

**CHAPTER III  
TRANSPORT OF PETROLEUM  
PART I**

**General**

**28. Restriction on leaky receptacles. –**

No leaky tank or container containing petroleum shall be tendered for transport..

**29. Loading of containers. –**

Barrels, drums and other containers filled with petroleum shall be loaded with bung upwards.

**30. Restriction on passengers, combustible and inflammable cargo. –**

Save as provided in rules 38,39 and 52 and clause, (b) of rule 60, no ship, vessel or vehicle shall carry petroleum Class A or petroleum Class B and Class C in bulk if it is carrying passengers or any combustible cargo other than petroleum: Provided that nothing in this rule shall prohibit the use of dunnage for packing purposes in the case of coastwise transport of petroleum Class A otherwise than in bulk.

**31. Prohibition of smoking, fires, lights. –**

No person while engaged in loading or unloading or transporting shall smoke or carry matches, lighters or other appliances capable of producing ignition or explosion.

**32. Restriction on loading and unloading by night. –**

Petroleum shall not be loaded into, or unloaded from, any ship, vessel or vehicle between the hours of sunset and sunrise, unless.-

(a) adequate electric lighting is provided at the place of loading or unloading and the provisions of Chapter IV are complied with; and

(b) adequate fire-fighting facilities with personnel are kept ready at the place of loading for immediate use in the event of a fire.

(2) Nothing in this rule shall apply to the refueling of an aircraft by vessels or vehicles licensed under these rules in accordance with the provisions of the Indian Aircraft Rules, 1937, or to the refueling of an aircraft by the Defence Forces of the Union.

Explanation - For the purposes of this rule the Chief Controller shall determine the adequacy or otherwise of the electric lighting and fire-fighting facilities.

**PART II  
TRANSPORT BY WATER**

**33. Conditions of carriage of petroleum in bulk by water. –**

(1) Petroleum in bulk shall not be carried by water, except in a ship or other vessel licensed for the carriage of petroleum in bulk by an officer appointed by the Central Government in this behalf (hereinafter in this part referred to as the, licensing authority) and the petroleum shall be stored in such part of the ship or other vessel and in such manner as may be approved by general or special order by the licensing authority after consultation with the Chief Controller,:

Provided that -

(a) nothing in this rule shall apply to vessels registered in a country other than India importing petroleum

(b) petroleum in tank vehicles may, with the permission, in writing, of the Chief Controller and subject to such conditions as he may specify, be transported across a river by a ferry.

(2) The licence referred to in sub-rule (1) shall be granted in Form III, and shall remain in force for a period of one year from the date of its issue.

**33. Requirement as to the construction of vessels. –**

Every ship or other vessel carrying petroleum in bulk, other than a ferry permitted to transport tank vehicles under clause (b) of the proviso of sub-rule (1) of rule 33, shall be made of iron or steel well and substantially constructed with scantlings of ample dimensions in proportion to the size of the vessel: Provided that the licensing authority may, in special circumstances, allow use of such ships or other vessels constructed of materials other than iron or steel under such conditions as it may, in consultation with the Chief Controller, specify.

**35. Tank fittings on ships or vessels. –**

The following provisions shall apply for the transport of petroleum other than petroleum Class C in ship or other vessels, namely: -

- (a) All tanks shall be fitted with independent approved filling and suction pipes and valves, or with stand pipes with blank flanges, all pipes being carried down nearly to the bottom of the tanks, and no petroleum in bulk shall be taken on board or discharged except through such pipes and valves, unless otherwise permitted by the Chief Controller in writing;
- (b) All tanks shall be fitted with manholes having screw-down cover with petroleum-tight joints and, in the case of tanks intended for use with petroleum class A, with ventilators or relief valves of approved pattern properly protected with wire gauge of a mesh not less than 11 meshes to linear centimeter; and
- (c) Ventilators similarly protected shall be fitted to all spaces, around tanks.

**36. Self propelled barges. –**

The following conditions shall be observed in self propelled barges transporting petroleum other than petroleum class C, namely: -

- (a) The whole of the machinery shall be at the stern of the barge and shall be entirely separated from the cargo by a cofferdam consisting of two transverse petroleum-proof bulkheads separated by a space of at least 75 centimetres;
- (b) each exhaust outlet from the machinery shall be fitted with an approved type of spark arrester;
- (c) no petrol-driven engine shall be used either as main engine or for the purpose of driving any auxiliary machinery or pumps.
- (d) a quick-action closing valve which can be operated from outside the machinery space, shall be fitted to each fuel feed pipe at its junctions with the fuel service tank;
- (e) the barge shall be provided with a heavy wood belting; and
- (f) suitable ventilators shall be fitted to the cargo space.

**37. Petroleum in bulk on barges and flats. –**

Petroleum in bulk shall not be transported in a barge or flat unless the barge or flat is self-propelled or is in tow of, or otherwise, attended by, a steamer or tug and carries:

- (a) at least four fire extinguishers suitable for extinguishing oil fires and a covered sand box, on deck, containing at least 0.20 cubic metres of dry sand;
- (b) a suitable hammer of non-sparking metal; and
- (c) a red flag.

**38. Restriction on cargo or passengers. –**

- (1) No ship or other vessel shall carry petroleum in bulk if it is carrying passengers, or any inflammable cargo other than petroleum or coal.
- (2) This rule shall not apply to petroleum Class C used as fuel and carried in cellular double bottoms under engine and boiler compartments and under ordinary holds; such fuel oil tanks and installations connected therewith shall comply with the provisions of the Indian Merchant Shipping (Construction and Survey of Passenger Steamers) Rules, 1956.

