RG 19.8.43.
[99/1946
188/1948
47/1949].

PETROLEUM (TESTING, STORAGE, ETC.) REGULATIONS

**deemed to be made under section 29*

1. (1) These Regulations may be cited as the Petroleum (Testing, Storage, Etc.) Regulations.

(2) In these Regulations, the expression "mixtures of petroleum" means all mixtures (whether liquid, viscous or solid) of petroleum with any substance except mixtures which, when tested in the manner hereinafter set forth, do not give off an inflammable vapour at a temperature below 95° Fahrenheit.

PART I

TEST APPARATUS TO BE USED AND MANNER OF TESTING PETROLEUM THEREWITH SO AS TO ASCERTAIN THE TEMPERATURE AT WHICH IT WILL GIVE OFF INFLAMMABLE VAPOUR

Specification of the Test Apparatus

GENERAL

1. The apparatus to be employed shall be the Abel Petroleum Testing apparatus or the Abel apparatus modified by having an oil cup provided with a stirrer. It shall be constructed to the dimensions herein specified within the limits of accuracy prescribed by the tolerance set forth below.

THE OIL CUP

2. The oil cup consists of a cylindrical vessel open at the top and fitted on the outside with a flat circular flange projecting at right angles.

3. Within the cup, fixed through the wall and silver soldered or brazed in place, there is a gauge consisting of a piece of wire bent upwards and terminating in a point.

* These Regulations were made under section 28 of the Petroleum Ordinance (Ch. 26 No. 2—1950 Ed.) (now repealed) and continue in force by virtue of section 29(3) of the Interpretation Act (Ch. 3:01).

4. Material—brass or gunmetal.

	Dimension	Tolerance
Cup, wall and bottom thickness	17 I.W.G.	—
Cup, internal diameter	2"	± 0.05"
Cup, internal depth	2.2"	± 0.05"
Flange, thickness	17 I.W.G.	—
Flange, width	0.5"	± 0.05"
Flange, distance of upper side from top edge of cup ...	0.375"	± 0.05"
Gauge, thickness, not less than	10 I.W.G.	—
Gauge, distance of point from level of upper edge of cup	0.7"	± 0.005"

THE COVER

5. The cup is provided with a close-fitting cover with a downward projecting rim barely reaching the flange on the cup. The downward projecting rim is made solid with the top or silver soldered or brazed in place. Upon the cover are mounted a thermometer socket, trunnions to support an oil-test lamp, a pair of guides in which a slide moves, and a white bead. The top of the cover is pierced by three rectangular holes symmetrically placed on a diameter, one in the centre and the other two as close as practicable to the inner sides of the cover-rim and opposite each other. These three holes are covered or uncovered by means of a slide moving in suitably disposed guides. The slide has two perforations, one corresponding in all particulars to the centre hole in the cover and the other to one of the holes at the side. The movement of the slide is restricted by suitable stops, and its length and the disposition of the holes are such, that at the outer extremity of the movement of the slide, the holes in the cover are simultaneously just completely opened and at the inner extremity of the movement of the slide they are completely closed.

6. The trunnions supporting the test lamp are fixed on the top of the guides and the lamp is mounted in the trunnions so that it is free to oscillate. The lamp is provided with a jet to contain a wick and is so arranged that when the slide is moved so as to uncover the holes, the oscillating lamp is caught by a pin fixed in

the slide and tilted over the central hole in such a way that the lower edge of the cover bisects the circle formed by the bore of the jet when in the lowest position. The flame then occupies a central position within the hole in both directions.

7. A suitably mounted gas-jet may be substituted for the lamp.

8. The thermometer socket is in the form of a split tube, mounted on a diameter at right angles to the diameter through the centres of the holes, and fitted at such an angle as to bring the bulb of the thermometer, when in place, vertically below the centre of the cover and at the correct distance from it.

9. A white bead, the dimensions of which represent the size of test flame to be used, is mounted in a visible position on the cover.

