TASMANIA.

1929.

ANNO VICESIMO
GEORGII V. REGIS.
No. 7.

ANALYSIS.

A.D. 1929.

AN ACT to regulate the Keeping, Conveyance, and Sale of Inflammable Liquid, Carbide of Calcium, and other Dangerous Commodities. [25 *July*, 1929.]

BE it enacted by His Excellency the Governor of Tasmania, by and with the advice and consent of the Legislative Council and House of Assembly, in Parliament assembled, as follows:—

1 This Act may be cited as "The Inflammable Liquids Act, 1929." Short title.

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Repeal.

2 The Inflammable Liquids Act, 1920, is hereby repealed.

Interpretation.

3—(1) In this Act, unless the contrary intention appears—

"Boat" means any vessel used for the purposes of navigation and propelled only by oars or by towing:

"Carbide" means carbide of calcium:

"Chief Inspector" means the Chief Inspector of Explosives:

"Inflammable liquid" means liquid petroleum, or kerosene, or any oil, liquid, or spirit derived wholly or in part from any petroleum, shale, schist, coal, peat, bitumen, or any other similar substance; and which has a true flashing point of less than one hundred and fifty degrees Fahrenheit:

7 Geo. V. No. 9.

"Inspector" means an inspector appointed under the provisions of the Explosives Act, 1916, and includes the Chief Inspector:

"Master," used in relation to a ship, includes every person, except a pilot or Government officer, in command or charge of a ship, and in relation to any boat belonging to a ship means the master of the ship, and in relation to a boat includes every person having command or charge of such boat:

"Mineral oil" means any inflammable liquid whose true flashing point is above seventy-three degrees Fahrenheit:

"Mineral spirit" means any inflammable liquid whose true flashing point is seventy-three degrees Fahrenheit or less:

"Ship" means any vessel used for the purposes of navigation other than a boat:

"Vehicle" means any carriage, cart, wagon, truck, or other conveyance used for the transport of any goods by land.

(2) For the purposes of this Act, the true flashing point of an inflammable liquid is the temperature, ascertained as prescribed by the schedule to this Act, at which the liquid, when tested as prescribed by that schedule, produces a flash.

Power to Governor to extend applications of Act or to exempt specified places therefrom.

4—(1) The Governor, by proclamation, at any time may declare any liquid to be an inflammable liquid, or any substance to be a dangerous commodity for the purposes of this Act, and upon such proclamation being made such liquid or substance, as the case may be, shall be subject to all the provisions of this Act which are applicable thereto.

(2) The Governor, by proclamation, at any time may exempt any place specified in such proclamation from all or any of the provisions of this Act, and thereupon the same shall cease, to the extent of such exemption, to apply to such place.

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Regulation of keeping of inflammable liquids and carbide.

5—(1) No person shall keep or have in his possession, in any place, any inflammable liquid or carbide otherwise than as prescribed by or under this Act.

(2) No person shall have or keep on his premises mineral spirit in excess of four gallons for use for any industrial trade or commercial purpose unless the same is kept in a depot as prescribed.

(3) No person shall keep or have in his possession any inflammable oil or carbide unless the same is contained in a container of such a nature as to comply with the prescribed requirements.

(4) Subject to compliance with such requirements, if any, as may be prescribed, any person may have or keep—

I. Inflammable liquid—

(*a*) Consisting of not more than sixteen gallons of mineral spirit or one hundred gallons of mineral oil:

(*b*) On a ship, boat, or vehicle for the purposes of conveying the same thereon as prescribed:

(*c*) In the fuel tank of any—

(i) Motor-vehicle,

(ii) Motor-propelled ship or boat, or

(iii) Plant driven by an internal combustion engine:

(*d*) In any place, not within a city or a town, where the Chief Inspector certifies that he is satisfied that such liquid is not for sale, and that it can be stored without danger to any building, other than the building, if any, in which it is stored: or

(*e*) In premises registered for that purpose under this Act, in such quantities, not exceeding two hundred gallons of mineral spirit, or eight hundred gallons of mineral oil, as may be prescribed in respect of the locality or situation in which such premises are situated: or

(*f*) In premises licensed for that purpose under this Act:

II. Carbide—

(*a*) In any quantity not exceeding two hundred and twenty-four pounds in weight:

(*b*) In premises registered for that purpose under this Act, in such quantities as may be prescribed: or

(*c*) In premises licensed for that purpose under this Act.