**39. Petroleum carried as cargo in unberthed passenger ships. –**

Petroleum class A shall not be transported as cargo by an unberthed passenger ship as defined in the Merchant Shipping Act, 1958 (44 of 1958): Provided that the certifying officer referred to in section 243 of the Merchant Shipping Act, 1958 (44 of 1958), may in cases where he is satisfied

that no other means of transporting the petroleum are available, permit petroleum Class A in quantity not exceeding 1,250 litres to be transported otherwise than in bulk by an unberthed passenger ship subject to :

- (a) the condition that no more persons shall be carried in the ship than can with safety be accommodated in the ship's life-boats in case of an accident; and
- (b) such other conditions as the certifying officer may, after consultation with the Chief Controller, impose : Provided further that clause (a) of the first proviso shall not apply in the case of unberthed passenger ships engaged on voyages in the course of which they do not go beyond 32 kilometres from land.

**40. Prohibition of transport of petroleum Class A by country craft. –**

No country craft shall carry petroleum class A if it is carrying passengers.

**41. Restrictions on steamers or tugs employed in towing or attending a petroleum vessel. –**

- (1) No steamer or tug employed in towing or otherwise attending a barge, flat or lighter carrying petroleum, other than petroleum class C in bulk, shall at the same time tow or otherwise attend any other vessel carrying an inflammable cargo other than petroleum or coal.
- (2) No such steamer or tug shall carry any inflammable cargo other than petroleum or coal.
- (3) All such steamers or tugs shall be fitted with efficient spark arresters.

**42. Ventilation and cleaning of holds and tanks. –**

- (1) Before any petroleum is discharged from a ship or vessel, the holds of such vessels shall be thoroughly ventilated: Provided that nothing in this sub-rule shall apply to any vessel carrying petroleum Class A not exceeding 30 litres or petroleum Class B not exceeding 2,500 litres or petroleum Class C.
- (2) After all petroleum has been discharged from any such vessel, the holds, tanks and bilge's of the vessel shall be rendered free from inflammable vapour.
- (3) Sub-rule (2) shall not apply to the tanks of a ship importing petroleum which leaves the port without delay after unloading of cargo or remains only for the purpose of taking on board bunkers, stores or ballast or for such other purpose as may be approved by the Conservator, if the tanks of every such ship are securely fastened down immediately after the discharge of the cargo.
- (4) Sub-rule (2) shall not apply to barges or lighters continuously engaged in the transport of petroleum in bulk, if -
  - (a) an interval of not more than 72 hours is likely to elapse between an operation of unloading and the next loading operation; and
  - (b) the tanks are securely fastened down immediately after unloading.
- (5) Sub-rule (2) shall not apply to specially constructed steel tank motor vessel approved by the Chief Controller which are engaged in the transport of petroleum in bulk on such rivers and on such ports thereof as may be approved by him in areas outside port limits, or by the Conservator within port limits, if the tanks of such vessels are securely fastened down immediately after unloading and the vessels depart not later than 12 hours after completion of unloading for their next place of loading.
- (6) All ships or other vessels which by sub-rule (3) or sub-rule (4) or sub-rule (5) are exempted from the application of sub-rule (2), shall until their holds and tanks have been rendered free from inflammable vapour, comply with all the rules applicable to ships or other vessels when carrying petroleum in bulk.

**43. Master of vessels specially responsible. –**

The Master or other officer incharge of any vessel which had carried petroleum on board whether as a cargo or as a fuel, or any vessel licensed under rule 33 shall be responsible to see that -

- (a) all due precautions are taken for the prevention of accidents due to ignition of petroleum or petroleum vapour;
- (b) so long as there is petroleum or petroleum vapour in a tank, all openings from the tank to the atmosphere except the gas escape line are kept closed and locked or otherwise securely fastened; and when it is necessary to take dips or samples, the sludge plugs or sighting ports are

closed immediately after such dips or samples are taken: Provided that subject to the provisions of clause (c) the master or officer incharge may cause the necessary openings to be opened or unlocked for the purpose of taking on board or unloading petroleum Class B or petroleum Class C for cleaning the tanks or for other sufficient reason;

(c) no person enters a tank or an enclosed space which had, or is suspected to have contained petroleum without wearing a breathing apparatus of a type approved by the Chief Controller unless an officer appointed by the Central Government in this behalf has examined the tank or space with the aid of an approved petroleum vapour-testing instrument and has been certified by him in writing that the said tank or space is free from petroleum vapour.

(d) the vessel does not undergo repair by hot work to any of its tanks, part of fittings which are likely to contain petroleum vapour or petroleum unless each such tank, part of fittings, as the case may be, has been examined by an officer appointed under clause (c) with the aid of an approved petroleum vapour-test instrument and has been certified by him in writing that the tank, part or fittings is free from petroleum vapour or petroleum;

(e) the vessel used for the carriage of petroleum in bulk as a cargo is not taken among other ships or to a dry dock unless-

(i) the vessel is proceeding to an oil berth, or

(ii) a certificate from an officer appointed under clause (c); to the effect that he has examined all the tanks, cofferdams, pump rooms and such other parts as are deemed necessary with the aid of an approved petroleum vapour-testing instrument, and that such tanks, cofferdams, pump rooms and other parts are free from petroleum vapour; and declaration from the Master that to the best of his knowledge there is no petroleum vapour, present in other parts of the vessel not covered by the above certificate are produced.

(f) the officer granting certificate under clause (c) or clause (d) or clause (e) may specify such conditions and make such recommendations as are necessary to maintain gas-free conditions of tanks, space or parts certified;

(g) the certificate referred to in clause (c), (d) and (e) shall be granted only on receipt of fee fixed by the Central Government from time to time;

(h) the vessel or any steamer or tug towing or otherwise attending on such vessel exhibits conspicuously .-

(i) from sunrise to sunset a red flag not less than 90 centimetres square with a white circular centre 15 centimetres in diameter if petroleum class A is carried and a red flag not less than 90 centimetres square if petroleum Class B is carried; and

(ii) from sunset to sunrise such warning lights as may be required by the Conservator;

**Note :** The port authority concerned shall be the authority for the issue of final permission for the purpose of clauses (c), (d) and (e) even though Gas Free Certificates have been obtained from the officer concerned under clause (c) of this rule.

