
Electrical Engineering and Allied Industries' Association;
East London Engineers' and Founders' Employers' Association;
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Light Engineering Industries Association of South Africa;
Lift Engineering Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries' Association;
Non-Ferrous Metal Industries Association of South Africa;
Precision Manufacturing Engineers' Association;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheet Metal Industries' Association of South Africa;
S.A. Association of Shipbuilders and Repairers;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Fasteners Manufacturers' Association;
S.A. Tube Makers' Association;

nal Council: Provided that the Council shall be entitled in its absolute discretion to waive the payment of such interest or part thereof."

Signed at Johannesburg on behalf of the parties this 9th day of November 1971.

W. E. KIRKWOOD, Chairman.

R. F. BUDD, Vice-Chairman.

W. R. GLASTONBURY, Secretary.

No. R. 58

14 January 1972

INDUSTRIAL CONCILIATION ACT, 1956

IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY.—AMENDMENT OF GROUP LIVE AND PROVIDENT FUND AGREEMENT (A SCHEME)

I, Marais Viljoen, Minister of Labour, hereby—

(a) in terms of section 48 (1) (a) of the Industrial Conciliation Act, 1956, declare that the provisions of the Agreement (hereinafter referred to as the Amending Agreement) which appears in the Schedule hereto and which relates to the Iron, Steel, Engineering and Metallurgical Industry, shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 28 May 1975, upon the employers' organisations and the trade unions which entered into the Amending Agreement and upon the employers and employees who are members of the said organisations or unions; and

(b) in terms of section 48 (1) (b) of the said Act, declare that the provisions of the Amending Agreement shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 28 May 1975, upon all employers and employees, other than those referred to in paragraph (a) of this notice, who are engaged or employed in the said Industry in the Republic of South Africa.

M. VILJOEN, Minister of Labour.

SCHEDULE

AGREEMENT

in accordance with the provisions of the Industrial Conciliation Act, 1956, made and entered into between the

Association of Electrical Cable Manufacturers of South Africa;
Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
Edge Hand and Small Tool Manufacturers' Association;
Engineers' and Founders' Association (Transvaal, O.F.S. and Northern Cape);
Electrical Engineering and Allied Industries' Association;
East London Engineers' and Founders' Employers' Association;
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Light Engineering Industries Association of South Africa;
Lift Engineering Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries' Association;
Non-Ferrous Metal Industries Association of South Africa;
Precision Manufacturing Engineers' Association;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheet Metal Industries' Association of South Africa;
S.A. Association of Shipbuilders and Repairers;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Fasteners Manufacturers' Association;
S.A. Tube Makers' Association;

S.A. Wire and Rope Manufacturers' Association;
 S.A. Electro Plating Industries Association;
 S.A. Production Founders' Association;
 S.A. Reinforced Concrete Engineers' Association;
 South African Wrought Non-Ferrous Metal Manufacturers' Association;
 Transvaal and O.F.S. Foundry Association;
 South African Industrial Refrigeration and Air Conditioning Contractors' Association;

aan die een kant (hierna die "werkgewers" of die "werkgewers-organisasies" genoem), en die

Amalgamated Engineering Union of South Africa;
 Amalgamated Society of Woodworkers of South Africa;
 Engineering Industrial Workers' Union;
 Iron Moulders' Society of South Africa;
 S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
 S.A. Electrical Workers' Association;
 S.A. Engine Drivers', Firemen's and Operators' Association;
 Suid-Afrikaanse Yster-, Staal en Verwantenywerhede-Unie;

aan die ander kant (hierna die "werknemers" of die "vakverenigings" genoem),

wat die partye is by die Nasionale Nywerheidsraad vir die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid, om die Ooreenkoms gepubliseer by Goewermentskennisgewing R. 307 van 28 Februarie 1964, soos verleng en gewysig by Goewermentskennisgewings R. 767 van 28 Mei 1965, R. 1947 van 10 Desember 1965, R. 13 van 6 Januarie 1967, R. 1396 van 16 Augustus 1968, R. 786 van 22 Mei 1970 en R. 1439 en R. 1475 van 4 September 1970 [hierna die "Groepslewe- en Voorsorgfondsooreenkoms (A-skema)" genoem], soos volg te wysig:

Klausule 5 van die Groepslewe- en Voorsorgfondsooreenkoms (A-skema), word hierby gewysig deur die tweede subklousule (4) as subklousule "(5)" te hernoem en die volgende subklousule (6) by te voeg:

"(6) Indien enige bedrag wat ingevolge hierdie klousule verskuldig is, nog nie deur die Raad ontvang is teen die 15de dag van die maand wat volg op die maand waarvoor dit betaalbaar is nie, moet die werkgewer rente betaal op sodanige bedrag of kleiner bedrag as wat onbetaald oorbly, bereken teen 1 persent per maand of deel daarvan vanaf sodanige 15de dag tot op die dag waarop betaling in kontant werklik deur die betrokke Streekraad ontvang is. Met dien verstande dat die Raad na sy eie absolute goedvinde die regsbevoegdheid het om die betaling van sodanige rente of 'n deel daarvan, kwyt te skeld."

Namens die partye op hede die 9de dag van November 1971 in Johannesburg onderteken.

W. E. KIRKWOOD, Voorsitter.

R. F. BUDD, Ondervoorsitter.

W. R. GLASTONBURY, Algemene Sekretaris.

S.A. Wire and Wire Rope Manufacturers' Association;
 S.A. Electro Plating Industries Association;
 S.A. Production Founders' Association;
 S.A. Reinforced Concrete Engineers' Association;
 South African Wrought Non-Ferrous Metal Manufacturers' Association;
 Transvaal and O.F.S. Foundry Association;
 South African Industrial Refrigeration and Air Conditioning Contractors' Association;

of the one part (hereinafter referred to as "the employers" or "the employers' organisations") and the

Amalgamated Engineering Union of South Africa;
 Amalgamated Society of Woodworkers of South Africa;
 Engineering Industrial Workers' Union;
 Iron Moulders' Society of South Africa;
 S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
 S.A. Electrical Workers' Association;
 S.A. Engine Drivers', Firemen's and Operators' Association;
 Suid-Afrikaanse Yster-, Staal- en Verwantenywerhede-Unie;

of the other part (hereinafter referred to as "the employees" or "the trade unions"),

being parties to the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry, to amend the Agreement published under Government Notice R. 307 of 28 February 1964, as extended and amended by Government Notices R. 767 of 28 May 1965, R. 1947 of 10 December 1965, R. 13 of 6 January 1967, R. 1396 of 16 August 1968, R. 786 of 22 May 1970 and R. 1439 and R. 1475 of 4 September 1970 (hereinafter referred to as the "Group Life and Provident Fund A Scheme Agreement"), as follows:

Section 5 of the Group Life and Provident Fund A Scheme Agreement is hereby amended by renumbering the second subsection (4) as subsection "(5)" and the addition of the following subsection (6):

"(6) Should any amount due in terms of this section not be received by the Council by the 15th day of the month following the month in respect of which it is payable, the employer shall pay interest on such amount or on such lesser amount as remains unpaid calculated at the rate of 1 percent per month or part thereof from such 15th day until the day upon which payment in cash is actually received by the appropriate Regional Council: Provided that the Council shall be entitled in its absolute discretion to waive the payment of such interest or part thereof."

Signed at Johannesburg on behalf of the parties this 9th day of November 1971.

W. E. KIRKWOOD, Chairman.

R. F. BUDD, Vice-Chairman.

W. R. GLASTONBURY, Secretary.

No. R. 59

14 Januarie 1972

WET OP NYWERHEIDSVERSOENING, 1956

YSTER-, STAAL-, INGENIEURS- EN METALLURGIESE NYWERHEID.—WYSIGING VAN MEDIESE HULFONDOSOORENKOMS

Ek, Marais Viljoen, Minister van Arbeid, verklaar hierby, kragtens artikel 48 (1) (a) van die Wet op Nywerheidsversoening, 1956, dat die bepalings van die Ooreenkoms (hierna die Wysigingsooreenkoms genoem) wat in die Bylae hiervan verskyn en op die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid betrekking het, met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 28 April 1975 eindig, bindend is vir die werkgewersorganisasies en die vakverenigings wat die Wysigingsooreenkoms aangegaan het en vir die werkgewers en werknemers wat lede van genoemde organisasies of verenigings is.

M. VILJOEN, Minister van Arbeid.

No. R. 59

14 January 1972

INDUSTRIAL CONCILIATION ACT, 1956

IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY.—AMENDMENT OF MEDICAL AID FUND AGREEMENT

I, Marais Viljoen, Minister of Labour, hereby, in terms of section 48 (1) (a) of the Industrial Conciliation Act, 1956, declare that the provisions of the Agreement (hereinafter referred to as the Amending Agreement) which appears in the Schedule hereto and which relates to the Iron, Steel, Engineering and Metallurgical Industry, shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 28 April 1975, upon the employers' organisations and the trade unions which entered into the Amending Agreement and upon the employers and employees who are members of the said organisations or unions.

M. VILJOEN, Minister of Labour.

BYLAE OOREENKOMS

ingevoelge die Wet op Nywerheidsversoenig, 1956, gesluit deur die

Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
East London Engineers' and Founders' Employers' Association;
Edge, Hand and Small Tool Manufacturers' Association;
Electrical Engineering and Allied Industries Association;
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape);
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Lift Engineering Association of South Africa;
Light Engineering Industries Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries Association;
Non-Ferrous Metal Industries Association of South Africa;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Precision Manufacturing Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheetmetal Industries Association of South Africa;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Electro Plating Industries Association;
S.A. Fasteners Manufacturers' Association;
S.A. Production Founders' Association;
S.A. Reinforced Concrete Engineers' Association;
S.A. Association of Shipbuilders and Repairers;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Wrought Non-Ferrous Metal Manufacturers' Association;
South African Industrial Refrigeration and Air Conditioning Contractors' Association;
Transvaal and Orange Free State Foundry Association;
Electronics and Telecommunications Industries Association;
South African Burglar Alarm Systems Association;
S.A. Radio and Television Manufacturers' Association;

aan die een kant (hierna die "werkgewers" of die "werkgewers-organisaties" genoem), en die

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Engineering Industrial Workers' Union;
Iron Moulders' Society of South Africa;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers', Firemen's and Operators' Association;
Suid-Afrikaanse Yster-, Staal- en Verwante Nywerhede-Unie;
Electrical and Allied Trades Union of S.A.;
Radio, Television, Electronic and Allied Workers' Union;

aan die ander kant (hierna die "werknemers" of die "vakverenigings" genoem), wat die partye is by die Nasionale Nywerheidsraad vir die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid, om die Ooreenkoms gepubliseer by Goewermentskennisgewing R. 620 van 24 April 1970, soos gewysig by Goewermentskennisgewing R. 1438 van 4 September 1970 (hierna die "Mediese Hulpfondsooreenkoms" genoem), soos volg te wysig:

Klousule 9 van die Mediese Hulpfondsooreenkoms word hierby gewysig deur die byvoeging van die volgende subklousule (5):

"(5) Indien enige bedrag wat ingevolge hierdie klousule verskuldig is, nog nie deur die Raad ontvang is teen die 15de dag van die maand wat volg op die maand waarvoor dit betaalbaar is nie, moet die werkgever rente betaal op sodanige bedrag of kleiner bedrag as wat onbetaald oorbly, bereken teen 1 persent per maand of deel daarvan vanaf sodanige 15de dag tot op die dag waarop betaling in kontant werklik deur die betrokke Streekraad ontvang is: Met dien verstande dat die Raad na sy eie absolute goedvinde die regsbevoegdheid het om die betaling van sodanige rente of 'n deel daarvan, kwyt te skeld."

Namens die partye op hede die 9de dag van November 1971 in Johannesburg onderteken.

W. E. KIRKWOOD, Voorsitter.

R. F. BUDD, Ondervoorsitter.

W. R. GLASTONBURY, Sekretaris.

SCHEDULE AGREEMENT

in accordance with the provisions of the Industrial Conciliation Act, 1956, made and entered into between the

Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
East London Engineers' and Founders' Employers' Association;
Edge, Hand and Small Tool Manufacturers' Association;
Electrical Engineering and Allied Industries Association;
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape);
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Lift Engineering Association of South Africa;
Light Engineering Industries Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries Association;
Non-Ferrous Metal Industries Association of South Africa;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Precision Manufacturing Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheetmetal Industries Association of South Africa;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Electro Plating Industries Association;
S.A. Fasteners Manufacturers' Association;
S.A. Production Founders' Association;
S.A. Reinforced Concrete Engineers' Association;
S.A. Association of Shipbuilders and Repairers;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Wrought Non-Ferrous Metal Manufacturers' Association;
South African Industrial Refrigeration and Air Conditioning Contractors' Association;
Transvaal and Orange Free State Foundry Association;
Electronics and Telecommunications Industries Association;
South African Burglar Alarm Systems Association;
S.A. Radio and Television Manufacturers' Association;

of the one part (hereinafter referred to as "the employers" or "the employers' organisations") and the

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Engineering Industrial Workers' Union;
Iron Moulders' Society of South Africa;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers', Firemen's and Operators' Association;
Suid-Afrikaanse Yster-, Staal- en Verwante Nywerhede-Unie;
Electrical and Allied Trades Union of S.A.;
Radio, Television, Electronics and Allied Workers' Union;

of the other part (hereinafter referred to as "the employees" or "the trade unions"), being parties to the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry, to amend the Agreement published under Government Notice R. 620 of 24 April 1970, as amended by Government Notice R. 1438 of 4 September 1970 (hereinafter referred to as "the Medical Aid Fund Agreement") as follows:

Section 9 of the Medical Aid Fund Agreement is hereby amended by the addition of the following subsection (5):

"(5) Should any amount due in terms of this section not be received by the Council by the 15th day of the month following the month in respect of which it is payable, the employer shall pay interest on such amount or on such lesser amount as remains unpaid calculated at the rate of 1 per cent per month or part thereof from such 15th day until the day upon which payment in cash is actually received by the appropriate Regional Council: Provided that the Council shall be entitled in its absolute discretion to waive the payment of such interest or part thereof."

Signed at Johannesburg on behalf of the parties this the 9th day of November 1971.

W. E. KIRKWOOD, Chairman.

R. F. BUDD, Vice-Chairman.

W. R. GLASTONBURY, Secretary.

No. R. 60

14 Januarie 1972

WET OP NYWERHEIDSVERSOENING, 1956

YSTER-, STAAL-, INGENIEURS- EN METALLURGIESE NYWERHEID.—WYSIGING VAN SIEKTE-BYSTANDFONDSOOREENKOMS

Ek, Marais Viljoen, Minister van Arbeid, verklaar hierby, kragtens artikel 48 (1) (a) van die Wet op Nywerheidsversoening, 1956, dat die bepalings van die Ooreenkoms (hierna die Wysigingsooreenkoms genoem) wat in die Bylae hiervan verskyn en op die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid betrekking het, met ingang van die tweede Maandag na die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 28 April 1975 eindig, bindend is vir die werkgewersorganisasies en die vakverenigings wat die Wysigingsooreenkoms aangegaan het en vir die werkgewers en werknemers wat lede van genoemde organisasies of verenigings is.

M. VILJOEN, Minister van Arbeid.

BYLAE

OOREENKOMS

ingevolge die Wet op Nywerheidsversoening, 1956, gesluit deur die

Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
East London Engineers' and Founders' Employers' Association;
Edge Hand and Small Tool Manufacturers' Association;
Electrical Engineering and Allied Industries Association;
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape);
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Lift Engineering Association of South Africa;
Light Engineering Industries Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries Association;
Non-Ferrous Metal Industries Association of South Africa;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Precision Manufacturing Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheetmetal Industries Association of South Africa;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Electro Plating Industries Association;
S.A. Fasteners Manufacturers' Association;
S.A. Production Founders' Association;
S.A. Reinforced Concrete Engineers' Association;
S.A. Association of Shipbuilders and Repairers;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Wrought Non-Ferrous Metal Manufacturers' Association;
South African Industrial Refrigeration and Air Conditioning Contractors' Association;
Transvaal and Orange Free State Foundry Association;
Electronics and Telecommunications Industries Association;
South African Burglar Alarm Systems Association;
South African Radio and Television Manufacturers' Association;

aan die een kant (hierna die "werkgewers" of die "werkgewers-organisasies" genoem), en die

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Engineering Industrial Workers' Union;
Iron Moulders' Society of South Africa;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers', Firemen's and Operators' Association;

No. R. 60

14 January 1972

INDUSTRIAL CONCILIATION ACT, 1956

IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY.—AMENDMENT OF SICK PAY FUND AGREEMENT

I, Marais Viljoen, Minister of Labour, hereby, in terms of section 48 (1) (a) of the Industrial Conciliation Act, 1956, declare that the provisions of the Agreement (hereinafter referred to as the Amending Agreement) which appears in the Schedule hereto and which relates to the Iron, Steel, Engineering and Metallurgical Industry, shall be binding, with effect from the second Monday after the date of publication of this notice and for the period ending on 28 April 1975, upon the employers' organisations and the trade unions which entered into the Amending Agreement and upon the employers and employees who are members of the said organisations or unions.

M. VILJOEN, Minister of Labour.

SCHEDULE

AGREEMENT

in accordance with the provisions of the Industrial Conciliation Act, 1956, made and entered into between the

Automotive Parts Production Engineers' Association;
Cape Engineers' and Founders' Association;
Constructional Engineering Association;
East London Engineers' and Founders' Employers' Association;
Edge Hand and Small Tool Manufacturers' Association;
Electrical Engineering and Allied Industries Association;
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape);
Gate and Fence Manufacturers' Association of the Transvaal;
Heavy Engineering Manufacturers' Association;
Iron and Steel Producers' Association of South Africa;
Lift Engineering Association of South Africa;
Light Engineering Industries Association of South Africa;
Materials Handling and Construction Plant Association of South Africa;
Natal Engineering Industries Association;
Non-Ferrous Metal Industries Association of South Africa;
Plastics Manufacturers' Association of South Africa;
Port Elizabeth Engineers' Association;
Precision Manufacturing Engineers' Association;
Radio, Appliance and Television Association of South Africa;
Sheetmetal Industries Association of South Africa;
S.A. Agricultural and Irrigation Machinery Manufacturers' Association;
S.A. Electro Plating Industries Association;
S.A. Fasteners Manufacturers' Association;
S.A. Production Founders' Association;
S.A. Reinforced Concrete Engineers' Association;
S.A. Association of Shipbuilders and Repairers;
S.A. Tube Makers' Association;
S.A. Wire and Wire Rope Manufacturers' Association;
S.A. Wrought Non-Ferrous Metal Manufacturers' Association;
South African Industrial Refrigeration and Air Conditioning Contractor's Association;
Transvaal and Orange Free State Foundry Association;
Electronics and Telecommunications Industries Association;
South African Burglar Alarm Systems Association;
South African Radio and Television Manufacturers' Association;

of the one part (hereinafter referred to as "the employers" or "the employers' organisations"), and the

Amalgamated Engineering Union of South Africa;
Amalgamated Society of Woodworkers of South Africa;
Engineering Industrial Workers' Union;
Iron Moulders' Society of South Africa;
S.A. Boilermakers', Iron and Steel Workers', Shipbuilders' and Welders' Society;
S.A. Electrical Workers' Association;
S.A. Engine Drivers', Firemen's and Operators' Association;

Suid-Afrikaanse Yster-, Staal- en Verwante Nywerhede-Unie;
Electrical and Allied Trades Union of S.A.;
Radio, Television, Electronic and Allied Workers' Union;

aan die ander kant (hierna die "werknemers" of die "vakverenigings" genoem),

wat die partye is by die Nasionale Nywerheidsraad vir die Yster-, Staal-, Ingenieurs- en Metallurgiese Nywerheid, om die Ooreenkoms gepubliseer by Goewermentskennissgewing R. 621 van 24 April 1970 soos gewysig by Goewermentskennissgewing R. 46 van 15 Januarie 1971 (hierna "die Siektebystandfondsooreenkoms" genoem), soos volg te wysig:

Klousule 17 van die Siektebystandfondsooreenkoms word hierby gewysig deur die byvoeging van die volgende subklousule (4):

"(4) Indien enige bedrag wat ingevolge hierdie klousule verskuldig is, nog nie deur die Raad ontvang is teen die 15de dag van die maand wat volg op die maand waarvoor dit betaalbaar is nie, moet die werkgever rente betaal op sodanige bedrag of kleiner bedrag as wat onbetaald oorbly, bereken teen 1 persent per maand of deel daarvan vanaf sodanige 15de dag tot op die dag waarop betaling in kontant werklik deur die betrokke Streekraad ontvang is: Met dien verstande dat die Raad na sy eie absolute goedvinde die regsbevoegdheid het om die betaling van sodanige rente of 'n deel daarvan, kwyt te skeld."

Namens die partye op hede die 9de dag van November 1971 in Johannesburg onderteken.

W. E. KIRKWOOD, Voorsitter.

R. F. BUDD, Ondervoorsitter.

W. R. GLASTONBURY, Sekretaris.

No. R. 65 14 Januarie 1972

WET OP NYWERHEIDSVERSOENING, 1956

INTREKKING VAN REGISTRASIE VAN 'N VAKVERENIGING. — PORT ELIZABETH NON-EUROPEAN MUNICIPAL WORKERS' UNION

Ek, Francois Sebastiaan Pierre de Villiers, Nywerheidsregistrateur, maak hierby kragtens artikel 14 (2) van die Wet op Nywerheidsversoening, 1956, bekend dat ek die registrasie van die Port Elizabeth Non-European Municipal Workers' Union met ingang van 4 Januarie 1972 ingetrek het.

F. S. P. DE VILLIERS, Nywerheidsregistrateur.

DEPARTEMENT VAN BANTOE-ADMINISTRASIE EN -ONTWIKKELING

No. R. 52 14 Januarie 1972

ZOELOEPERSONEELREGULASIES, 1971

Kragtens die bevoegdheid my verleen by regulasie N.1 van die Zoeloepersoneelregulasies, 1971, afgekondig by Goewermentskennissgewing R. 2406 van 7 Januarie 1972, bepaal ek, Michiel Coenraad Botha, Minister van Bantoe-administrasie en -ontwikkeling, dat regulasies A1, A2 en B1 tot en met B9, van genoemde personeelregulasies, op 1 Februarie 1972 en regulasies C1 tot en met M18, van genoemde personeelregulasies, op 1 April 1972 in werking tree.

M. C. BOTHA, Minister van Bantoe-administrasie en -ontwikkeling.

(Lêer 1/2/2/8)

DEPARTEMENT VAN GEVANGENISSE

No. R. 53 14 Januarie 1972

Dit het die Staatspresident behaag om, kragtens die bevoegdheid hom verleen by artikel 94 van die Wet op Gevangenis, 1959 (Wet 8 van 1959), soos gewysig, goed te keur dat die Gevangenisregulasies uitgevaardig by

Suid-Afrikaanse Yster-, Staal- en Verwante Nywerhede-Unie;
Electrical and Allied Trades Union of S.A.;
Radio, Television, Electronic and Allied Workers' Union;

of the other part (hereinafter referred to as "the employees" or "the trade unions"),

being parties to the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry, to amend the Agreement published under Government Notice R. 621 of 24 April 1970 as amended by Government Notice R. 46 of 15 January 1971 (hereinafter referred to as "the Sick Pay Fund Agreement"), as follows:

Section 17 of the Sick Pay Fund Agreement is hereby amended by the addition of the following subsection (4):

"(4) Should any amount due in terms of this section not be received by the Council by the 15th day of the month following the month in respect of which it is payable, the employer shall pay interest on such amount or on such lesser amount as remains unpaid calculated at the rate of 1 per cent per month or part thereof from such 15th day until the day upon which payment is cash is actually received by the appropriate Regional Council: Provided that the Council shall be entitled in its absolute discretion to waive the payment of such interest or part thereof."

Signed at Johannesburg on behalf of the parties this 9th day of November 1971.

W. E. KIRKWOOD, Chairman.

R. F. BUDD, Vice-Chairman.

W. R. GLASTONBURY, Secretary.

No. R. 65 14 January 1972

INDUSTRIAL CONCILIATION ACT, 1956

CANCELLATION OF REGISTRATION OF A TRADE UNION.—PORT ELIZABETH NON-EUROPEAN MUNICIPAL WORKERS' UNION

I, Francois Sebastiaan Pierre de Villiers, Industrial Registrar, hereby notify in terms of section 14 (2) of the Industrial Conciliation Act, 1956, that I have cancelled the registration of the Port Elizabeth Non-European Municipal Workers' Union with effect from 4 January 1972.

F. S. P. DE VILLIERS, Industrial Registrar.

DEPARTMENT OF BANTU ADMINISTRATION AND DEVELOPMENT

No. R. 52 14 January 1972

ZULU STAFF REGULATIONS, 1971

Under and by virtue of the powers vested in me by regulation N.1 of the Zulu Staff Regulations, 1971, published under Government Notice R. 2406 of 7 January 1972, I, Michiel Coenraad Botha, Minister of Bantu Administration and Development, determine that regulations A1, A2 and B1 to and including B9 of the said staff regulations shall come into operation on 1 February 1972 and regulations C1 to and including M18 of the said staff regulations shall come into operation on 1 April 1972.

M. C. BOTHA, Minister of Bantu Administration and Development.

(File 1/2/2/8)

DEPARTMENT OF PRISONS

No. R. 53 14 January 1972

The State President has been pleased, under the powers vested in him by section 94 of the Prisons Act, 1959 (Act 8 of 1959), as amended, to approve that the Prison

Goewermentskennisgewing R. 2080 van 31 Desember 1965, soos volg gewysig word:

Regulasie 149 word gewysig deur subregulasie (4) (a) deur die volgende te vervang:

“(4) (a) ’n Blanke lid op die vaste diensstaat is met ingang van 1 Januarie 1966 of met ingang van die datum van sy aanstelling daarna *ipso facto* lid van die Mediese Fonds en is verplig om met ingang van 1 Januarie 1972 of met ingang van die datum van sy aanstelling daarna, maandeliks ’n bedrag van R1 aan die Mediese Fonds te betaal, wat by wyse van betaalstaataftrekkings ingevorder word.”