(5) Premises may be licensed or registered under this Act, subject to such conditions and restrictions as to quantities as

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may be prescribed for the keeping of both inflammable liquid and carbide, or for the keeping in the same premises of both mineral oil and mineral spirit.

(6) The authority conferred by this section shall be subject at all times to compliance with all such requirements as may be prescribed.

Licensing and registration of premises.

6—(1) The Chief Inspector, upon being satisfied that the premises comply with the prescribed requirements, may issue a licence in respect of, or may register, such premises for the keeping of inflammable liquid or carbide or both.

(2) Application for registration shall be made as prescribed, and shall be accompanied by the fee prescribed for the class of premises or commodity in respect of which registration is desired.

(3) A licence or certificate of registration respectively in the prescribed form, while in force, shall entitle the holder thereof, according to the tenor thereof, and subject to this Act, to keep on the premises specified therein the commodity in respect of which it is issued in any quantity not exceeding the quantity specified therein.

(4) The Chief Inspector, upon the application of the holder of any licence, and upon compliance with the prescribed conditions, may alter any licence to authorise the keeping of the commodity in quantities greater than such licence originally specified.

Conveyance of inflammable liquid or carbide.

7 No person shall convey any inflammable liquid or carbide from any place to any other place, unless the same is so conveyed in compliance with the prescribed requirements applicable to the particular case.

Cancellation of licence or registration.

8—(1) If the holder of any licence or certificate of registration under this Act is convicted of any offence against this Act, the Minister may direct such licence or certificate to be cancelled, and thereupon the same shall cease to have effect.

(2) Every such holder, upon being required by an inspector so to do, shall deliver such licence or certificate to such inspector or to the Chief Inspector forthwith for cancellation.

Disposal of forfeited commodities.

9—(1) Where an order is made under this Act for the forfeiture of any commodity in relation to which an offence has been committed, such commodity shall be destroyed, dealt with, or disposed of, as the Minister may direct, and the proceeds thereof, if any, shall be paid into the Consolidated Revenue, unless the Minister otherwise directs.

(2) Every person having the possession or control of any commodity forfeited as aforesaid shall deliver the same upon demand to the Chief Inspector or to some person authorised, in writing, by the Minister or the Chief Inspector to receive the same.

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Tests.

10—(1) All tests required for the purposes of this Act shall be made in the mode prescribed in the schedule to this Act, with an apparatus which conforms to the standard model apparatus for the time being in use and kept in the office of the Government Analyst.

(2) The model in the office of the Government Analyst at the passing of this Act shall be such standard model as aforesaid, until the Governor, by proclamation, declares that any new model shall be substituted therefor.

(3) Upon application by any person, and upon payment of the prescribed fee, the Government Analyst may test any such apparatus, and, if the same is found to be accurate, may stamp it in the manner prescribed as in conformity with the standard model at the date when the same is so stamped.

(4) No test of any commodity shall be admissible in evidence for the purposes of this Act unless the apparatus with which the same was made has been stamped as aforesaid within five years before such test was made.

Marking of packages.

11 No person shall sell, or keep for sale, any inflammable liquid or carbide in any package or container containing less than the prescribed quantity thereof unless such package or container is branded and marked as may be prescribed.

Inspection.

12—(1) An inspector may—

I. At any time enter, inspect, and examine any place where he believes inflammable liquid or carbide is kept:

II. Make any general or particular inquiries as to the observance of this Act:

III. Take, without payment, such samples of any substance which he believes to be inflammable liquid or carbide as are necessary for the examination and testing thereof:

IV. Seize, detain, and remove any inflammable liquid or carbide, and any package, vehicle, ship, or boat in which the same is contained, if he has reasonable cause to believe that there has been a contravention of this Act in respect of such liquid or carbide: and

V. With the consent of the Minister, or, in case of imminent danger, without such consent, destroy or render harmless any inflammable liquid or carbide, if he has reasonable ground to believe it necessary for the public safety so to do.

