# THE PETROLEUM ACT, 1881.

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THE SCHEDULE.

# ACT No. VIII of 1831.

PASSED BY THE GOVERNOR GENERAL OF INDIA IN COUNCIL.

(Received the assent of the Governor General on the 5th February, 1881.)

An Act to regulate the importation, possession and transport of Petroleum and other fluids of a like nature.

Preamble.

WHEREAS it is expedient to regulate the importation, possession and transport of petroleum and other fluids of a like nature; It is hereby enacted as follows:—

## Preliminary.

Short title.

1. This Act may be called "The Petroleum Act, 1881";

Commencement. and it shall come into force on the first day of July, 1881.

Local extent.

The provisions of this Act relating to dangerous petroleum, and the importation of petroleum, extend to the whole of British India. The rest of this Act extends only to such local areas as the Local Government may, from time to time, by notification in the official Gazette, direct.

Repeal of enactments.

2. The Indian Ports Act, 1875, section thirty-seven, and Bengal Act No. III of 1865 (to make better provision for the prevention of injury from fire in Ports, and to provide for the safe keeping of Inflammable Oils in Ports and places, within the Provinces under the control of the Lieutenant-Governor of Bengal) are hereby repealed.

Interpretation-clause. 3. In this Act, unless there is something repugnant in the subject or context,—

"petroleum:"

"petroleum" includes also the liquids commonly known

known by the names of rock oil, Rangoon oil, Burma oil, kerosine, paraffine oil, mineral oil, petroline, gasoline, benzol, benzoline, benzine and any inflammable liquid that is made from petroleum, coal, schist, shale, peat or any other bituminous substance, or from any products of petroleum,

but it does not include any oil ordinarily used for lubricating purposes, and having its flashing point at or above two hundred and fifty degrees of Fahren-

heit's thermometer.

Explanation.—The flashing point of petroleum means the lowest temperature at which the petroleum yields a vapour which will furnish a momentary flash or flame when tested with the apparatus and in the manner described in the Schedule hereto annexed:

"dangerous petroleum" means petroleum having "dangerous its flashing point below seventy-three degrees of Fahrenheit's thermometer:

"import" means to bring into British India by "import:" sea or land:

and "importation" means the bringing into "importa-British India as aforesaid:

"transport" means to remove from one place to "transport." another within British India.

# Dangerous Petroleum.

4. No quantity of dangerous petroleum exceeding Dangerous forty gallons shall be imported or transported, or kept petroleum in. by any one person or on the same premises, except exceeding 40 under, and in accordance with the conditions of, a gallons. license from the Local Government granted as next hereinafter provided.

Every application for such a license shall be in Application writing, and shall declare—

for license to import, possess such petroleum.

- (a) the quantity of such petroleum which it is transport or desired to import, transport or possess, as the case may be;
- (b) the purpose for which the applicant believes that such petroleum will be used; and

(c) that

(c) that petroleum other than dangerous petroleum cannot be used for such purpose.

Power to grant license.

. If the Local Government sees reason to believe that such petroleum will be used for such purpose, and that no petroleum other than dangerous petroleum can be used for such purpose, it may grant such license for the importation, transport or possession (as the case may be) of such petroleum, absolutely or subject to such conditions as it thinks fit.

Dangerous petroleum in quantities not exceeding 40 gallons.

5. No quantity of dangerous petroleum equal to or less than forty gallons shall be kept or transported without a license:

Provided that nothing in this section shall apply in any case when the quantity of such petroleum kept by any one person or on the same premises, or transported, does not exceed three gallons, and such petroleum is placed in separate glass, earthenware or metal vessels, each of which contains not more than a pint and is securely stopped.

Vessels containing dangerous petroleum to be marked.

6. All dangerous petroleum-

(a) which is kept at any place after seven days from the date on which it is imported, or

(b) which is transported, or

(c) which is sold or exposed for sale,

shall be contained in vessels which shall bear an indelible mark or a label in conspicuous characters, stating the nature of the contents thereof.

# Petroleum generally.

to the importation of petroleum.