10. Materials—all parts excepting bead—brass or gunmetal. Bead—ivory or other suitable material.

	Dimension	Tolerance
Cover, thickness	0.05"	±0.015"
Cover, central hole, length (in direction of slide) ...	0.5"	±0.005"
Cover, width	0.4"	±0.005"
Cover, peripheral holes length (in direction of slide) ...	0.2"	±0.005"
Cover, width	0.3"	±0.005"
Slide, thickness	20 I.W.G.	—
Slide, width of upper surface	0.5"	+ 0.01" (excess only)
Lamp. Overall length of jet	Approximately 0.6"	To suit the requirements for the position of jet when tilted
Lamp. Bore of jet at end	0.0625"	± 0.005"
Bead. Diameter	0.15"	± 0.01"
Thermometer Socket:		
Internal diameter	0.6"	± 0.01"
Length of short side measured from under surface of cover	Approximately 0.5"	—
Length of long side measured from under surface of cover	Approximately 0.75"	—
Distance of centre of socket from centre of cover measured on the underside ... ... These dimensions are subject to the correct placing of the thermometer when in position.	Approximately 0.7"	—
Vertical depth of lowest part of thermometer below centre of underside of cover	1.5"	± 0.1"

COVER FITTED WITH STIRRER

11. Provision may be made in the cover for the reception of a stirrer which projects into the oil cup, for use with viscous materials only.

12. A bush is mounted on the cover in a position diametrically opposite the thermometer mounting and its length is such and it is set at such an angle that the stirrer rod clears the oil-level gauge and the blades operate below the level of and without fouling the thermometer bulb. The bush is placed as near as practicable to the outer edge of the cover.

13. The stirrer consists of a round stem having four blades or vanes silver soldered in place at one end. A collar is fixed on the stem so that when the stem is inserted into the bush from below, it is arrested at a position such that the correct length protrudes into the oil cup. The top end of the stem is reduced and screwed.

14. A long sleeve having an internally screwed, knurled knob soldered to its upper end, is passed over the upper end of the stem and screwed home. The length of the sleeve is such that a flat-faced collar at its lower end just comes into contact with the upper end of the bush, leaving the stirrer free to rotate without appreciable vertical play.

15. A flat-headed cylindrical plug is provided for insertion in the bush when the stirrer is not in use.

16. Material—brass or gunmetal.

	Dimension	Tolerance
Stem, length overall	4"	± 0.1"
Stem, length. Lower end to point of attachment of blades ...	Approximately 0. 1"	—
Stem, length. Lower end to upper surface of collar	1.9"	± 0.1"
Stem, length. Upper surface of collar to lower end of thread ...	2"	± 0.1"
Stem, length. Diameter of stem	Approximately 0.125"	—
Stem, length. Diameter of collar	Approximately 0.25"	—

	Dimension	Tolerance
Stem, Thread	7 B.A.	—
Blades, thickness	17 I.W.G.	—
Blades, length excluding root...	0.5"	± 0.1"
Blades, breadth (all corners of blades rounded)	$^{5}/_{16}$" (0.3125")	± 0.01"
Blade angle	Approximately 45°	—
Sleeve. Length, to suit stem, giving free rotation with no appreciable vertical play when screwed home	—	—
Diameter of bore	Sliding fit on stem	—
Diameter of collar	Approximately 0.25"	—

HEATING VESSEL

17. The heating vessel or bath consists of two flat-bottomed cylindrical copper vessels placed coaxially one inside the other and soldered at their tops to a flat copper ring, greater in outside diameter than the larger vessel and of smaller inside diameter than the smaller vessel. The space between the two vessels is thus totally enclosed and is used as a water jacket.

18. An ebonite or fibre ring of right-angle section is fitted into the hole in the centre of the flat ring forming the top of the bath and, when the apparatus is in use, the oil cup fits into, and its flange rests upon, this ebonite or fibre ring so that the oil cup is centrally disposed within the heating vessel. The ebonite or fibre ring is secured in place by means of six small screws having their heads sunk below the surface of the ring, to avoid metallic contact between the bath and the oil cup.

19. A split socket, similar to that on the cover of the oil cup, but set vertically, allows a thermometer to be inserted into the water-space. A funnel and overflow pipe also communicate with the water-space through the top plate and two loop handles are provided thereon.