(2) Every person in or about the premises which are being inspected as aforesaid, if and when reasonably required so to do, shall facilitate and assist in the exercise by the inspector

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of all or any such duties as aforesaid, and shall truthfully answer all questions lawfully put to him by such inspector.

(3) No action shall be taken against any inspector in respect of anything lawfully done by him in the execution of his duties under this Act.

Offences.

13—(1) Any person who—

I. Keeps or has in his possession any inflammable liquid or carbide:

II. Conveys any inflammable liquid or carbide:

III. Being the owner or occupier of any premises, or of any vehicle, ship, or boat, knowingly permits such premises, vehicle, ship, or boat to be used:

IV. Being the master of a ship or boat, uses, or permits the use of, such boat for the conveyance of inflammable liquid or carbide:

V. Being in possession or control of any forfeited commodity, fails to deliver the same on demand.

VI. Fails to facilitate or assist in the exercise, by an inspector, of any duty under this Act when required so to do:

VII. Refuses or neglects to answer truthfully any question lawfully put to him by an inspector: or

VIII. Sells, or keeps for sale, any inflammable liquid or carbide—

in contravention of this Act, shall be guilty of an offence.

Penalty: Fifty Pounds.

(2) Any person who fails on demand to deliver up his licence or certificate of registration for cancellation when required by this Act shall be guilty of an offence.

Penalty: Ten Pounds.

(3) Upon the conviction of any person for any offence under any of the provisions of Subsection (1) hereof, the court may order any inflammable liquid or carbide in respect of which such offence was committed to be forfeited.

Procedure.

14 All proceedings in respect of offences against this Act shall be taken, heard, and determined, and all penalties enforced and recovered, in accordance with the provisions of the Justices' Procedure Act, 1919.

10 Geo. V. No. 55.

Evidence.

15—(1) In any proceedings under this Act any allegation in the complaint—

I. That any person therein named holds a specified office:

II. That the defendant is, or is not, the holder of a licence or certificate of registration in respect of any specified premises: or

III. That any article, commodity, or container is or contains inflammable liquid or carbide, as the case may be— A.D. 1929.

shall be sufficient evidence of the fact so alleged until the contrary is proved.

(2) In any such proceedings the certificate of the Government Analyst shall be evidence of the facts therein certified, but the defendant, by notice, in writing, not less than twenty-four hours before the time appointed for the hearing of the proceedings, may require that the Government Analyst shall be called for cross-examination thereon.

Regulations.

16—(1) The Governor from time to time may make regulations prescribing all matters and things which may be necessary or desirable for carrying out or giving effect to the provisions of this Act, and in particular may prescribe—

I. The forms to be used for the purposes of this Act:

II. The mode and conditions of registration of premises, the issue of licences, and the transfer of any such registration or licence:

III. The fees to be paid in respect of registrations, licences, and transfers, with power to discriminate in respect of the quantity of the commodity to be kept, or the number of containers or storing places to be used thereunder:

V. The precautions to be observed and the methods to be employed in different cases or classes of cases respectively in the storing, keeping, or conveying of any commodity, and generally for the preservation of public safety:

V. The persons by and from whom, the times at which, and the matters in respect of which, notices, returns, or other information may be required:

. The materials to be used, and the nature and form of construction to be adopted, for the several classes of stores or containers respectively, according to class or capacity for storing, keeping, or conveying any commodity, and the relative positions in which any such stores or containers may be built or kept in relation to one another or to other buildings:

VII. The conditions under which the hawking of inflammable liquid may be permitted: and

VIII. The places at which, and the conditions under which, any commodity may be loaded, unloaded, or kept upon or from any ship or boat, and generally regulating all matters relating to such loading or unloading—

under this Act.

(2) Any such regulations may impose penalties not exceeding Fifty Pounds, either generally or in particular cases, for the breach of any such regulation.

SCHEDULE.