7. The Local Government may, from time to time, rower to make rules consistent with this Act to regulate the importation of petroleum, and in particular

(a) for ascertaining the quantity and description

of any petroleum on board a ship;

(b) to provide for the delivery, by the master of a ship or the consignees of the cargo, of samples of petroleum before such petroleum is landed from such ship, and for the testing thereof;

(c) to

- (c) to determine the ports at which only petroleum may be imported; and
- (d) to regulate the time and mode of, and the precautions to be taken on, landing or transhipping any petroleum.

In this section—

"ship" includes anything made for the convey- "ship." ance by water of human beings or property;

"master" includes every person (except a Pilot or "master." Harbour Master) having for the time being the charge or control of a ship.

8. No quantity of petroleum exceeding five Possession hundred gallons shall be kept by any one person or on the same premises or shall be transported except under, and in accordance with the conditions of, a license granted under this Act.

of petroleum.

9. The Local Government may, from time to time, make rules consistent with this Act as to the make rules to such posgranting of licenses to possess or transport petroleum session and in cases where such licenses are by law required.

Power to make rules as transport.

Such rules may provide for the following among other matters, that is to say—

in the case of licenses to possess petroleum—

- (a) the nature and situation of the premises for which they may be granted, and
- (b) the inspection of such premises and the testing of petroleum found thereon;

in the case of licenses to transport petroleum —

- (c) the manner in which the petroleum shall be packed, the mode of transit, and the route by which it is to be taken, and
- (d) the stoppage and inspection of it during transit:

in the case of both such licenses-

- (e) the authority by which the license may be granted;
  - (f) the fee to be charged for it;

(g) the

- (g) the quantity of petroleum it is to cover;
- (h) the conditions which may be inserted in it;
- (i) the time during which it is to continue in force; and
- (j) the renewal of the license.

Power to inspect and require dealer to sell samples. 10. Any officer specially authorized by name or by virtue of his office in this behalf by the Local Government may require any dealer in petroleum to show him any place, and any of the vessels, in which any petroleum in his possession is stored or contained, to give him such assistance as he may require for examining the same, and to deliver to him samples of such petroleum on payment of the value of such samples.

Notice to be given when officer proposes to test samples. 11. When any such officer has, in exercise of the powers conferred by section ten, or by purchase, obtained a sample of petroleum in the possession of a dealer, he may give a notice in writing to such dealer informing him that he is about to test such sample or cause the same to be tested with the apparatus and in the manner described in the schedule hereto annexed, at a time and place to be fixed in such notice, and that such person or his agent may be present at such testing.

Certificate as to result of such testing. 12. On any such testing, if it appears to the officer or other person so testing that the petroleum from which such sample has been taken is or is not dangerous petroleum, such officer or other person may certify such fact, and the certificate so given shall be receivable as evidence in any proceedings which may be taken under this Act against the dealer in whose possession such petroleum was found, and shall, until the contrary is proved, be evidence of the fact stated therein; and a certified copy of such certificate shall be given gratis to the dealer at his request.

## Penalties.

Penalty for illegal importation, &c., of petroleum.

13. Any person who, in contravention of this Act or of any rules made hereunder, imports, possesses or transports any petroleum, and any person who other-

wise

wise contravenes any such rules or any condition contained in a license granted hereunder, shall be punished with imprisonment for a term which may extend to one month, or with fine which may extend to five hundred rupees, or with both.

14. Any person keeping, transporting, selling or Penalty for exposing for sale petroleum in vessels not marked or keeping, transporting, labelled as prescribed by section six shall be punished selling or exwith fine which may extend to fifty rupees.

posing for sale petroleum in contravention of section 6.

comply with

- 15. Any dealer in petroleum who refuses or neg- Penalty for lects to show to any officer authorized under section refusing to ten any place, or any of the vessels, in which petroleum in his possession is stored or contained, or to give him such assistance as he may require for examining the same, or to give him samples of such petroleum on payment of the value of such samples, shall be punished with fine which may extend to two hundred rupees.
- 16. In any case in which an offence under section Confiscation thirteen or section fourteen has been committed, the of petroleum convicting Magistrate may direct that—

- (a) the petroleum in respect of which the offence has been committed, or.
- (b) where the offender is importing or transporting, or is in possession of, any petroleum exceeding the quantity (if any) which he is permitted to import, transport or possess, as the case may be, the whole of the petroleum which he is importing or transporting, or is in possession of,

shall, together with the tins or other vessels in which it is contained, be confiscated.