<sup>2</sup>[43-A. Agency undertaking ship breaking specially responsible.—The Agency, which owns vessels meant for breaking or beaching, before undertaking breaking of such vessels, called ship breaking, shall be responsible to see that—

(a) all due precautions are taken for the prevention of accidents due to ignition of petroleum or petroleum vapour;

(b) so long as there is petroleum vapour in a tank, all openings from the tank to the atmosphere except the gas escape line are kept closed and locked or otherwise securely fastened; and subject the provisions of clause (c), the

2. Inserted by G.S.R. 61(E), dated 2-2-2007 (w.e.f. 2-2-2007).

agency undertaking the ship breaking activities may cause the necessary openings to be opened or unlocked for cleaning the tanks or for making the tank free from petroleum vapour or for other sufficient reason;

(c) no person enters a tank or an enclosed space which had, or is suspected to have contained petroleum without wearing a breathing apparatus of a type approved by the Chief Controller unless an officer appointed by the Central Government in this behalf has examined the tank or space with the aid of an approved petroleum vapour-testing instrument and has been certified by him in writing that the said tank or space is free from petroleum vapour;

(d) the vessel does not undergo breaking by hot work to any of its tanks, part of fittings which are likely to contain petroleum vapour or petroleum unless each such tank, part of fittings, as the case may be, has been examined by an officer appointed under clause (c) with the aid of an approved petroleum vapour-test instrument and has been certified by him in writing that the tank, part of fittings are free from petroleum vapour or petroleum;

(e) the vessel is not taken to ship breaking yard unless a certificate from an officer appointed under clause (c); to the effect that he has examined all the tanks, cofferdams, pump rooms and such other parts as are deemed necessary with the aid of an approved petroleum vapour-testing instrument, and that such tanks, cofferdams, pump room and other parts are free from petroleum vapour; and declaration from the agency undertaking the ship breaking activities that to the best of its knowledge there is no petroleum vapour, present in other parts of the vessel not covered by the above certificate are produced;

(f) the officer granting certificate under clause (c) or clause (d) or clause (e) may specify such conditions and make such recommendations as are necessary to maintain gas free conditions of tanks, space or parts certified;

(g) the certificate referred to in clauses (c), (d) and (e) shall be granted only on receipt of fee fixed by Central Government from time to time.

*Note.*—The port authority concerned shall be the authority for the issue of final permission for the purpose of clauses (c), (d) and (e) even though Gas Free Certificates have been obtained from the officer concerned under clause (c) of this rule.

**44. Loading and unloading of bulk petroleum. –**

(1) Petroleum in bulk shall not be loaded or unloaded into or from any ship/ barge at any place unless-

(a) the location is notified or permitted by the Central Government and the facilities are approved by Chief Controller under rule 16, in case of import, or

(b) the location and facilities for loading or unloading are approved by the Chief Controller, in cases other than import

(2) Persons(s) seeking approval under sub-rule 1 (b) of this rule shall submit to Chief Controller-

(a) Specification and plans drawn to scale in quadruplicate, indicating

(i) surroundings and all protected works within 500 metres of the loading or unloading facilities on all sides showing therein the location, size of the ship, available draft, navigation channel, turning circle, route of transfer pipeline(s),

(ii) mooring or berthing facilities, service platform/berth, mode of loading or unloading, fire fighting facilities, illumination arrangements, control room, spill collection/containment arrangements etc., and

(iii) piping and instrumentation diagram of the petroleum pipeline(s) at the loading or unloading area:

- (b) Comprehensive project report elaborating the scheme and methodology of loading or unloading of petroleum, safety and security features including those mentioned in (a) (i), (ii) and (iii) of this sub-rule;
- (c) Risk Analysis Report indicating qualitative and quantitative risks, probable failure scenarios and consequent hazards and damages with damage distances etc, and remedies recommended;
- (d) Scrutiny fee of rupees two thousand, and
- (e) Copies of clearances obtained from the following authorities
  - (i) Ministry of Shipping or State Maritime Board as the case may be.
  - (ii) Ministry of Environment and Forests or State Pollution Control Board as the case may be.
- (3) Loading or unloading of petroleum in bulk shall be either by merchandised arm, or armoured hose metal pipe as approved by Chief Controller.
- (4) All hoses, pipes and other appliances used in loading or unloading of petroleum shall be electrically and mechanically continuous and duly tested as per codes/standards.
- (5) The hose and metal pipes used for loading and unloading of petroleum in bulk shall be subjected to periodic testing.

**45. Precautions on suspension of loading or unloading. –**

When the loading or unloading of petroleum has commenced, such loading or unloading shall proceed with due diligence and, if it is discontinued, the tanks, and holds of the ships or other vessels concerned and all loading or unloading valves shall be closed immediately.

**46. Prohibition of naked lights, fire and smoking on board a vessel. –**

No fire, naked light, fuses, matches or other appliances for producing ignition or explosion and no smoking shall be allowed on board any barge, flat or lighter carrying petroleum in bulk or on board any vessel used for the transport of petroleum class A otherwise than in bulk or for the transshipment of petroleum to or from any vessel within the limits of any port: Provided that nothing in this rule shall prevent the use on a self propelled barge of the machinery or propulsion.

**47. Prohibition of smoking, fire and lights, during loading or unloading. –**

At all times during loading or unloading of a ship or other vessel and until such time as all petroleum shall have been loaded into or unloaded from the holds or tanks and the holds or tanks shall have been securely closed down and, in the case of unloading rendered free from inflammable vapour, there shall be no fire or artificial light or smoking on board such ship or other vessel or within 30 metres of the place where the petroleum is being loaded or unloaded:

Provided that nothing in this rule shall apply: -

- (i) to the use of lamps, cookers or similar apparatus, electric or otherwise so designed, constructed and maintained as to be incapable of igniting inflammable vapour or in the case of petroleum Class C the use of gally fires.
- (ii) to the unloading or loading of a ship under conditions approved by the conservator by means of steam from her own boilers or power generated by electric motors or internal combustion engines placed in a position away from cargo holds and pump rooms or by means of electric motors, so designed, constructed and maintained as to be incapable of igniting inflammable vapour and maintained in accordance with the requirements specified by Lloyds or other ship surveyors approved by Central Government.