NOTE—In this schedule the expression "oil" means any liquid to be tested for the purpose of ascertaining its character as inflammable liquid. Degrees of temperature are according to Fahrenheit's thermometer.

I.—NATURE OF THE TEST APPARATUS.

The apparatus consists of the following parts:—

1. An oil cup.
2. A cover, with slide, test lamp for oil, or test-flame arrangement for use with gas, and clockwork arrangement for opening and closing the holes in the cover, and for dipping the test-flame.
3. A water bath or heating vessel.
4. A tripod (with jacket), and spirit lamp or gas arrangement for heating the water bath.
5. A round bulb thermometer for testing the temperature of the oil, with scale ranging from 55° Fahrenheit to 160° Fahrenheit.
6. A long bulb thermometer for testing the temperature of the water, with scale ranging from 90° Fahrenheit to 220° Fahrenheit.
7. A mercurial or aneroid barometer.

The oil cup is a cylindrical flat-bottomed vessel, 2 inches in diameter, 2 2/10 inches in height (internal), made of gunmetal or brass (17 B.W.G.), and tinned or silvered inside. It is provided with a projecting rim, 5/10-inch wide, 3/8-inch from the top and 1 7/8-inch from the bottom of the cup, on which it rests when inserted in the water bath. A gauge is fixed on the inside of the cup to regulate the height to which it is to be filled with the sample under examination. The distance of the point from the bottom of the cup is 1½-inch. The cup is provided with a close-fitting overlapping cover made of brass (22 B.W.G.), which carries the thermometer, the test lamp, or test-flame arrangement, and the adjuncts thereto. The test lamp, which has a spout, the mouth of which is 1/16-inch in diameter, or test-flame arrangement, is suspended upon two supports by means of trunnions, which allow it to be easily inclined to a particular angle and restored to its original position. The socket in the cover, which is to hold a round bulb thermometer for indicating the temperature of the oil during the testing operation, is so adjusted that the bulb of the latter is always inserted to a distance of 1½-inch below the centre of the lid.

The cover is provided with three holes—one in the centre (0·2 square inch) and two smaller ones (each 0·06 square inch) close to the sides. These are closed and opened by means of a pivoted slide. When the slide is moved so as to uncover the holes, the suspended lamp, or test-flame arrangement, is caught by a projection fixed on the slide, and tilted in such a way as to bring the end of the spout or test flame just below the surface of the lid. As the lid moves back so as to cover the holes the lamp returns to its original position. Upon the cover, in front of and in a line with the nozzle of the lamp, is fixed a white bead, the diameter of which represents the size of the test flame to be used.

The water bath or heating vessel consists of two flat-bottomed copper cylinders (24 B.W.G.)—an inner one of 3 inches diameter and 2½ inches height, and an outer one of 5½ inches diameter and 5¾ inches 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. The top of the bath projects both outwards and inwards about 3/8-inch, that is, its diameter is about 6/8-inch greater than 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 and the oil cup is ½-inch. The bath is therefore so constructed that when the oil cup is placed in position an air space or air chamber intervenes between the two; consequently, in applying the tests to oils flashing below 115° Fahrenheit the heat is transmitted gradually to the oil from the hot water through the air space. The water bath is fitted with a socket, set at a right angle, for receiving a long bulb thermometer, to indicate the temperature of the water. It is also provided with a funnel, an overflow pipe, and two handles.

The water bath rests upon a tripod stand, which is fitted with a copper cylinder or jacket (24 B.W.G.) 6½ inches diameter, so that the bath is surrounded by an enclosed air space, which retains and regulates the heat. One of the legs of the stand serves as a support for a spirit lamp, which is attached to it by a small swing bracket. The distance of the wickholder from the bottom of the bath is 1 inch. The clockwork arrangement by which, during the operation of testing, the slide is withdrawn and the test flame dipped into the cup and raised again as the slide is replaced, is provided with a ratchet key for setting it in action for each test, and with a trigger for starting it each time that the test flame is applied. From the beginning to the end of the movement of the slide the time taken is to be exactly three seconds.

II.—Directions for Preparing and Using the Test Apparatus.