[Wysigingstrokie 12]

DEPARTEMENT VAN KLEURLINGBETREKKINGE EN REHOBOTH-AANGELEENTHEDE

No. R. 51

14 Januarie 1972

WET OP ONDERWYS VIR KLEURLINGE, 1963.— WYSIGING VAN REGULASIES

Kragtens artikel 34 van die Wet op Onderwys vir Kleurlinge, 1963 (Wet 47 van 1963), wysig ek, Schalk Willem van der Merwe, Adjunk-minister van Kleurlingsake, handelende namens die Minister van Kleurlingsake, hierby regulasies B30.2 en B32.3 (a) van Hoofstuk B van die regulasies uitgevaardig kragtens genoemde artikel 34 en afgekondig by Goewermentskennisgewing R. 1898 van 21 November 1963, soos gewysig by Goewermentskennisgewings R. 195 van 4 Februarie 1964, R. 1371 van 4 September 1964, R. 75 van 15 Januarie 1965, R. 166 van 5 Februarie 1965, R. 951 van 25 Junie 1965, R. 1188 van 13 Augustus 1965, R. 1397 van 17 September 1965, R. 186 van 11 Februarie 1966, R. 614 van 22 April 1966, R. 767 van 13 Mei 1966, R. 916 van 17 Junie 1966, R. 59 van 13 Januarie 1967, R. 595 van 28 April 1967, R. 1826 van 17 November 1967, R. 951 van 24 Mei 1968, R. 1920 van 18 Oktober 1968, R. 18 van 3 Januarie 1969, R. 160 van 7 Februarie 1969, R. 317 van 7 Maart 1969, R. 842 van 23 Mei 1969, R. 1142 van 4 Julie 1969, R. 3205 van 9 Augustus 1969, R. 2164 van 4 Desember 1970, R. 1038 van 18 Junie 1971, R. 1039 van 18 Junie 1971, R. 1106 van 25 Junie 1971 en R. 1323 van 30 Julie 1971, soos volg:

1. Die volgende verdere voorbehoudsbepaling word by regulasie B30.2 gevoeg:

“Met dien verstande voorts dat ’n onderwyser binne een maand nadat hy aldus op diens gebly het, kan versoek dat hy met sodanige getal dae verlof gekrediteer word of dat hy in die plek daarvan ’n nie-pensioendraende kontantbetaling ontvang bereken teen die helfte van sy basiese jaarlikse salaris ten tye van die verrigting van die diens, vir ’n maksimum tydperk van 48 dae vakansiediens in enige kalenderjaar”.

2. Die uitdrukking “25” in regulasie B30.2 word vervang deur die uitdrukking “24”.

3. Paragraaf (a) van regulasie B32.3 word deur die volgende paragraaf vervang:

“(a) ’n goedgekeurde eksamen te doen: Met dien verstande dat een addisionele dag spesiale verlof met volle salaris toegestaan kan word aan sodanige onderwyser vir elke dag waarop sodanige eksamen werklik afgeleë word; of”.

Regulations, published under Government Notice R. 2080 of 31 December 1965, be amended as follows:

Regulations 149 is amended by substituting the following for subregulation (4) (a):

“(4) (a) A White member on the fixed establishment shall, as from 1 January 1966, or from the date of his appointment thereafter, *ipso facto* be a member of the Medical Fund and shall, as from 1 January 1972, or from the date of his appointment thereafter, be obliged to pay monthly an amount of R1 to the Medical Fund, which amount shall be collected by way of paysheet stoppages.”

[Amendment Slip 12]

DEPARTMENT OF COLOURED RELATIONS AND REHOBOTH AFFAIRS

No. R. 51

14 January 1972

COLOURED PERSONS EDUCATION ACT, 1963.— AMENDMENT OF REGULATIONS

Under section 34 of the Coloured Persons Education Act, 1963 (Act 47 of 1963), I, Schalk Willem van der Merwe, Deputy Minister of Coloured Affairs, acting on behalf of the Minister of Coloured Affairs, hereby amend regulation B30.2 and B32.3 (a) of Chapter B of the regulations made under the said section 34 and published by Government Notice R. 1898, dated 21 November 1963, as amended by Government Notices R. 195 of 4 February 1964, R. 1371 of 4 September 1964, R. 75 of 15 January 1965, R. 166 of 5 February 1965, R. 951 of 25 June 1965, R. 1188 of 13 August 1965, R. 1397 of 17 September 1965, R. 186 of 11 February 1966, R. 614 of 22 April 1966, R. 767 of 13 May 1966, R. 916 of 17 June 1966, R. 59 of 13 January 1967, R. 595 of 28 April 1967, R. 1826 of 17 November 1967, R. 951 of 24 May 1968, R. 1920 of 18 October 1968, R. 18 of 3 January 1969, R. 160 of 7 February 1969, R. 317 of 7 March 1969, R. 842 of 23 May 1969, R. 1142 of 4 July 1969, R. 3205 of 9 August 1969, R. 2164 of 4 December 1970, R. 1038 of 18 June 1971, R. 1039 of 18 June 1971, R. 1106 of 25 June 1971, and R. 1323 of 30 July 1971, as follows:

1. The following further proviso is added to regulation B30.2:

“Provided further that a teacher may request, within one month of his having so remained on duty, that he be credited with such number of days leave or that in lieu thereof he receive a non-pensionable cash payment calculated at one-half of his basic annual salary at the time of the performance of such duty, for a maximum period of 48 days’ vacation duty in any calendar year”.

2. The expression “24” is substituted for the expression “25” in regulation B30.2.

3. The following paragraph is substituted for paragraph (a) of regulation B32.3:

“(a) sitting for an approved examination: Provided that in addition one day’s special leave on full salary may be granted to such teacher for each day on which he actually sits for an approved examination; or”.

DEPARTEMENT VAN LANDBOU-EKONOMIE EN -BEMARKING

No. R. 62

14 Januarie 1972

TABAJSKEMA

OPLEGGING VAN HEFFING EN SPESIALE HEFFING OP TABAK

Kragtens artikel 79 (a) van die Bemarkingswet, 1968 (No. 59 van 1968), maak ek, Hendrik Stephanus Johan Schoeman, Adjunk-minister van Landbou, hierby bekend dat die Tabakraad, vermeld in artikel 6 van die Tabakskema, afgekondig by Proklamasie R. 159 van 1971, soos gewysig, ingevolge artikels 23 en 24 van daardie Skema, met my goedkeuring en met ingang van die datum van publikasie hiervan die heffing en spesiale heffing in die Bylae hiervan uiteengesit, opgelê het, ter vervanging van die heffing en spesiale heffing afgekondig by Goewermentskennisgewing R. 2059 van 25 Julie 1969 wat hierby herroep word.

H. S. J. SCHOEMAN, Adjunk-minister van Landbou.

BYLAE

1. In hierdie kennisgewing, tensy uit die samehang anders blyk, het 'n woord of uitdrukking waaraan in die Tabakskema, afgekondig by Proklamasie R. 159 van 1971, soos gewysig, 'n betekenis geheg is, 'n ooreenstemmende betekenis, en beteken—

“klas”, 'n klas voorgeskryf by regulasie kragtens artikel 89 van die Wet.

2. Hierby word 'n heffing en spesiale heffing opgelê teen die onderstaande koerse op tabak wat—

- (a) in die Republiek ingevoer word;
- (b) deur produsente daarvan verkoop word;
- (c) deur produsente daarvan vir verkoop verwerk word.

Klas tabak	Heffing per kg	Spesiale heffing per kg
(a) Oondgedroogde tabak.....	0,25	10,75
(b) Ligte luggedroogde en ligte Burley-tabak.....	0,25	8,00
(c) Donker luggedroogde rol- en snuif-tabak en donker vuurgedroogde snuiftabak.....	0,25	6,25
(d) Donker luggedroogde en vuurgedroogde pyptabak.....	0,25	4,70
(e) Donker Burley- en sigaarblad.....	0,25	3,95
(f) Pondo-/Transkei tabak.....	0,25	3,05
(g) Oriëntale tabak.....	0,25	1,25

No. R. 61

14 Januarie 1972

TABAJSKEMA

MINIMUM VERKOOPPRYSE VIR TABAK

Kragtens artikel 79 (b) van die Bemarkingswet, 1968 (No. 59 van 1968), maak ek, Hendrik Stephanus Johan Schoeman, Adjunk-minister van Landbou, hierby bekend dat die Tabakraad, vermeld in artikel 6 van die Tabakskema, afgekondig by Proklamasie R. 159 van 1971, soos

DEPARTMENT OF AGRICULTURAL ECONOMICS AND MARKETING

No. R. 62

14 January 1972

TOBACCO SCHEME

IMPOSITION OF LEVY AND SPECIAL LEVY ON TOBACCO

In terms of section 79 (a) of the Marketing Act, 1968 (No. 59 of 1968), I, Hendrik Stephanus Johan Schoeman, Deputy Minister of Agriculture, hereby make known that the Tobacco Board, referred to in section 6 of the Tobacco Scheme, published by Proclamation R. 159 of 1971, as amended, has in terms of sections 23 and 24 of that Scheme with my approval and with effect from the date of publication hereof, imposed the levy and special levy set out in the Schedule hereto, in substitution for the levy and special levy published by Government Notice R. 2059 of 25 July 1969, which is hereby repealed.

H. S. J. SCHOEMAN, Deputy Minister of Agriculture.

SCHEDULE

1. In this notice unless inconsistent with the context, any word or expression to which a meaning has been assigned in the Tobacco Scheme, published by Proclamation R. 159 of 1971, as amended, shall have a corresponding meaning and—

“class” means a class prescribed by regulation under section 89 of the Act.

2. A levy and special levy are hereby imposed at the undermentioned rates on tobacco which—

- (a) is imported into the Republic;
- (b) is sold by producers thereof;
- (c) is processed for sale by producers thereof.

Class tobacco	Levy per kg	Special levy per kg
(a) Flue-cured tobacco.....	0,25	10,75
(b) Light air-cured tobacco and light Burley.....	0,25	8,00
(c) Dark air-cured roll, snuff and dark fire-cured snuff tobacco.....	0,25	6,25
(d) Dark air-cured and fire-cured pipe tobacco.....	0,25	4,70
(e) Dark Burley and cigar leaf.....	0,25	3,95
(f) Pondo/Transkei tobacco.....	0,25	3,05
(g) Oriental tobacco.....	0,25	1,25

No. R. 61

14 January 1972

TOBACCO SCHEME

MINIMUM SELLING PRICES FOR TOBACCO

In terms of section 79 (b) of the Marketing Act, 1968 (No. 59 of 1968), I, Hendrik Stephanus Johan Schoeman, Deputy Minister of Agriculture, hereby make known that the Tobacco Board, referred to in section 6 of the Tobacco Scheme, published by Proclamation R. 159 of 1971, as

gewysig, kragtens artikel 36 van daardie Skema, met my goedkeuring en met ingang van die datum van publikasie hiervan, die pryse in die Bylae hiervan uiteengesit, vasgestel het.

H. S. J. SCHOEMAN, Adjunk-minister van Landbou.

BYLAE

1. In hierdie kennisgewing, tensy uit die samehang anders blyk, het 'n woord of uitdrukking waaraan in die Tabakskema, afgekondig by Proklamasie R. 159 van 1971, soos gewysig, 'n betekenis geheg is, 'n ooreenstemmende betekenis, en beteken—

“gespesifiseerde persoon”, 'n persoon deur die Raad kragtens artikel 37 van die genoemde Skema aangewys as 'n persoon deur bemiddeling van wie produsente tabak deur hul geproduseer, moet verkoop;

“graad”, 'n graad by regulasie kragtens artikel 89 van die Wet voorgeskryf;

“klas”, 'n klas by regulasie kragtens artikel 89 van die Wet voorgeskryf.

2. Geen gespesifiseerde persoon mag 'n hoeveelheid tabak wat aan hom vir verkoop gelewer is deur 'n produsent ooreenkomstig 'n verbod deur die Raad opgelê kragtens artikel 37 van die genoemde Skema, verkoop nie teen 'n laer prys as 'n prys in die onderstaande tabel vasgestel vir die betrokke klas en graad tabak.

amended, has in terms of section 36 of that Scheme, with my approval and with effect from the date of publication hereof, fixed the prices set out in the Schedule hereto.

H. S. J. SCHOEMAN, Deputy Minister of Agriculture.

SCHEDULE

1. In this notice, unless inconsistent with the context, any word or expression to which a meaning has been assigned in the Tobacco Scheme, published by Proclamation R. 159 of 1971, as amended, shall have a corresponding meaning, and—

“class” means a class prescribed by regulation under section 89 of the Act;

“grade” means a grade prescribed by regulation under section 89 of the Act;

“specified person” means a person assigned by the Board under section 37 of the said Scheme as a person through whom producers have to sell tobacco produced by them.

2. No specified person shall sell any quantity of tobacco delivered for sale to him by a producer in accordance with any prohibition imposed by the Board under section 37 of the said Scheme, of a price below the price fixed in the undermentioned table for the class and grade of tobacco in question.

TABEL

Klas—Oondgedroogde tabak		Klas—Donker luggedroogde tabak		Klas—Vuurgedroogde tabak		Klas—Ligte luggedroogde tabak	
Graad	Sent per kg	Graad	Sent per kg	Graad	Sent per kg	Graad	Sent per kg
OR/1.....	162,25	<i>Snuiftabak</i>		F/DS1.....	79,50	A2.....	118,75
OR/3.....	158,25	DS1.....	74,00	F/DS2.....	77,00	A3.....	115,25
OR/4.....	156,25	DS2.....	70,50	F/DS3.....	70,50	A4.....	112,75
OR/2S.....	129,25	DS3.....	67,00	F/UG.....	65,50	A4S.....	99,25
OR/4S.....	127,75	UG.....	65,50	F/D.....	56,25	BS1.....	80,25
OR/GL1.....	125,25	DS4.....	63,50	F/E.....	53,75	DL.....	86,75
OR/BS1.....	109,75	GS.....	61,00	F/F.....	50,75	GL.....	78,25
OR/5.....	114,25			F/G.....	50,75	DB.....	69,25
OR/5S.....	105,25	<i>Pyptabak</i>	63,75	F/H.....	50,75	HL.....	58,25
OR/GLM.....	96,25	PS.....	56,25	F/SD.....	50,75	BS2.....	67,25
OR/DL.....	89,75	D.....	53,75	Gemiddeld		SL1.....	62,25
		E.....		F/D-F/SD.....	52,75		
OR/DB.....	70,25			F/SDS.....	35,00	SL.....	51,25
OR/HL.....	67,75	F.....	50,75	<i>Fyn brokkeltabak</i>	28,00	SLS1.....	41,00
OR/BS2.....	83,25	G.....	50,75	Alle klasse.....		SLS.....	36,50
OR/SL1.....	81,25	H.....	50,75				
OR/SL.....	69,25	SD.....				<i>Klas—Burleytabak</i>	
		Gemiddeld	52,75			B/PX.....	100,25
OR/E.....	41,00	D-SD.....	39,00			B/CO.....	104,25
OR/F.....	41,00	SDS1.....	35,00			B/CR.....	97,75
OR/G.....	41,00	SDS.....				B/LO.....	97,75
OR/H.....	41,00					B/LR.....	89,25
OR/SD.....	41,00	<i>Roltabak</i>	73,00			B/T.....	80,25
OR/SLS1.....	51,00	D(t).....	64,25			B/BS1.....	73,25
OR/SLS.....	44,00	E(t).....	63,25			B/SL1.....	64,75
OR/SDS.....	41,00	F(t).....				B/SL.....	59,75
		F(i).....	64,25			B/SLS1.....	41,00
		Gemiddeld				B/SLS.....	36,50
		E(t)-F(i).....				B/XL.....	61,25
						B/LL.....	61,25
						B/LSL.....	39,25
						B/LSLS.....	31,00
						B/XD.....	45,75
						B/LD.....	45,75
						B/SD.....	45,75
						B/SDS.....	31,00

TABLE

Class—Flue-cured tobacco		Class—Dark air-cured tobacco		Class—Fire-cured tobacco		Class—Light air-cured tobacco	
Grade	Cent per kg	Grade	Cent per kg	Grade	Cent per kg	Grade	Cent per kg
OR/1.....	162,25	<i>Snuff leaf</i>		F/DS1.....	79,50	A2.....	118,75
OR/3.....	158,25	DS1.....	74,00	F/DS2.....	77,00	A3.....	115,25
OR/4.....	156,25	DS2.....	70,50	F/DS3.....	70,50	A4.....	112,75
OR/2S.....	129,25	DS3.....	67,00	F/UG.....	65,50	A4S.....	99,25
OR/4S.....	127,75	UG.....	65,50	F/D.....	56,25	BS1.....	80,25
OR/GL1.....	124,25	DS4.....	63,50	F/E.....	53,75	DL.....	86,75
OR/BS1.....	109,75	GS.....	61,00	F/F.....	50,75	GL.....	78,25
OR/5.....	114,25			F/G.....	50,75	DB.....	69,25
OR/5S.....	105,25			F/H.....	50,75	HL.....	58,25
OR/GLM.....	96,25	<i>Pipe tobacco</i>		F/SD.....	50,75	BS2.....	67,25
OR/DL.....	89,75	PS.....	63,75			SL1.....	62,25
OR/DB.....	70,25	D.....	56,25	Average		SL.....	51,25
OR/HL.....	67,75	E.....	53,75	F/D—F/SD.....	52,75	SLS1.....	41,00
OR/BS2.....	83,25	F.....	50,75	F/SDS.....	35,00	SLS.....	36,50
OR/SL1.....	81,25	G.....	50,75				
OR/SL.....	69,25	H.....	50,75	<i>Fine scrap tobacco</i>			
OR/E.....	41,00	SD.....	50,75	All classes.....	28,00	<i>Class—Burley tobacco</i>	
OR/F.....	41,00	Average				B/PX.....	100,25
OR/G.....	41,00	D—SD.....	52,75			B/CO.....	104,25
OR/H.....	41,00	SDS1.....	39,00			B/CR.....	97,75
OR/SD.....	41,00	SDS.....	35,00			B/LO.....	97,75
OR/SLS1.....	51,00					B/LR.....	89,25
OR/SLS.....	44,00	<i>Roll tobacco</i>				B/T.....	80,25
OR/SDS.....	41,00	D(t).....	73,00			B/BS1.....	73,25
		E(t).....	65,25			B/SL1.....	64,75
		F(t).....	64,25			B/SL.....	59,75
		F(i).....	63,25			B/SLS1.....	41,00
		Average				B/SLS.....	36,50
		E(t)—F(i).....	64,25			B/XL.....	61,25
						B/LL.....	61,25
						B/LSL.....	39,25
						B/LSLS.....	31,00
						B/XD.....	45,75
						B/LD.....	45,75
						B/SD.....	45,75
						B/SDS.....	31,00

No. R. 63

14 Januarie 1972

TABAKSKEMA

AANWYSING VAN AGENTSAPPE VIR DIE
UITVOER VAN TABAK

Kragtens artikel 79 (c) van die Bemarkingswet, 1968 (No. 59 van 1968), maak ek, Hendrik Stephanus Johan Schoeman, Adjunk-minister van Landbou, hierby bekend dat die Tabakraad, vermeld in artikel 6 van die Tabakskema, afgekondig by Proklamasie R. 159 van 1971, soos gewysig, kragtens artikel 39 van daardie Skema, met ingang van die datum van publikasie hiervan, die lasgewing in die Bylae hiervan uiteengesit, uitgereik het ter vervanging van die lasgewing afgekondig by Goewermenskennisgewing R. 276 van 23 Februarie 1962, wat hierby herroep word.

H. S. J. SCHOEMAN, Adjunk-minister van Landbou.

BYLAE

1. In hierdie kennisgewing, tensy uit die samehang anders blyk, het 'n woord waaraan in die Tabakskema, afgekondig by Proklamasie R. 159 van 1971, soos gewysig, 'n betekenis geheg is, 'n ooreenstemmende betekenis.

No. R. 63

14 January 1972

TOBACCO SCHEME

DESIGNATION OF AGENCIES FOR THE EXPORT
OF TOBACCO

In terms of section 79 (c) of the Marketing Act, 1968 (No. 59 of 1968), I, Hendrik Stephanus Johan Schoeman, Deputy Minister of Agriculture, hereby make known that the Tobacco Board, referred to in section 6 of the Tobacco Scheme, published by Proclamation R. 159 of 1971, as amended, has, in terms of section 39 of that Scheme, with effect from the date of publication hereof, issued the direction set out in the Schedule hereto, in substitution of the direction published by Government Notice R. 276 of 23 February 1962, which is hereby repealed.

H. S. J. SCHOEMAN, Deputy Minister of Agriculture.

SCHEDULE

1. In this notice, any word to which a meaning has been assigned in the Tobacco Scheme, published by Proclamation R. 159 of 1971, as amended, shall have a corresponding meaning.

2. Iemand wat tabak uitvoer word hierby gelas om 'n hoeveelheid tabak wat by uitvoer deur bemiddeling van die ondergenoemde agentskappe te versend of van die hand te sit:

(a) Die Sentrale Koöperatiewe Tabakmaatskappy van Suid-Afrika Beperk, Pretoria, in die geval van Virginiese tabak; en

(b) Die Westelike Provinsie Koöperatiewe Tabak-kwekersmaatskappy Beperk, Suider-Paarl, in die geval van Oriëntele tabak.

No. R. 64

14 Januarie 1972

TABAJSKEMA

VERBOD OP DIE VERKOOP VAN TABAK BEHALWE DEUR BEMIDDELING VAN BEPAALDE PERSONE

Kragtens artikel 79 (b) van die Bemakingswet, 1968 (No. 59 van 1968), maak ek, Hendrik Stephanus Johan Schoeman, Adjunk-minister van Landbou, hierby bekend dat die Tabakraad, vermeld in artikel 6 van die Tabakskema, afgekondig by Proklamasie R. 159 van 1971, soos gewysig, kragtens artikel 37 van daardie Skema, met my goedkeuring en met ingang van die datum van publikasie hiervan, die verbodsbepaling in die Bylae hiervan uiteengesit, opgelê het ter vervanging van die verbodsbepaling afgekondig by Goewermentskennisgewing R. 561 van 5 April 1968, soos gewysig, wat hierby herroep word.

H. S. J. SCHOEMAN, Adjunk-minister van Landbou.

BYLAE

1. In hierdie kennisgewing, tensy uit die samehang anders blyk, het 'n woord of uitdrukking waaraan in die Tabakskema, afgekondig by Proklamasie R. 159 van 1971, soos gewysig, 'n betekenis geheg is, 'n ooreenstemmende betekenis, en beteken—

“Gebied A”, die gebied bestaande uit landdrosdistrikte Alberton, Benoni, Boksburg, Brakpan, Brits, Bronkhorstspuit, Cullinan, Delmas, Germiston, Groblersdal, Johannesburg, Kempton Park, Koster, Krugersdorp, Marico, Middelburg (Transvaal), Nigel, Pretoria, Randfontein, Roodepoort, Rustenburg, Springs, Swartruggens, Thabazimbi, Waterberg (uitgesonderd die plaas Num Num 568), Warmbad, Westonaria en Witbank, en die plase De Hoop 886, Uitvlugt 887, Buffelskloof 141, Tigershoek 140, Groothoek 139 en Steynsdraif 145 in die landdrosdistrik Lydenburg, en die plase Hartebeestfontein 116, Zaagkuil 117, Rietbokvallei 125, Hartebeestfontein 121, Dedimus 124, Boschpoort 123, Elandsbosch 122, Nooitgedacht 167, Kafferskraal 168, Welgevonden 170, Bamboeskloof 169, Weltevreden 172, Weltevreden 174, Vrischgewaagd 173, Houtboschkloof 309, Driefontein 164, Macoupan 165, Kaalvallei 163, Donkerkloof 162, Doornhoek 342, Goedgedacht 575, Klipplaas 577, Riekertsdraag 593, Blinkwater 592, Kalkfontein 591, Kalkfontein 589, Locatie 584, Grootfontein 590, Grasplaas 588, in die landdrosdistrik Potgietersrus;

“Gebied C”, die gebied bestaande uit die landdrosdistrikte Amersfoort, Bethal, Ermelo, Piet Retief, Standerton, Volksrust, Wakkerstroom, Babanango, Dundee, Entonjaneni, Eshowe, Hlabisa, Ingwavuma, Laer-Umfolozi, Mahlabatini, Newcastle, Ngotshe, Nkandla, Nongoma, Nqutu, Paulpietersburg, Ubombo en Utrecht;

“Gebied D”, die gebied bestaande uit die landdrosdistrikte Letaba, Messina, Pietersburg, Potgietersrus (uitgesonderd die plase Hartebeestfontein 116, Zaagkuil 117, Rietbokvallei 125, Hartebeestfontein 121, Dedimus 124,

2. Any person who exports tobacco is hereby directed to consign or dispose of any quantity of tobacco which he exports, through the undermentioned agencies:

(a) Die Sentrale Koöperatiewe Tabakmaatskappy van Suid-Afrika, Beperk, Pretoria, in the case of Virginian tobacco; and

(b) Die Westelike Provinsie Koöperatiewe Tabak-kwekersmaatskappy Beperk, Suider-Paarl, in the case of Oriental tobacco.

No. R. 64

14 January 1972

TOBACCO SCHEME

PROHIBITION OF THE SALE OF TOBACCO EXCEPT THROUGH SPECIFIED PERSONS

In terms of section 79 (b) of the Marketing Act, 1968 (No. 59 of 1968), I, Hendrik Stephanus Johan Schoeman, Deputy Minister of Agriculture, hereby make known that the Tobacco Board, referred to in section 6 of the Tobacco Scheme, published by Proclamation R. 159 of 1971, as amended, has in terms of section 37 of that Scheme, with my approval and with effect from the date of publication hereof, imposed the prohibition set out in the Schedule hereto in substitution for the prohibitions published by Government Notice R. 561 of 5 April 1968, as amended, which is hereby repealed.