	Dimension	Tolerance
Inner vessel:		
Thickness	24 I.W.G.	—
Internal diameter	3"	± 0.05"
Internal depth	2.5"	± 0.05"
Outer vessel:		
Thickness, not less than	24 I.W.G.	—
Internal diameter	5.5"	± 0.01"
Internal depth	5.75"	± 0.1"
Top plate:		
Thickness not less than	20 I.W.G.	—
Outer flange projection	0.375"	± 0.1"
Diameter of central hole	To suit ebonite or fibre ring. Clearance not to exceed 0.1"	—
Ebonite or fibre ring:		
Internal diameter	Easy fit on oil cup	—
External diameter of flange	2.75"	± 0.02"
Overall depth of spigot	0.25"	± 0.02"
Thickness, flange and spigot	0.08"	± 0.005"
Screws, C.S.	8 B.A. x 0.15"	—
Thermometer socket:		
Internal diameter	0.6"	± 0.01"
Height from top of plate	0.75"	± 0.05"

20. The bath rests upon a cast-iron tripod stand, to the ring of which is attached a cylindrical copper jacket not less than 24 I.W.G. flanged inwards at the top, and of such dimensions that the bath, while resting firmly on the iron ring, just touches with its outward projecting flange the inward-turned flange of the jacket. Two handles are provided on the outer jacket.

Diameter of the outer jacket 6.5 inches ± 0.1 inches.

SPIRIT LAMP

21. A spirit lamp is provided for raising the temperature of the water bath.

THERMOMETERS

22. Two thermometers are provided with the apparatus, the one for ascertaining the temperature of the bath, the other for determining the flashing point.

OIL CUP THERMOMETER

23. Type—Mercury in glass, nitrogen filled graduated on the stem, enamel back.

Length—Approximately 9 inches.

Stem—Diameter 0.24 inches to 0.28 inches.

Bulb—Spherical: made of a normal glass. Diameter, 0.35 inches ± 0.05 inches.

Range—50 degrees Fahrenheit to 150 degrees Fahrenheit with expansion chamber. Distance from the bottom of the bulb to the 50 degree line 2.75 inches to 3.15 inches. Distance from the 50 degree line to the 150 degree line not less than 4.75 inches.

Immersion—A swelling is made in the stem to ensure that the thermometer shall be fixed in its brass collar so that the distance from the top of the collar to the bottom of the bulb is 2.4 inches ± 0.05 inches.

Graduation—Scale graduated in 1 degree Fahrenheit divisions. Every fifth degree and tenth degree to be indicated by longer lines. Figured at every tenth degree in full.

Marking—"Abel Oil Cup": Identification number: "Fahrenheit" Maker's or Vendor's name or trade mark.

WATER BATH THERMOMETER

24. Type—Mercury in glass, nitrogen filled, graduated on the stem, enamel back.

Length—Approximately 9 inches.

Stem—Diameter 0.24 inches to 0.28 inches.

Bulb—Cylindrical: made of a normal glass. Length approximately 0.8 inches. Diameter not to exceed the diameter of the stem.

Range—90 degrees Fahrenheit to 190 degrees Fahrenheit with expansion chamber. Distance from the bottom of the bulb to the 90 degree line 3.95 inches to 4.35 inches. Distance from the 90 degree line to the 190 degree line not less than 3.55 inches.

Immersion—A swelling is made in the stem to ensure that the thermometer shall be fixed in its brass collar so that the distance from the top of the collar to the bottom of the bulb is 3.5 inches ± 0.1 inches.

Graduation—Scale graduated in 1 degree Fahrenheit divisions. Every fifth degree and tenth degree to be indicated by longer lines. Figured at every tenth degree in full.

Marking—"Abel Water Bath": Identification number: "Fahrenheit": Maker's or Vendor's name or trade mark.

25. The brass collar of the thermometer is in each case of the following dimensions:

Outside diameter—push fit in socket.
Thickness of tube—22 I.W.G.
Thickness of flange—0.1 inches ± 0.001 inches.

MANNER OF TESTING LIQUID PETROLEUM

26. Liquid petroleum shall be tested by means of apparatus constructed in accordance with the specification contained in the foregoing regulations of this Part.

27. The test apparatus shall be placed for use in a position where it is not exposed to currents of air or draughts.

28. The heating vessel or water-bath shall be filled by pouring water into the funnel until it begins to flow out at the spout of the vessel. The temperature of the water at the beginning of the test shall be 130 degrees Fahrenheit and no heat shall be applied to the water-bath during the test. When a test has been completed and it is desired to make another test the water-bath shall be again raised to 130 degrees Fahrenheit which may conveniently be done while the petroleum cup is being emptied, cooled, and refilled with a fresh sample to be tested. The next test is then proceeded with.