**48. Fire-extinguishing appliances to be ready for use. –**

Vessels unloading or loading petroleum shall have adequate fire-extinguishing appliances so disposed that they can be put into immediate use.

**49. Restriction on the simultaneous conveyance of different classes of petroleum. –**

- (1) Petroleum Class A shall not be conveyed to the shore from, or loaded into the same vessel simultaneously with petroleum Class B or petroleum Class C.
- (2) The Chief Controller may, by written order exempt specially any particular operation from the provisions of sub-rule(1) if separate and distinct pipelines and pumps are provided for loading or unloading of petroleum Class A simultaneously with petroleum Class B or petroleum Class C.

**50. Transport by sea of petroleum which has not been tested. –**

Petroleum which has been imported into any port approved under sub-rules (1) and (2) of rule 16 and which has not been tested at such port in accordance with the rules contained in Chapter X, shall not be transported to any port other than a port at which importation is permitted under sub-rule (1) of rule 16 and in accordance with the provisions of all the rules in Chapter II.

**PART III**

**Coastwise Transport of Petroleum Class A otherwise than in Bulk**

**51. Application. –**

(1) The rules in this Part apply only to the transport coastwise of petroleum class A otherwise than in bulk.

(2) Unless otherwise expressly provided in this part, nothing contained in Part II of this Chapter shall apply to any petroleum transported in accordance with this Part.

**52. Conditions of transport by unberthed passenger ships. –**

Petroleum Class A may be transported otherwise than in bulk by an unberthed passenger ship as defined in the Merchant Shipping Act, 1958 (44 of 1958), in accordance with the provisions of rules 29, 30, 39 and 54 to 60 (both inclusive).

**53. Maximum quantity allowed to be carried. –**

Petroleum Class A may be transported otherwise in bulk by a country craft or steam or motor vessel other than unberthed passenger ship as defined in the Merchant Shipping Act, 1958 (44 of 1958), subject to the provisions of rules 29, 30, 39 and 54 to 60 (both inclusive), if the quantity of petroleum does not exceed –

- (a) in the case of country craft, the licensed carrying capacity of the vessel after taking into account the weight of barrels or tins in which the petroleum is carried; or
- (b) in the case of steam or motor vessels, 15 tonnes.

**54. Carriage below decks. –**

(1) Petroleum Class A shall not be carried below deck in decked vessels unless there are efficient ventilators in the hold.

(2) Half of the ventilators referred to in sub-rule (1) shall be carried down nearly to the bottom of the holds and the other half of such ventilators terminated only a short distance below the deck; the short ventilators shall be labelled "Outlet or to Leeward" and the long ventilators shall be labelled "Inlet or to Windward", such ventilators shall have large cowl heads, the openings being covered with double copper or noncorroding metal gauze not less than 11 meshes per linear centimeter.

**55. Provisions of bulkhead. –**

In all vessels other than country craft, a solid gas-tight bulkhead without openings, and in country craft a solid bulkhead without openings, shall be between the hold and the afterdeck where the crew are accommodated, and in vessels fitted with a poop the bulkhead shall be placed immediately in front of the poop. In decked vessels the bulkhead shall reach upto the deck; in all other vessels it shall reach to within 15 centimetres of the gunwale.

**56. Prohibition of fire, lights and smoking. –**

(1) No fire, naked light of any description and smoking shall be allowed on any part of the vessel transporting petroleum Class A except abaft the solid bulkhead.

(2) The navigational lights on any such vessel shall be carried abaft the bulkhead.

**57. Provisions of fire extinguishers. –**

Fire extinguishers suitable for fighting oil fires shall be placed at convenient points on any vessel transporting petroleum Class A. Not less than two such fire-extinguishers shall be placed on the afterdeck.

**58. Construction of steam or motor-vessels. –**

Steam or motor-vessels not specially constructed for the carriage of petroleum shall not carry petroleum unless they are constructed of iron or steel or any other material approved by the Chief Controller.

**59. Transport in steam or motor-vessels. –**

On steam or motor vessels not specially constructed for the carriage of petroleum-

(a) any petroleum shall either be carried in separate compartments which shall be gas-tight and shall be effectively sealed, or in a hold in which there are efficient ventilators in accordance with sub-rule (2) of rule 54 or on deck in accordance with rule 60;

(b) Petroleum Class A shall be packed in containers complying with the provisions of rules 4 and 5.

(c) Special precautions shall be taken against smoking and the use of lights or fire of any kind while cargo is being loaded or unloaded or while the hatches are off, or any deck openings are uncovered; before any lights are used in compartment which contains petroleum, precautions shall also be taken to ensure that the space is clear of vapour and all empty containers which have contained petroleum class A are kept securely closed.

**60. Transport of deck. –**

Petroleum may be carried in deck in steamer or motorvessels not specially built for the carriage of petroleum, subject to the following conditions, namely:

(a) in cargo ships petroleum Class A shall not occupy more than 50 per cent of the open deck area and shall be so stowed as not to interfere with the navigation of the ship or make it unseaworthy.

(b) in passenger ships a limited quantity of petroleum Class A may be carried provided that proper precautions are taken regarding stowage and keeping the packages away from passengers, promenade or deck space;

(c) the petroleum shall be protected from the direct rays of the sun by the use of canvas awnings or otherwise; and

(d) Conspicuous notices shall be posted up, drawing attention to the danger arising from smoking or striking matches near the deck cargo.