1. *Preparing the Water Bath.*

The water bath is filled by pouring water into the funnel until it begins to flow out at the overflow pipe. The temperature of the water at the commencement of each test, as indicated by the long bulb thermometer, is to be as follows:—

(*a*) 130° Fahrenheit when a flashing point at or about 73° Fahrenheit is to be observed.

(*b*) 160° Fahrenheit when a flashing point at or about 100° Fahrenheit is to be observed.

(*c*) 180° Fahrenheit when a flashing point at or about 150° Fahrenheit is to be observed.

This is attained in the first instance by mixing hot and cold water, either 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 the water is heated in the bath by means of a spirit lamp or gas arrangement until the required temperature is indicated.

2. *Preparing the Test Lamp.*

(*a*) The test lamp is fitted with a piece of cylindrical wick of such thickness that it fills the wickholder, but may be readily moved to and fro for the purpose of adjusting the size of the flame. In the body of the lamp, upon the wick which is coiled within it, is placed a small tuft of cotton wool moistened with petroleum, any oil not absorbed by the wool being removed. When the lamp has been lighted, the wick is adjusted by means of a pair of forceps or a pin until the flame is of the size of the bead fixed on the cover of the oil cup.

Should a particular test occupy so long a time that the flame begins to get smaller through the supply of the oil in the lamp becoming exhausted, three or four drops of petroleum are allowed to fall upon the tuft of wool in the lamp from a dropping-bottle or pipette provided for the purpose. This can be safely done without interrupting the test.

(*b*) When using gas for testing, the jet is to be lighted, and then adjusted by means of the tap controlled by means of a screw pinch-cock or fine tap until the flame is the size of the bead fixed on the cover of the oil cup.

III.—Filling the Oil Cup.

Before the oil cup is filled the lid is to be made ready by being placed upon the cup, *i.e.*, the round bulb thermometer is to be inserted into the socket, so

that the projecting rim of the collar with which it is fitted touches the edge of the socket, and the test lamp is to be placed in position. The oil cup is to be cooled when necessary to a temperature not exceeding—

(*a*) 60° Fahrenheit, when a flashing point at or about 73° Fahrenheit is being observed:

(*b*) 85° Fahrenheit, when a flashing point at or about 100° Fahrenheit is being observed:

(*c*) 135° Fahrenheit, when a flashing point at or about 150° Fahrenheit is being observed—

by placing it bottom downwards in water at a suitable temperature. The oil cup is now to be rapidly wiped dry, placed on a level surface in a good light, and the oil to be tested poured in without splashing until its surface is level with the point of the gauge which is fitted in the cup. The lid is then put on the cup at once and pressed down, so that its edge rests on the rim of the cup.

IV.—APPLICATION OF THE TEST.

1. The water bath, with its thermometer in position, is placed in some locality where it is not exposed to currents of air, and where the light is sufficiently subdued to admit of the size of the entire test flame being compared with that of the bead on the cover. The cup is carefully lifted, without shaking it, and placed in the bath, the test lamp is lighted, and the clockwork wound up by turning the key. The thermometer in the oil cup is now watched, and the clockwork is set in motion by pressing the trigger when the temperature has reached—

(*a*) 63° Fahrenheit, when a flashing point at or about 73° Fahrenheit is being observed:

(*b*) 90° Fahrenheit, when a flashing point at or about 100° Fahrenheit is being observed:

(*c*) 140° Fahrenheit, when a flashing point at or about 150° Fahrenheit is being observed.

If no flash takes place the clockwork is at once rewound and the trigger pressed at the next higher degree, and so on at every degree rise of temperature until the flash occurs.

2. When a flashing point at or above 115° Fahrenheit is being observed the air chamber is to be filled to a depth of 1½ inch with cold water before the oil cup containing the oil to be tested is placed in position.

3. The temperature at which a flash occurs, if not within 8° of the temperature at which the testing was commenced, is the observed flashing point of the oil, and by correction of the observed flashing point for atmospheric pressure, as hereinafter described, the true flashing point is obtained.