29. If an oil test-lamp is being used it shall be prepared by fitting it with a piece of flat plaited candle wick, and filling it with colza or rape oil up to the lower edge of the opening of the spout or wick tube. The lamp shall be trimmed so that when lighted it gives a flame of about 0.15 of an inch diameter, and this size of flame, which is represented by the projecting white bead on the cover of the oil-cup, is readily maintained by simple manipulation from time to time with a small wire trimmer. A gas test-lamp may be employed, and if so, the size of the jet of flame shall be adjusted to the size laid down above.

30. The bath having been raised to the proper temperature, the cup shall be placed on a level surface in a good light and the oil to be tested shall be poured into it, until the level of the liquid just reaches the point of the gauge which is fixed in the cup. Before a test is begun the temperature of the oil shall be determined and shall be brought to approximately 60 degrees Fahrenheit. The cover, with the slide closed shall then be put on to the cup and pressed down so that its edge rests on the rim of the cup, and the cup shall be placed into the bath or heating vessel, every care being taken to avoid wetting the sides of the cup with the oil. The thermometer in the lid of the cup has been adjusted so as to have the correct immersion when the brass collar of the thermometer is properly seated, and its position shall not in any circumstances be altered. When the cup has been placed in the proper position, the scale of the thermometer faces the operator.

31. The test lamp shall then be placed in position upon the lid of the cup. When the temperature has reached 66 degrees Fahrenheit the operation of testing shall be begun, the test flame being applied once for every rise of one degree, in the following manner:

The slide shall be slowly drawn open while a metronome, set so as to beat at the rate of 75 to 80 beats in the minute, beats three times and shall be closed during the fourth beat. A pendulum of 24 inches effective length may be used in the place of the metronome, counting one beat from one extremity of the swing to the other.

MANNER OF TESTING LIQUID MIXTURES OF PETROLEUM

32. A mixture of petroleum which is wholly liquid, flows quite freely, and does not contain any sediment or thickening ingredient, shall be tested by the method employed to test liquid petroleum.

MANNER OF TESTING SEDIMENTARY AND VISCOUS MIXTURES OF PETROLEUM

33. Where a mixture of petroleum contains an undissolved sediment that can be separated by filtration or by settlement and decantation, the sediment shall be so separated and the filtered or decanted liquid shall be tested by the method employed to test liquid petroleum.

In separating the sediment, care must be taken to minimise the evaporation of the petroleum.

34. Where a mixture of petroleum is such that sediment cannot be separated by filtration or by settlement and decantation, or where it is of a viscous nature, the apparatus to be used for testing the mixture shall be fitted with a stirrer in accordance with the specification hereinbefore contained.

35. In carrying out the test of a viscous petroleum mixture, the stirrer shall, except when the test flame is applied, be constantly revolved at a slow speed with the fingers, the direction of revolution being that of the hands of a clock.

36. Subject to the foregoing provisions, the method of testing a sedimentary or viscous mixture shall be that employed to test liquid petroleum.

MANNER OF TESTING SOLID MIXTURES OF PETROLEUM

37. The apparatus to be used for testing a solid mixture of petroleum shall be that of which a specification is contained in regulations 1 to 25 of this Part, and the method of carrying out the test shall be as follows:

The solid mixture must be cut into cylinders 1½ inches long and ¼ inch in diameter by means of a cork borer or other cylindrical cutter having the correct internal diameter.

These cylinders must be placed in the petroleum cup of the testing apparatus in a vertical position in such number as completely to fill the cup, the cylinders being in contact with one another, but not so tightly packed as to be deformed in shape.

Five or six of the cylinders in the centre of the cup must be shortened to ½ inch to allow space for the thermometer bulb.

The air bath of the testing apparatus must be filled with water to a depth of 1½ inches.

The water bath must then be raised to and maintained at a temperature of about 97° Fahrenheit; the cup must then be placed in the air bath, and the temperature of the sample must be allowed to rise until the thermometer in the oil cup shows 94° Fahrenheit, when the test flame must be applied.

If no flash is obtained, this temperature must be maintained constant in the oil cup for one hour, at the expiration of which time the test flame must again be applied:

Provided that in testing samples of petroleum mixtures in a room of which the temperature is below 95° Fahrenheit the test flame may be applied after the sample has been a few minutes in the cup while it is still at the temperature of the room in which the test is being carried out, and if a flash is obtained by this means the test need not be proceeded with at a higher temperature.