17. The criminal jurisdiction under this Act shall, Jurisdiction. in the towns of Calcutta, Madras and Bombay, be exercised by a Presidency Magistrate, and elsewhere by a Magistrate of the first class or (where specially empowered by the Local Government to try cases under this Act) a Magistrate of the second class.

Miscellaneous.

### Miscellaneous.

Rules when of law.

18. All rules made by the Local Government to have force under this Act shall be published in the official Gazette, and shall, on the expiry of one month from the date of such publication, have the force of law:

> Provided that no such rule shall be so published without the previous sanction of the Governor General in Council.

Power to apply this Act to other fluids.

19. The Governor General in Council may, from time to time, by notification in the Gazette of India, apply the whole or any portion of this Act to any inflammable fluid other than petroleum, and may by such notification fix, in substitution for the quantities of petroleum fixed by sections four, five and eight, the quantities of such fluid to which these sections shall apply.

The Governor General in Council may by a like notification cancel any notification issued under this section.

## THE SCHEDULE.

Specification explanatory of the Test Apparatus.

The following is a description of the details of the

apparatus :-

The oil-cup consists of a cylindrical vessel 2" diameter,  $2\frac{2}{10}$  height (internal), with outward projecting rim  $\frac{5}{10}$  wide,  $\frac{3}{3}$  from the top and  $1\frac{7}{8}$  from the bottom of the cup. It is made of gun-metal or brass. (17 B. W. G.), tinned inside. A bracket, consisting of a short stout piece of wire, bent upwards and terminating in a point, is fixed to the inside of the cup to serve as gauge. The distance of the point from the bottom of the cup is  $1\frac{1}{2}$ . The cup is provided with a close-fitting overlapping cover made of brass (22 B. W. G.) which carries the thermometer and test-The latter is suspended from two supports from the side by means of trunnions, upon which it may be made to oscillate: it is provided with a spout

the mouth of which is  $\frac{1}{16}$ " in diameter. The socket which is to hold the thermometer is fixed at such an angle, and its length is so adjusted, that the bulb of the thermometer, when inserted to its full depth, shall be  $1\frac{1}{2}$ " below the centre of the lid.

The cover is provided with three square holes, one in the centre  $\frac{5}{10}$ " by  $\frac{4}{10}$ ", and two smaller ones,  $\frac{3}{10}$ " by  $\frac{2}{10}$ ", close to the sides and opposite each other. These three holes may be closed and uncovered by means of a slide moving in grooves, and having perforations corresponding to those on the lid.

In moving the slide so as to uncover the holes, the oscillating lamp is caught by a pin fixed in the slide, and tilted in such a way as to bring the end of the spout just below the surface of the lid. Upon the slide being pushed back so as to cover the holes, the lamp returns to its original position.

Upon the cover, in front of, and in line with, the mouth of the lamp, is fixed a white bead the dimensions of which represent the size of the test flame to be used.

The bath or heated vessel consists of two flatbottomed copper cylinders (24 B. W. G.), an inner one of 3" diameter and  $2\frac{1}{3}$ " height, and an outer one of  $5\frac{1}{3}$  diameter and  $5\frac{3}{4}$  height; they are soldered to a circular copper plate (20 B. W. G.) perforated in the centre, which forms the top of the bath, in such a manner as to enclose the space between the two cylinders, but leaving access to the inner cylinder. top of the bath projects both outwards and inwards about  $\frac{3}{8}$ , that is, its diameter is about  $\frac{6}{8}$  greater than that of the body of the bath, while the diameter of the circular opening in the centre is about the same amount less than that of the inner copper cylinder. To the inner projection of the top is fastened, by six small screws, a flat ring of ebonite, the screws being sunk below the surface of the ebonite to avoid metallic contact between the bath and the oil-cup. The exact distance between the sides and bottom of the bath of the oil-lamp is  $1\frac{1}{2}$ . A split socket similar to that on the cover of the oil-cup, but set at a right angle,

allows a thermometer to be inserted into the space between the two cylinders. The bath is further provided with a funnel, an overflow pipe, and two loop handles.

