

Storage of Petroleum

Cap. 172.

STORAGE OF PETROLEUM REGULATIONS, 1932

Authority: These regulations were made on 6th October, 1932 by the Governor-in-Executive Committee under section 3 the *Petroleum Act, 1912*.

Governor-in-Executive Committee: These powers are now exercised by the Minister under section 31 of the *Storage of Petroleum Act*.

Commencement: 30th December, 1932.

1. These Regulations may be cited as the *Storage of Petroleum Regulations, 1932*. Short title.

PART I

2. In these regulations

"Petroleum" means any inflammable liquid which is derived from petroleum, coal, shale, peat, or any other bituminous substance, or from any of their products. Definitions.

"Dangerous petroleum" means petroleum having a flash-point below 73F. Abel close test.

"Ordinary petroleum" means any petroleum having a flash-point which is not below 73F. Abel test and which is below 150F. Pensky-Marten close test.

"Fuel Oil" means a petroleum used as fuel and having a flash-point which is not below 150F. Pensky-Marten close test.

"Bulk installation" hereinafter referred to as an installation means a place specially prepared for the storage of petroleum to an amount exceeding 500 tons.

"Storage shed" means a building used for the storage of petroleum otherwise than in bulk and includes a filling shed.

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PART II

Installations
for the
Storage of
Petroleum.

3. Any person desiring to erect an installation shall forward to the Governor-in-Executive Committee an application and shall submit with such application (a) a site plan, drawn to a scale of not less than one inch to 100 feet, showing the position of the proposed tanks, buildings, walls and embankment surrounding the enclosure, and all adjacent warehouses, buildings and roads; (b) plans and section drawn to scale of not less than one tenth of an inch to one foot, of the surrounding walls or embankments.

4. Every person managing or employed on or in connection with an installation or storage shed shall abstain from any act whatever which tends to cause fire or explosion and which is not reasonably necessary and shall prevent any other person from doing such act.

5. No person shall smoke in a storage shed or in an installation or within a radius of 100 feet of either except in such place as may be specially set apart for the purpose and suitable notices to this effect shall be conspicuously posted on the premises.

6. All operations within any installation or storage shed shall be conducted under the supervision of a responsible agent of the owners of the premises.

7. The ground in the interior of an installation shall be kept clean and free from articles of an inflammable nature, waste vegetation and rubbish articles of an inflammable nature shall only be stored under conditions approved by the Petroleum Inspector.

8. An efficient fire service or fire extinguishing apparatus approved of by the Superintendent of the Fire Brigade, shall be provided in each installation and the employees shall be instructed periodically in the use of the various fire appliances.

9. An adequate supply of sand or dry earth shall always be kept ready for immediate use in an installation or storage shed for the purpose of extinguishing fire.

10. All enclosures surrounding tanks shall be drained by two or more pipes fitted with valves actuated from the outside of the enclosure to the satisfaction of the Petroleum Inspector. Such valves shall be kept in proper working order and shall always be kept closed except when they are actually in use. No water shall be allowed to accumulate in the enclosure.

11. Valves in pipe mains, and valves in pipes for draining water, may be of any approved type, but shall be provided with some form of indicator so constructed as to be readily seen from a distance whether the valves are open or shut.

12. All leaks in tanks and pipes shall be promptly repaired.

13. No person shall enter any tank without the authority of the Manager of the installation.

14. Before a tank is entered or repairs undertaken which would expose the interior atmosphere to contact with hot rivets or other source of artificial heat it shall be tested by a person approved by the Governor-in-Executive Committee. Such person shall, if satisfied, furnish a certificate setting out that the tank has been thoroughly ventilated and has been found free from vapour, and substantially free from oil from which vapours may be evolved.

15. Until a tank is certified free from dangerous vapour only portable safety lamps, oil or electric, of types approved by the Petroleum Inspector of the recognised types used in the Petroleum Industry shall be taken to prevent waste oil passing down drains or watercourses and naked lights or electric lamps with wandering leads is strictly prohibited.

16. Steel tanks shall be constructed of mild steel plates designed according to sound engineering practice.

17. The Petroleum Inspector may at all times enter any installation or storage shed for the purpose of inspection with a view to ensuring conformity with these regulations.