H. S. J. SCHOEMAN, Deputy Minister of Agriculture.

SCHEDULE

1. In this notice unless inconsistent with the context, any word or expression to which a meaning has been assigned in the Tobacco Scheme, published by Proclamation R. 159 of 1971, as amended, shall have a corresponding meaning and—

“Area A” means the area comprising the Magisterial Districts of Alberton, Benoni, Boksburg, Brakpan, Brits, Bronkhorstspuit, Cullinan, Delmas, Germiston, Groblersdal, Johannesburg, Kempton Park, Koster, Krugersdorp, Marico, Middelburg (Transvaal), Nigel, Pretoria, Randfontein, Roodepoort, Rustenburg, Springs, Swartruggens, Thabazimbi, Waterberg (excluding the farm Num Num 568), Warmbaths, Westonaria and Witbank and the farms De Hoop 886, Uitvlugt 887, Buffelskloof 141, Tigershoek 140, Groothoek 139 and Steynsdraif 145, in the Magisterial District of Lydenburg, and the farms Hartebeestfontein 116, Zaagkuil 117, Rietbokvallei 125, Hartebeestfontein 121, Dedimus 124, Boschpoort 123, Elandsbosch 122, Nooitgedacht 167, Kafferskraal 168, Welgevonden 170, Bamboeskloof 169, Weltevreden 172, Weltevreden 174, Vrischgewaagd 173, Houtboschkloof 309, Driefontein 164, Macoupan 165, Kaalvallei 163, Donkerkloof 162, Doornhoek 342, Goedgedacht 575, Klipplaas 577, Riekertsdraag 593, Blinkwater 592, Kalkfontein 591, Kalkfontein 589, Locatie 584, Grootfontein 590 and Grasplaas 588, in the Magisterial District of Potgietersrus;

“Area C” means the area comprising the Magisterial Districts of Amersfoort, Bethal, Ermelo, Piet Retief, Standerton, Volksrust, Wakkerstroom, Babanango, Dundee, Entonjaneni, Eshowe, Hlabisa, Ingwavuma, Lower-Umfolozi, Mahlabatini, Newcastle, Ngotshe, Nkandla, Nongoma, Nqutu, Paulpietersburg, Umbombo and Utrecht;

“Area D” means the area comprising the Magisterial Districts of Letaba, Messina, Pietersburg, Potgietersrus (excluding the farms Hartebeestfontein 116, Zaagkuil 117, Rietbokvallei 125, Hartebeestfontein 121, Dedimus 124,

Boschpoort 123, Elandsbosch 122, Nootgedacht 167, Kafferskraal 168, Welgevonden 170, Bamboeskloof 169, Weltevreden 172, Weltevreden 174, Vrischgewaagd 173, Houtboschkloof 309, Driefontein 164, Macoupan 165, Kaalvallei 163, Donkerkloof 162, Doornhoek 342, Goedgedacht 575, Klipplaats 577, Riekertsvraag 593, Blinkwater 592, Kalkfontein 591, Kalkfontein 589, Locatie 584, Grootfontein 590 en Grasplaats 588) en Soutpansberg en die plaas Num Num 568 in die landdrosdistrik Waterberg;

“Gebied E”, die gebied bestaande uit die provinsie Oranje-Vrystaat en die landdrosdistrikte Balfour, Bloemhof, Christiana, Coligny, Delareyville, Heidelberg (Transvaal), Klerksdorp, Lichtenburg, Oberholzer, Potchefstroom, Schweizer-Reneke, Vanderbijlpark, Ventersdorp, Vereeniging en Wolmaransstad;

“Gebied F”, die gebied bestaande uit die landdrosdistrikte Barberton, Belfast, Carolina, Lydenburg (uitgesonderd die plase De Hoop 886, Uitvlugt 887, Buffelskloof 141, Tigershoek 140, Groothoek 139 en Steynsdraif 145), Nelspruit, Pelgrimsrus, Waterval-Boven en Witrivier;

“Gebied G”, die gebied bestaande uit die landdrosdistrikte Aberdeen, Albanie, Alexandria, Bathurst, Graaff-Reinet, Hankey, Humansdorp, Jansenville, Kirkwood, Knysna, Pearston, Port Elizabeth, Steytlerville, Uitenhage en Willowmore;

“Gebied H”, die gebied bestaande uit die landdrosdistrikte Albert, Aliwal-Noord, Barkly-Wes, Bredasdorp, Britstown, Calitzdorp, Colesberg, De Aar, George, Gordonia, Hanover, Hay, Hartswater, Heidelberg (Kaap), Herbert, Hopetown, Joubertina, Kenhardt, Kimberley, Kuruman, Ladismith, Lainsburg, Mafeking, Maraisburg, Middelburg (Kaap), Molteno, Mosselbaai, Noupoot, Oudtshoorn, Philipstown, Postmasburg, Prieska, Prins Albert, Riversdal, Steynsburg, Swellendam, Taungs, Uniondale, Venterstad, Vryburg en Warrenton;

“Gebied I”, die gebied bestaande uit die landdrosdistrikte Adelaide, Alice, Barkly-Oos, Bedford, Cathcart, Cradock, Elliot, Fort Beaufort, Glen Grey, Lady Grey, Herschel (Sterkspruit), Indwe, Keiskammahoek, King William's Town, Komga, Maclear, Middeldraif, Oos-London, Peddie, Queenstown, Somerset-Oos, Sterkstroom, Stockenström, Stutterheim, Tarka, Victoria-Oos en Wodehouse;

“Gebied J”, die gebied bestaande uit die landdrosdistrikte Alfred, Bergville, Camperdown, Durban, Estcourt, Helpmekaar, Impendhle, Inanda, Ixopo, Kliprivier, Kranskop, Lionsrivier, Laer-Tugela, Mapumulo, Mooirivier, Msinga (Tugela Ferry), Mtunzini, Ndwedwe, New Hanover, Pietermaritzburg, Pinetown, Polela, Port Shepstone, Richmond (Natal), Stanger, Umlazi (Umbumbulo), Umvoti, Umzinto, Underberg en Weenen;

“Gebied K”, die gebied bestaande uit die landdrosdistrikte Beaufort-Wes, Bellville, Caledon, Calvinia, Carnarvon, Ceres, Clanwilliam, Fraserburg, Hermanus, Hopefield, Die Kaap, Malmesbury, Montagu, Murraysburg, Namakwaland, Paarl, Piketberg, Richmond, Robertson, Simonstad, Somerset-Wes, Stellenbosch, Strand, Sutherland, Tulbagh, Vanrhynsdorp, Victoria-Wes, Vredenburg, Vredendal, Wellington, Williston, Worcester en Wynberg.

2. Geen produsent van tabak in die Republiek, uitgesonderd die Transkei, mag tabak in enigeen van die gebiede genoem in paragraaf 1 op 'n ander wyse verkoop as deur bemiddeling van die persone wat hieronder ten opsigte van daardie gebied genoem word nie, naamlik—

(a) ten opsigte van Gebiede A en C, deur bemiddeling van die agentskap van die Magaliesbergse Koöperatiewe Tabakplantersvereniging, Rustenburg;

Boschpoort 123, Elandsbosch 122, Nootgedacht 167, Kafferskraal 168, Welgevonden 170, Bamboeskloof 169, Weltevreden 172, Weltevreden 174, Vrischgewaagd 173, Houtboschkloof 309, Driefontein 164, Macoupan 165, Kaalvallei 163, Donkerkloof 162, Doornhoek 342, Goedgedacht 575, Klipplaats 577, Riekertsvraag 593, Blinkwater 592, Kalkfontein 591, Kalkfontein 589, Locatie 584, Grootfontein 590 and Grasplaats 588) and Soutpansberg and the farm Num Num 568 in the Magisterial District of Waterberg;

“Area E”, means the area comprising the Province of the Orange Free State and the Magisterial Districts of Balfour, Bloemhof, Christiana, Coligny, Delareyville, Heidelberg (Transvaal), Klerksdorp, Lichtenburg, Oberholzer, Potchefstroom, Schweizer-Reneke, Vanderbijlpark, Ventersdorp, Vereeniging and Wolmaransstad;

“Area F”, means the area comprising the Magisterial Districts of Barberton, Belfast, Carolina, Lydenburg, (excluding the farms De Hoop 886, Uitvlugt 887, Buffelskloof 141, Tigershoek 140, Groothoek 139 and Steynsdraif 145), Nelspruit, Pilgrim's Rest, Waterval-Boven and White River;

“Area G” means the area comprising the Magisterial Districts of Aberdeen, Albany, Alexandria, Bathurst, Graaff-Reinet, Hankey, Humansdorp, Jansenville, Kirkwood, Knysna, Pearston, Port Elizabeth, Steytlerville, Uitenhage and Willowmore;

“Area H” means the area comprising the Magisterial Districts of Albert, Aliwal North, Barkly West, Bredasdorp, Britstown, Calitzdorp, Colesberg, De Aar, George, Gordonia, Hanover, Hay, Hartswater, Heidelberg (Cape), Herbert, Hopetown, Joubertina, Kenhardt, Kimberley, Kuruman, Ladismith, Laingsburg, Mafeking, Maraisburg, Middelburg (Cape), Molteno, Mossel Bay, Noupoot, Oudtshoorn, Philipstown, Postmasburg, Prieska, Prins Albert, Riversdale, Steynsburg, Swellendam, Taungs, Uniondale, Venterstad, Vryburg and Warrenton;

“Area I” means the area comprising the Magisterial Districts of Adelaide, Alice, Barkly East, Bedford, Cathcart, Cradock, East London, Elliot, Fort Beaufort, Glen Grey, Lady Grey, Herschel (Sterkspruit), Indwe, Keiskammahoek, King William's Town, Komga, Maclear, Middeldraif, Peddie, Queenstown, Somerset East, Sterkstroom, Stockenström, Stutterheim, Tarka, Victoria East and Wodehouse;

“Area J” means the area comprising the Magisterial Districts of Alfred, Bergville, Camperdown, Durban, Estcourt, Helpmekaar, Impendhle, Inanda, Ixopo, Klip River, Kranskop, Lions River, Lower Tugela, Mapumulo, Mooi River, Msinga (Tugela Ferry), Mtunzini, Ndwedwe, New Hanover, Pietermaritzburg, Pinetown, Polela, Port Shepstone, Richmond (Natal), Stanger, Umlazi (Umbumbulo), Umvoti, Umzinto, Underberg and Weenen;

“Area K” means the area comprising the Magisterial Districts of Beaufort West, Bellville, Caledon, Calvinia, The Cape, Carnarvon, Ceres, Clanwilliam, Fraserburg, Hermanus, Hopefield, Malmesbury, Montagu, Murraysburg, Namakwaland, Paarl, Piketberg, Richmond, Robertson, Simonstown, Somerset West, Stellenbosch, Strand, Sutherland, Tulbagh, Vanrhynsdorp, Victoria West, Vredenburg, Vredendal, Wellington, Williston, Worcester and Wynberg.

2. No producer of tobacco in the Republic, excluding the Transkei, shall sell tobacco in any of the areas mentioned in paragraph 1, otherwise than through the persons specified hereunder in respect of that area, namely—

(a) in respect of Area A and C, through the Magaliesbergse Koöperatiewe Tabakplantersvereniging, Rustenburg;

(b) ten opsigte van Gebied D, deur bemiddeling van die agentskap van Die Potgietersrusse Tabakkoöperasie Beperk, Potgietersrus;

(c) ten opsigte van Gebied E, deur bemiddeling van die agentskap van Die Vaalrivierse Tabakkoöperasie Beperk, Parys;

(d) ten opsigte van Gebied F, deur bemiddeling van die agentskap van Die Laeveldse Tabakkoöperasie Beperk Nelspruit;

(e) ten opsigte van Gebied G, deur bemiddeling van die agentskap van Die Gamtoos Koöperatiewe Tabakmaatskappy Beperk, Patensie;

(f) ten opsigte van Gebied H, deur bemiddeling van die agentskap van Die Kango Koöperatiewe Tabakmaatskappy Beperk, Oudtshoorn;

(g) ten opsigte van Gebied I, deur bemiddeling van die agentskap van Die Katrivier Tabak-koöperatiewe Maatskappy Beperk, Balfour, Kaapprovinsie;

(h) ten opsigte van Gebied J, deur bemiddeling van die agentskap van Die Natal Indian Tobacco Growers' Co-operative Company Limited, Umkomaas;

(i) ten opsigte van Gebied K, deur bemiddeling van die agentskap van Die Westelike Provinsie Koöperatiewe Tabakwerkersmaatskappy, Beperk, Suider-Paarl.

(b) in respect of Area D, through the Potgietersrusse Tabakkoöperasie Beperk, Potgietersrus;

(c) in respect of Area E, through the Vaalrivierse Tabakkoöperasie Beperk, Parys;

(d) in respect of Area F, through the Laeveldse Tabakkoöperasie Beperk, Nelspruit;

(e) in respect of Area G, through the Gamtoos Koöperatiewe Tabakmaatskappy Beperk, Patensie;

(f) in respect of Area H, through the Kango Koöperatiewe Tabakmaatskappy Beperk, Oudtshoorn;

(g) in respect of Area I, through the Katrivier Tabak-koöperatiewe Maatskappy Beperk, Balfour, Cape Province;

(h) in respect of Area J, through the Natal Indian Tobacco Growers' Co-operative Company Limited, Umkomaas;

(i) in respect of Area K, through the Westelike Provinsie Koöperatiewe Tabakwerkersmaatskappy, Beperk, Suider-Paarl.

DEPARTEMENT VAN NYWERHEIDSWESE

No. R. 71

14 Januarie 1972

WET OP STANDAARDE, 1962

WYSIGING VAN VERPLIGTE STANDAARDSPESIFIKASIE VIR HIDROULIESE REMVLOEISTOF.

Ek, Abraham Hermanus du Plessis, Adjunk-minister van Ekonomiese Sake, vervang hierby, op aanbeveling van die Raad van die Suid-Afrikaanse Buro vir Standaarde en kragtens artikel 15 van die Wet op Standaarde, 1962 (Wet 33 van 1962), met ingang van die datum twee maande na publikasie van hierdie kennisgewing die verpligte standaardspesifikasie vir hidrouliese remvloeistof, gepubliseer by Goewermentskennisgewing R. 524 van 14 April 1967, deur die gewysigde verpligte standaardspesifikasie in die Bylae vervat.

A. H. DU PLESSIS, Adjunk-minister van Ekonomiese Sake.

BYLAE

VERPLIGTE STANDAARDSPESIFIKASIE VIR HIDROULIESE REM- EN KOPPELAARVLOEISTOF

0. OPMERKING.

Inligting aangaande die verkryging van toetsstroke, rubberdoppe en mengbaarheidsvloeistof wat in gehalte ooreenstem met die verwysingstandaarde van die Suid-Afrikaanse Buro vir Standaarde, en dekvermoëkaarte wat in ontwerp ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde, soos vereis vir toetsdoeleindes kragtens hierdie verpligte standaardspesifikasie, is op aanvraag verkrygbaar van die Direkteur-generaal, Suid-Afrikaanse Buro vir Standaarde, Privaatsak 191, Pretoria. Nadere besonderhede aangaande die samestelling van 'n werkverrigtingstoetseenheid is ook beskikbaar.

1. BESTEK.

1.1 Hierdie spesifikasie dek vloeistof van die nie-petroleumtipe wat geskik is om in hidrouliese rem- en koppelaarsstelsels van motorvoertuie gebruik te word.

DEPARTMENT OF INDUSTRIES

No. R. 71

14 January 1972

STANDARDS ACT, 1962

AMENDMENT OF COMPULSORY STANDARD SPECIFICATION FOR HYDRAULIC BRAKE FLUID

I, Abraham Hermanus du Plessis, deputy Minister of Economic Affairs, hereby substitute, on the recommendation of the Council of the South African Bureau of Standards and in terms of section 15 of the Standards Act 1962 (Act 33 of 1962), with effect from the date two months after publication of this notice the amended compulsory standard specification contained in the Schedule for the compulsory standard specification for hydraulic brake fluid published by Government Notice R. 524 of 14 April, 1967.

A. H. DU PLESSIS, Deputy Minister of Economic Affairs.

SCHEDULE

COMPULSORY STANDARD SPECIFICATION FOR HYDRAULIC BRAKE AND CLUTCH FLUID

0. NOTE.

Information about the procurement of test strips, rubber cups, and compatibility fluid corresponding in quality to the reference standards of the South African Bureau of Standards, and hiding power charts corresponding in design to the reference standard of the South African Bureau of Standards, as required for test purposes in terms of this specification, is obtainable upon request from the Director General, South African Bureau of Standards, Private Bag 191, Pretoria. More detailed particulars regarding the construction of a performance test unit are also available.

1. SCOPE.

1.1 This specification covers fluid of the non-petroleum type suitable for use in automotive hydraulic brake and clutch systems.

2. VEREISTES.

2.1 ALGEMEEN.—Die vloeistof moet homogeen, helder en vry van sanderigheid, mineraalolie en ander onsuiverhede wees wat 'n nadelige invloed op die werkverrigting van die vloeistof kan hê.

2.2 EWEWIGSTERUGVLOEIKOOKPUNT BY 'N DRUK VAN 760 mm Hg.—Volgens 3.1 getoets, mag die ewewigsterugvloei-kookpunt van die vloeistof nie laer as 190° C wees nie.

2.3 FLITSPUNT BY 'N DRUK VAN 760 mm Hg.—Volgens 3.3 getoets, mag die flitspunt van die vloeistof nie laer as 82° C wees nie.

2.4 KINEMATIESE VISKOSITEIT.—Volgens 3.4 getoets, moet die kinematiese viskositeit van die vloeistof soos volg wees:

- (a) By -40° C: Nie meer as 1 800 centistokes nie;
- (b) by 50° C: Nie minder as 4,2 centistokes nie; en
- (c) by 100° C: Nie minder as 1,5 centistokes nie.

2.5 NEUTRALITEIT.—Volgens 3.5 getoets (voor sowel as na die korrosietoets), moet die pH-waarde van die toetsmengsel tussen 7,0 en 11,5 wees.

2.6 VLOEISTOFSTABILITEIT.

2.6.1 *Stabiliteit by hoë temperatuur.*—Volgens 3.2.1 getoets, mag die ewewigsterugvloei-kookpunt van die vloeistof nie met meer verander as 3,0° C plus 0,05° C vir elke graad wat die kookpunt 225° C oorskry nie.

2.6.2 *Chemiese stabiliteit.*—Volgens 3.2.2 getoets, mag die toetsmengsel geen chemiese omkering toon wat blyk uit 'n vermindering van meer as 2,0° C in aangetekende temperatuur nie.

2.7 KORROSIE-EIENSKAPPE. — Volgens 3.6 getoets—

- (a) mag die korrosie wat die vloeistof op die metaalstroke veroorsaak, nie die korrosiegrense oorskry wat in Tabel 1 gegee word nie en mag die oppervlakte van die metaalstroke wat nie in aanraking met mekaar was nie; nie in so 'n mate uitgevrete of grofgemaak wees dat dit met die oog sigbaar is nie. Vlekking of verkleuring van hierdie oppervlakte word nie as 'n teken van faling beskou nie;

TABEL 1

1	2
Toetsstroke	Maksimum toelaatbare korrosieverlies in milligram per vierkante sentimeter oppervlak
Vertinde yster.....	0,2
Staal.....	0,2
Aluminium.....	0,1
Geelkoper.....	0,4
Koper.....	0,4
Gietyster.....	0,2

- (b) mag die mengsel van vloeistof en water geen jelvorming by 23 ± 5° C toon nie, mag geen kristal-lyne neerslag in die beker vorm of aan die kante van die beker of aan die oppervlak van die metaalstroke vas-keef nie en mag die mengsel van vloeistof en water hoogstens 0,10 persent per volume afsaksel bevat wanneer dit volgens 3.6.4 bepaal word;

(c) mag die rubberdoppe geen ontbinding toon wat blyk uit koolswartafskieding op die oppervlak van die rubberdoppe, klewerigheid of blasies nie;

(d) mag die basisdiameter van die rubberdoppe, volgens die werkwyse in 3.6.2 (a) bepaal, met hoogstens 1,4 mm toeneem; en

2. REQUIREMENTS.

2.1 GENERAL.—The fluid shall be homogeneous, clear, and free from grit, mineral oil, and other impurities which may have a deleterious effect on the performance of the fluid.

2.2 EQUILIBRIUM REFLUX BOILING POINT AT A PRESSURE OF 760 mm Hg.—When tested in accordance with 3.1 the equilibrium reflux boiling point of the fluid shall be not lower than 190° C.

2.3 FLASH POINT AT A PRESSURE OF 760 mm Hg.—When tested in accordance with 3.3, the flash point of the fluid shall be not lower than 82° C.

2.4 KINEMATIC VISCOSITY.—When tested in accordance with 3.4, the kinematic viscosity of the fluid shall be as follows:

- (a) At -40° C: Not more than 1 800 centistokes;
- (b) at 50° C: Not less than 4,2 centistokes; and
- (c) at 100° C: Not less than 1,5 centistokes.

2.5 NEUTRALITY.—When tested in accordance with 3.5 (both before and after the corrosion test), the pH value of the test mixture shall be between 7,0 and 11,5.

2.6 FLUID STABILITY.

2.6.1 *Stability at high temperature.*—When tested in accordance with 3.2.1, the equilibrium reflux boiling point of the fluid shall not change by more than 3,0° C plus 0,05° C for each degree that the original boiling point exceeds 225° C.

2.6.2 *Chemical stability.*—When tested in accordance with 3.2.2, the test mixture shall show no chemical reversion as evidenced by a decrease in recorded temperature of more than 2,0° C.

2.7 CORROSIVENESS.—When tested in accordance with 3.6—

- (a) the fluid shall not cause corrosion of the metal strips in excess of the corrosion limits given in Table 1 and the surfaces of the metal strips that were not in contact with each other shall not be pitted or roughened to an extent discernible to the eye. Staining or discoloration of these surfaces shall not be regarded as a sign of failure:

TABLE 1

1	2
Test strips	Maximum permissible corrosion loss in milligrams per square centimetre of surface
Tinned iron.....	0,2
Steel.....	0,2
Aluminium.....	0,1
Brass.....	0,4
Copper.....	0,4
Cast iron.....	0,2

- (b) the fluid-water mixture shall show no jelling at 23 ± 5° C, no crystalline deposit shall form in the jar or adhere to the walls of the jar or to the surface of the metal strips, and the fluid-water mixture shall contain not more than 0,10 per cent by volume of sediment when determined in accordance with 3.6.4;

(c) the rubber cups shall show no disintegration as evidenced by carbon black separation on the surface of the rubber cup, tackiness, or blisters;

(d) the base diameters of the rubber cups, determined in accordance with 3.6.2 (a), shall not increase by more than 1,4 mm; and

(c) mag die hardheid van die rubberdoppe, volgens die werkwyse in 3.6.2 (b) bepaal, met hoogstens 25 grade afneem.

2.8 VLOEIBAARHEID EN VOORKOMS BY LAE TEMPERATURE.

2.8.1 *By -40° C.*—Volgens 3.7.1 getoets, moet die swart kontrasstrepe op die dekvermoëkaart duidelik sigbaar wees wanneer dit deur die vloeistof in die monsterbottel bekyk word, mag die vloeistof geen laagvorming of afsakking toon nie en moet die lugblasie nie langer as 10 sekondes neem om tot aan die oppervlak van die vloeistof te beweeg as die monsterbottel omgekeer word nie.

2.8.2 *By -50° C.*—Volgens 3.7.2 getoets, moet die swart kontrasstrepe op die dekvermoëkaart duidelik sigbaar wees wanneer dit deur die vloeistof in die monsterbottel bekyk word, mag die vloeistof geen laagvorming of afsakking toon nie en moet dit die lugblasie nie langer as 35 sekondes neem om tot aan die oppervlak van die vloeistof te beweeg as die monsterbottel omgekeer word nie.

2.9 VERDAMPING.

2.9.1 *Persentasie verdamping.*—Volgens 3.8 getoets, mag hoogstens 80 massa-persent van die vloeistof verdamp.

2.9.2 *Kwaliteit van residu.*—Volgens 3.8.3 ondersoek, mag die residu van die vloeistof na verdamping geen neerslag bevat wat grinterig of skurend is nie.

2.9.3 *Vloei-punt van residu.*—Volgens 3.8.4 getoets, mag die vloei-punt van die residu hoogstens -5° C wees.

2.10 WATERTOLERANSIE.

2.10.1 *By -40° C.*—Volgens 3.9.1 getoets, moet die swart kontrasstrepe op die dekvermoëkaart duidelik sigbaar wees wanneer dit deur die vloeistof in die sentrifugeerbuis bekyk word, mag die vloeistof geen laagvorming of afsakking toon nie en moet dit die lugblasie nie langer as 10 sekondes neem om tot aan die oppervlak van die vloeistof te beweeg as die sentrifugeerbuis omgekeer word nie.

2.10.2 *By 60° C.*—Volgens 3.9.2 getoets, mag die vloeistof geen laagvorming toon nie en mag die afsakselinhoud na sentrifugering nie 0,05 persent per volume oorskry nie.

2.11 MENGBAARHEID.

2.11.1 *By -40° C.*—Volgens 3.10.1 getoets, moet die swart kontrasstrepe op die dekvermoëkaart duidelik sigbaar wees wanneer dit deur die vloeistof in die sentrifugeerbuis bekyk word en mag die vloeistof geen laagvorming of afsakking toon nie.

2.11.2 *By 60° C.*—Volgens 3.10.2 getoets, mag die vloeistof geen laagvorming toon nie en mag die afsakselgehalte na sentrifugering nie 0,05 persent per volume oorskry nie.

2.12 BESTANDHEID TEEN OKSIDASIE. Volgens 3.11 getoets—

(a) mag die toetsvloeistof die aluminium- en gietysterstroke onderskeidelik met nie meer as 0,05 gm per vk cm en 0,3 mg per vk cm in massa laat afneem nie; en

(b) mag die oppervlakke van die metaalstroke wat nie in aanraking met die tinfoelie was nie, nie in so 'n mate uitgevreet of grofgemaak wees dat dit met die oog sigbaar is nie. Vlekking of verkleuring van hierdie oppervlakke word nie as 'n teken van falings beskou nie. Daar mag nie meer as 'n spoor gom op hierdie oppervlakke neergeslaan wees nie.

(c) the hardness of the rubber cups, determined in accordance with 3.6.2 (b), shall not decrease by more than 25 degrees.

2.8 FLUIDITY AND APPEARANCE AT LOW TEMPERATURE.

2.8.1 *At -40° C.*—When tested in accordance with 3.7.1, the black contrast lines on the hiding power chart shall be clearly visible when viewed through the fluid in the sample bottle, the fluid shall show no stratification or sedimentation and, upon inversion of the sample bottle, the time taken for the air bubble to travel to the top of the fluid shall not exceed 10 seconds.

2.8.2 *At -50° C.*—When tested in accordance with 3.7.2, the black contrast lines on the hiding power chart shall be clearly visible when viewed through the fluid in the sample bottle, the fluid shall show no stratification or sedimentation and, upon inversion of the sample bottle, the time taken for the air bubble to travel to the top of the fluid shall not exceed 35 seconds.

2.9 EVAPORATION.

2.9.1 *Percentage evaporation.*—When tested in accordance with 3.8 not more than 80 per cent by mass of the fluid shall be evaporated.

2.9.2 *Quality of residue.*—When examined as described in 3.8.3, the residue from the fluid after evaporation shall contain no precipitate that is gritty or abrasive.

2.9.3 *Pour point of residue.*—When tested in accordance with 3.8.4, the pour point of the residue shall be not higher than -5° C.

2.10 WATER TOLERANCE.

2.10.1 *At -40° C.*—When tested in accordance with 3.9.1 the black contrast lines on the hiding power chart shall be clearly visible when viewed through the fluid in the centrifuge tube, the fluid shall show no stratification or sedimentation and, upon inversion of the centrifuge tube, the time taken for the air bubble to travel to the top of the fluid shall not exceed 10 seconds.

2.10.2 *At 60° C.*—When tested in accordance with 3.9.2, the fluid shall show no stratification and the sediment content shall not exceed 0,05 per cent by volume after centrifuging.

2.11 COMPATIBILITY.

2.11.1 *At -40° C.*—When tested in accordance with 3.10.1, the black contrast lines on the hiding power chart shall be clearly visible when viewed through the fluid in the centrifuge tube and the fluid shall show no stratification or sedimentation.

2.11.2 *At 60° C.*—When tested in accordance with 3.10.2, the fluid shall show no stratification and the sediment content shall not exceed 0,05 per cent by volume after centrifuging.

2.12 RESISTANCE TO OXIDATION. When tested in accordance with 3.11—

(a) the fluid shall not cause the aluminium strips and the cast iron strips to decrease in mass by more than 0,05 mg per sq cm and 0,03 mg per sq cm respectively; and

(b) the surfaces of the metal strips that were not in contact with the tinfoil shall not become pitted or roughened to an extent visible to the eye. Staining or discoloration of these areas shall not be regarded as a sign of failure. Not more than a trace of gum shall be deposited on these surfaces.