PART II

SPECIAL REGULATIONS FOR THE STORAGE AND TRANSPORT OF CRUDE PETROLEUM, PETROLEUM AND DANGEROUS PETROLEUM IN THE CITY OF PORT-OF-SPAIN, PRINCES TOWN, SANGRE GRANDE, THE BOROUGHS OF SAN FERNANDO AND ARIMA AND SUCH OTHER PLACES AS THE PRESIDENT MAY FROM TIME TO TIME PROCLAIM

1. No crude petroleum, petroleum or dangerous petroleum above the quantity of one hundred Imperial gallons shall be

stored in any place save in a warehouse authorised by licence under the Act. No such warehouse shall be of a capacity greater than two hundred tons for dangerous petroleum and eight thousand tons for crude petroleum or petroleum.

2. Any person desiring to erect a warehouse under these Regulations shall forward an application to the Inspector and together with the application shall submit—

(a) a site plan showing the position of the proposed warehouse and all adjacent warehouses, buildings and roads;

(b) plans and specifications of the warehouse;

(c) plans and specifications of the fence around the site of the warehouse.

3. Every licence shall be signed and issued by the Inspector and published in the *Gazette* and shall expire on the 31st day of December next after it is granted.

4. No licence shall be issued for the erection of any warehouse in Port-of-Spain save on a site south of Wrightson Road and west of the Electric Power Station:

Provided however that the President may when satisfied, on the report of the Inspector that the circumstances warrant exceptional treatment, approve of the issue of a licence in respect of any other suitable site.

5. Every application for the renewal of a licence shall be made at a date not less than thirty days before the date on which the original licence expires, and if the application is so made the premises shall be held to be duly licensed until such date as the Inspector issues the renewed licence, or until an intimation that the renewal of the licence is refused is communicated to the applicant.

6. Special licences for the storage of crude petroleum, petroleum or dangerous petroleum in receptacles approved by

the Inspector and containing not more than twelve tons of crude petroleum, petroleum or dangerous petroleum may be granted on such terms as the Inspector may think proper.

7. The licensee shall conform to these Regulations and to any amendments, additions or alterations that may hereafter be made.

8. Plans and specifications which have been approved by the Inspector shall be signed by the applicant for a licence and filed by the Inspector.

9. No warehouse the plans and specifications of which have been approved shall be licensed until the Inspector has certified in writing that the plans and specifications and the Regulations for its construction and enclosure have been satisfactorily carried out.

10. All warehouses licensed under these Regulations shall conform to the following rules and to such other conditions as may be imposed by the President who may also grant exemption from the operations of any such rules in special cases:

(a) a distance of not less than thirty-five feet shall be kept clear between any warehouse and all buildings (save approved filling sheds) or public roads, the distances being measured between the perimeter of the warehouse and the perimeters of the buildings of extreme boundaries of the public roads nearest such warehouse;

(b) no warehouse shall be placed within seventy feet of any other warehouse, the distances being measured between the perimeters of the warehouses;

(c) every warehouse shall as far as possible be built of uninflammable material;

(d) each warehouse shall either be separately surrounded by a wall or embankment of substantial construction or shall be partly sunk in

an excavation. The enclosure thus formed shall be of dimensions sufficient to contain ten per cent more oil than the warehouse is capable of containing, and shall be so constructed as to prevent the escape therefrom of any oil in the form of liquid. The space enclosed by such wall or excavation and not occupied by the warehouse shall be kept entirely clear and unoccupied;

(e) the site of every warehouse shall be surrounded by an approved eight-foot galvanised iron fence or fence of other approved uninflammable material. The distance of such fence shall not be less than thirty-five feet from the perimeter of the warehouse.

11. No crude petroleum, petroleum or dangerous petroleum stored under these Regulations shall be allowed to leak or escape into an inlet or drain communicating with a public drain or sewer.

12. A sufficient quantity of clean sand shall always be kept at every warehouse for the purpose of absorbing any petroleum which may leak from any receptacle.

13. All pipes or openings for draining out water from the enclosure mentioned in regulation 10*(d)* of this Part shall be so constructed that they are capable of being closed, and they shall only be kept open when actually necessary for drainage purposes. The nature of such drainage arrangements shall be shown in the specifications which are required under regulation 2*(b)* of this Part.

14. No engine, dynamo or motor shall be erected within the enclosure fence under regulation 10*(e)* of this Part save on a spot to be approved of in writing by the Inspector.