The bath rests upon a cast-iron tripod stand, to the ring of which is attached a copper cylinder or jacket (24 B. W. G.), flanged at the top, and of such dimensions that the bath, while flrmly resting on the iron ring, just touches with its projecting top the inward-turned flange. The diameter of this outer jacket is  $6\frac{1}{2}$ . One of the three legs of the stand serves as support for the spirit-lamp, attached to it by means of a small swing bracket. The distance of the wick-holder from the bottom of the bath is 1".

Two thermometers are provided with the apparatus, the one for ascertaining the temperature of the bath, the other for determining the flashing-point. The thermometer for ascertaining the temperature of the water has a long bulb and a space at the top. Its range is from about 90° to 190° Fahrenheit. scale (in degrees of Fahrenheit) is marked on an ivory back fastened to the tube in the usual way; it is fitted with a metal collar fitting the socket, and the part of the tube below the scale should have a length of about 34" measured from the lower end of the scale to the end of the bulb. The thermometer for ascertaining the temperature of the oil is fitted with collar and ivory scale in a similar manner to the one described. has a round bulb, a space at the top, and ranges from about 55° F. to 150° F.; it measures from end of ivory back to bulb  $2\frac{1}{4}$ ".

Note.—A model apparatus is deposited at the office of the Chemical Examiner to Government at Calcutta.

# Directions for applying the Test.

- 1. The test-apparatus is to be placed for use in a position where it is not exposed to currents of air or draughts.
- 2. The heating vessel or water-bath is 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 commencement of the test is to be 130° Fahrenheit, and this is attained in the first instance either by mixing hot and cold water in the bath, or in a vessel from which the bath is filled, until the thermometer which is provided for testing the temperature of the water gives the proper indication; or by heating the water with the spirit-lamp (which is attached to the stand of the apparatus) until the required temperature is indicated.

If the water has been heated too highly, it is easily reduced to 130° by pouring in cold water little by little (to replace a portion of the warm water) until the thermometer gives the proper reading.

When a test has been completed, this water-bath is again raised to 130° by placing the lamp underneath, and the result is readily obtained while the petroleum cup is being emptied, cooled, and refilled with a fresh sample to be tested. The lamp is then turned on its swivel from under the apparatus, and the next test is proceeded with.

3. The test-lamp is prepared for use by fitting it with a piece of flat plaited candlewick, and filling it with colza or rape-oil up to the lower edge of the opening of the spout or wick-tube. The lamp is 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.

When gas is available it may be conveniently used in place of the little oil-lamp, and for this purpose a test-flame arrangement for use with gas may be substituted for the lamp.

4. The bath having been raised to the proper temperature, the oil to be tested is introduced into the petroleum cup, being poured in slowly until the level of the liquid just reaches the point of the gauge which is fixed in the cup. In warm weather the

temperature

temperature of the room in which the samples to be tested have been kept should be observed in the first instance, and, if it exceeds 65°, the samples to be tested should be cooled down (to about 60°) by immersing the bottle containing them in cold water, or by any other convenient method. The lid of the cup, with the slide closed, is then put on, and the cup is put into the bath or heating vessel. The thermometer in the lid of the cup has been adjusted so as to have its bulb just immersed in the liquid, and its position is not under any circumstances to be altered. When the cup has been placed in the proper position, the scale of the thermometer faces the operator.

5. The test-lamp is then placed in position upon the lid of the cup, the lead line or pendulum,\* which has been fixed in a convenient position in front of the operator, is set in motion, and the rise of the thermometer in the petroleum cup is watched. When the temperature has reached about 66°, the operation of testing is to be commenced, the test-flame being applied once for every rise of one degree in the following manner:—

The slide is slowly drawn open while the pendulum performs three oscillations, and is closed during the fourth oscillation.

Note.—If it is desired to employ the test-apparatus to determine the flashing-points of oils of very low volatility, the mode of proceeding is to be modified as follows:—

The air-chamber which surrounds the cup is filled with cold water to a depth of  $1\frac{1}{2}$  inches, and the heating vessel or water-bath is filled as usual, but also with cold water. The lamp is then placed under the apparatus and kept there during the entire operation. If a very heavy oil is being dealt with, the operation may be commenced with water previously heated to  $120^{\circ}$ , instead of with cold water.

<sup>\*</sup>This pendulum is two (2) feet in length from the point of suspension to the centre of gravity of the weight.