4. If, however, the flash takes place at any temperature within 8° of the temperature at which the testing was commenced, the test is to be rejected, and the whole operation of testing is to be repeated with a fresh portion of the sample, the testing, however, to begin at 10° lower than the temperature at which the flash has been previously obtained. If necessary, this procedure shall be repeated with fresh portions of oil until a flash has been obtained at a temperature not within 8° of the temperature at which the testing was commenced.

5. The temperature at which this lastmentioned flash occurs is the observed flashing point of the oil, and by correction of the observed flashing point for atmospheric pressure, as hereinafter described, the true flashing point is obtained.

6. In repeating a test a fresh sample of oil must always be used, the tested sample being thrown away, and the cup must be wiped dry from any adhering oil, and cooled, as already described, before receiving the fresh sample.

7. If in any case no flash has occurred when a temperature has been reached which is not within 8° of the temperature at which the testing was commenced, and which, after correction for atmospheric pressure, is not less than 100° Fahrenheit, and the tests are not required to be continued, the oil shall be deemed to have a true flashing point of not less than 73° Fahrenheit.

8. If no flash has occurred when a temperature has been reached which is not within 8° of the temperature at which the testing was commenced, and which, after correction for atmospheric pressure, is not less than 100° Fahrenheit, and the tests are not required to be continued, the oil shall be deemed to have a true flashing point of not less than 100° Fahrenheit.

9. In the same manner, if no flash has occurred when a temperature has been reached which is not within 8° of the temperature at which the testing was commenced, and which, after correction for atmospheric pressure, is not less than 150° Fahrenheit, and the tests are not required to be continued, the oil shall be deemed to have a true flashing point of not less than 150° Fahrenheit.

V.—Correction for Atmospheric Pressure.

As the flashing point of an oil is influenced by changes in atmospheric pressure to an average of 1·6° for every inch of the barometer, a correction of the observed flashing point is necessary whenever the barometer does not stand at 30 inches. This correction is to be made in the following manner:—

If the barometer stands at *less* than 30 inches (the normal height of the barometer), *add* to the observed flashing point 1·6 times the difference (measured in inches) between the actual and normal barometer. If the barometer stands *above* 30 inches, *deduct* from the observed flashing point 1·6 times the difference between the actual and normal barometer.

The nearest whole number to the result of this correction is to be taken as the corrected flashing point, and if the result is exactly midway between the two whole numbers, the higher whole number is to be taken.

For example: Suppose an oil has an observed flashing point of 72°, the barometer being 27·1 inches, then the difference between 30·0 inches and 27·1 inches is 2·9 inches. This result multiplied by 1·6 is 4·64, which has to be *added* to 72, making 76·64. The nearest whole number to this is 77°, which is to be taken as the corrected flashing point, and if the testing had been commenced at or below 64° the true flashing point is 77° Fahrenheit.

Again: Suppose the observed flashing point of an oil to be 96° and the testing had been commenced at 87° and the barometer indicated 30·6 inches. The true flashing point of the oil is the nearest whole number to 96 *minus* the product of 0·6 multiplied by 1·6, that is, 95° Fahrenheit.

The readings of the barometer are to be corrected readings, in accordance with the corrections applicable to the instrument in use. The instrument must be compared periodically with the standard barometer at the office of the Government Analyst, and regulated thereby.

VI.—Application of the Test to Viscous Fluids or Preparations.

If the flashing test has to be applied to substances of a viscous or semi-solid nature which cannot be poured (such as solutions of indiarubber in mineral naphtha), the mode of proceeding is as follows:—

One fluid ounce or two tablespoonfuls of the substance to be tested is placed in the cup, and the cover is put on. The air chamber in the water bath is filled with water to a depth of 1½ inch, and the temperature of the water bath is raised to 90°. The cup is then put into the bath, and the temperature of the water bath maintained at 90° throughout the test. After the lapse of 15 minutes the test flame is to be applied. If no flash occurs the heating is continued for another 15 minutes, and the test flame again applied, and so on until a flash takes place, or the temperature in the cup has reached 90°, and so on.

The temperature at which a flash occurs is the observed flashing point of the substance, and, subject to correction for atmospheric pressure as hereinbefore described, is the true flashing point.

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