15. No work shall be done in connection with any warehouse nor with the storage of crude petroleum, petroleum or dangerous petroleum therein between the hours of 6.00 p.m. and 6.00 a.m.,

provided that in cases where electric lighting is exclusively used, night working may be permitted by the Inspector.

16. All operations in connection with any warehouse shall be conducted under the supervision of a responsible agent or supervisor.

17. All due precautions shall be taken to prevent unauthorised persons or any person under the age of 18 from having access to any warehouse containing crude petroleum, petroleum or dangerous petroleum.

18. Every person managing or employed in or in connection with any warehouse shall abstain from any act whatsoever which tends to cause fire or explosion and which is not reasonably necessary, and shall prevent any other persons from doing such act.

19. No fire or lights other than safety lamps approved by the Inspector shall be allowed within the fence mentioned at regulation 10*(e)* of this Part and no person shall enter the enclosure with any matches or with any oiled cotton waste rags or any articles liable to spontaneous combustion.

20. Efficient means of extinguishing fire to the satisfaction of the Inspector shall be provided at each and every warehouse.

21. No crude petroleum, petroleum or dangerous petroleum shall be transported from any warehouse licensed under these Regulations save in air tight receptacles of steel or iron, or wood in the case of crude petroleum, or in tank carts or through a pipeline.

22. Tank carts for the conveyance of crude petroleum, petroleum and dangerous petroleum shall be approved by the Inspector.

23. (1) Receptacles for the conveyance or storage of dangerous petroleum shall have the nature of the contents and the

words *"Highly Inflammable"* distinctly marked on them. Such receptacles shall be painted at both ends thereof with red paint (or with a paint of such other colour as the Inspector may, by notice in the *Gazette*, authorise to be used during any particular period) and shall be of gas tight tinned or galvanised sheet iron or steel containing each not more than one hundred Imperial gallons and fitted with well made filling holes and well fitted screw plugs or fitted with screw cap and under cap. Such receptacles shall be packed in strong wooden cases the thickness of wood to be not less than ⅜ of an inch:

Provided that wood cases shall not be necessary when the receptacles have the following thicknesses of metal:

		Body		*Ends*	
(i)	When the capacity does not exceed two Imperial gallons...	27	B.W.G.	27	B.W.G.
(ii)	When the capacity exceeds 2 Imperial gallons but does not exceed 4 Imperial gallons ...	22	"	22	"
(iii)	When the capacity exceeds 4 Imperial gallons but does not exceed 8 Imperial gallons ...	20	"	20	"
(iv)	When the capacity exceeds 8 Imperial gallons but does not exceed 20 Imperial gallons ...	16	"	16	"
(v)	When the capacity exceeds 20 Imperial gallons but does not exceed 25 Imperial gallons ...	14	"	16	"
(vi)	When the capacity exceeds 25 Imperial gallons but does not exceed 35 Imperial gallons ...	12	"	15	"
(vii)	When the capacity exceeds 35 Imperial gallons but does not exceed 65 Imperial gallons ...	10	"	14	"
(viii)	When the capacity exceeds 65 Imperial gallons but does not exceed 100 Imperial gallons ...	9	"	12	"

An air space of at least 1/50 of its capacity shall be left in each receptacle at the time of filling.

Receptacles shall be so substantially constructed and secured as not to be liable except under circumstances of grave negligence or extraordinary accident to be broken or become defective, leaky or insecure.

All due precautions shall be taken to prevent any unauthorised person or persons below the age of 18 years having access to any receptacle which contains or has contained crude or dangerous petroleum or to the contents of such receptacles.

(2) The provisions of subregulation (1) which require that receptacles for the conveyance or storage of dangerous petroleum shall be of tinned or galvanised sheet iron or steel and that such receptacles shall be packed in strong wooden cases, the thickness of wood to be not less than ⅜ of an inch, shall not apply to metal barrels or metal drums which have been constructed and are maintained in conformity with the legal or recognised standards of the United Kingdom or the United States of America for metal barrels or metal drums intended for the conveyance of dangerous petroleum in those countries on more than one trip or journey.