2.13 UITWERKING OP RUBBER.

2.13.1 *By 70° C.*—Volgens 3.12.2 (a) getoets—

(a) moet die gemiddelde toename in die basisdiameters van die rubberdoppe minstens 0,15 mm en hoogstens 1,4 mm wees; en

(b) mag die rubberdoppe geen toename in hardheid toon nie, mag dit nie met meer as 18 grade in hardheid afneem nie en mag dit geen disintegrasie toon wat blyk uit koolswartafskieding, klewerigheid of blasies nie.

2.13.2 *By 120° C.*—Volgens 3.12.2 (b) getoets—

(a) moet die gemiddelde toename in die basisdiameters van die rubberdoppe minstens 0,15 mm en hoogstens 1,4 mm wees; en

(b) mag die rubberdoppe geen toename in hardheid toon nie, mag dit nie met meer as 25 grade in hardheid afneem nie en mag dit geen disintegrasie toon wat blyk uit koolswartafskieding, klewerigheid of blasies nie.

2.14 WERKVERRIGTING IN NAGEBOOTSTE DIENS. Volgens 3.13 getoets, moet die vloeistof aan die volgende werkverrigtingsvereistes voldoen:

(a) Die metaaldele van die toetsapparaat mag nie korrosie, wat uit uitvreting blyk, in so 'n mate toon dat dit met die oog sigbaar is nie. Vlekking of verkleuring van hierdie oppervlakke word nie as 'n teken van falig beskou nie.

(b) Die oorspronklike diameter van 'n silinder of suier mag met hoogstens 0,13 mm tydens die toets verander.

(c) Die silindersuiers mag in geen stadium tydens die toets vassit of onbehoorlik funksioneer nie.

(d) Die basisdiameters van die rubberdoppe mag met hoogstens 0,9 mm toeneem.

(e) Die hardheid van die rubberdoppe mag met hoogstens 25 grade afneem en die doppe mag nie klewerigheid of stukkendskuring, wegskuring, blaasvorming, barsvorming, afsplintering (hielafskuring) of vormverandering toon nie.

(f) Die gemiddelde lipdiameterinterferensieset van die rubberdoppe mag nie 65 persent oorskry nie.

(g) Die volume vloeistof wat tydens 'n periode van 24 000 slae verlore gegaan het, mag nie 36 ml oorskry nie.

(h) Die volume vloeistof wat tydens die laaste 100 slae van die toets verlore gegaan het, mag nie 36 ml oorskry nie.

(i) Aan die einde van die toets mag die vloeistof nie slikvorming, jelvorming of skurende grinterigheid toon nie. Volgens 3.6.4 bepaal, mag die afsakselgehalte na sentrifugering hoogstens 1,5 persent per volume wees.

(j) Daar mag hoogstens 'n spoor gom op die remsilinderwande of op ander metaaldele neergeslaan wees. Geen neerslag wat skurend is of wat nie afgevyf kan word met 'n doek wat met 95 persent-etanool natgemaak is nie, mag op remsilinderwande vorm of daaraan vaskleef nie.

3. TOETSMETODES.

3.1 EWEWIGSTERUGVLOEIKOOKPUNT BY 'N DRUK VAN 760 mm Hg.

3.1.1 *Apparaat* (kyk figuur 1 en 2).

(a) *Fles.*—'n 100-ml-rondeboomfles van hittebestande glas met 'n kort nek en 'n oorpasseende 19/38-slypglasverbindstuk met standaardtapsheid, en 'n sybuis met 'n buitendiameter van 10 mm wat die fles met so 'n hoek binnegaan dat die onderpunt van die termometerbol presies in die middel van die fles en 6,5 mm bokant die bodem is.

(b) *Koeler.*—'n Terugvloeiglasbuiskoeler van die water-verkoelde tipe met 'n mantel wat 200 mm lank is. Die onderent van die koeler moet van 'n oorpasseende 19/38-druppunt met standaardtapsheid en 'n inpassende slypglasverbindstuk voorsien wees.

(c) *Kooksteentjies.*—Silikonkarbidkorrels van grintnommer 8.

2.13 EFFECT ON RUBBER.

2.13.1 *At 70° C.*—When tested in accordance with 3.12.2 (a)—

(a) the average increase in the base diameters of the rubber cups shall be not less than 0,15 mm and not more than 1,4 mm; and

(b) the rubber cups shall show no increase in hardness, shall not decrease in hardness by more than 18 degrees, and shall show no disintegration as evidenced by carbon black separation, tackiness, or blisters.

2.13.2 *At 120° C.*—When tested in accordance with 3.12.2 (b)—

(a) the average increase in the base diameters of the rubber cups shall be not less than 0,15 mm and not more than 1,4 mm; and

(b) the rubber cups shall show no increase in hardness, shall not decrease in hardness by more than 25 degrees, and shall show no disintegration as evidenced by carbon black separation, tackiness, or blisters.

2.14 SIMULATED SERVICE PERFORMANCE.—When tested in accordance with 3.13 the fluid shall meet the following performance requirements:

(a) The metal parts of the test apparatus shall not show corrosion as evidenced by pitting to an extent visible to the eye. Staining or discoloration of these areas shall not be regarded as a sign of failure.

(b) The initial diameter of any cylinder or piston shall not change by more than 0,13 mm during the test.

(c) The cylinder pistons shall not seize or fail to function properly at any stage during the test.

(d) The base diameters of the rubber cups shall not increase by more than 0,9 mm.

(e) The rubber cups shall not decrease in hardness by more than 25 degrees and the cups shall not show tackiness or scoring, scuffing, blistering, cracking, chipping (heel abrasion), or change in shape.

(f) The average lip diameter interference set of the rubber cups shall not exceed 65 per cent.

(g) The volume of fluid lost during any period of 24 000 strokes shall not exceed 36 ml.

(h) The volume of fluid lost during the last 100 strokes of the test shall not exceed 36 ml.

(i) At the end of the test the fluid shall not show sludging, jelling, or abrasive grittiness. The sediment content determined in accordance with 3.6.4, shall not exceed 1,5 per cent by volume after centrifuging.

(j) Not more than a trace of gum shall be deposited on the brake cylinder walls or other metal parts. No deposits that are abrasive or cannot be removed when rubbed with a cloth wetted with 95 per cent ethanol shall form on or adhere to brake cylinder walls.

3. METHODS OF TEST.

3.1 EQUILIBRIUM REFLUX BOILING POINT AT A PRESSURE OF 760 mm Hg.

3.1.1 *Apparatus* (see Figures 1 and 2).

(a) *Flask.*—A 100 ml round-bottomed flask of heat resistant glass with a short neck having a 19/38 standard-taper, female ground-glass joint, and a 10 mm outside diameter side tube which enters the flask at such an angle as to permit the end of the thermometer bulb to be directly centred in the flask 6,5 mm from the bottom.

(b) *Condenser.*—A reflux, glass tube condenser of the water-cooled type having a jacket 200 mm in length. The bottom end of the condenser shall have a 19/38 standard-taper, drip-tip, and a male ground-glass joint.

(c) *Boiling stones.*—Silicon carbide grains of No. 8 grit.

(d) *Termometer*.—'n Termometer met 'n bereik van -5 tot 300°C en wat akkuraat vir 7,62-cm-indompeling gekalibreer is.

(e) *Hittebron*.—'n Verhittingsbron wat die verhittings- en terugvloeitempo in 3.1.2 sal verskaf.

3.1.2 *Werkwyse*.—Plaas 60 ml van die vloeistof saam met drie of vier silikonkarbiedkorrels in die fles, verbind die koeler en steek die termometer deur die sybuis sodat sy onderpunt 6,5 mm van die middelpunt van die fles se boom is. Bevestig die termometer aan die sybuis met 'n kort stukkie rubberbuis. Monteer die fles, draai die koeler se watertoevoer oop en verhit teen so 'n tempo dat die vloeistof binne 10 ± 2 minute kook teen 'n terugvloeitempo van een tot vyf druppels per sekonde. Maak tydens die volgende 5 ± 2 minute seker, deur die hitteaanwending te reguleer, dat die terugvloeitempo een tot twee druppels ewewigsterugvloeiing per sekonde is. Hou die gespesifiseerde terugvloeitempo nog twee minute lank in stand, lees dan die temperatuur af en teken die barometerdruk aan. Die temperatuuraflesing behoort die gemiddelde te wees van vier aflesings wat met 30-sekonde-tussenpose geneem is.

3.1.3 *Aantekening*.—Korrigeer die temperatuur vir termometerfout en vir verskil in atmosferiese druk tussen die waarde wat aangeteken is en 760 mm Hg, met behulp van die toepaslike korreksie wat in Tabel 2 aangegee word. Teken die gekorrigeerde temperatuur, afgerond tot die naaste $0,5^{\circ}\text{C}$, aan as die ewewigsterugvloei-kookpunt by 'n druk van 760 mm Hg.

TABEL 2.—KORREKSIE VIR DRUK

1	2
Temperatuurbestek	Korreksie* per 10 mm Hg drukverskil
$^{\circ}\text{C}$	$^{\circ}\text{C}$
10 tot maar nie insluitende 30.....	0,35
30 tot maar nie insluitende 50.....	0,38
50 tot maar nie insluitende 70.....	0,40
70 tot maar nie insluitende 90.....	0,42
90 tot maar nie insluitende 110.....	0,45
110 tot maar nie insluitende 130.....	0,47
130 tot maar nie insluitende 150.....	0,50
150 tot maar nie insluitende 170.....	0,52
170 tot maar nie insluitende 190.....	0,54
190 tot maar nie insluitende 210.....	0,57
210 tot maar nie insluitende 230.....	0,59
230 tot maar nie insluitende 250.....	0,62
250 tot maar nie insluitende 270.....	0,64
270 tot maar nie insluitende 290.....	0,66
290 tot maar nie insluitende 310.....	0,69
310 tot maar nie insluitende 330.....	0,71
330 tot maar nie insluitende 350.....	0,74
350 tot maar nie insluitende 370.....	0,76
370 tot maar nie insluitende 390.....	0,78
390 tot maar nie insluitende 410.....	0,81

* Moet bygetel word as die barometerdruk onder 760 mm Hg is; moet afgetrek word as die barometerdruk bo 760 mm Hg is.

3.2 VLOEISTOFSTABILITEIT.

3.2.1 Stabiliteit by hoë temperatuur.

3.2.1.1 Apparaat.—Soos in 3.1 beskryf.

3.2.1.2 *Werkwyse*.—Verhit 'n nuwe monster van die oorspronklike toetsvloeistof tot 'n temperatuur van $185 \pm 2^{\circ}\text{C}$ volgens die werkwyse wat in 3.1 beskryf word. Hou dit twee uur lank by hierdie temperatuur en bepaal dan weer die ewewigsterugvloei-kookpunt volgens die werkwyse wat in 3.1 beskryf word.

(d) *Thermometer*.—A thermometer having a range of -5 to 300°C and accurately calibrated for 7,62 cm immersion.

(e) *Heat source*.—A means of heating that will provide the heating and reflux rates specified in 3.1.2.

3.1.2 *Procedure*.—Place 60 ml of the fluid together with three or four silicon carbide grains in the flask, attach the condenser and insert the thermometer through the side tube so that its end is 6,5 mm from the centre bottom of the flask. Seal the thermometer to the side tube with a short length of rubber tubing. Mount the flask, turn on the condenser water and apply heat at such a rate that the fluid is refluxing in 10 ± 2 minutes at a rate of one to five drops per second. During the next 5 ± 2 minute period by adjusting the heat input, ensure that the rate of reflux is one to two drops of equilibrium reflux per second. Maintain the specified reflux rate for an additional two minutes and then read the temperature and record the barometric pressure. The temperature reading should be the average of four readings taken at 30 second intervals.

3.1.3 *Recording*.—Correct the temperature for thermometer error and for difference in atmospheric pressure between that recorded and 760 mm Hg by applying the appropriate correction given in Table 2. Record the corrected temperature rounded off to the nearest $0,5^{\circ}\text{C}$ as the equilibrium reflux boiling point at a pressure of 760 mm Hg.

TABLE 2.—CORRECTION FOR PRESSURE

1	2
Temperature range	*Correction per 10 mm Hg pressure difference
$^{\circ}\text{C}$	$^{\circ}\text{C}$
10 up to but not including 30.....	0,35
30 up to but not including 50.....	0,38
50 up to but not including 70.....	0,40
70 up to but not including 90.....	0,42
90 up to but not including 110.....	0,45
110 up to but not including 130.....	0,47
130 up to but not including 150.....	0,50
150 up to but not including 170.....	0,52
170 up to but not including 190.....	0,54
190 up to but not including 210.....	0,57
210 up to but not including 230.....	0,59
230 up to but not including 250.....	0,62
250 up to but not including 270.....	0,64
270 up to but not including 290.....	0,66
290 up to but not including 310.....	0,69
310 up to but not including 330.....	0,71
330 up to but not including 350.....	0,74
350 up to but not including 370.....	0,76
370 up to but not including 390.....	0,78
390 up to but not including 410.....	0,81

* To be added if the barometric pressure is below 760 mm Hg; to be subtracted if the barometric pressure is above 760 mm Hg.

3.2 FLUID STABILITY.

3.2.1 Stability at high temperature.

3.2.1.1 Apparatus.—As described in 3.1.

3.2.1.2 *Procedure*.—Heat a new sample of the original test fluid to a temperature of $185 \pm 2^{\circ}\text{C}$ by the procedure specified in 3.1. Maintain it at that temperature for 2 hours, and then determine the equilibrium reflux boiling point again by the procedure described in 3.1.

3.2.1.3 *Verandering in kookpunt.*—Teken die verskil tussen die twee gekorrigeerde ewewigsterugvloei-kookpunte aan as die verandering in die kookpunt.

3.2.2 *Chemiese stabiliteit.*

3.2.2.1 *Apparaat.*—Soos in 3.1 beskryf.

3.2.2.2 *Werkwyse.*—Meng 30 ml van die vloeistof met 30 ml standaardmengbaarheidsvloeistof. Bepaal die ewewigsterugvloei-kookpunt van hierdie vloeistofmengsel volgens die werkwyse wat in 3.1 beskryf word; verhit teen so 'n tempo dat die vloeistof binne 10 ± 2 minute kook teen 'n terugvloei-tempo van een tot vyf druppels per sekonde. Teken die maksimum vloeistof-temperatuur aan wat afgelees word gedurende die eerste minuut nadat die vloeistof teen die gespesifiseerde terugvloei-tempo begin kook het. Reguleer die hitteaanwending gedurende die volgende 15 ± 1 minuut so dat die terugvloei-tempo een tot twee druppels per sekonde is. Hou 'n konstante ewewigsterugvloei-tempo nog twee minute lank in stand. Teken die gemiddelde van vier temperatuuraflesings wat met tussenpose van 30 sekondes geneem is aan as die finale ewewigsterugvloei-kookpunt.

3.2.2.3 *Chemiese omkering.*—Chemiese omkering blyk uit die vermindering in temperatuur tussen die maksimum vloeistof-temperatuur wat aangeteken word en die finale ewewigsterugvloei-kookpunt.

3.3 FLITSPUNT.

3.3.1 *Apparaat* (kyk figuur 3, 4 en 5).

(a) *Cleveland-oopbekerapparaat.*—Die apparaat moet bestaan uit 'n toetsbeker, plaat, toetsvlamaanwender, verwarmers en steunstukke wat aan die volgende vereistes voldoen:

(i) *Toetsbeker.*—'n Geelkopertoetsbeker wat 'n vulmerk het en aan die afmetingsvereistes in figuur 4 voldoen. Die beker kan 'n handvat sel hê.

(ii) *Plaat.*—'n Plaat van geelkoper, gietyster, smeeyster of staal met 'n gat in die middel wat omring is deur 'n vlak holte waarin die toetsbeker kan rus, en 'n plaat harde asbesbord wat die metaalplaat, maar nie die vlak holte nie, bedek. Die essensiële afmetings van die verwarmingsplaat word in figuur 5 getoon, maar die plaat kan vierkantig in plaas van rond wees. Die plaat kan verlengstukke hê waarop die toetsvlamaanwender en die termometersteunstuk gemonteer kan word.

(iii) *Toetsvlamaanwender.*—'n Toestel om die toetsvlam aan te wend, soos afgebeeld in figuur 3. Die toestel kan op so 'n wyse gemonteer wees dat die swaai van die toetsvlam outomaties herhaal kan word; die straal van die swaai moet minstens 152 mm wees en die middelpunt van die opening moet so gesteun wees dat die toetsvlam op 'n vlak van hoogstens 2 mm bokant die vlak van die rand van die beker swaai.

(iv) *Verwarmer.*—By voorkeur 'n elektriese verwarmers wat deur 'n transformator met spanningsreëling beheer word. Die gebruik van 'n gasbrander of alkohollamp word toegelaat, maar verbrandingsprodukte of vry vlam mag onder geen omstandighede rondom die beker opkom nie.

Die hittebron moet op so 'n manier reg onder die opening in die verwarmingsplaat geplaas word dat daar geen plaaslike oorverhitting is nie. Vlamverwarmers kan met 'n skerm wat nie bo die boonste oppervlak van die asbesbord uitsteek nie, teen trekke of oormatige straling beskerm word.

(v) *Termometersteunstuk.*—'n Toestel wat die termometer tydens die toets in die gespesifiseerde posisie sal hou en wat dit moontlik maak om die termometer na afloop van die toets maklik uit die toetsbeker te verwyder.

3.2.1.3 *Boiling point change.*—Take as the change in the boiling point the difference between the two corrected equilibrium reflux boiling points.

3.2.2 *Chemical stability.*

3.2.2.1 *Apparatus.*—As described in 3.1.

3.2.2.2 *Procedure.*—Mix 30 ml of the fluid with 30 ml of standard compatibility fluid. Determine the equilibrium reflux boiling point of this fluid mixture by the procedure specified in 3.1, applying heat to the flask at such a rate that the fluid is refluxing in 10 ± 2 minutes at a rate of 1 to 5 drops per second. Record the maximum fluid temperature observed during the first minute after the fluid begins to reflux at the specified rate. Over the next 15 ± 1 minutes, adjust and maintain the rate of reflux to 1 to 2 drops per second. Maintain a constant equilibrium reflux rate of 1 to 2 drops per second for an additional 2 minutes. Record the average of four temperature readings taken at 30 second intervals as the final equilibrium reflux boiling point.

3.2.2.3 *Chemical reversion.*—Chemical reversion is evidenced by the decrease in temperature between the maximum fluid temperature recorded and the final equilibrium reflux boiling point.

3.3 FLASH POINT.

3.3.1 *Apparatus* (see Figures 3, 4 and 5).

(a) *Cleveland Open Cup Apparatus.*—The apparatus shall consist of a test cup, plate, test flame applicator, heater, and supports conforming to the following requirements:

(i) *Test cup.*—A brass test cup having a filling mark and conforming to the dimensional requirements given in Figure 4. The cup may be equipped with a handle.

(ii) *Plate.*—A brass, cast iron, wrought iron, or steel plate with a centre hole surrounded by an area of plane depression in which the test cup is supported, and a sheet of hard asbestos board which covers the metal plate except over the area of plane depression. The essential dimensions of the heating plate are shown in Figure 5 but it may be square instead of circular. The plate may have extensions suitable for mounting the test flame applicator device and the thermometer support.

(iii) *Test flame applicator.*—A device for applying the test flame as pictured in Figure 3. The device may be mounted in such a manner as to permit automatic duplication of the sweep of the test flame, the radius of the swing being at least 152 mm and the centre of the orifice being so supported that it swings in a plane not more than 2 mm above the plane of the rim of the cup.

(iv) *Heater.*—Preferably an electric heater controlled by a variable voltage transformer. The use of a gas burner or alcohol lamp is permitted, but under no circumstances shall products of combustion or free flame be allowed to come up around the cup.

The source of heat shall be so centred under the opening in the heating plate that there is no local superheating. Flame-type heaters may be protected from draughts or excessive radiation by a suitable shield that does not project above the level of the upper surface of the asbestos board.

(v) *Thermometer support.*—A device which holds the thermometer in the specified position during a test and which will permit easy removal of the thermometer from the test cup upon completion of the test.

(vi) *Plaatsteunstuk*.—'n Steunstuk wat die plaat waterpas en vas sal hou.

(b) *Skerm*.—'n Skerm, 46 cm in die vierkant, 61 cm hoog en met 'n oop voorkant.

(c) *Termometer*.—'n Termometer met 'n bereik van -6 tot $+400^{\circ}\text{C}$ en wat akkuraat vir 25-mm-indompeling gekalibreer is.

3.3.2 *Werkwyse*.

(a) Steun die apparaat op 'n tafel wat waterpas en vas staan in 'n kamer of kompartement waarin daar geen trekke is nie. Skerm die bopunt van die apparaat teen sterk lig af om die waarneming van die flitspunt te vergemaklik.

Was die toetsbeker met oplosmiddel om alle olie of spore van gom of residu wat van 'n vorige toets agtergebly het, te verwyder. Verwyder koolstofneerslae met staalwol. Spoel die beker met koue water uit en droog dit 'n paar minute lank oor 'n oop vlam of op 'n warmplaat om die laaste spore van oplosmiddel en water te verwyder. Verkoel die beker tot minstens 56°C onder die verwagte flitspunt voordat dit gebruik word.

Steun die termometer in 'n vertikale posisie met die onderpunt van die bol 6,4 mm bokant die boom van die beker en by 'n punt halfpad tussen die middelpunt en die kant van die beker op 'n diameter wat loodreg op die boog (of lyn) van die swaai van die toetsvlam is en aan die teenoorgestelde kant van die arm van die toetsvlambrander. Die indompelingslyn wat op die termometer gegraveer is, sal 2 mm onder die rand van die beker wees as die termometer in sy regte posisie is.

(b) Vul die beker met vloeistof sodat die bokant van die meniskus presies by die vullyn is. As te veel monster in die beker gegooi is, verwyder die oormaat met 'n pipet. Indien daar vloeistof aan die buitekant van die beker kom, maak die beker leeg, maak dit skoon en vul dit weer. Vernietig alle lugblasies op die oppervlak van die monster.

(c) Steek die toetsvlam aan en reguleer dit totdat die diameter daarvan 3,2 tot 4,8 mm is, d.w.s. totdat dit so groot soos die vergelykingskraal is.

(d) Wend hitte in die begin aan sodat die temperatuurstygingstempo van die monster 14 tot 16°C per minuut is. Wanneer die temperatuur van die monster ongeveer 56°C onder die verwagte flitspunt is, verminder dit hitte sodat die temperatuurstygingstempo vir die laaste 28°C voordat die flitspunt bereik word, 5 tot 6°C per minuut is.

(e) Begin minstens 28°C onder die verwagte flitspunt en wend die toetsvlam aan wanneer die temperatuuraflesing op die termometer elke opeenvolgende 2°C -merk bereik. Beweeg die toetsvlam oor die middel van die beker, loodreg op die diameter wat deur die termometer gaan. Wend die vlam in 'n reguit lyn of langs 'n sirkelomtrek met 'n straal van minstens 152 mm met 'n egalige, ononderbroke beweging aan.

Maak seker dat die middel van die toetsvlam op 'n vlak beweeg wat hoogstens 2 mm bo die vlak van die bekerrand is, dat opeenvolgende dwarsbewegings in teenoorgestelde rigtings is en dat die tempo van die heen-en-weergaande bewegings oor die beker ongeveer 1 sekonde is.

Moenie die dampe in die toetsbeker deur onverskillige bewegings of deur asemhaling naby die beker versteur tydens die laaste temperatuurstyging van 17°C voor flitspunt nie.

3.3.3 *Aantekening*.—Teken die temperatuuraflesing op die termometer wanneer 'n flits op enige plek op die oppervlak van die vloeistof voorkom, as die flitspunt aan. Moenie die werklike flits verwar met die blouerige kring

(vi) *Plate support*.—A support which will hold the plate level and steady.

(b) *Shield*.—A shield 46 cm square, 61 cm high and having an open front.

(c) *Thermometer*.—A thermometer having a range of -6 to $+400^{\circ}\text{C}$ and which has been accurately calibrated for 25 mm immersion.

3.3.2 *Procedure*.

(a) Support the apparatus on a level steady table in a draught-free room or compartment. To permit ready detection of flash point, shield the top of the apparatus from strong light.

Wash the test cup with solvent to remove any oil or traces of gum or residue remaining from a previous test. Remove any carbon deposits with steel wool. Flush the cup with cold water and dry for a few minutes over an open flame or on a hotplate to remove the last traces of solvent and water. Cool the cup to at least 56°C below the expected flash point before using it.

Support the thermometer in a vertical position with the bottom of the bulb 6,4 mm above the bottom of the cup and at a point halfway between the centre and side of the cup on a diameter perpendicular to the arc (or line) of the sweep of the test flame and on the side opposite to the test flame burner arm. The immersion line engraved on the thermometer will be 2 mm below the level of the rim of the cup when the thermometer is properly positioned.

(b) Fill the cup with fluid so that the top of the meniscus is exactly at the filling line. If too much sample has been added to the cup, remove the excess by pipette. If fluid runs onto the outside of the cup, empty, clean, and refill the cup. Destroy any air bubbles on the surface of the sample.

(c) Light the test flame and adjust it to a diameter of 3,2 to 4,8 mm, i.e. to the size of the comparison bead.

(d) Apply heat initially so that the rate of temperature rise of the sample is 14 to 16°C per minute. When the sample temperature is approximately 56°C below the anticipated flash point decrease the heat so that the rate of temperature rise for the last 28°C before the flash point is reached is 5 to 6°C per minute.

(e) Starting at least 28°C below the anticipated flash point, apply the test flame when the temperature reading on the thermometer reaches each successive 2°C mark. Pass the test flame across the centre of the cup, at right angles to the diameter which passes through the thermometer. With a smooth, continuous motion apply the flame in a straight line or along the circumference of a circle having a radius of at least 152 mm. Ensure that the centre of the test flame moves in a plane not more than 2 mm above the plane of the rim of the cup, that successive traverses are in opposite directions, and that the rate of traverse across the cup is about 1 second. During the last 17°C rise in temperature before flash point, avoid disturbing the vapours in the test cup by careless movements or breathing near the cup.

3.3.3 *Recording*.—Record as the flash point the temperature reading on the thermometer when a flash appears at any point on the surface of the fluid. Do not confuse

wat die toetsvlam soms omring nie. Teken die barometerdruk aan en korregeer die flitspunt wat waargeneem is tot 'n druk van 760 mm Hg deur die toepaslike korreksies in Tabel 3 toe te pas.

TABEL 3.—KORREKSIE VIR DRUK

1	2
Barometerdruk, mm Hg	Korreksie*, °C
715 tot 665.....	2
664 tot 610.....	4
609 tot 550.....	6

*Geen korreksie is van toepassing op drukwaardes bokant 715 mm Hg nie.

3.4 KINEMATIESE VISKOSITEIT.

3.4.1 *Apparaat*.—'n Gekalibreerde kapillêre viskositeitsbuis wat viskositeit tot binne die foutgrense wat in Tabel 4 gegee word, kan meet.