**61. Conditions of transport by country craft. –**

No petroleum Class A shall be transported in a country craft unless the following conditions are satisfied, namely:

(a) the petroleum shall be carried –

(i) in 200 litres capacity steel barrels, the screw bungs of such barrels being well fitting and sealed; or

(ii) in 200 litres capacity sealed steel drums, not more than three tiers of which may be carried on any single vessel; or

(iii) in 10 litres capacity sealed tins, not more than six tiers of which may be carried on any single vessel; or

(b) all barrels or tins shall be carefully examined and no leaky barrel or tin shall be taken on board the craft.

(c) no barrels, drums or tins shall be placed within 1.2 metres of afterdeck where the crew are accommodated in the case of an undecked vessel or on deck in the case of a decked vessel; and

(d) no passengers shall be carried on board the craft.

## **PART – IV**

### **TRANSPORT ON LAND BY VEHICLES**

#### **62. Application. –**

The provisions of this part shall apply to the transport of petroleum on land by vehicles except transport of –

- (a) Petroleum Class A in quantity not exceeding 100 litres and petroleum of any other class, otherwise than in bulk, subject to the provisions of rule 67.
- (b) Petroleum of any class transported by the Defence Forces of the Union.

#### **63. Tank Vehicles. –**

(1) every tank vehicle used for the transport of petroleum, in bulk on land shall be built, tested and maintained in accordance with the requirements laid down in the Third Schedule and be of a type approved in writing by the Chief Controller : Provided that the Chief Controller may under exceptional circumstances to be recorded in writing, waive any of the requirements of the Third Schedule. This will, inter alia, include approvals for trials of better quality vehicles that will contribute to enhancement of safety of petroleum transportation by road under Indian conditions.

(2) The tank shall be fabricated and mounted on the vehicle chassis by a manufacturer approved by the Chief Controller. Such a manufacturer shall apply to the Chief Controller for approval with particulars of facilities and competent persons available with him and a scrutiny fee of **rupees five hundred**. The tank fabrication and mounting drawings in quadruplicate for each type of tank vehicle, along with scrutiny fee of rupees one hundred shall be submitted to the Chief Controller for approval. Such approval shall be valid for three years from the date of issue of approval and renewable for further period of 3 years on payment of fee of **rupees five hundred**.

(3) If the Chief Controller, after receipt of the drawing under sub-rule (2) and after making such further inquiries as he may deem necessary, is satisfied that the tank vehicle or the special safety fittings, as the case may be, meet with the requirements laid down in the Third Schedule, he shall approve the drawing and return to the applicant one copy thereof duly endorsed.

(4) Nothing in this rule shall apply to tank wagons for the carriage of petroleum by rail.

#### **64. Tank Capacity. –**

(1) In this part, “the tank forming part of a tank vehicle” shall be deemed to include any number of tanks on the same chassis and any limitation herein specified on the capacity of a tank shall be construed so as to permit of the tank containing the quantity specified under varying degrees of temperature.

(2) The net carrying capacity of a tank shall be 97 percent of its gross carrying capacity in the case of petroleum Class A and petroleum Class B and 98 percent, in the case of petroleum Class C.

(3) The net carrying capacity of a tank truck or a tank semi-trailer shall not exceed 25 kilolitres of petroleum except in case of air-craft refueller in which case it should not exceed 50 kilolitres and the net carrying capacity of any tank trailer should not exceed 5 kilolitres of petroleum.

(4) The maximum safe carrying capacity in weight of petroleum that can be carried in a tank vehicle shall not exceed the difference between the unladen weight of the vehicle and the maximum gross weight permitted for the class of vehicle under the appropriate transport regulations.

#### **65. Restriction on other use. –**

Tank vehicle meant for the carriage of petroleum in bulk shall not be used for any other purpose except when so authorised by the Chief Controller in writing.

#### **66. Trailers. –**

(1) A tank trailer not exclusively used for transporting petroleum shall not be attached to any vehicle for transporting petroleum.

(2) A tank trailer transporting petroleum shall not be attached to any vehicle other than a vehicle used exclusively for transporting petroleum and not more than one trailer

shall be so attached.

(3) A tank trailer shall not be attached to a tank semi-trailer or a trailer.

(4) A tank trailer or tank semi-trailer shall have reliable brakes and all wheels which shall be capable of efficient operation from driver's seat of the vehicle towing the trailer.

(5) The width of the tank trailer or a tank semi-trailer shall be less than the overall width of the towing vehicle

(6) A tank trailer shall be so connected to the towing vehicle as to cause the trailer to follow substantially the path of the towing vehicle and to prevent the tank trailer from whipping or swerving side to side dangerously.

(7) If a tank trailer carrying petroleum Class A is attached to a vehicle carrying petroleum Class B or petroleum Class C, the towing vehicle shall comply with all the provisions of these rules relating to a vehicle for the transportation of petroleum Class A.

(8) A trailer other than a tank trailer shall not be attached to any tank truck.

(9) Where a tank trailer is attached to a tank truck, the total quantity of petroleum transported in the tank trailer and the tank truck shall not exceed 15 kilolitres.

(10) No tank trailer shall be attached to a tank truck having a net carrying capacity exceeding 12 kilolitres of petroleum.

(11) No tank trailer attached to a tank truck shall be operated within a thickly populated area without the written permission of the district authority.

#### **67. Vehicle for transport otherwise than in bulk. –**

(1) Every vehicle on which petroleum otherwise than in bulk is transported shall be strongly constructed and with sides and back of adequate height, and shall be maintained in good condition.

(2) In the case of animal-drawn vehicles, push carts and pedal carts, the requirements of sub-rule (1) regarding the sides and back of the vehicle shall not apply if the load is securely fastened to the vehicle.

(3) All containers shall be so packed as not to project beyond the sides or back of the vehicle.

(4) Petroleum Class A otherwise than in bulk shall not be transported in a trailer, attached to any vehicle.

#### **68. Composite vehicles. –**

Petroleum in cans or in other containers shall not be transported by road on any tank vehicle used for transport of petroleum unless the vehicle is so constructed as to comply with the rules applicable to the transport of petroleum otherwise than in bulk as well as with the rules applicable to the transport of petroleum in bulk.