24. If either during the construction or after the completion of any warehouse the Inspector shall find any thing or practice to be dangerous or defective he may give notice thereof in writing to the applicant for a licence or licensee, as the case may be, and require the same to be remedied within a stated time. If the applicant for a licence or the licensee objects to remedy the matter complained of in the notice he may, within the time specified in the notice, send his objection in writing stating the ground thereof to the President and thereupon the matter shall be determined by the President. The applicant or licensee shall be held responsible for any delay on his part in not complying with the order of the Inspector. If the applicant for a licence or licensee fails when no objection is sent as aforesaid to comply with the requisition of the notice within the time prescribed or when there has been an order to comply with the decision of the President he shall be refused a licence.

25. There shall be kept hung up in a conspicuous place near each warehouse a copy of these Regulations so that they can be conveniently read by all employees.

PART III

GENERAL REGULATIONS FOR THE SALE, USE, STORAGE AND TRANSPORT OF CRUDE OR DANGEROUS PETROLEUM

1. Every container in which dangerous petroleum is kept shall have the nature of the contents and the words *"Highly Inflammable"* distinctly marked thereon. Such container shall be painted, at both ends thereof, with red paint (or with paint of such other colour as the Inspector may by notice in the *Gazette* authorise to be used during any particular period). Such container shall be properly secured and stored and at all times kept in good order and repair so that no leakage of either spirit or vapour can take place therefrom.

2. A quantity of fine sand shall be kept where dangerous petroleum is stored for the purpose of absorbing leakage and extinguishing fire.

3. The lighting of fires or smoking is strictly prohibited in or near any warehouse used for the storage of dangerous petroleum; and no person shall enter any such warehouse with any lamp or light (other than an approved safety lamp) or with matches or with any oiled cotton waste, rags, or any article liable to spontaneous combustion.

4. It shall not be lawful to transport dangerous petroleum unless such dangerous petroleum is packed as prescribed by these Regulations, or unless it is kept in vessels sanctioned by the Act.

5. Any person removing dangerous petroleum shall take all necessary precautions to protect such petroleum from ignition.

6. The transference of dangerous petroleum from any package to any other receptacle shall be conducted with every reasonable precaution against ignition or explosion or spilling of the dangerous petroleum; and no fire or artificial light (save approved safety lamps) shall be brought within dangerous proximity during this operation.

7. Regulations 1 to 6 of this Part shall not apply to any crude or dangerous petroleum in the tank of any locomotive in use by land or water or in any gas making machine licensed under the Act.

PART IV

DISCHARGING AND LANDING OF PETROLEUM

1. Masters of vessels carrying a cargo consisting wholly or in part of petroleum, crude petroleum or dangerous petroleum on entering *any declared Harbour of Trinidad and Tobago* shall give notice thereof to the visiting Officer when boarding the vessel.

2. Vessels carrying crude petroleum, or dangerous petroleum in bulk shall on entering the Harbour of Port-of-Spain, anchor within the area declared from time to time as an Explosive Anchorage, or in such other place as the Harbour Master or other person authorised by him may direct, and on entering any other declared Harbour of Trinidad and Tobago shall anchor in such place as the Harbour Master of that port, or other person authorised by him, shall direct.

3. (1) Vessels shall be anchored in sufficient water to remain afloat at any time of the tide and be at least ½ cable's length (100 yards) distant from each other and from any other vessel at anchor in the Harbour.

(2) Any vessel carrying crude petroleum or dangerous petroleum when moored alongside an oil jetty shall not, except for the purpose of trans-shipment, be moored within one hundred feet of any other vessel unless it is impracticable to maintain such distance.

4. Masters of Steamers, Barges or other craft carrying petroleum, crude petroleum or dangerous petroleum in bulk shall, on nearing and during such time as the vessel remains in any declared Harbour of Trinidad and Tobago, display by day a

red flag not less than three feet square and by night a red light at the mast-head or, if the said ship has no mast, on a staff.

5. Petroleum, crude petroleum, or dangerous petroleum shall not be landed in or shipped from the Harbour of Port-of-Spain or San Fernando between the hours of 6.00 p.m. and 7.00 a.m., and dangerous petroleum landed or received at any wharf shall be removed without delay to a warehouse for its storage. In cases where electric light or approved safety lamps are exclusively used petroleum in bulk may be loaded on or unloaded from any ship between these hours at the discretion of the Harbour Master. And in cases where petroleum in bulk consists of petroleum with a flash point of not less than 150°F (Abel test) oil navigating lights may be used.