TABEL 4

1	2	3
Toetstoestand	Foutgrense: Persentasie verskil van die gemiddelde	
	Herhaalbaarheid (een operateur en apparaat)	Reproduseerbaarheid (verskillende operateurs en apparaat)
Toetstemperatuur onder 0° C	0,5	1,0
Toetstemperatuur bo 0° C....	0,1	0,2

3.4.2 *Werkwyse*.—Bepaal die kinematiese viskositeit van die vloeistof by -40° C, 50° C en by 100° C en wees besonder versigtig om besoedeling van die vloeistof as gevolg van kondensering van atmosferiese vog tydens die bepaling by -40° C te voorkom.

3.5 NEUTRALITEIT.

3.5.1 *Apparaat*.—'n pH-meter wat van 'n gekalibreerde glaselektrode en 'n kalomelverwysingselektrode voorsien is.

3.5.2 *Werkwyse*.—Meng gelyke volumes van die vloeistof en 'n 80 persent-wateroplossing (gedistilleerde water) van etielalkohol met 'n pH-waarde van $7,0 \pm 0,1$. Gedistilleerde water met 'n pH-waarde van $7,0 \pm 0,1$ kan in plaas van die alkoholoplossing gebruik word as die vloeistof met 'n gelyke volume water mengbaar is. Bepaal die pH van die mengsel by 'n temperatuur van $23 \pm 5^\circ \text{C}$.

3.6 KORROSIE-EIENSKAPPE.

3.6.1 *Metaalstroke*.—Uit die metale in Tabel 1 aangegee, berei soos volg drie stelle korrosietoetsstroke voor wat in samestelling en afmetings ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde:

Maak die stroke, met uitsondering van die vertinde ysterstroke, skoon deur alle oppervlakke met 320A-waterdigte karborundumpapier af te skuur en met Stoddard-oplosmiddel of met 95 persent-etanol te was totdat alle oppervlakkrapmerke, -snye en -gaatjies van die stroke verwyder is.

the true flash with the bluish halo that sometimes surrounds the test flame. Record the barometric pressure and correct the observed flash point to a pressure of 760 mm Hg by applying the appropriate corrections given in Table 3.

TABLE 3.—CORRECTION FOR PRESSURE

1	2
Barometric pressure, mm Hg	Correction*, °C
715 to 665.....	2
664 to 610.....	4
609 to 550.....	6

*No correction is applicable to pressures above 715 mm Hg.

3.4 KINEMATIC VISCOSITY.

3.4.1 *Apparatus*.—A calibrated capillary type viscosity tube capable of measuring viscosity to within the limits of error given in Table 4.

TABLE 4

1	2	3
Conditions of test	Limits of error: Percentage difference from the mean	
	Repeatability (one operator and apparatus)	Reproducibility (different operators and apparatus)
Test temperatures below 0° C..	0,5	1,0
Test temperatures above 0° C	0,1	0,2

3.4.2 *Procedure*.—Determine the kinematic viscosity of the fluid at -40° C, 50° C and at 100° C taking particular care to avoid contamination of the fluid by condensation of atmospheric moisture during the determination at -40° C.

3.5 NEUTRALITY.

3.5.1 *Apparatus*.—A pH meter equipped with a calibrated glass electrode and a calomel reference electrode.

3.5.2 *Procedure*.—Mix equal volumes of the fluid and an 80 per cent aqueous (distilled water) solution of ethyl alcohol having a pH value of $7,0 \pm 0,1$. Distilled water with a pH value of $7,0 \pm 0,1$ may be used instead of the alcohol solution if the fluid is miscible with an equal volume of water. Determine the pH value at a temperature of $23 \pm 5^\circ \text{C}$.

3.6 CORROSIVENESS.

3.6.1 *Metal Strips*.—Prepare as follows from the metals listed in Table 1 three sets of corrosion test strips corresponding in composition and dimensions to the reference standard of the South African Bureau of Standards:

With the exception of the tinned iron strips, clean the strips by abrading all surfaces with 320A waterproof carborundum paper and washing with Stoddard solvent or 95 per cent ethanol until all surface scratches, cuts, and

Gebruik 'n nuwe stuk karborundumpapier vir elke verskillende tipe metaal. Poleer die stroke met uitsondering van die vertinde ysterstroke, met No. 00-graad-staafwol. Was die stroke, insluitende die vertinde ysterstroke, met 95 persent-etanol, droog hulle met 'n skoon pluisslose doek af en plaas hulle minstens een uur lank in 'n desikkator wat by $23 \pm 5^\circ \text{C}$ gehou word. Hanteer die stroke na polering met 'n skoon knyper of hanteertang om besoedeling te voorkom. Bepaal die massa van elke strook tot die naaste 0,1 mg en monteer elke stel stroke op 'n onbedekte staalspy of -bout in die volgende volgorde: Vertinde yster, staal, aluminium, gietyster, geelkoper en koper. Maak seker dat die stroke elektries verbind is en buig hulle dan, behalwe die gietysterstroke, op so 'n wyse dat daar 'n opening van minstens 3 mm tussen die aangrensende stroke oor 'n afstand van ongeveer 6 cm van die vry ente van die stroke af is. Meet die totale blootgestelde oppervlakte van elke strook. Om vingerafdrukke te verwyder, dompel die strooksamestelle in 95 persent-etanol en hanteer hulle dan slegs met 'n skoon knyper of hanteertang.

3.6.2 Stireenbutadien-rubberdoppe.

(a) Neem drie stireenbutadien-wielsilinderrubberdoppe wat in kwaliteit ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde. Meet die basisdiameter van die doppe tot die naaste 0,02 mm langs die hartlyn van die letters op die dop en loodreg op hierdie hartlyn. Neem die afmetings binne 0,4 mm van die boonste rand en parallel met die basis van die dop. Moenie 'n dop gebruik waarvan die twee afmetings met meer as 0,08 mm verskil nie. Kry die gemiddelde van die twee aflesings van elke dop.

(b) Bepaal die hardheid van die toetsdoppe in internasionale rubberhardheidsgrade op die binnevlak van die doppe met behulp van 'n mikrotoetsapparaat.

3.6.3 *Werkwyse*.—Plaas een rubberdop, met die liprand na bo, in elk van drie ronde glasflesse met regop kante, wat ongeveer 115 mm hoog en 75 mm in diameter is. Plaas een metaalstrooksamstelling binne in elke dop sodat die vasgepende ent in aanraking is met die holte van die dop en die vry ent na bo in die fles wys. Meng 1 140 ml vloeistof met 60 ml gedistilleerde water.

Voeg genoeg van die mengsel by om die metaalstrooksamstel in elke fles tot 'n diepte van minstens 10 mm bokant die bopunte van die stroke te bedek. Gebruik slegs vertinde staaldeksel met 'n luggat van $0,8 \pm 0,1$ mm diameter om die fles mee toe te maak. Draai die deksels styf toe en plaas die flesse 120 ± 2 uur lank in 'n oond wat by $100 \pm 2^\circ \text{C}$ gehou word, gebruik dan 'n knyper of hanteertang om die strooksamestelle uit die flesse te haal en verwyder afsaksels wat liggies vaskleef deur elke samestel in die vloeistof in die betrokke fles rond te beweeg. Onderzoek die stroke en flesse vir vasklewende kristallyne neerslae, haal die metaalstroke uitmekaar, verwyder vasklewende vloeistof deur die stroke met water af te spoel en maak die afsonderlike stroke skoon deur hulle met 'n doek wat met 95 persent-etanol natgemaak is, af te vee. Onderzoek die stroke vir tekens van grofheid en uitvreting. Plaas die stroke minstens een uur lank in 'n desikkator wat by $23 \pm 5^\circ \text{C}$ gehou word. Bepaal die massa van elke strook tot die naaste 0,1 mg. Bepaal die verskil in massa van elke metaalstrook en deel die verskil deur die totale blootgestelde oppervlakte van die metaalstrook uitgedruk in vierkante sentimeter. Bereken die gemiddelde van die resultate vir die drie stroke van elke tipe materiaal.

Gebruik 'n knyper of hanteertang om die rubberdoppe uit die flesse te haal en verwyder afsaksels wat liggies vaskleef deur die dop in die vloeistof in die fles rond te

pits have been removed from the strips. Use a new piece of carborundum paper for each different type of metal. With the exception of the tinned iron strips, polish the strips with No. 00 grade steel wool. Wash the strips, including the tinned iron ones, with 95 per cent ethanol, dry them with a clean lint-free cloth, and place them for at least 1 hour in a desiccator maintained at $23 \pm 5^\circ \text{C}$. After polishing, handle the strips with clean forceps or tongs to avoid contamination. Determine the mass of each strip to the nearest 0,1 mg and assemble each set of strips on an uncoated steel cotter pin or bolt in the following order: Tinned iron, steel, aluminium, cast iron, brass, and copper. Ensure that the strips are in electrical contact, and except for the cast iron strips bend them so that there is a gap of at least 3 mm between adjacent strips for a distance of about 6 cm from the free ends of the strips. Measure the total exposed surface area of each strip. To remove fingerprints immerse the strip assemblies in 95 per cent ethanol and then handle them only with clean forceps or tongs.

3.6.2 Styrene-butadiene rubber cups.

(a) Take three styrene-butadiene wheel cylinder rubber cups corresponding in quality to the reference standard of the South African Bureau of Standards. Measure to the nearest 0,02 mm the base diameter of these cups along the centre line of the lettering on the cup and at right angles to this centre line. Take the measurements within 0,4 mm of the bottom edge and parallel to the base of the cup. Do not use any cup for which the two measurements differ by more than 0,08 mm. Average the two readings of each cup.

(b) By means of a Micro-tester apparatus determine on the inner surface of the test cups the hardness of the cups in International Rubber Hardness Degrees.

3.6.3 *Procedure*.—Place one rubber cup, with the lip edge facing up, in each of three straight-sided round glass jars approximately 115 mm in height and 75 mm in diameter. Insert one metal strip assembly inside each cup with the pinned end in contact with the concavity of the cup and the free end extending upward in the jar. Mix 1 140 ml of fluid with 60 ml of distilled water. Add enough of the mixture to cover the metal strip assembly in each jar to a depth of at least 10 mm above the tops of the strips. To close the jar use only tinned steel lids vented with a hole $0,8 \pm 0,1$ mm in diameter. Tighten the lids and place the jars in an oven maintained at $100 \pm 2^\circ \text{C}$ for 120 ± 2 hours, then use forceps or tongs to take the strip assemblies out of the jars, removing loose adhering sediment by agitating each assembly in the fluid in its jar. Examine the strips and jars for adhering crystalline deposits, disassemble the metal strips, remove adhering fluid by flushing with water, and clean individual strips by wiping with a cloth wetted with 95 per cent ethanol. Examine the strips for evidence of roughening and pitting. Place the strips in a desiccator maintained at $23 \pm 5^\circ \text{C}$ for at least an hour. Determine the mass of each strip to the nearest 0,1 mg. Determine the difference in mass of each metal strip and divide the difference by the total exposed surface area of the metal strip expressed in square centimetres. Average the results for the three strips of each type of metal.

Use forceps or tongs to remove the rubber cups from the jars, removing loosely adhering sediment by agitation of the cup in the fluid in the jar. Rinse the cups in 95

beweeg. Spoel die doppe in 95 persent-etanol af, maak hulle in die lug droog en ondersoek hulle vir tekens van koolswartafskieding, klewerigheid, blasies en ander vorms van disintegrasie. Bepaal die hardheid en basisdiameters volgens 3.6.2 binne 15 minute nadat die doppe uit die vloeistof verwyder is.

Hou die mengsel van vloeistof en water in die flesse minstens een uur lank by $23 \pm 5^\circ \text{C}$ en ondersoek dit dan vir jelvorming. Skud die vloeistof in die flesse om alle afsaksel eenvormig te versprei, bring 'n 100-ml-deel van die vloeistof uit elke fles in 'n keëlvormige sentrifugeerbuis [kyk 3.6.4.1 (b)] oor en bepaal dan die persentasies afsaksel volgens 3.6.4.

Meet die pH-waarde van die mengsel van vloeistof en water volgens 3.5.

3.6.4 Bepaling van afsaksel.

3.6.4.1 Apparaat.

(a) *Sentrifuge*.—'n Sentrifuge wat twee of meer gevulde sentrifugeerbuis kan draai teen 'n spoed wat so beheer kan word dat 'n relatiewe sentrifugale krag van 600-700 by die punte van die buise verkry word.

Bereken die vereiste spoed van die draaiende kop met behulp van die volgende vergelyking:

$$\text{rpm} = 423 \sqrt{\frac{\text{rsk}}{d}}$$

waar rsk = relatiewe sentrifugale krag, en
d = diameter van swaai, in sentimeter, gemeet tussen die punte van teenoorgestelde buise wanneer hulle in 'n draaiende posisie is.

(b) *Sentrifugeerbuis*.—Sentrifugeerbuis wat van deeglik uitgegloeide glas gemaak is, met die afmetings in figuur 6 aangegee en wat duidelik gegradeer is.

3.6.4.2 *Werkwyse*.—Balanseer twee sentrifugeerbuis of pare buise wat die toetsvloeistof bevat tesame met hul onderskeie dratapkoppies en plaas hulle aan teenoorgestelde kante van die sentrifugeerkop. Draai hulle dan 10 minute lank teen 'n tempo van 'n relatiewe sentrifugale krag van 600-700 by die punte van die draaiende buise sal lewer. Herhaal totdat die volume afsaksel in elke buis remvloeistof konstant bly vir die drie opeenvolgende aflesings.

3.6.4.3 *Aantekening*.—Teken die gemiddelde volume afsaksel op die bodem van die sentrifugeerbuis akkuraat tot minstens 0,1 ml aan.

3.7 VLOEIBAARHEID EN VOORKOMS BY LAE TEMPERATURE.

3.7.1 *By -40°C* .—Gooi 100 ml van die vloeistof in 'n 125-ml-monsterbottel wat ongeveer 3,5 cm in diameter en presies 15 cm in binnelengte is. Kurk die bottel toe en plaas dit 144 ± 4 uur lank in 'n bad wat by $-40 \pm 2^\circ \text{C}$ gehou word. Haal die bottel uit die bad, vee dit gou af met 'n skoon pluisslose doek wat deurweek is met aseton of 95 persent-etanol en bepaal dan die deursigtigheid van die vloeistof deur die bottel teen 'n dekvermoëkaart, wat in ontwerp ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde, te plaas en die helderheid van die kontrasstrepe op die kaart waar te neem wanneer dit deur die vloeistof bekyk word. Ondersoek die vloeistof vir laagvorming en afsakking. Keer die bottel om en bepaal in sekondes hoe lank dit die lugblasie neem om tot op die oppervlak van die vloeistof te beweeg.

per cent ethanol; air-dry them, and examine them for evidence of carbon black separation, tackiness, blisters, and other forms of disintegration. Determine the hardness and base diameters in accordance with 3.6.2 within 15 minutes after removal from the fluid.

Maintain the fluid-water mixture in the jars at $23 \pm 5^\circ \text{C}$ for at least an hour and then examine it for jelling. Agitate the liquid in the jars to uniformly suspend any sediment, transfer a 100-ml portion of the liquid from each jar to a cone-shaped centrifuge tube [see 3.6.4.1 (b)] and then determine percentages of sediment as described in 3.6.4.

Measure as described in 3.5 the pH value of the fluid-water mixture.

3.6.4 Determination of sediment.

3.6.4.1 Apparatus.

(a) *Centrifuge*.—A centrifuge capable of whirling two or more filled centrifuge tubes at a speed which can be controlled to give a relative centrifugal force of 600-700 at the tip of the tubes. Calculate the required speed of the rotating head by means of the following equation:

$$\text{rpm} = 423 \sqrt{\frac{\text{rcf}}{d}}$$

where rcf = relative centrifugal force, and
d = diameter of swing, in centimetres, measured between tips of opposite tubes when in rotating position.

(b) *Centrifuge tubes*.—Centrifuge tubes made of thoroughly annealed glass and having the dimensions given in figure 6 and clear and distinct graduations.

3.6.4.2 *Procedure*.—Balance two centrifuge tubes or pairs of tubes containing the liquid under test with their respective trunion cups and place them on opposite sides of the centrifuge head. Then whirl them for 10 minutes at a rate sufficient to produce a relative centrifugal force of 600-700 at the tips of the whirling tubes. Repeat this operation until the volume of sediment in each tube containing brake fluid remains constant for three consecutive readings.

3.6.4.3 *Recording*.—Record the average volume of sediment at the bottom of the centrifuge tubes to an accuracy of at least 0,1 ml.

3.7 FLUIDITY AND APPEARANCE AT LOW TEMPERATURES.

3.7.1 *At -40°C* .—Place 100 ml of fluid in a 125 ml sample bottle approximately 3,5 cm in diameter and exactly 15 cm in inside length. Stopper the bottle with a cork and place for 144 ± 4 hours in a bath maintained at $-40 \pm 2^\circ \text{C}$. Remove the bottle from the bath, quickly wipe the bottle with a clean lint-free cloth saturated with acetone or 95 per cent ethanol, determine the transparency of the fluid by placing the bottle against a hiding power chart corresponding in design to the reference standard of the South African Bureau of Standards and by observing the clarity of the contrast lines on the chart when viewed through the fluid. Examine the fluid for stratification and sedimentation. Invert the bottle and determine the time in seconds required for the air bubble to travel to the top of the fluid.

3.7.2. *By* -50°C .—Volg dieselfde werkwyse wat in 3.7.1 beskryf word, maar hou die bottel $6 \pm 0,2$ uur lank in 'n bad wat by $-50^{\circ}\text{C} \pm 2^{\circ}\text{C}$ gehou word.

3.8 VERDAMPING.

3.8.1 *Werkwyse*.—Bepaal tot die naaste 0,01 g die massa van elk van vier geslote petribakkies wat ongeveer 100 mm in diameter en 15 mm hoog is. Plaas ongeveer 25 ml vloeistof in elk van die vier geweegde bakkies, sit die deksels op en bepaal weer die massa tot die naaste 0,01 g. Bepaal die massa van die vloeistof volgens die massaverskil tussen die vol en die leë bakkies.

Haal die deksels af, keer hulle om en plaas eke bakkie binne in sy deksel in 'n trekvyre oond by $100 \pm 2^{\circ}\text{C}$; hou hierdie temperatuur 46 ± 2 uur lank in stand.

Haal die bakkies uit die oond, sit die deksels weer op, verkoel een uur lank in 'n disikkator tot $23 \pm 5^{\circ}\text{C}$ en bepaal die massa van elke bakkie. Plaas al die bakkies nog 22 ± 2 uur lank terug in die oond; verkoel en bepaal die massa soos voorheen. Hou aan met hierdie werkwyse totdat ewewig bereik is, soos aangedui deur 'n massaverlies van minder as 0,25 g in 22 uur op elke bakkie, of tot na verloop van sewe dae, watter ook al eerste plaasvind.

3.8.2 *Berekening*.—Bereken die persentasie vloeistof wat uit elke bakkie verdamp het, bepaal die gemiddelde van die resultate en teken hierdie syfer as die verdampingsverlies aan.

3.8.3 *Kwaliteit van residu*.—Ondersoek die residu in die bakkies na finale verkoeling by $23 \pm 5^{\circ}\text{C}$ vir voldoening aan 2.9.2. deur enige aanwesige afsaksel met die vingerpunt te vryf om vas te stel of grinterigheid en grofheid aan- of afwesig is.

3.8.4 *Vloeiopunt van residu*.—Voeg die residu van al vier bakkies bymekaar en bepaal die vloeiopunt volgens 3.8.5.

3.8.5 Bepaling van vloeiopunt.

3.8.5.1 Apparaat (kyk figuur 7).

(a) *Toetsfles*.—'n Toetsfles A van helder glas, silinder-vormig, met 'n plat bodem, ongeveer 30 tot 33,5 mm in binnediameter en 115 tot 125 mm hoog; of as alternatief 'n oliemonsterbottel met 'n inhoudsvermoë van 125 ml, mits dit aan hierdie vereistes voldoen.

(b) *Termometer*.—'n Termometer B met 'n temperatuurbereik van -38 tot $+50^{\circ}\text{C}$ en wat akkuraat vir 108-mm-indompeling gekalibreer is.

(c) *Kurkprop*.—'n Kurkprop C om op die toetsfles te pas, met 'n gaatjie in die middel waardeur die termometer gesteek kan word.

(d) *Mantel*.—'n Waterdigte glas- of metaalmantel D, silindervormig, met 'n plat bodem, ongeveer 115 mm hoog en met 'n binnediameter wat 9,5 tot 12,5 mm groter is as die buitendiameter van die toetsfles.

(e) *Skyf*.—'n Kurk- of viltskyf E, 6 mm dik en met dieselfde diameter as die binnekant van die mantel.

(f) *Pakstuk*.—'n Pakstukring F, ongeveer 5 mm dik, wat styf om die buitekant van die toetsfles en lossies in die mantel pas, om te verhoed dat die toetsfles aan die mantel raak. Hierdie pakstuk kan van kurk, vilt of ander materiaal wees wat elasties genoeg is om aan die toetsfles vas te kleef en stewig genoeg is om sy vorm te behou.

(g) *Bad*.—'n Verkoelingsbad G. Die grootte en vorm van die bad is opsioneel maar 'n steunstuk is noodsaaklik om die mantel stewig in 'n vertikale posisie te hou. Vir die bepaling van vloeiopunte wat laer as 10°C is, is twee of meer baddens nodig. Die vereiste badtemperatuur kan deur afkoeling of deur die gebruik van vriesmengsels in stand gehou word.

3.7.2. *At* -50°C .—Use the same procedure as described in 3.7.1 but keep the bottle for $6 \pm 0,2$ hours in a bath maintained at $-50 \pm 2^{\circ}\text{C}$.

3.8 EVAPORATION.

3.8.1 *Procedure*.—Determine to the nearest 0,01 g the mass of each of four covered Petri dishes, approximately 100 mm in diameter and 15 mm high. Place approximately 25 ml of fluid in each of the four tared dishes, replace the covers, and redetermine the mass to the nearest 0,01 g. Determine the mass of fluid from the difference in masses of the filled and empty dishes.

Remove the covers, invert them, place each dish inside its cover in a draught-free oven at $100 \pm 2^{\circ}\text{C}$; maintain this temperature for 46 ± 2 hours. Remove the dishes from the oven, replace the covers, cool in a desiccator to $23 \pm 5^{\circ}\text{C}$ for one hour, and determine the mass of each dish. Return all the dishes to the oven for a further 22 ± 2 hours; cool and determine the mass as before. Continue this procedure until equilibrium is reached as evidenced by a mass loss of less than 0,25 gm in 22 hours on each dish, or until seven days have elapsed, whichever occurs first.

3.8.2 *Calculation*.—Calculate the percentage of fluid evaporated from each dish, average the results, and record this figure as the loss by evaporation.

3.8.3 *Quality of residue*.—Examine the residue in the dishes after the final cooling at $23 \pm 5^{\circ}\text{C}$ for compliance with 2.9.2 by rubbing any sediment with a fingertip to establish the presence or absence of grittiness and abrasiveness.

3.8.4 *Pour point of residue*.—Combine the residue from all four dishes and determine the pour point as described in 3.8.5.

3.8.5 Determination of pour point.

3.8.5.1 Apparatus (see Figure 7).

(a) *Test jar*.—A test jar A of clear glass, cylindrical in shape, flat bottomed, approximately 30 to 33,5 mm in inside diameter and 115 to 125 mm in height.

Alternatively a 125 ml oil sample bottle provided it meets these requirements.

(b) *Thermometer*.—A thermometer B which has a temperature range of -38 to $+50^{\circ}\text{C}$ and which has been accurately calibrated for 108 mm immersion.

(c) *Cork*.—A cork C to fit the test jar, bored centrally to take the thermometer.

(d) *Jacket*.—A glass or metal water-tight jacket D, cylindrical in shape, flat bottomed, approximately 115 mm in height and with an inside diameter 9,5 to 12,5 mm greater than the outside diameter of the test jar.

(e) *Disk*.—A cork or felt disk E, 6 mm in thickness and of the same diameter as the inside of the jacket.

(f) *Gasket*.—A ring gasket F, about 5 mm in thickness, that fits tightly around the outside of the test jar and loosely inside the jacket to prevent the test jar from touching the jacket. This gasket may be cork, felt, or other material elastic enough to cling to the test jar and firm enough to retain its shape.

(g) *Bath*.—A cooling bath G. The size and shape of the bath are optional but a support for holding the jacket firmly in a vertical position is essential. For determination of pour points below 10°C two or more baths are needed. The required bath temperatures may be maintained by refrigeration or by the use of freezing mixtures.

3.8.5.2 *Werkwyse.*

(a) Gooi die saamgevoegde residu van 3.8.4 in die toetsfles A. Indien nodig, verhit die residu vir 'n kort rukkie in 'n waterbad voordat dit in die toetsfles gegiet word.

(b) Maak die toetsfles styf toe met kurkprop C wat die toetstermometer B in 'n vertikale posisie in die middel van die fles dra, met die termometerbol tot so 'n diepte ondergedompel dat die onderpunt van die haarbuisie 3 mm onder die oppervlak van die residu is.

(c) Verhit die residu, sonder om dit te roer, tot 'n temperatuur van 46°C in 'n bad wat by 'n temperatuur van 48°C gehou word. Verkoel die residu tot 35°C in die lug of in 'n waterbad by 'n temperatuur van ongeveer 25°C .

(d) Maak seker dat die skyf, die pakstuk en die binnekant van die mantel skoon en droog is. Plaas die skyf E onder in die mantel D. Sit die toetsfles in die mantel, met die pakstukring F in 'n posisie ongeveer 25 mm bo die bodem van die fles.

(e) Wees versigtig om nie die residu te versteur nadat dit gestol het nie.

(f) Hou die temperatuur van die verkoelingsbad G by -1 tot $+2^{\circ}\text{C}$. Steun die mantel wat die toetsfles bevat stewig in 'n vertikale posisie in die verkoelingsbad sodat hoogstens 25 mm van die mantel bo die verkoelmedium is.

(g) Begin termometeraflesings neem by 'n temperatuur van 12°C bo die verwagte vloeipunt. By elke toetstermometeraflesing wat 'n veelvoud van 3°C is, haal die toetsfles versigtig uit die mantel en hou dit effens skuins om vas te stel of die residu beweeg. Die hele proses van uithaal en terugsit mag nie langer as 3 sekondes duur nie.

Wanneer die temperatuur van die residu 10°C bereik het, plaas die toetsfles in die mantel in 'n tweede bad wat by 'n temperatuur van -18 tot -15°C gehou word. As die residu nie opgehou het om te vloei wanneer die temperatuur daarvan -7°C bereik het nie, plaas die toetsfles in die mantel in 'n derde bad wat by 'n temperatuur van $-34,5$ tot $-31,5^{\circ}\text{C}$ gehou word. Om baie lae vloeipunte te bepaal, moet bykomende baddens met opeenvolgend laer temperatuurdifferentiale van ongeveer 17°C gereedgemaak word. Plaas die toetsfles elke keer oor wanneer die temperatuur van die residu 'n punt bereik wat 28°C bokant die temperatuur van die volgende bad is. Die koue toetsfles mag nooit direk in die verkoelmedium geplaas word nie. Sodra die residu in die toetsfles ophou vloei wanneer die fles skuins gehou word, hou die fles presies vyf sekondes lank in 'n horisontale posisie en neem die residu versigtig waar. As die residu in hierdie toestand beweging toon, plaas die toetsfles onmiddellik terug in die mantel en herhaal die toets vir vloei wanneer die temperatuur 3°C laer is.