#### **69. Carriage of other articles prohibited. –**

No vehicle shall carry any other article while it is carrying petroleum except when specifically authorised in writing by the Chief Controller.

#### **70. Engines of mechanically propelled vehicles. –**

(1) In every mechanically propelled vehicle used for the transport by road of petroleum other than petroleum Class B otherwise than in bulk or petroleum Class C.

(i) the engine shall be diesel engine or an internal combustion engine.

(ii) the exhaust shall be wholly in front of the tank or the load, as the case may be and shall have ample clearance from fuel-system and combustible materials and shall not be exposed to leakage or spillage of the fuel or product or accumulations of grease or oil;

(iii) the exhaust pipe shall be fitted with an approved spark arrestor;

(iv) the muffler or silencer shall not be cut off from the exhaust system;

(v) the engine air intake shall be fitted with an effective flame-arrester, or an air cleaner having effective flame-arrester characteristics, substantially installed and capable of preventing emission of flame from the side of the engine in the event of back firing;

(vi) the cab of the vehicle shall be of all-metal construction and its rear window, if provided, shall be fully covered with wired glass; alternatively, the cab and the engine shall be separated from the tank or the load, as the case may be, by a fire-resisting shield which shall fully cover the tank

or load.

(2) The fuel tanks of every such vehicle, if installed behind the cab of vehicle, shall be-

(a) so designed, constructed and installed as to present no unusual hazard, and shall be so arranged as to permit drainage without removal from their mountings; and

(b) protected against blows by stout steel guards and provided with a lock in the filling caps.

(3) In every engine running on petroleum Class A, quick action cut-off valve shall be fitted to the fuel feed pipe in an easily accessible position which shall be clearly marked.

(4) Notwithstanding any thing contained in this rule, provisions of sub-rules (1) to (3) except Clauses (i) and (iii) of sub-rule (1) shall not apply for transportation of petroleum Class A otherwise than in bulk exclusively used by helicopters and aeroplanes for aerial crops-spraying purpose only.

#### **71. Electrical installation. –**

If electric light or instrument or any other electrically operated equipment is employed on any vehicle including a trailer used in the transportation by road of petroleum other than petroleum Class C-

( i ) the pressure of the electric circuit shall not exceed 24 volts.

( ii ) electrical wiring shall-

(a) be heavily insulated and be adequate for maximum loads to be carried.

(b) be provided with suitable over-current protection in the form of fuses or automatic circuit breakers and installed so as to be protected from physical damage and contact with possible product spill either by location or by being encased in metal conduit or other oil resistant protective covering, and

(c) have all junction boxes sealed;

(iii) the generator, battery, switches, fuses and circuit brackets shall be carried in the cab of the vehicle or in the engine compartment and the battery shall be in an easily accessible position with a heavy-duty switch close by to cutoff the battery;

(iv) generators and motors and switches thereof which are not installed within the engine compartment shall be of the approved flame-proof type: Provided that where such generators or motors or switches thereof are installed in an enclosed space, adequate provision shall be made for air circulation to prevent overheating and possible accumulation of inflammable vapours:

Provided further that the provisions of this rule except clause (i) and subclause (a) of clause (ii) shall not apply for transportation of petroleum Class A otherwise than in bulk exclusively used by helicopters and aeroplanes for aerial crop spraying purposes only.

#### **72. Means of extinguishing fire to be carried. –**

A portable fire extinguisher (10 kg, dry chemical powder or equivalent) suitable for extinguishing petroleum fire shall be carried in an easily accessible and detachable position and away from the discharge faucets on every vehicle transporting petroleum by road. Additionally, one dry chemical powder type fire extinguisher of 1Kg. capacity shall be carried in the driver's cabin of the vehicle.

#### **73. Vehicles to be constantly attended. –**

(1) Every vehicle which is engaged in the transport of petroleum by road shall be constantly attended to by at least one person who shall be familiar with the rules in this Part Provided that such a vehicle, if its tanks or compartments are empty, but not free from Petroleum vapour, may be left unattended in places previously approved for the purpose in writing by the Chief Controller.

(2) Every vehicle in which more than 5 kilolitres of petroleum, other than petroleum Class C, is being transported by road, or which, while transporting petroleum, other than petroleum Class C, by road is being trailed by another vehicle, shall, so long as it is in motion, be attended to, by the driver and at least one more person both of whom shall be familiar with the rules in this Part.

#### **74. Prohibition as to parking. –**

No vehicle carrying petroleum by road shall be parked on a public road or in any congested area or at a place within 9 metres of any source of fire.

**75. Licence necessary for the transport in bulk of Petroleum Classes A and B.-**

(1) No person shall transport petroleum Class A or petroleum Class B in bulk, by road except under and in accordance with the condition of a licence granted under these rules.

(2) Nothing in this rule shall apply to the transport by railway administration of petroleum which is in its possession in its capacity as a carrier or to the transport of petroleum in the refueller, licensed under these rules between places within the same aerodrome.

**76. Restriction against loading and unloading of tank vehicles. –**

(1) No person shall load or unload a tank vehicle with any class of petroleum except at a place which is situated within premises licensed under these rules and is approved in writing, for loading or unloading of such class of petroleum, by the Chief Controller: Provided that petroleum Class C may be loaded or unloaded at a place where such Petroleum is allowed to be stored without licence under sections 7 and 10 of the Act: Provided further that-

(a) a tank wagon may be loaded or unloaded at railway sidings earmarked for the purpose; and

(b) a tank vehicle may be unloaded at any other place with all due precautions against fire and under adequate supervision if such unloading is necessitated by an accident or breakdown.

(2) Every tank vehicle, while it is being loaded or unloaded and until its valves have been shut and filling pipe and discharge faucets closed, shall be attended to by a person who is familiar with the rules in this part.