18. The distances specified in Parts III and IV following may be reduced by the Petroleum Inspector in cases where screenwalls

are provided or other special precautions taken, or where there are special circumstances which in the opinion of the Petroleum Inspector warrant such reduction.

19. Precautions to be approved by the Petroleum Inspector shall be taken to prevent waste oil passing down drains or water courses and from reaching shipping in harbour or waters where there is no tidal scour.

20. No fire or naked lights shall be permitted within the installation except in the offices, soldering shed, laboratories, under stills, living quarters, engine-rooms, boiler-house and smithy.

21. Electric lights shall be enclosed in a double glass the outer one of which shall be gas-tight. All switches and fuses within a radius of 50 feet from any point in the perimeter of storage tanks shall be outside the buildings and enclosed in gas-tight boxes and all electric wires shall be enclosed in piping.

22. The storage shed shall be constructed of masonry, iron or other unflammable material and shall be fitted with tiled, paved, earthen or concrete floors.

23. Each tank or group of tanks shall be surrounded by a wall or embankment of substantial construction, or shall be partially sunk in an excavation.

24. The enclosure thus formed shall be of dimensions sufficient to contain in the case of "dangerous" and "ordinary" petroleum an amount equal to the volume of oil that the tank or tanks are capable of containing, with the addition of 10% in excess of that volume, unless in the opinion of the Petroleum Inspector the circumstances are such as to warrant a reduction or addition in the capacity of the enclosures. The enclosure shall be so constructed as to prevent the leakage of oil therefrom, whether under the action of fire or otherwise.

25. In the case of all storage sheds within the installation, either the doorways and other openings of the building shall be built up to a height of not more than 2 feet above the level of the

ground outside it or the floor shall be sunk to a depth of not more than 2 feet below the level of the ground, or the building itself shall be surrounded with a masonry wall or embankment, or both. Provided that whatever method of preventing outflow of petroleum is adopted the receptacle so formed shall be capable of containing the whole of the petroleum liable to be present in the storage shed.

26. All ventilating openings on tanks shall be protected by double diaphragms of strong wire gauze having a mesh of 200 to the square inch, the diaphragms to be spaced not less than 3 inches apart. If not provided with such ventilating openings each tank shall be fitted with a safety valve of an approved type.

27. Adequate ventilation shall be provided in all storage sheds.

28. Regulations 20 to 27 both inclusive shall not apply to installations or separate sections of installations where fuel oil only is dealt with.

PART III

29. The following shall be the minimum distances between the nearest points of the perimeters of the storage tanks or storage sheds or buildings, as the case may be:—

Dangerous
Petroleum.

Distance between tank and tank	50 feet
" " " " storage shed or building	200 "
" " " " outer boundary of installation	300 "

30. Petroleum other than that stored in tanks shall be contained in gas-tight tinned or galvanized sheet iron steel or lead plate receptacles fitted with well-made filling holes and well-fitting screw plugs, or fitted with screw caps or other metal air tight caps, subject to the following provisions:—

(a) A sufficient air space of not less than 5% of the contents to allow of expansion shall be left in each receptacle at the time of filling.

- (b) All 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.
- (c) The nature of the contents and the words "highly inflammable" shall be distinctly marked on all receptacles before despatch from the installation.
- (d) All receptacles before being repaired shall be cleared of all dangerous petroleum and of all vapours arising therefrom.

31. The soldering of filled tins shall not be carried out in the filling shed but shall be done in a separate building not less than 100 feet distant. The soldering irons unless electrically heated, shall be heated in a separate compartment from that in which the soldering takes place. The opening between these 2 compartments through which the soldering irons are passed shall be at a height of not less than 3 feet from the ground and shall be provided with an iron door on a swing hinge capable of opening both ways.

PART IV

Ordinary
Petroleum.

32. The following shall be the minimum distances between the nearest points of the perimeters of the storage tanks or storage sheds as the case may be:-

	Feet
Distance between tank and tank
" " " " outer boundary of	} 50
" " " " installation	
" " " " storage shed or	
" " " " building	

33. There shall be hung in a conspicuous place in every installation or storage shed a copy of these regulations.

34. Any person committing a breach of these regulations shall be liable on summary conviction to a fine not exceeding \$480.