(h) Gaan so voort met die toets totdat 'n punt bereik is waarby die residu in die toetsfles geen beweging toon wanneer die toetsfles presies vyf sekondes lank in 'n horisontale posisie gehou word nie.

3.8.5.3 Aantekening.—Teken die temperatuur aan waarby die residu ophou vloei, soos in (h) beskryf, korreger vir termometerfout indien nodig, tel 3°C by die gekorrigeerde temperatuur en teken die resultaat aan as die vloeipunt van die residu.

3.9 WATERTOLERANSIE.

3.9.1 By -40°C .—Meng 3,5 ml gedistilleerde water met 100 ml vloeistof en gooi die mengsel in 'n keëlvormige sentrifugeerbuis (kyk figuur 6), soos in 3.6.4.1 (b) beskryf. Kurk die buis toe en plaas dit 22 ± 2 uur lank in 'n koue bad wat by $-40 \pm 2^{\circ}\text{C}$ gehou word.

3.8.5.2 *Procedure.*

(a) Transfer the combined residue from 3.8.4 into the test jar A. If necessary, heat the residue in a water bath for a short time before pouring it into the test jar.

(b) Close the test jar tightly with the cork C carrying the test thermometer B in a vertical position in the centre of the jar with the thermometer bulb so immersed that the beginning of the capillary is 3 mm below the surface of the residue.

(c) Heat the residue without stirring to a temperature of 46°C in a bath maintained at a temperature of 48°C . Cool the residue to 35°C in air or in a water bath at a temperature of approximately 25°C .

(d) Ensure that the disk, gasket and inside of the jacket are clean and dry. Place the disk E in the bottom of the jacket D. Insert the test jar, with the ring gasket F positioned approximately 25 mm above the bottom of the jar, into the jacket.

(e) After the residue has congealed take great care not to disturb it.

(f) Maintain the temperature of the cooling bath G at -1 to $+2^{\circ}\text{C}$. Support the jacket containing the test jar firmly in a vertical position in the cooling bath so that not more than 25 mm of the jacket is above the cooling medium.

(g) Begin thermometer readings at a temperature 12°C before the expected pour point. At each test thermometer reading that is a multiple of 3°C , remove the test jar from the jacket carefully and tilt it slightly to ascertain whether there is a movement of residue. The complete operation of removal and replacement shall require not more than three seconds. When the temperature of the residue has reached 10°C place the test jar in the jacket in a second bath maintained at a temperature of -18 to -15°C . If the residue has not ceased to flow when its temperature has reached -7°C place the test jar in the jacket in a third bath maintained at a temperature of $-34,5$ to $-31,5^{\circ}\text{C}$. For determinations of very low pour points, additional baths should be maintained with successively lower temperature differentials of about 17°C . In each case transfer the test jar when the temperature of the residue reaches a point 28°C above the temperature of the next bath. At no time shall the cold test jar be placed directly into the cooling medium. As soon as the residue in the test jar ceases to flow when the jar is tilted, hold the jar in a horizontal position for exactly five seconds and observe the residue carefully. If the residue shows any movement under these conditions, immediately replace the test jar in the jacket and repeat the test for flow when the temperature is 3°C lower.

(h) Continue the test in this manner until a point is reached at which the residue in the test jar shows no movement when the test jar is held in a horizontal position for exactly five seconds.

3.8.5.3 Recording.—Record the temperature at which the residue ceases to flow as described in (h), correct for thermometer error if necessary, add 3°C to the corrected temperature, and record the result as the pour point of the residue.

3.9 WATER TOLERANCE.

3.9.1 At -40°C .—Mix 3,5 ml of distilled water with 100 ml of fluid and pour the mixture into a cone-shaped centrifuge tube (see Figure 6) as described in 3.6.4.1 (b). Stopper the tube with a cork and place it for 22 ± 2 hours in a cold bath maintained at $-40 \pm 2^{\circ}\text{C}$. Remove the

Haal die sentrifugeerbuis uit die bad en vee die buis gou af met 'n skoon pluistose doek wat met aseton of 95-persent-etanol deurweek is. Plaas die buis teen 'n dekvermoëkaart wat in ontwerp ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde en neem die helderheid van die kontrasstrepe op die kaart waar wanneer dit deur die vloeistof bekyk word. Onderzoek die vloeistof vir laagvorming en afsakking. Keer die buis om en bepaal in sekondes hoe lank dit die lugblasie neem om tot aan die oppervlak van die vloeistof te beweeg. Daar word geag dat die lugblasie die oppervlak van die vloeistof bereik het wanneer die bopunt van die blasie die 2-ml-gradueermerk van die sentrifugeerbuis bereik.

3.9.2 *By 60° C.*—Plaas die sentrifugeerbuis en die vloeistof wat vir die toets in 3.9.1 gebruik is, 22 ± 2 uur lank in 'n oond wat by $60 \pm 2^\circ \text{C}$ gehou word. Haal die buis uit die oond en ondersoek die inhoud onmiddellik vir laagvorming. Bepaal dan die persentasie afsaksel per volume volgens 3.6.4.

3.10 MENGBAARHEID.

3.10.1 *By -40° C.*—Meng 50 ml vloeistof met 50 ml mengbaarheidsvloeistof wat in gehalte ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde, gooi hierdie mengsel in 'n keëlvormige sentrifugeerbuis (kyk figuur 6) soos in 3.6.4.1 (b) beskryf en kurk dit toe. Plaas die sentrifugeerbuis 22 ± 2 uur lank in 'n bad wat by $-40 \pm 2^\circ \text{C}$ gehou word. Haal die sentrifugeerbuis uit die bad en vee die buis gou af met 'n skoon pluistose doek wat met aseton of 95 persent-etanol deurweek is. Plaas die buis teen 'n dekvermoëkaart wat in ontwerp ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde en neem die helderheid van die kontrasstrepe op die kaart waar wanneer dit deur die vloeistof bekyk word. Onderzoek die vloeistof vir laagvorming en afsakking.

3.10.2 *By 60° C.*—Plaas die sentrifugeerbuis en die vloeistof wat vir die toets in 3.10.1 gebruik is 22 ± 2 uur lank in 'n oond wat by $60 \pm 2^\circ \text{C}$ gehou word. Haal die buis uit die oond en ondersoek die inhoud onmiddellik vir laagvorming. Bepaal dan die persentasie afsaksel per volume volgens 3.6.4.

3.11 BESTANDHEID TEEN OKSIDASIE.

3.11.1 *Voorbereiding van metaalstroke.*—Gaan volgens 3.6.1 te werk om drie stelle aluminium- en gietysterkorrosietoetsstroke, wat in samestelling en afmetings ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde, voor te berei en skoon te maak. Bepaal die massa van elke strook tot die naaste 0,1 mg en monteer 'n strook van elke metaal op 'n onbedekte staalspy; skei die strook aan elke punt met 'n stuk tinfolie wat 'n oppervlakte van ongeveer 12 vk mm het en tussen 0,02 en 0,06 mm dik is. Die tinfolie moet minstens 99,9 persent tin en hoogstens 0,025 persent lood bevat.

3.11.2 *Voorbereiding van toetsvloeistof.*—Plaas 50 ml vloeistof in 'n klein glasbottel met 'n inhoudsvermoë van ongeveer 120 ml. Gooi dan ook 100 ± 2 mg reagensgraad bensoïelperoksied en $2,5 \pm 0,1$ ml gedistilleerde water in die bottel. Kurk die bottel toe en skud die inhoud sonder dat die oplossing die prop natmaak. Plaas die toegekurkte bottel 120 ± 10 minute lank in 'n oond by $70 \pm 2^\circ \text{C}$ en skud dit elke 15 minute om die peroksied op te los. Haal die bottel uit die oond en hou dit 22 ± 2 uur lank by $23 \pm 5^\circ \text{C}$.

centrifuge tube from the bath, and quickly wipe the tube with a clean lint-free cloth saturated with acetone or 95 per cent ethanol. Place the tube against a hiding power chart corresponding in design to the reference standard of the South African Bureau of Standards, and observe the clarity of the contrast lines on the chart when viewed through the fluid. Examine the fluid for stratification and sedimentation. Invert the tube and determine the time in seconds required for the air bubble to travel to the top of the fluid. The air bubble shall be considered to have reached the top of the fluid when the top of the bubble reaches the 2 ml graduation mark of the centrifuge tube.

3.9.2 *At 60° C.*—Place, for 22 ± 2 hours, the centrifuge tube and fluid used for the test given in 3.9.1 in an oven maintained at $60 \pm 2^\circ \text{C}$. Remove the tube from the oven and immediately examine the contents for stratification. Then determine the percentage by volume of sediment as described in 3.6.4.

3.10 COMPATIBILITY.

3.10.1 *At -40° C.*—Mix 50 ml of fluid with 50 ml of compatibility fluid corresponding in quality to the reference standard of the South African Bureau of Standards. Pour this mixture into a cone-shaped centrifuge tube (see Figure 6) as described in 3.6.4.1 (b), and stopper with a cork. Place the centrifuge tube for 22 ± 2 hours in a bath maintained at $-40 \pm 2^\circ \text{C}$. Remove the centrifuge tube from the bath and quickly wipe the tube with a clean lint-free cloth saturated with acetone or 95 per cent ethanol. Place the tube against a hiding power chart corresponding in design to the reference standard of the South African Bureau of Standards, and observe the clarity of the contrast lines on the chart when viewed through the fluid. Examine the fluid for stratification and sedimentation.

3.10.2 *At 60° C.*—Place, for 22 ± 2 hours, the centrifuge tube and fluid used for the test described in 3.10.1 in an oven maintained at $60 \pm 2^\circ \text{C}$. Remove the tube from the oven and immediately examine the contents for stratification. Then determine the percentage by volume of sediment as described in 3.6.4.

3.11 RESISTANCE TO OXIDATION.

3.11.1 *Preparation of metal strips.*—Prepare and clean as described in 3.6.1 three sets of aluminium and cast iron corrosion test strips corresponding in composition and dimensions with the reference standard of the South African Bureau of Standards. Determine the mass of each strip to the nearest 0,1 mg and assemble a strip of each metal on an uncoated steel cotter pin, separating the strip at each end with a piece of tin foil approximately 12 sq mm in area and between 0,02 and 0,06 mm in thickness. The tin foil shall contain at least 99,9 per cent of tin and not more than 0,025 per cent of lead.

3.11.2 *Preparation of test fluid.*—Place 50 ml of fluid in a small glass bottle of capacity approximately 120 ml. Add 100 ± 2 mg of reagent grade benzoyl peroxide and $2,5 \pm 0,1$ ml of distilled water to the bottle. Stopper the bottle and shake the contents without allowing the solution to wet the stopper. Place the stoppered bottle in an oven at $70 \pm 2^\circ \text{C}$ for 120 ± 10 minutes, shaking every 15 minutes, to dissolve the peroxide. Remove the bottle from the oven and maintain at $23 \pm 5^\circ \text{C}$ for 22 ± 2 hours.

3.11.3 Werkwyse.—Sny 'n stireenbutadien-wielsilinder-rubberdop in agt dele van ongeveer gelyke massa en plaas een deel onderin elk van drie toetsbuis wat ongeveer 22 mm in diameter en 175 mm lank is. Gooi 10 ml van die voorbereide toetsvloeistof in elke toetsbuis. Plaas 'n metaalstrooksamestel in elke buis sodat die vry ente van die stroke op die rubber rus en die vloeistof ongeveer een helfte van die stroke bedek en die ent met die spy bokant die vloeistof uitsteek. Kurk die buise toe en bewaar hulle 70 ± 2 uur lank in 'n regop posisie by $23 \pm 5^\circ \text{C}$. Maak die kurkproppe los, plaas die buise 168 ± 2 uur lank in 'n oond wat by $70 \pm 2^\circ \text{C}$ gehou word, haal die metaalstroke dan uit die oond en haal hulle uitmekaar.

3.11.4 Ondersoek en berekening.—Ondersoek die stroke vir gomneerslae. Vee die stroke af met 'n doek wat in 95 persent-etanol geweek is en ondersoek hulle vir uitvreting of grofheid van die oppervlakke. Plaas die stroke minstens een uur lank in 'n desikkator wat by $23 \pm 5^\circ \text{C}$ gehou word, bepaal dan die massa van elke strook tot die naaste 0,1 mg en bepaal die verlies as gevolg van oksidasie deur die massaverskil van elke metaalstrook deur die totale blootgestelde oppervlakte van elke metaalstrook, uitgedruk in vierkante sentimeter, te deel. Teken die gemiddelde van die resultate vir die drie stroke van elke tipe metaal afsonderlik aan.

3.12 INVLOED OP RUBBER.

3.12.1 Rubberdoppe.—Vier wielsilinderdoppe van stireenbutadienrubber wat in kwaliteit ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde. Meet die basisdiameter en hardheid van elke dop onderskeidelik volgens 3.6.2 (a) en 3.6.2 (b). Moenie 'n dop gebruik waarvan die twee basisdiameterafmetings met meer as 0,08 mm verskil nie.

3.12.2 Werkwyse.

(a) *By 70°C .*—Plaas twee rubberdoppe in 'n silindriese glasfles met reguit kante, met 'n inhoudsvermoë van ongeveer 250 ml en wat aan die binnekant ongeveer 125 mm hoog en 50 mm in diameter is. Gooi 75 ml vloeistof in die fles. Maak die fles toe met 'n vertinde staaldeksel. Verhit die fles 120 ± 2 uur lank by $70 \pm 2^\circ \text{C}$. Laat die fles 60 tot 90 minute lank by $23 \pm 5^\circ \text{C}$ afkoel. Haal die doppe uit die fles, was die doppe onmiddellik met 95 persent-etanol en laat hulle in die lug droog word. Ondersoek die doppe vir disintegrasie, wat blyk uit klewerigheid, blasies of koolswartafskieding. Meet die basisdiameter en hardheid van elke dop onderskeidelik volgens 3.6.2 (a) en 3.6.2 (b) binne 15 minute nadat die doppe uit die vloeistof gehaal is.

(b) *By 120°C .*—Plaas die ander twee rubberdoppe in 'n 250-ml-glasfles wat van 'n deksel voorsien is [kyk (a) hierbo]. Gooi 75 ml vloeistof in die fles en verhit 70 ± 2 uur lank by $120 \pm 2^\circ \text{C}$. Laat die fles 60 tot 90 minute lank by $23 \pm 5^\circ \text{C}$ afkoel. Haal die doppe uit die fles, was die doppe onmiddellik met 95 persent-etanol en laat hulle in die lug droog word. Ondersoek die doppe vir disintegrasie, wat blyk uit klewerigheid, blasies of koolswartafskieding. Meet die basisdiameter en hardheid van elke dop onderskeidelik volgens 3.6.2 (a) en 3.6.2 (b) binne 15 minute nadat die doppe uit die vloeistof gehaal is.

3.11.3 Procedure.—Cut a styrene-butadiene wheel cylinder rubber cup into eight sections of approximately equal mass and place one section in the bottom of each of three test tubes about 22 mm in diameter and 175 mm in length. Add 10 ml of the prepared test fluid to each test tube. Place a metal strip assembly in each tube with the free ends of the strips resting on the rubber, the fluid covering about one-half the length of the strips, and the end having the cotter pin projecting above the fluid. Stopper the tubes with corks and store them upright for 70 ± 2 hours at $23 \pm 5^\circ \text{C}$. Loosen the stoppers, place the tubes for 168 ± 2 hours in an oven maintained at $70 \pm 2^\circ \text{C}$ and then remove and disassemble the metal strips.

3.11.4 Examination and calculation.—Examine the strips for gum deposits. Wipe the strips with a cloth soaked in 95 per cent ethanol and examine for pitting or roughening of their surfaces. Place the strips for at least one hour in a desiccator maintained at $23 \pm 5^\circ \text{C}$, then determine the mass of each strip to the nearest 0,1 mg, and determine the loss caused by oxidation by dividing the difference in mass of each metal strip by the total exposed surface area of each metal strip expressed in square centimetres. Record the average of the results for the three strips of each type of metal separately.

3.12 EFFECT ON RUBBER.

3.12.1 Rubber cups.—Four styrene-butadiene wheel cylinder rubber cups corresponding in quality to the reference standards of the South African Bureau of Standards. Measure the base diameter and hardness of each cup as described in 3.6.2 (a) and 3.6.2 (b) respectively. Do not use any cup for which the two base diameter measurements differ by more than 0,08 mm.

3.12.2 Procedure.

(a) *At 70°C .*—Place two rubber cups in a straight-sided cylindrical glass jar having a capacity of about 250 ml and inside dimensions of approximately 125 mm in height and 50 mm in diameter. Add 75 ml of fluid to the jar. Close the jar with a tinned steel lid. Heat the jar for 120 ± 2 hours at $70 \pm 2^\circ \text{C}$. Allow the jar to cool at $23 \pm 5^\circ \text{C}$ for 60 to 90 minutes. Remove the cups from the jars, wash the cups immediately with 95 per cent ethanol, and air-dry them. Examine the cups for disintegration as evidenced by tackiness, blisters or carbon black separation. Within 15 minutes after removal from the fluid measure the base diameter and hardness of each cup as described in 3.6.2 (a) and 3.6.2 (b) respectively.

(b) *At 120°C .*—Place the other two rubber cups in a 250 ml glass jar with lid [see (a) above]. Add 75 ml of fluid to the jar and heat for 70 ± 2 hours at $120 \pm 2^\circ \text{C}$. Allow the jar to cool at $23 \pm 5^\circ \text{C}$ for 60 to 90 minutes. Remove the cups from the jar, immediately wash the cups with 95 per cent ethanol, and air-dry them. Examine the cups for disintegration as evidenced by tackiness, blisters, or carbon black separation. Within 15 minutes after removal from the fluid measure the base diameter and hardness of each cup as described in 3.6.2 (a) and 3.6.2 (b) respectively.

3.13 WERKVERRIGTING IN NAGEBOOTSDE DIENS.

3.13.1 *Toetsapparaat en materiaal.*—'n Slagtoetsapparaat (kyk figuur 8) wat in ontwerp en onderdeekwaliteit ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde, en wat uit die volgende bestaan:

(a) *Hoofsilindersamestel.*—'n Nuwe hidrouliese remstelsilinder met 'n binnediameter van ongeveer 28 mm en 'n gietysteromhulsel en wat van 'n onbedekte staalstaansyp voorsien is. Die suiers moet van halfharde koperbasislegering wees.

(b) *Remsamestelle.*—Vier nuwe hidroulieseremwiel-silindersamestelle van die reguitboottype en gietyster omhulsels met diameters van ongeveer 28 mm en suiers wat van nie-geanodiseerde aluminiumlegering gemaak is. Elke samestel moet 'n vorentoeremskoën met voering, 'n truremskoën met voering, 'n voortrommelsamestel en die nodige samestelonderdele hê.

(c) *Remdrukwerkmeganisme.*—'n Werkmeganisme om krag sonder sydruk op die stootstang van die hoofsilinder aan te wend.

Die hoeveelheid krag wat deur die werkmeganisme aangewend word, moet verstelbaar wees en moet genoeg druk op die hoofsilinder kan aanwend om 'n krag van minstens 69 bar in die nagebootste remstelsel te veroorsaak. 'n Hidrouliese meter of drukregistreerder met 'n bereik van minstens 0 tot 69 bar moet in die stelsel geïnstalleer wees en moet van 'n afsluitklep en 'n bloeiklep voorsien wees om lug uit die verbindingspype te verwyder.

Die werkmeganisme moet veranderbare slagtempo's van ongeveer 1 000 slae per uur toelaat. 'n Meganiëse of elektriese teltoestel moet gebruik word om die totale getal slae aan te teken.

(d) *Verhitte lugkabinet.*—'n Geïsoleerde kabinet of oond wat groot genoeg is om die vier gemonteerde wielsamestelle, die hoofsilinder en die nodige verbindinge te bevat en wat 'n termostaatbeheerde verwarmingstelsel het waarmee die temperatuur op $120 \pm 5^\circ \text{C}$ gehou kan word. Verwarmers moet afgeskerm wees om direkte straling na die wiel- en hoofsilinder te voorkom.

3.13.2 Voorbereiding van toetsapparaat.

(a) *Wiel-silindersamestelle.*—Haal die silinders uitmekaar en gooi die rubberdoppe weg. Maak alle metaaldele met 95 per cent-etanool skoon en maak dit met skoon saamgeperste lug droog. Ondersoek die werkkoppervlakke van alle metaaldele vir stukkendskuring, skaafplekke, uitvretting of grofheid van die silinderwand en vervang alle gebrekkige dele. Verwyder vlekke op silinderwande met 'n growwe skuurdoek en 95 persent etanol. Indien sulke vlekke nie verwyder kan word nie, vervang die silinder. Meet die binnediameter van elke silinder by vier posisies ongeveer 19 mm van elke ent van die silinderwand af deur die afmetings in lyn met die hidrouliese inlaatopening en loodreg op hierdie hartlyn te neem. Vervang die silinder indien enigeen van hierdie vier aflesings onderskeidelik die maksimum of minimum grense van 28,66 of 28,60 mm oorskry. Meet die buitendiameter van elke suier by twee posisies wat ongeveer 90 grade uit mekaar is. Vervang 'n suier indien een van die twee aflesings onderskeidelik die maksimum of minimum grense van 28,55 of 28,52 mm oorskry. Soek die dele uit om te verseker dat die vry ruimte tussen elke silinder en passilinder binne 0,08 tot 0,13 mm is.

3.13 SIMULATED SERVICE PERFORMANCE.

3.13.1 *Test apparatus and materials.*—A stroking test apparatus (see Figure 8) corresponding in design and component quality to the reference standard of the South African Bureau of Standards and consisting of the following:

(a) *Master cylinder assembly.*—A new hydraulic brake system cylinder that has an inside diameter of approximately 28 mm, a cast iron housing and is fitted with an uncoated steel stand pipe. The piston shall be of half hard copper base alloy.

(b) *Brake assemblies.*—Four new straight bore hydraulic brake wheel cylinder assemblies in cast iron housings that have diameters of approximately 28 mm and pistons made from unanodized aluminium alloy. Each assembly shall have a forward brake shoe with lining, a reverse brake shoe with lining, a front brake drum assembly, and the necessary assembly components.

(c) *Breaking pressure actuating mechanism.*—An actuating mechanism for applying a force, free from side-thrust, to the master cylinder push rod.

The amount of force applied by the actuating mechanism shall be adjustable and capable of applying sufficient thrust to the master cylinder to create a pressure of at least 69 bar in the simulated brake system. A hydraulic gauge or pressure recorder that has a range of at least 0 to 69 bar shall be installed in the system and shall be provided with a shut-off valve and with a bleeding valve for removing air from the connecting tubing. The actuating mechanism shall permit adjustable stroking rates of approximately 1 000 strokes per hour. A mechanical or electrical counter shall be used to record the total number of strokes.

(d) *Heated air cabinet.*—An insulated cabinet or oven that has sufficient capacity to house the four mounted wheel assemblies, master cylinder, and necessary connections, and having a thermostatically controlled heating system to maintain a temperature of $120 \pm 5^\circ \text{C}$. Heaters shall be shielded to prevent direct radiation to wheel and master cylinders.

3.13.2 Preparation of test apparatus.

(a) *Wheel cylinder assemblies.*—Disassemble the cylinders and discard the rubber cups. Clean all metal parts with 95 per cent ethanol and dry with clean compressed air. Inspect the working surfaces of all metal parts for scoring, galling, pitting, and cylinder bore roughness, and replace all defective parts. Remove any stains on cylinder walls with coarse abrasive cloth and 95 per cent ethanol. If stains cannot be removed, replace the cylinder.

Measure the internal diameter of each cylinder at four positions approximately 19 mm from each end of the cylinder bore by taking the measurements in line with the hydraulic inlet opening and at right angles to this centreline. Replace the cylinder if any of these four readings exceed maximum or minimum limits of 28,66 or 28,60 mm respectively. Measure the outside diameter of each piston at two positions approximately 90 degrees apart. Replace any piston if either reading exceeds maximum or minimum limits of 28,55 or 28,52 mm respectively. Select the parts to insure that the clearance between each piston and mating cylinder is within 0,08 to 0,13 mm. Use new

Gebruik nuwe doppe van stireenbutadiëenrubber wat in kwaliteit ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde.

Maak seker dat alle doppe pluisloos en sonder vuiligheid is en moenie 'n dop gebruik wat gebreke soos snye, vormdefekte of blasies het nie. Meet die lip- en basisdiameters van alle toetsdoppe tot die naaste 0,02 mm langs die hartlyn van die letters op die dop en loodreg op hierdie hartlyn. Bepaal die basisdiameterafmetings binne 0,4 mm van die onderste rand en parallel met die basis van die dop. Moenie 'n dop gebruik waarvan die lyn- of basisdiameters met meer as 0,08 mm verskil nie. Bereken die gemiddelde van die lip- en basisdiameters van elke dop. Bepaal die hardheid van al die doppe volgens die werkwyse in 3.6.2 (b). Maak die rubberdele met 95 persent etanol en 'n pluislose doek skoon. Droog met skoon saamgeperste lug. Doop die rubber- en metaaldele van die wielsilinders, maar nie die omhulsels en rubberstofskerm nie, in die vloeistof wat getoets moet word en installeer hulle in die silinders. Werk die silinders met die hand om seker te maak dat hulle maklik werk. Installeer die silinders in die nagebootste remstelsel.

(b) *Hoofsilindersamstel*.—Haal die hoofsilinder uitmekaar en gooi al die rubberonderdele weg. Maak al die metaaldele skoon en meet hulle volgens 3.13.2 (a). Gebruik nuwe doppe van stireenbutadiëenrubber wat in kwaliteit ooreenstem met die verwysingstandaard van die Suid-Afrikaanse Buro vir Standaarde en wat volgens 3.13.2 (a) ondersoek en skoongemaak en volgens 3.6.2 (a) gemeet is. Voordat die lip- en basisdiameters van die sekondêre dop bepaal word, doop die dop in die toetsvloeistof, monteer dit in die suier en hou die samstel minstens 12 uur lank in 'n vertikale posisie by $23 \pm 5^\circ \text{C}$. Ondersoek die ontlastings- en toevoerpoorte van die hoofsilinder en vervang die silinder indien hierdie poorte bame of draadrande het. Meet die binnediameter van die silinder by twee posisies: Ongeveer halfpad tussen die ontlastings- en toevoerpoorte en ongeveer 19 mm onderkant die ontlastingspoort in die rigting van die bodem of uitlaet van die silinder en neem afmetings by elke posisie op die vertikale horisontale hartlyn van die silinder. Vervang die silinder indien 'n aflesing onderskeidelik die maksimum of minimum grense van 28,65 of 28,57 mm oorskry. Meet elke buitediameter van die hoofsilindersuier by twee punte wat ongeveer 90 grade uitmekaar is. Vervang die suier indien een van hierdie vier silinders onderskeidelik die maksimum of minimum grense van 28,55 of 28,52 mm oorskry.