6. Vessels with part cargoes of petroleum, crude petroleum or dangerous petroleum shall not discharge or ship any merchandise from or into any hold in which petroleum is stored between the hours of 6.00 p.m. and 7.00 a.m. unless the permission of the Harbour Master has first been obtained.

7. All imported petroleum or dangerous petroleum from any vessel shall be landed between the hours of 7.00 a.m. and 3.00 p.m., and when landed shall forthwith be removed to and stored in the Petroleum Warehouse or some warehouse licensed under the Act at the cost of the importer. Except by special permission of the Comptroller of Customs and Excise, no petroleum or dangerous petroleum shall be received in the Petroleum Warehouse before the hour of 7.00 a.m. or after the hour of 4.00 p.m.

8. No dangerous petroleum shall be imported into Trinidad and Tobago unless it is packed in strong iron or steel drums of a capacity and strength approved by the Comptroller of Customs and Excise.

9. The following rules in respect of the unloading or loading or trans-shipment of petroleum, crude petroleum or

dangerous petroleum within any declared Harbour of Trinidad and Tobago or within the territorial waters of Trinidad and Tobago shall be observed:

(a) Petroleum, crude petroleum and dangerous petroleum shall be landed or shipped only at such quay or landing place as the Harbour Master shall from time to time direct; and in the case of dangerous petroleum so soon as a vessel has completed its loading it must at once leave the wharf.

(b) No petroleum, crude petroleum or dangerous petroleum shall be discharged or allowed to escape into the waters of any declared Harbour of Trinidad and Tobago or into the territorial waters of Trinidad and Tobago.

(c) The owner of such petroleum, crude petroleum or dangerous petroleum shall take all due precautions for the prevention of accidents by fire in landing or shipping the same.

10. The Master of any vessel shall, when so required by the Harbour Master or other officer appointed by him, or by any police constable, show to such officer or constable all petroleum, crude petroleum or dangerous petroleum on board his vessel, and shall afford any reasonable facility to enable such officer or constable to inspect the vessel and the petroleum on board.

11. (1) The Master of a vessel carrying crude petroleum or dangerous petroleum shall not permit any fire or artificial light on board—

(a) whilst such vessel is alongside any oil jetty;

(b) from the time when the holds or tanks of such vessel are first opened for the purpose of loading or landing crude petroleum or dangerous petroleum until such time as all dangerous petroleum shall have been loaded

into or removed from such holds or tanks, and the holds or tanks shall have been securely closed down and, in the case of landing, rendered free from inflammable vapour:

Provided that nothing contained in this subregulation shall prevent the use of lamps, heaters, cookers, or other similar type of safe apparatus, electric or otherwise, designed, constructed and maintained in accordance with Lloyds or other approved classification society's requirements, or be deemed to prohibit the discharging or loading of a vessel carrying crude petroleum or dangerous petroleum, under conditions approved by the Harbour Master, by means of steam from its own boilers or power supplied from electric motors or internal combustion engines placed in a position away from cargo holds and pump rooms or alternatively by means of electric motors designed, constructed and maintained in accordance with Lloyds or other approved classification society's requirements.

(2) The Master of a vessel carrying crude petroleum or dangerous petroleum shall take adequate steps to prevent any person from smoking on deck or in any part of the vessel, whilst such vessel is alongside any oil jetty or when crude petroleum or dangerous petroleum is being landed or loaded, and prevent any person on deck or engaged in the landing or loading from carrying fuses, matches or any appliance whatsoever for producing ignition: Provided that this requirement shall not apply to such enclosed space or spaces on board the vessel as may be sanctioned by the Master for the purpose of smoking.

12. When any vessel or cargo is moored, landed or otherwise dealt with in contravention of any of the above regulations, it shall be lawful for the Harbour Master or any other person acting

under his instructions to cause such ship or cargo to be removed at the expense of the owner thereof to such place as will conform with the Regulations.

13. The importer shall furnish such number of samples as may be required and approved as sufficient by the Comptroller of Customs and Excise, and such samples shall be forwarded to the Government Chemist or other competent examiner authorised under the provisions of the Act who shall test the same as laid down in Part I of these Regulations.

14. A fee of five dollars shall be charged for each sample the flashing point of which falls below 95° Fahrenheit.

15. Any person guilty of an offence against these Regulations is liable to a penalty of three thousand dollars for each offence or, in the case of a continuing offence, seven hundred and fifty dollars for each day during which the offence continues.