(3) No person shall under any circumstances allow filling or replenishment of the fuel tank of any motor vehicle or internal combustion engine directly from a tank vehicle: Provided that nothing in this sub-rule shall restrict filling or replenishment of the fuel tank of an aircraft in accordance with the rule framed under Aircraft Act, 1934 (22 of 1934).

**77. Prohibition of loading of leaky or defective tank vehicles or unlicensed tank vehicles. –**

No person shall load -

(i) any class of petroleum in tank vehicle if any tank, compartment, valve, pipes or any safety fitting thereof becomes leaky or defective and until such leaks are repaired and defects rectified and, in the case of any leak in a tank or a compartment until all the tanks or compartment are re-tested in the manner laid down in para 5 of the third Schedule and pass the test;

(ii) Petroleum Class A or petroleum Class B in any tank vehicle other than a tank wagon which is not licensed under these rules.

**78. Precautions against static charges. –**

(1) All petroleum pipelines entering any tank vehicle loading or unloading area shall be electrically continuous and be efficiently earthed.

(2) An earth boss with a flexible cable having robust clamping device shall be provided adjacent to the loading point.

(3) Sound and electrically continuous hoses or metal pipes shall only be used for loading or unloading of a tank vehicle. Where stand pipes or metallic loading arms are provided, swivel joints shall be electrically continuous.

(4) The tank, filling pipe and the chassis of the tank vehicle shall, during loading of a tank vehicle, be efficiently bonded and connected with the earth boss referred to in sub-rule (2) by means of a flexible metal wire or tape.

(5) The bonding and earthing connections shall not be broken until loading of the tank vehicle has been completed and the filling and dip pipes thereof have been securely closed.

(6) Dip rod, if used, shall be lowered into the tank or compartment before loading of petroleum starts; such a rod shall not be completely raised above the liquid level during or within one minute of the completion of such loading.

(7) No tank vehicle shall be loaded at a rate exceeding one metre per second at the delivery end of the filling pipe until the filling pipe is completely submerged in petroleum and thereafter the loading rate may be gradually increased but it shall at no time exceed six metres per second at the delivery end of the filling pipe: Provided that the Chief Controller may specify a faster loading rate in respect of crude petroleum and petroleum products which have a relative higher conductivity rate.

(8) No tank or compartment of any tank vehicle which has last carried petroleum Class A, shall be

filled with petroleum of any other class if the interior thereof has any floating non-conducting loose object or water. No tank vehicle shall be subjected to splash loading.

**79. Precautions against electrical hazards and hazard of a running engine. –**

No mechanically propelled vehicle for the petroleum shall be loaded or unloaded until its engine has been stopped and battery is isolated from the electrical circuit. The engine shall not be restarted and the battery shall not be connected to the electrical circuit until tanks and valves have been securely closed: Provided that this rule shall not apply in the case of unloading of a tank vehicle into the fuel tank of aircraft in accordance with the rules framed under the Aircraft Act, 1934 (22 of 1934) or in any other case as may be authorized, in writing, by the Chief Controller subject to such conditions as he may specify in that behalf.

**80. Precautions against movements of vehicles during loading or unloading. -**

Petroleum shall not be loaded into or unloaded from a vehicle until its wheels have been secured by efficient brakes or by scotching and in the case of animal-drawn vehicle until the animals have been unhitched and removed.

**81. Precaution against product contamination. –**

(1) No person shall load or unload any tank vehicle unless he has selected the correct filling hose and otherwise satisfied himself that such loading or unloading will not result in any dangerous contamination of one class of petroleum with another class of petroleum.

(2) A tank or compartment which carried petroleum Class A shall not be filled with any other class of Petroleum until such tank or compartment has been completely drained of residual oil and its discharge faucet and emergency control valve have been closed firmly.

**82. Filling discharge faucet and dip pipes to be kept close. -**

Except during the operation of loading or emptying a tank vehicle, the filling pipe, discharge faucet and dip pipe shall be kept securely closed. Where the filling pipes are not provided with a liquid seal, the covers shall be locked or sealed except during the operation of loading a tank vehicle and the keys shall not be carried on the vehicle or the trailer.

**83. Restrictions on loading and unloading of Petroleum at night. –**

Except where approved electric lights as specified in Chapter IV are exclusively used, the loading or unloading of tank vehicles carrying petroleum shall be performed between the hours of sunrise and sunset.

**84. Prohibition of fires and smoking. –**

(1) No fire or other artificial light capable of igniting inflammable vapour shall be allowed on any vehicle containing petroleum Class A otherwise or petroleum Class B and class C in bulk.

(2) No person shall smoke while on or attending such a vehicle.

(3) No article or substance capable of causing fire or explosion shall be carried on such a vehicle.

**85. Repair of tank. –**

(1) No tank which has carried petroleum shall be repaired by welding, brazing, soldering or hot-riveting unless it has been examined by a competent responsible person and certified in writing by such person to be free from inflammable vapour or oil.

(2) The certificate issued by the competent and responsible person under sub-rule (1) shall be preserved by the repairer for a period of at least three months and shall be produced for examination on demand by an inspector.

(3) All repairs to tanks which have contained petroleum shall be carried out by qualified and experienced persons.

(4) All the compartments of the tank shall be tested after each repair in the manner laid down in para 5 of the Third Schedule.

**86. Special provisions for motor conveyances. –**

(1) No motor conveyance carrying passengers on hire shall carry petroleum other than -

(a) Petroleum in the tank incorporated in the conveyance, and

(b) Petroleum not exceeding 100 litres in quantity intended to be used to generate motive power for the conveyance of that vehicle kept in the manner provided in sub-section (2) of section 8 of the Act.

(2) During the filling or replenishment of the fuel tank of a motor conveyance licensed for the carriage of more than six passengers on hire the driver or other person in charge of such conveyance shall not allow any passenger to remain therein.

(3) All petroleum containers carried in a motor conveyance carrying passengers on hire shall be free from leaks and be securely closed and shall be placed in a specially prepared receptacle which is not accessible to passengers in such conveyance and is not on the roof.