Doop die rubber- en metaaldele van die hoofsilinder, maar nie die omhulsel en stootstang-stofskermstelsel nie, in die vloeistof wat getoets moet word en installeer hulle in die silinder. Werk die hoofsilinder met die hand om seker te maak dat dit maklik werk. Installeer die hoofsilinder in die nagebootse remstelsel.

(c) *Montering en stel van toetsapparaat*.—Stel die vry ruimte van die remskoentoon op $1,0 \pm 0,1$ mm nadat die wielsilindersamstelle en hoofsilinder geïnstalleer is. Vul die stelsel met die toetsvloeistof en bloei al die wielsilinders en die drukmeter om vassegerde lug uit die stelsel te verwyder.

Werk die aandrywer met die hand om 'n hoër druk as die vereiste werkdruk aan te wend en ondersoek die stelsel vir lekplekke. Stel die aandrywer om 'n druk van 69 ± 3 bar te verkry.

styrene-butadiene rubber cups corresponding in quality to the reference standard of the South African Bureau of Standards. Ensure that all cups are free from lint and dirt and do not use any cup which has defects such as cuts, molding flaws, or blisters. Measure to the nearest 0,02 mm the lip and base diameter of all test cups along the centreline of the lettering on the cup and at right angles to this centreline. Determine the base diameter measurements within 0,4 mm of the bottom edge and parallel to the base of the cup. Do not use any cup of which the lip or base diameters differ by more than 0,08 mm. Average the lip and base diameters of each cup. Determine the hardness of all cups by the procedure specified in 3.6.2 (b). Clean the rubber parts with 95 per cent ethanol and lint-free cloth. Dry with compressed air. With the exception of housings and rubber boots dip the rubber and metal parts of the wheel cylinders in the fluid to be tested and install them in the cylinders. Operate the cylinders manually to ensure that they operate easily. Install the cylinders in the simulated brake system.

(b) *Master cylinder assembly*.—Disassemble the master cylinder and discard all rubber components. Clean and measure all metal components as described in 3.13.2 (a). Use new styrene-butadiene rubber cups corresponding in quality to the reference standard of the South African Bureau of Standards which have been inspected and cleaned as described in 3.13.2 (a) and measured as described in 3.6.2 (a). Prior to determining the lip and base diameters of the secondary cup, dip the cup in the test fluid, assemble on the piston, and maintain the assembly at $23 \pm 5^\circ \text{C}$ for at least 12 hours in a vertical position. Inspect the relief and supply ports of the master cylinder and replace the cylinder if these ports have burrs or wire edges. Measure the internal diameter of the cylinder at two positions: approximately midway between the relief and supply ports and approximately 19 mm beyond the relief port towards the bottom or discharge end of the bore, taking measurements at each position on the vertical and horizontal centrelines of the bore. Replace the cylinder if any reading exceeds maximum or minimum limits of 28,65 or 28,57 mm respectively. Measure each of the outside diameters of the master cylinder piston at two points approximately 90 degrees apart. Replace the piston if any of these four readings exceed maximum or minimum limits of 28,55 or 28,52 mm respectively.

Except for the housing and push rod-boot assembly, dip the rubber and metal parts of the master cylinder in the fluid to be tested and install them in the cylinder. Operate the master cylinder manually to ensure that it operates easily. Install the master cylinder in the simulated brake system.

(c) *Assembly and adjustment of test apparatus*.—With the wheel cylinder assemblies and master cylinder installed adjust the brake shoe toe clearance to $1,0 \pm 0,1$ mm. Fill the system with the test fluid and bleed all wheel cylinders and the pressure gauge to remove entrapped air from the system.

Operate the actuator manually to apply a pressure of more than the required operating pressure, and inspect the system for leaks. Adjust the actuator to obtain a pressure of 69 ± 3 bar.

Stel die aandrywer op 'n egalige drukslagpatroon en 'n slagtempo van $1\,000 \pm 100$ slae per uur. Teken die vloeistofstand in die staanpyp van die hoofsilinder aan.

3.13.3 Toetswerkwyse.—Laat die stelsel vir $16\,000 \pm 1\,000$ slae by $23 \pm 5^\circ \text{C}$ werk. Herstel lekplekke, stel weer die remskoenvryruimte en gooi vloeistof in die staanpyp van die hoofsilinder om die stand wat oorspronklik aangeteken is, te verkry.

Sit die werkmeganisme weer aan en verhoog die temperatuur van die kabinet binne 6 ± 2 uur tot $120 \pm 5^\circ \text{C}$. Maak seker dat die wielsilinders behoorlik funksioneer en teken tydens die toets met tussenpose van $24\,000$ slae die hoeveelheid vloeistof aan wat nodig is om 'n verlies aan te vul. Beëindig die toets aan die einde van altesaam $85\,000$ aangetekende slae, d.w.s. met inbegrip van die getal slae aangeteken tydens werking by $23 \pm 5^\circ \text{C}$ en die getal slae aangeteken gedurende die tydperk wat vereis word om die stelsel tot die werktemperatuur van $120 \pm 5^\circ \text{C}$ te bring. Laat die uitrusting tot kamertemperatuur afkoel. Onderzoek die wielsilinders vir oormatige lekkasie. Laat die samestel nog 100 slae werk, ondersoek die wielsilinders vir lekkasie en teken die volume vloeistof aan wat verlore gegaan het.

Verwerp die resultate van 'n toets waarin meganiese onklaarraking voorkom wat die evaluasie van die toetsvloeistof kan beïnvloed en herhaal die toets.

3.13.4 Uitmekaarhaal van apparaat en ondersoek van werkdele.—Verwyder die hoof- en wielsilinders uit die stelsel binne 16 uur na voltooiing van die toets en hou die vloeistof in die silinders deur die dele onmiddellik met sluitdoppe of -proppe toe te maak. Haal die silinders uitmekaar en vang die vloeistof in 'n glasfles op. Maak die rubberdoppe in 95 persent-etanol skoon en maak hulle met saamgeperste lug droog. Onderzoek die doppe vir klewerigheid, stukkerskuring, wegsuring, blasies, afsplintering (hielafskuring) en vormverandering. Meet die lip- en basisdiameters van elke silinderdop volgens 3.13.2 (a) en 3.13.2 (b) binne een uur na uitmekaarhaal, met dié verskil dat die lip- of basisdiameters met meer as $0,08$ mm kan verskil. Bepaal die hardheid van elke dop volgens die werkwyse in 3.6.2 (b).

3.13.5 Aantekening en berekening van toetsresultate.—Teken enige slik, jelvorming of skuurgrint aan wat na die toets in die vloeistof aanwesig is. Skud die vloeistof in die glasfles binne 'n uur nadat die silinders afgetap is om enige afsaksel wat teenwoordig is in suspensie te plaas en eenvormig te versprei en gooi 'n 100 -ml-deelvolum van hierdie monster in 'n keëlvormige sentrifugeerbuis [kyk 3.6.4.1. (b)] en bepaal die persentasie afsaksel per volume volgens 3.6.4. Onderzoek die silinderdele en teken enige vergommings of uitvretings op suiers en silinderwande aan. Vryf enige neerslag wat aan die silinderwande vassit met 'n doek wat met 95 persent-etanol natgemaak is om die grofheid en verwyderbaarheid daarvan te bepaal.

Maak die silinderdele in 95 persent-etanol skoon en maak met saamgeperste lug droog. Meet die diameters van die suiers en silinders volgens 3.13.2 (a) en 3.13.2 (b) en teken dit aan. Bereken die lipdiameterinterferensieset aan die hand van die volgende formule:

$$\text{Lipdiameterinterferensieset, persent} = \frac{D_1 - D_2}{D_1 - D_3} \times 100$$

Waar D_1 = oorspronklike lipdiameter.

D_2 = finale lipdiameter.

D_3 = oorspronklike silinderboring.

Adjust to a smooth pressure-stroke pattern and a stroking rate of $1\,000 \pm 100$ strokes per hour. Record the fluid level in the master cylinder stand pipe.

3.13.3 Test procedure.—Operate the system for $16\,000 \pm 1\,000$ cycles at $23 \pm 5^\circ \text{C}$. Repair any leaks, re-adjust the brake shoe clearances and add fluid to the master cylinder stand pipe to bring to the level originally recorded.

Restart the actuating mechanism and within 6 ± 2 hours raise the temperature of the cabinet to $120 \pm 5^\circ \text{C}$. Ensure that the wheel cylinders are functioning properly and record at intervals of $24\,000$ strokes during test the amount of fluid required to replenish any loss. Stop the test at the end of $85\,000$ total recorded strokes, i.e. including the number of strokes during operation at $23 \pm 5^\circ \text{C}$ and the number of strokes during the period required to bring the system to the operating temperature of $120 \pm 5^\circ \text{C}$. Allow the equipment to cool to room temperature. Examine the wheel cylinders for excessive leakage. Operate the assembly for an additional 100 strokes, examine the wheel cylinders for leakage, and record the volume of any fluid lost.

Discard the results of any test in which mechanical failure occurs which may effect the evaluation of the test fluid, and repeat the test.

3.13.4 Dismantling of apparatus and inspection of operating parts.—Within 16 hours after completion of the test, remove the master and wheel cylinders from the system and retain the fluid in the cylinders by immediately capping or plugging the parts. Disassemble the cylinders and collect the fluid in a glass jar. Clean the rubber cups in 95 per cent ethanol and dry them with compressed air. Inspect the cups for thickness, scoring, scuffing, blistering, chipping (heel abrasion) and change in shape. Within an hour after disassembly measure the lip and base diameters each cylinder cup as described in 3.13.2 (a) and 3.13.2 (b), with the exception that the lip or base diameters may differ by more than $0,08$ mm. Determine the hardness of each cup by the procedure specified in 3.6.2 (b).

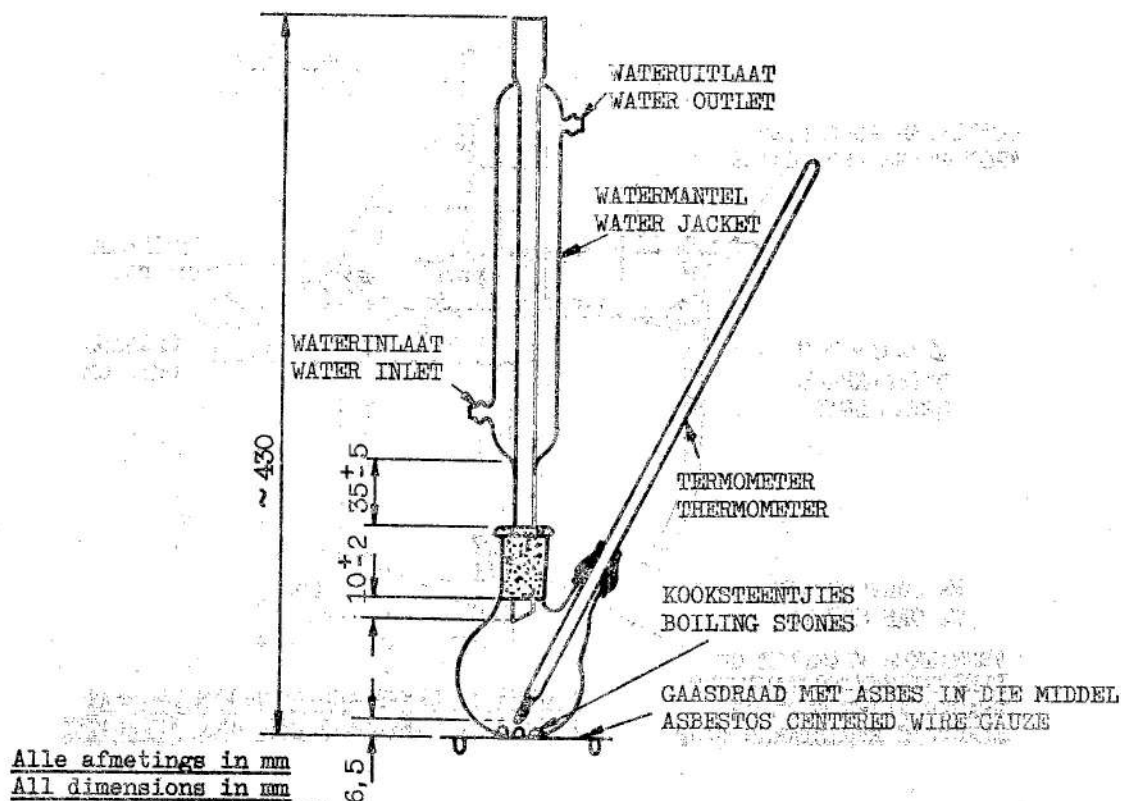
3.13.5 Recording and calculation of test results.—Record any sludge, jelling, or abrasive grit present in the fluid after the test. Within an hour after draining the cylinders, agitate the fluid in the glass jar to suspend and uniformly disperse any sediment present and transfer a 100 ml aliquot of this sample to a cone-shaped centrifuge tube [see 3.6.4.1 (b)] and determine the percentage by volume of sediment as described in 3.6.4. Inspect the cylinder parts and record any gumming or any pitting on pistons and cylinder walls. Rub any deposits adhering to the cylinder walls with a cloth wetted with 95 per cent ethanol to determine its abrasiveness and removability. Clean the cylinder parts in 95 per cent ethanol and dry with compressed air. Measure and record the diameters of the pistons and cylinders as described in 3.13.2 (a) and 3.13.2 (b). Calculate the lip diameter interference set from the following formula:

$$\text{Lip diameter interference set, per cent} = \frac{D_1 - D_2}{D_1 - D_3} \times 100$$

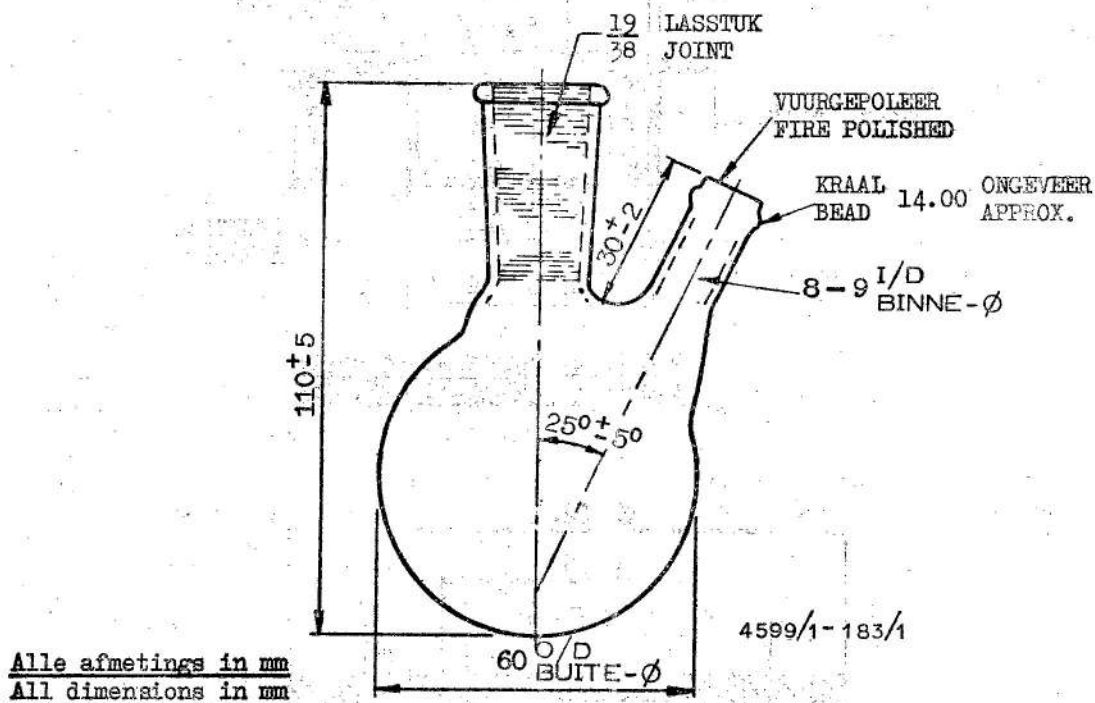
where D_1 = original lip diameter.

D_2 = final lip diameter.

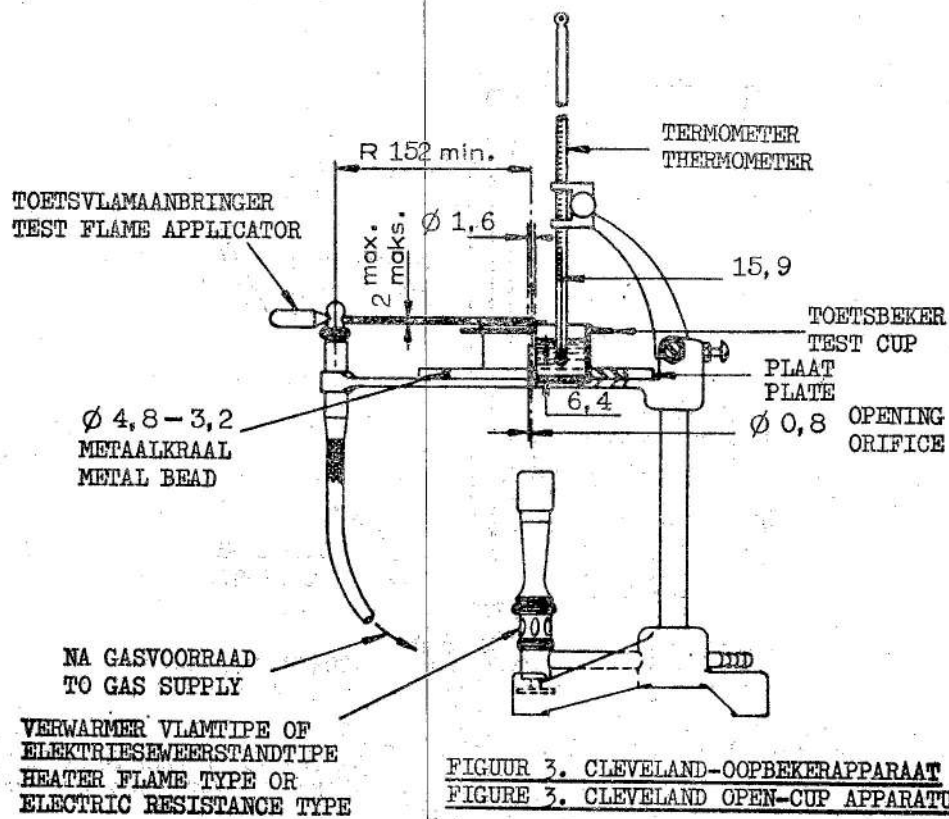
D_3 = original cylinder bore diameter.



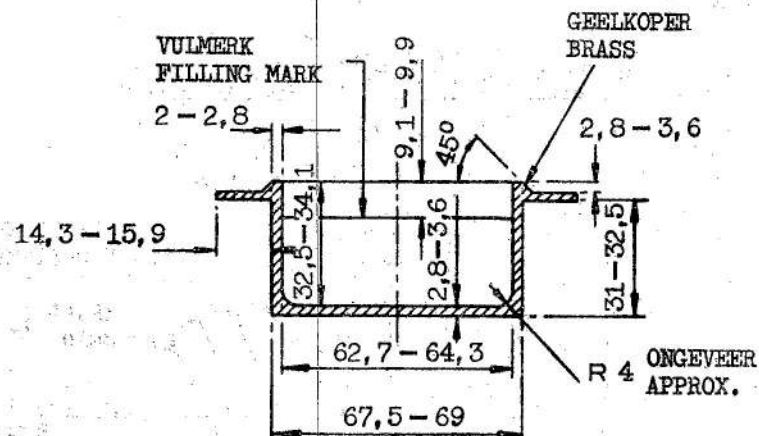
FIGUUR 1. KOOKPUNTTOETSAPPARAAT
FIGURE 1. BOILING POINT TEST APPARATUS



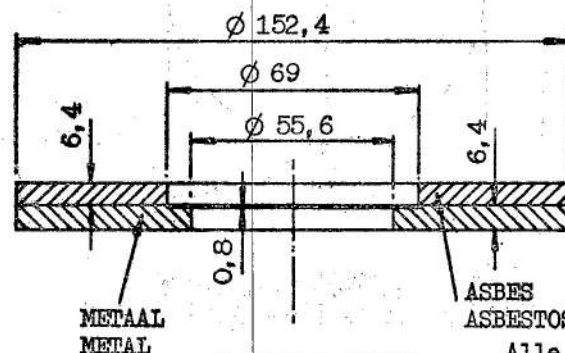
FIGUUR 2. KORTNEKFLES, 100 ml
FIGURE 2. SHORT-NECK FLASK, 100-ml



FIGUUR 3. CLEVELAND-OOPBEKERAPPARAAT
FIGURE 3. CLEVELAND OPEN-CUP APPARATUS



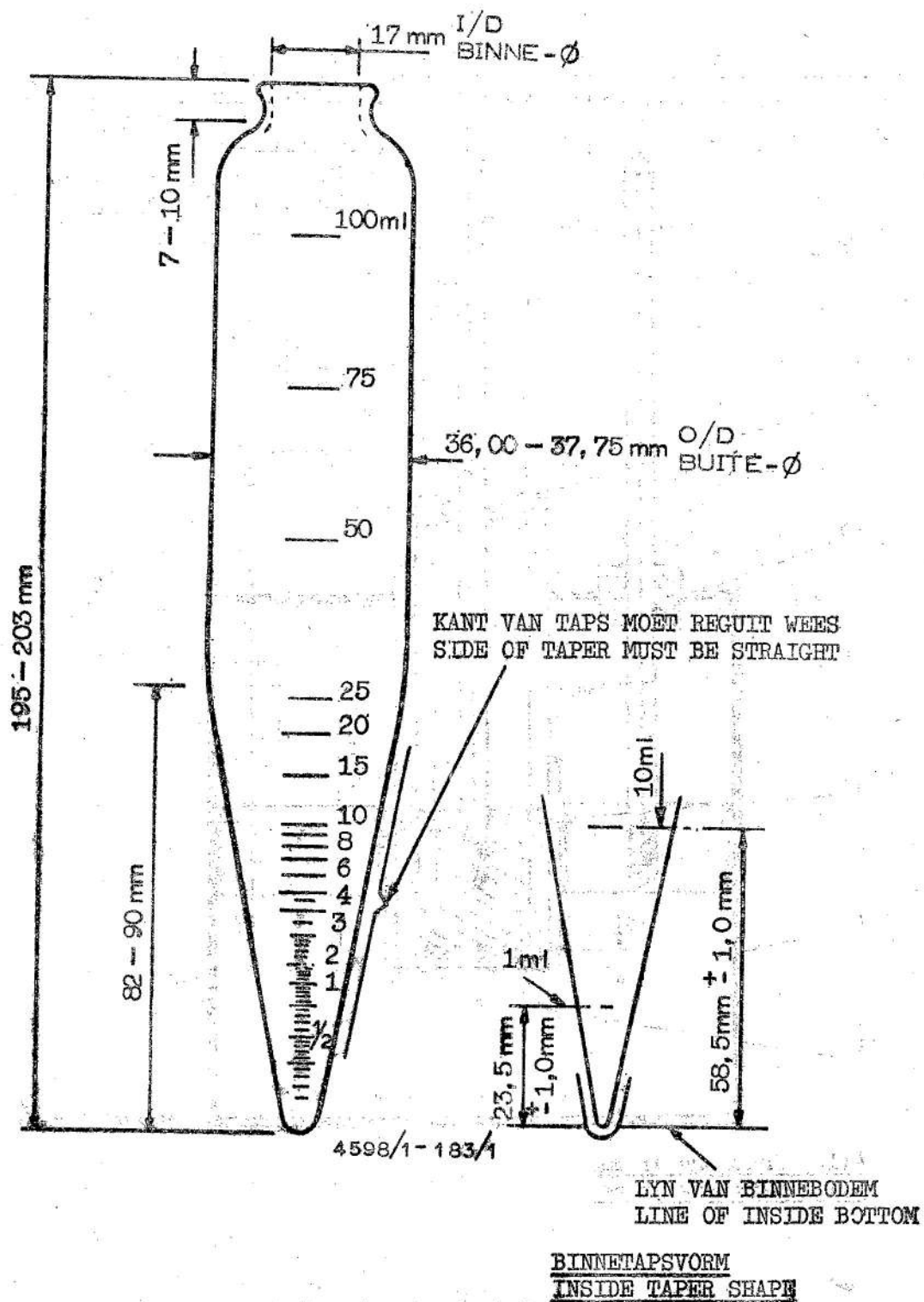
FIGUUR 4. CLEVELAND-OOPBEKER
FIGURE 4. CLEVELAND OPEN CUP



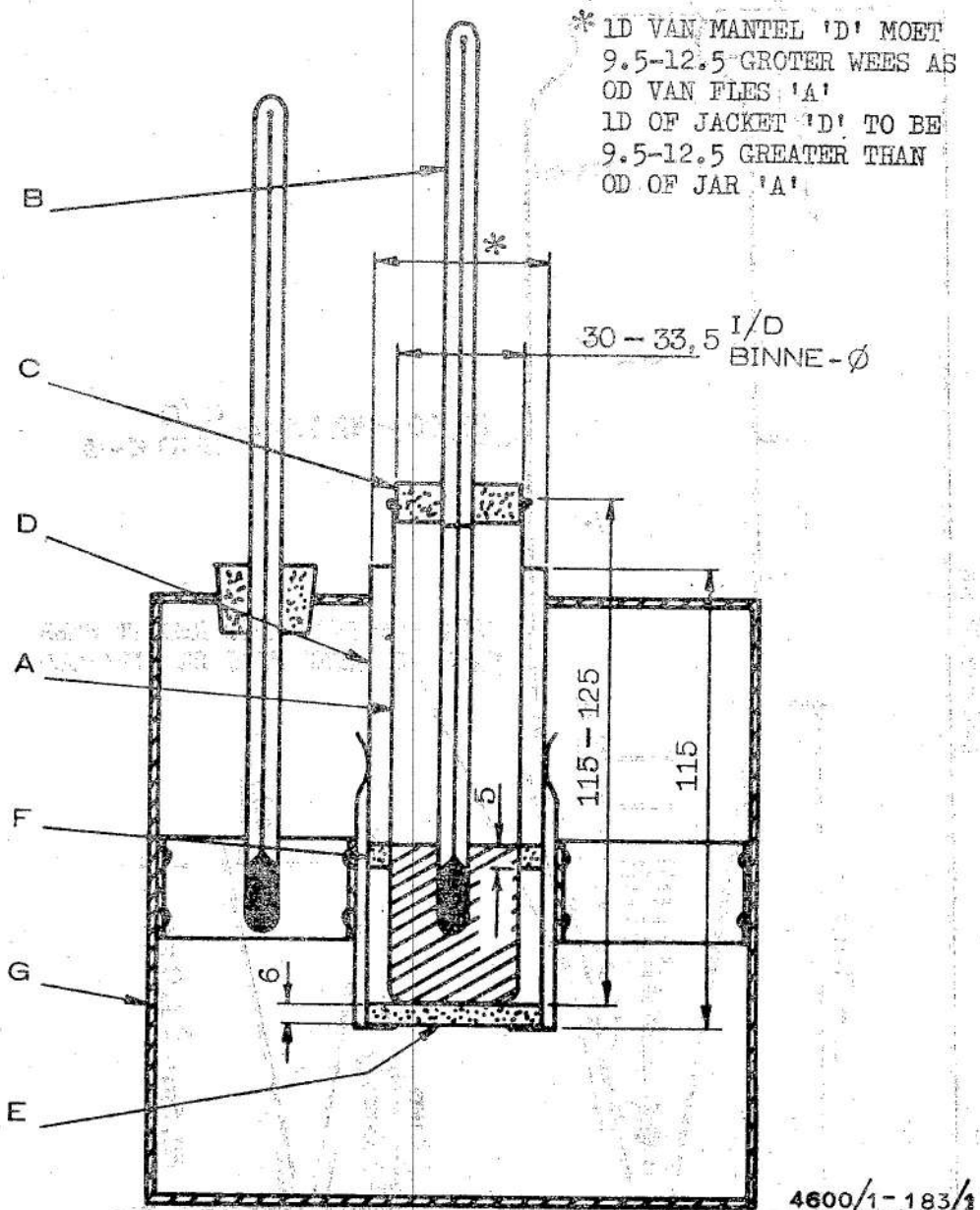
FIGUUR 5. PLAAT
FIGURE 5. PLATE

Alle afmetingen in mm
All dimensions in mm

4597/1-183/1

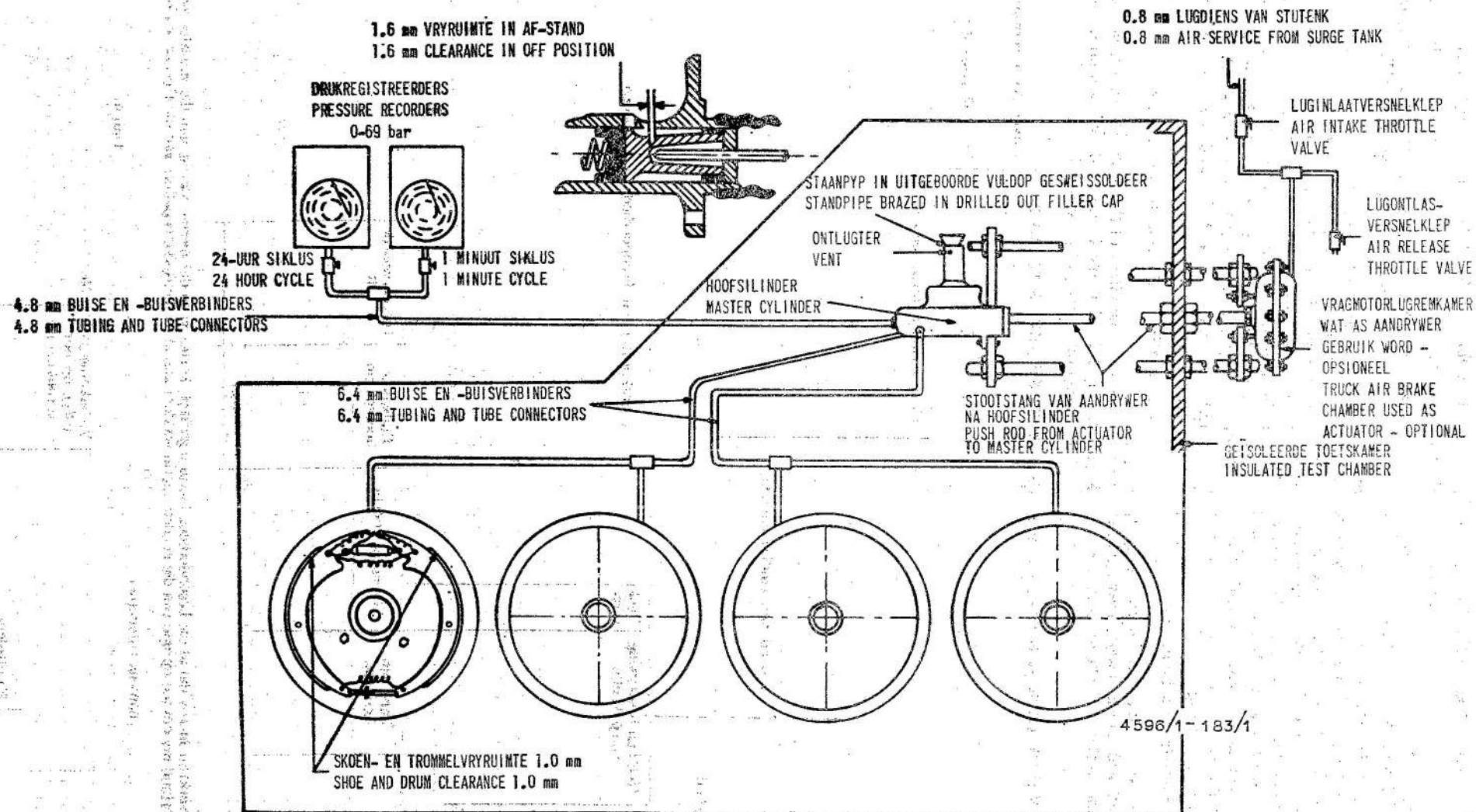


FIGUUR 6. KEELVORMIGE SENTRIFUGEERBUIS
FIGURE 6. CONE-SHAPED CENTRIFUGE TUBE



Alle afmetings in mm
All dimensions in mm

FIGUUR 7. APPARAAT VIR VLOEITOEFS
FIGURE 7. APPARATUS FOR POUR TEST



FIGUUR 8. SLAGTOETSAPPARAAT
FIGURE 8. STROKING TEST APPARATUS

DEPARTEMENT VAN DOEANE EN AKSYNS

No. R. 42

14 Januarie 1972

DOEANE- EN AKSYNSWET, 1964.—WYSIGING VAN
REGULASIES (No. MR/35)

Ek, Nicolaas Diederichs, Minister van Finansies, handelende kragtens die bevoegdheid my verleen by artikel 120 van die Doeane- en Aksynswet, 1964, wysig hierby, met ingang van 1 Junie 1972, die Tweede Bylae by die regulasies soos gepubliseer by Goewermentskennisgewing R. 555 van 13 April 1966 deur vorms DA 23, DA 24, DA 25 en DA 26 deur die vorms DA 23, DA 23A, DA 24, DA 24A, DA 25, DA 25A, DA 26 en DA 26A in die Aanhangsels hierby aangetoon te vervang.

N. DIEDERICHS, Minister van Finansies.

Opmerking.—Die uitwerking van hierdie kennisgewing is dat nuwe gestandaardiseerde uitvoerklaringsbriefvorms en ooreenstemmende verbeteringsbewysvorms voorgeskryf word.

KLARINGSBRIEF—VIR UITVOER VAN SUID-AFRIKAANSE GOEDERE (NIE EX PAKHUIS)

DEPARTMENT OF CUSTOMS AND EXCISE

No. R. 42

14 January 1972

CUSTOMS AND EXCISE ACT, 1964.—AMENDMENT
OF REGULATIONS (No. MR/35)

I, Nicolaas Diederichs, Minister of Finance, acting in terms of the powers vested in me by section 120 of the Customs and Excise Act, 1964, hereby amend with effect from 1 June 1972, the Second Schedule to the regulations published in Government Notice R. 555 of 13 April 1966, by the substitution for forms DA-23, DA-24, DA-25 and DA-26 of the forms DA-23, DA-23A, DA-24, DA-24A, DA-25, DA-25A, DA-26 and DA-26A shown in the Annexures hereto.

N. DIEDERICHS, Minister of Finance.

Note.—The effect of this notice is that new standardised export bill of entry forms and corresponding voucher of correction forms are prescribed.

DA 23

Uitvoerder se verwysing

Versendingsagent se verwysing

Naam en adres van uitvoerder

Klaringsplek

Land van eindbestemming

Skip/Vliegtuig/Spoor/Pad

Merke en nommers

Getal en beskrywing
van pakketteReël-
verw.

Beskrywing en besonderhede van goedere

Totale getal

Reël-
verw.Land van
herkoms

Statistiese kodeno.

Statistiese
hoeveelheidUitvoerwaarde
R

Totaal

Ek,
namens uitvoerder, verklaar hierby dat al die besonderhede hierin ingeskryf, korrek is en dat hierdie klaring aan die vereistes van 'n geldige klaring voldoen. Ek verbind my om ten opsigte van die goedere hierin verklaar aan al die betrokke bepalings van die Doeane- en Aksynswet te voldoen.

namens Uitvoerder

Datum

Vir inkomsteseël
(slegs op oorspronklike)

No.

Kontroleur

DA 23

Forwarding agent's reference

Place of entry

Country of final destination

Ship/Aircraft/Rail/Road

No. and description of packages	Weight	Value	Quantity	Remarks
1	100	100	1	
2	100	100	1	
3	100	100	1	
4	100	100	1	
5	100	100	1	
6	100	100	1	
7	100	100	1	
8	100	100	1	
9	100	100	1	
10	100	100	1	
11	100	100	1	
12	100	100	1	
13	100	100	1	
14	100	100	1	
15	100	100	1	
16	100	100	1	
17	100	100	1	
18	100	100	1	
19	100	100	1	
20	100	100	1	
21	100	100	1	
22	100	100	1	
23	100	100	1	
24	100	100	1	
25	100	100	1	
26	100	100	1	
27	100	100	1	
28	100	100	1	
29	100	100	1	
30	100	100	1	
31	100	100	1	
32	100	100	1	
33	100	100	1	
34	100	100	1	
35	100	100	1	
36	100	100	1	
37	100	100	1	
38	100	100	1	
39	100	100	1	
40	100	100	1	
41	100	100	1	
42	100	100	1	
43	100	100	1	
44	100	100	1	
45	100	100	1	
46	100	100	1	
47	100	100	1	
48	100	100	1	
49	100	100	1	
50	100	100	1	
51	100	100	1	
52	100	100	1	
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54	100	100	1	
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56	100	100	1	
57	100	100	1	
58	100	100	1	
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75	100	100	1	
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77	100	100	1	
78	100	100	1	
79	100	100	1	
80	100	100	1	
81	100	100	1	
82	100	100	1	
83	100	100	1	
84	100	100	1	
85	100	100	1	
86	100	100	1	
87	100	100	1	
88	100	100	1	
89	100	100	1	
90	100	100	1	

Line
ref.

Description and particulars of goods

Total No.

Line
ref.Country of
origin

Statistical code No.

Statistical
quantity

Export value
R 255.5

Total?

I, _____, for exporter, hereby declare that all the particulars entered herein are correct and that this entry complies with the requirements of a valid entry. I undertake to comply with all relative provisions of the Customs and Excise Act in respect of the goods entered herein.

for Exporter

Date _____

For revenue
stamp
(on original
only)

No.

Controller

**VERBETERINGSBEWYS—KLARINGSBRIEF—VIR UITVOER VAN SUID-AFRIKAANSE PRODUKTE
(NIE EX PAKHUIS NIE)**

DA 23A

Klaringsplek

Skip/Vliegtuig/Spoor/Pad

Land van finale bestemming

Uitvoerder

Adres

Merke, nos., getal en beskrywing van pakke	Land van herkoms	Statistiese kodenommer	Statistiese hoeveelheid	Beskrywing en besonderhede van goedere	Uitvoerwaarde
					R

OORSPRONKLIK OP KB.-NO. _____ VAN _____ GEKLAAR AS _____

--	--	--	--	--	--

Totale getal				Totaal	
Namens Uitvoerder _____ Datum _____			Kontroleur	No.	

**VOUCHER OF CORRECTION—BILL OF ENTRY—FOR EXPORT OF SOUTH AFRICAN PRODUCTS
(NOT EX WAREHOUSE)**

DA 23A

Place of entry

Ship/Aircraft/Rail/Road

Country of final destination

Exporter

Address

Marks, Nos., No. and description of packages	Country of origin	Statistical Code No.	Statistical quantity	Description and particulars of goods	Export value
					R

ORIGINALLY ENTERED ON B/E NO. _____ OF _____ AS: _____

Total No.				Total	

for Exporter _____ Date _____		No.	
	Controller		

DA 24

KLARINGSBRIEF—VIR UITVOER VAN INGEVOERDE GOEDERE (NIE EX PAKHUIS)

		Uitvoerder se verwysing		
		Versendingsagent se verwysing		
Klaringsplek Land van eindbestemming Skip/Vliegtuig/Spoor/Pad		Naam en adres van uitvoerder		
Merke en nommers	Getal en beskrywing van pakkette	Reël-verw.	Beskrywing en besonderhede van goedere	
Totale getal				
Reël-verw.	Land van herkoms	Statistiese kodeno.	Statistiese hoeveelheid	Uitvoerwaarde R
			Totaal	
Ek, namens uitvoerder, verklaar hierby dat al die besonderhede hierin ingeskryf, korrek is en dat hierdie klaring aan die vereistes van 'n geldige klaring voldoen. Ek verbind my om ten opsigte van die goedere hierin verklaar aan al die betrokke bepalinge van die Doecane- en Aksynswet te voldoen.				
namens uitvoerder		Datum		
Kontroleur		Vir inkomsteseël (slegs op oorspronklike)	No.	

DA 24

BILL OF ENTRY—FOR EXPORT OF IMPORTED GOODS (NOT EX WAREHOUSE)

Exporter's Reference

Forwarding Agent's Reference

Name and address of Exporter

Place of entry

Country of final destination

Ship/Aircraft/Rail/Road

Marks and numbers

No. and description
of packagesLine
ref.

Description and particulars of goods

Total No.

Line
ref.Country of
originStatistical
Code No.Statistical
quantityExport value
R

Total

I, _____
for exporter, hereby declare that all the particulars entered herein are correct and that this entry complies with the requirements of a valid entry.
I undertake to comply with all relative provisions of the Customs and Excise Act in respect of the goods entered herein.

for Exporter

Date

For revenue
stamp
(on original
only)

No.

Controller

VERBETERINGSBEWYS—KLARINGSBRIEF—VIR UITVOER VAN INGEVOERDE GOEDERE
(NIE EX PAKHUIS NIE)

DA 24A

Klaringsplek				Uitvoerder	
Skip/Vliegtuig/Spoor/Pad				Adres	
Land van finale bestemming					
Merke, nos., getal en beskrywing van pakke	Land van herkoms	Statistiese kodenommer	Statistiese hoeveelheid	Beskrywing en besonderhede van goedere	Uitvoerwaarde R
OORSPRONKLIK OP KB. NO..... VAN..... GEKLAAR AS					
Totale getal				Totaal	
				No.	
Namens Uitvoerder..... Datum.....			Kontroleur		

VOUCHER OF CORRECTION—BILL OF ENTRY—FOR EXPORT OF IMPORTED GOODS
(NOT EX WAREHOUSE)

DA 24A

Place of entry				Exporter	
Ship/Aircraft/Rail/Road				Address	
Country of final destination					
Marks, Nos., number and description of packages	Country of origin	Statistical code No.	Statistical quantity	Description and particulars of goods	Export value R
ORIGINALLY ENTERED ON B/E NO..... OF..... AS					
Total No.				Total	
				No.	
for Exporter..... Date.....			Controller		

DA 25

KLARINGSBRIEF—VIR UITVOER VAN SUID-AFRIKAANSE GOEDERE (EX PAKHUIS)

Uitvoerder se verwysing

Versendingsagent se verwysing

Naam en adres van uitvoerder

Klaringsplek

EX pakhuis (naam)

Land van eindbestemming

No.

Skip/Vliegtuig/Spoor/Pad

Merke en nommers

**Getal en beskrywing
van pakkette**

Reël-
verw.

Beskrywing en besonderhede van goedere vir belastingdoeleindes

Totale getal

Reël-
verw.

Opdragingsnr. en
datum

Land van
herkoms

Tariefitem en
kortingitem

Statistiese hoeveelheid

Uitvoerwaarde

R

Aksynswaarde/
Verkoopbel.
waarde:
R

Totale

 $E_k,$

namens uitvoerder, verklaar hierby dat al die besonderhede hierin ingeskryf, korrek is en dat hierdie klaring aan die vereistes van 'n geldige klaring voldoen. Ek verbind my om ten opsigte van die goedere hierin verklaar aan al die betrokke bepalings van die Doane- en Aksynswet te voldoen.

namens uitvoerder

Datum

Vir inkomsteseël
(slegs op oorspronklike)

No.

Kontroleur

BILL OF ENTRY—FOR EXPORT OF SOUTH AFRICAN GOODS (EX WAREHOUSE)

Exporter's Reference
Forwarding Agent's Reference

		Name and address of Exporter
Place of Entry		
Ex Warehouse (name) No.	Country of final destination	
Ship/Aircraft/Rail/Road		

Marks and numbers	No. and description of packages	Line Ref.	Description and particulars of goods for duty purposes
Total No.			

[illegible]

I, _____, for exporter, hereby declare that all the particulars entered herein are correct and that this entry complies with the requirements of a valid entry. I undertake to comply with all relative provisions of the Customs and Excise Act in respect of the goods entered herein.

for Exporter	Date
For revenue stamp (on original only)	No.
Controller	

VERBETERINGSBEWYS—KLARINGSBRIEF—VIR UITVOER VAN SUID-AFRIKAANSE PRODUKTE
(EX PAKHUIS)

DA 25A

Klaringsplek					Uitvoerder		
Skip/Vliegtuig/Spoor/Pad					Adres		
Ex pakhuis (naam) No.							
Land van finale bestemming							
Kb. Opslag no. en datum	Merke, nos., getal en beskrywing van pakke	Land van herkoms	Tariefitem en korting- item	Statistiese hoeveelheid	Beskrywing en besonderhede van goedere vir belastingdoeleindes	Uitvoer- waarde R	Aksyns- waarde/ Verkoopreg- waarde R
OORSPRONKLIK OP KB. NO. VAN					GEKLAAR AS		
Totale getal					V.O.W.-no.	datum	Totale
							No.
Namens Uitvoerder					datum	Kontroleur	

VOUCHER OF CORRECTION—BILL OF ENTRY—FOR EXPORT OF SOUTH AFRICAN PRODUCTS
(EX WAREHOUSE)

DA 25A

Place of entry					Exporter		
Ship/Aircraft/Rail/Road					Address		
Ex warehouse (name) No.							
Country of final destination							
Whg. B/E No. and date	Marks, Nos., No. and description of packages	Country of origin	Tariff item and rebate item	Statistical quantity	Description and particulars of goods for duty purposes.	Export value R	Excise value/ Sales duty value R
ORIGINALLY ENTERED ON B/E NO. OF AS							
Total No.					R.I.B. No.	Date	Totals
							No.
for Exporter					Date	Controller	

DA 26

KLARINGSBRIEF—VIR UITVOER VAN INGEVOERDE GOEDERE (EX PAKHUIS)

Uitvoerder se verwysing

Versendingsagent se verwysing

Naam en adres van uitvoerder

Klaringsplek

Ex pakhuis (naam)

No.

Skip/Vliegtuig/Spoor/Pad

Land van eindbestemming

Merke en nommers

**Getal en beskrywing
van pakkette**

Reël-
verw.

Beskrywing en besonderhede van goedere vir belastingdoeleindes

Totale getal

Reël-
verw.

Opslagkb.-no. en-
datum

Land van
herkomsTariefhoof/Item
en kortingitem

Statistische hoeveelheid

Uitvoerwaarde
R

V.A.B.-prys
R

Binnelandse waarde
Verk.-bel.-waarde
R

Totale

 $E_k,$

namens uitvoerder, verklaar hierby dat al die besonderhede hierin ingeskryf, korrek is en dat hierdie klaring aan die vereistes van 'n geldige klaring voldoen. Ek verbind my om ten opsigte van die goedere hierin verklaar aan al die betrokke bepalings van die Doane- en Aksynswet te voldoen.

namens uitvoerder.

Datum

Vir inkomsteseël
(slegs op oorspronklike)

No.

Kontroleur

No. R. 41

14 Januarie 1972

DOEANE- EN AKSYNSWET, 1964.—WYSIGING VAN REGULASIES (No. MR/34)

Ek, Nicolaas Diederichs, Minister van Finansies, handelende kragtens die bevoegdheid my verleen by artikel 120 van die Doeane- en Aksynswet, 1964, wysig hierby, met ingang van 1 Junie 1972, die regulasies soos gepubliseer by Goewermentskennisgewing R. 555 van 13 April 1966 deur paragraaf 200.07 van die Tweede Bylae deur die volgende te vervang:

"200.07 Ten opsigte van elke voorgeskrewe klarings-brief vir die klaring van goedere (uitgesonderd vorms DA 23, DA 24, DA 25 en DA 26) is daar 'n verdere voorgeskrewe vorm met die woorde 'Verbeteringsbewys' by die naam van die vorm en die letter 'A' by die nommer van die vorm gevoeg. Die verklaring(s) word weggelaat indien sodanige bewyse afsonderlik gedruk word en die oop gedeelte vir inskrywing van die besonderhede van die goedere in twee gelyke dele verdeel word met twee ewewydige horisontale lyne en die woorde 'Oorspronklik op Kb. No. van geklaar as' tussen die lyne. Ten opsigte van enige vorm met 'n kolom wat op die bedrag van reg betrekking het moet die woord 'Totale' op sodanige vorm deur die woorde 'Verskil in reg' vervang word. Sodanige bewyse mag afsonderlik gedruk word of die gewone voorgeskrewe vorms mag gebruik en die bovermelde veranderings daaraan aangebring word. Voorsiening moet in alle gevalle vir die handtekening van die persoon wat sodanige bewys aan die Kontroleur aanbied, gemaak word."

N. DIEDERICHS, Minister van Finansies.

Opmerking.—Die uitwerking van hierdie kennisgewing is om aan te dui dat afsonderlike verbeteringsbewysvorms ten opsigte van vorms DA 23, DA 24, DA 25 en DA 26 voorgeskryf is.

DEPARTEMENT VAN SPOORWEE EN HAWENS

No. R. 74

14 Januarie 1972

Ingevolge die bevoegdheid wat aan my verleen is by artikel 4 (3) van die Spoorweg- en Hawepensioenwet, 1971 (Wet 35 van 1971), verleen ek, Barend Jacobus Schoeman, Minister van Vervoer van die Republiek van Suid-Afrika, na raadpleging met die Spoorweg- en Haweraad, goedkeuring daaraan dat die Regulasies van die Nuwe Spoorweg- en Hawesuperannuasiefonds, gepubliseer in Goewermentskennisgewing R. 859 van 28 Mei 1971, soos volg gewysig word:

**SUID-AFRIKAANSE SPOORWEE
REGULASIES VAN DIE NUWE SPOORWEG- EN
HAWESUPERANNUASIEFONDS****WYSIGINGLYS**

(Van krag van 1 November 1971)

Regulasie 23

Vervang paragraaf (1) (b) deur die volgende:

"(b) in die geval van dienare op wie die bepaling van artikel 16 (1) (d) of (e) van die Dienswet van toepassing is, terwyl hulle een van die ondergenoemde grade beklee, die gemelde bedrae benewens hulle salarisse en lone:

Graad	Bedrag per jaar
	R
Hoofvlootkaptein.....	1 600
Vlootkaptein.....	1 600
Hoofopleidingskaptein.....	1 600
Senioropleidingskaptein.....	1 600
Seniorkaptein.....	1 600

No. R. 41

14 January 1972

CUSTOMS AND EXCISE ACT, 1964.—AMENDMENT OF REGULATIONS (No. MR/34)

I, Nicolaas Diederichs, Minister of Finance, acting in terms of the powers vested in me by section 120 of the Customs and Excise Act, 1964, hereby amend with effect from 1 June, 1972, the regulations published in Government Notice R. 555 of 13 April 1966, by the substitution for paragraph 200.07 of the Second Schedule of the following:

"200.07 In respect of every prescribed bill of entry form for the clearance of goods (excluding forms DA 23, DA 24, DA 25 and DA 26) there shall be a further prescribed form with the words 'Voucher of Correction' added to the name of the form and the letter 'A' added to the number of the form. The declaration(s) shall be omitted if such vouchers are printed separately and the blank portion for entry of the particulars of the goods shall be divided into equal portions with two parallel horizontal lines and the words 'Originally entered on B/E No. of as' between the two lines. In respect of any form with a column relating to the amount of duty, the words 'Difference in duty' shall be substituted for the word 'Totals' on such form. Such vouchers may be printed separately or the normal prescribed forms may be used and the above-stated adjustments made thereto. Provision should in all cases be made for the signature of the person presenting such voucher to the Controller."

N. DIEDERICHS, Minister of Finance.

Note.—The effect of this notice is to indicate that separate voucher of correction forms have been prescribed in respect of forms DA 23, DA 24, DA 25 and DA 26.

DEPARTMENT OF RAILWAYS AND HARBOURS

No. R. 74

14 January 1972

Under the powers vested in me by section 4 (3) of the Railways and Harbours Pensions Act, 1971 (Act 35 of 1971), I, Barend Jacobus Schoeman, Minister of Transport of the Republic of South Africa, do hereby, after consultation with the Railways and Harbours Board, approve of the Regulations of the New Railways and Harbours Superannuation Fund, published in Government Notice R. 859 of 28 May 1971, being amended as follows:

**SOUTH AFRICAN RAILWAYS
REGULATIONS OF THE NEW RAILWAYS AND
HARBOURS SUPERANNUATION FUND****SCHEDULE OF AMENDMENT**

(Operative from 1 November 1971)

Regulation 23

Substitute the following for paragraph (1) (b):

"(b) in the case of servants to whom the provisions of section 16 (1) (d) or (e) of the Service Act apply, while occupying the grades enumerated below, the following sums in addition to salaries and wages:

Grade	Sum per annum
	R
Chief Fleet Captain.....	1 600
Fleet Captain.....	1 600
Chief Training Captain.....	1 600
Senior Training Captain.....	1 600
Senior Captain.....	1 600

Graad	Bedrag per jaar R	Grade	Sum per annum R
Kaptein.....	800	Captain.....	800
Opleidingskaptein.....	800	Training Captain.....	800
Senioreersteoffisier.....	400	Senior First Officer.....	400
Eersteoffisier.....	400	First Officer.....	400
Hoofoffisiernavigator.....	400	Chief Navigation Officer.....	400
Assistent-hoofoffisiernavigator.....	400	Assistant Chief Navigation Officer.....	400
Offisiernavigator.....	400	Navigation Officer.....	400
Seniorinstrukteurnavigator.....	400	Senior Navigation Instructor.....	400
Instrukteurnavigator.....	400	Navigation Instructor.....	400
Hoofoffisier-boordingenieur.....	400	Chief Flight Engineer Officer.....	400
Senioroffisier-boordingenieur.....	400	Senior Flight Engineer Officer.....	400
Seniorinstrukteuroffisier-boordingenieur.....	400	Senior Flight Engineer Officer Instructor.....	400
Instrukteuroffisier-boordingenieur.....	400	Flight Engineer Officer Instructor.....	400
Offisier-boordingenieur, klas I.....	400	Flight Engineer Officer, Class I.....	400
Offisier-boordingenieur, klas II.....	400"	Flight Engineer Officer, Class II.....	400"

Werk mooi daarmee.

Ons leef daarvan

Use it.

Don't abuse it.

water is for everybody

INHOUD

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