## **PART – V TRANSPORT BY PIPELINES**

### **87. Application. –**

The rules in this part apply only to the transport of petroleum by means of pipelines other than those in any area in which operation for the winning of natural petroleum or natural gas or both are carried on or within the limits of refineries and installations.

### **88. Right of way to be acquired. –**

No pipeline and installation connected with a pipeline, shall be constructed without acquiring the necessary land, leaseholds and right for the construction thereof and for the unhindered access thereto for inspection, maintenance, repairs, replacements and patrolling.

### **89. Approval of the design and route of the pipeline. –**

(1) No pipeline shall be laid without the prior written approval of the Chief Controller of the route of the pipeline, and of the design, construction and working thereof.

(2) Where the approval of the Chief Controller is sought for the laying of a pipeline, the person desirous of laying the pipeline shall submit to the Chief Controller.-

(a) a comprehensive project report, accompanied by all necessary drawings, calculations giving references to recognized code or codes followed, giving full details of the design, construction and testing of the pipeline and its components; the route along which the pipeline will be laid and the manner of laying, the class or classes of petroleum proposed to be transported in the pipeline and provisions proposed to be made for the maintenance and patrolling of the pipeline.

(b) a scrutiny fee of rupees five hundred.

### **90. Design of pipeline and attachments. –**

(1) The pipeline shall be constructed of suitable steel which is safe for the conditions under which it is to be used.

(2) The pipeline and its components shall be designed and constructed in accordance with a code recognized by the Chief Controller or OISD Standard 141 regarding design and construction requirements for cross country hydrocarbon pipelines and shall be capable of withstanding a pressure which shall not be less than the maximum working pressure thereof plus an allowance for surge pressure, as anticipated.

(3) Provision shall be made for thermal expansion or contraction of the pipeline and for the prevention of excessive stresses on the pipeline or its anchorages, guides and connections.

(4) The pipeline shall be protected by a casing of steel pipe or by increasing the thickness of its wall or in any other manner approved by the Chief Controller and any other authority having jurisdiction to prevent damage to the pipeline from usual external conditions which may be encountered in railway crossings, road crossings, river or water course crossings, bridges, long self supported spans, unstable ground, vibrations, weight of special attachments or thermal forces.

(5) By-pass relief valves, pressure limiting stations or automatic shut down equipment of approved design shall be provided in the pipe line to prevent rising at any time of the pressure, in the pipeline to a pressure which exceeds the designed internal pressure by more than ten

percent.

(6) Isolation valves shall be installed at each of the following locations.-

(a) On the suction end and the discharge end of the pump station in a manner that permits isolation of the pump station equipment in the event of an emergency.

(b) On each line entering or leaving the installation in a manner that permits isolation of the installation from other facilities.

(c) On each main line at locations along the pipeline system that will minimize damage from accidental product discharge, as appropriate for the terrain in open country or for the location near cities or other populated areas.

(d) On each lateral take off from a trunk line in a manner that permits shutting off the lateral without interrupting the flow in the trunk line.

(e) On each side of a water crossing that is more than 30m wide from highwater mark to high-water mark.

(f) On each side of a reservoir holding water for human consumption.

#### **91. Laying of Pipe line. –**

(1) Pipeline shall be laid in the most favorable route, avoiding as far as possible, known obstructions and areas in which unusual external conditions prevail.

(2) Pipeline shall be laid below the ground level except where laying thereof above the ground level is desirable for topographical economic or other special reasons.

(3) Where an underground Pipeline has to cross any existing underground water or gas line, cable, drain or other services, the pipeline shall be laid at least thirty centimetres below such services in a manner that will not obstruct access to such services for inspection repair, or maintenance.

(4) The number of bends in the pipeline shall be kept to the minimum by proper grading of trenches or supports at crossing and other obstacles.

(5) The route of underground sections of a pipeline shall be indicated by markers and not less than two such markers shall be visible from any point along the route.

#### **92. Protection against corrosion. –**

The pipeline shall be protected against corrosion by suitable coating strapping and where necessary by cathodic protection.

#### **93. Hydrostatic testing of pipeline. –**

(1) Before transporting petroleum for the first time, each pipeline or completed sections thereof shall be filled with water and the pressure in the line or section, as the case may be, raised to 1.1 times the design internal pressure and maintained for a period of at least 24 hours or as per procedure laid down in the relevant pipelines design code recognized by Chief Controller. A pipeline or a section thereof showing any significant drop of pressure during the period of testing shall not be used for transporting petroleum until necessary repairs have been carried out and satisfactory retest done.

(2) The test specified in sub-rule (1) shall be carried out atleast once every 12 months in each completed pipeline section which crosses an area where there is danger of water pollution by any leakage : Provided that the Chief Controller may subject to such conditions as may be specified by him in this behalf allow retesting of such sections of the pipelines as are protected by sleeves or otherwise -

(i) to contain or prevent leakage at longer intervals, and

(ii) by filling them with petroleum in place of water for the purposes of test.

(3) The provisions of sub-rule (2) shall not apply to cross-country pipelines, for which new technologies are available.

#### **94. Shut down of pipelines. –**

Except when shut down for maintenance work, a pipeline when not in operation shall be shut down under pressure and a careful record made of the pressure during the shut down period. Any significant drop in pressure shall be deemed to render the pipeline unfit for transport of petroleum

until it is repaired and tested in accordance with rule 98 and no significant drop in shut-down pressure is observed and it passes the test specified in rule 93.

**95. Patrolling of pipeline. –**

(1) The whole of every pipeline shall be efficiently patrolled by the company owning the pipeline.  
(2) Telegraph or telephone or radio communication facilities shall be provided at frequent intervals along the pipeline: Provided that one such communication channel shall suffice for a series of parallel pipelines laid close to each other: Provided further that nothing in this sub-rule shall apply to a pipeline if the length thereof does not exceed two kilometres.

**96. Checking of gauges. –**

Tank gauges or gauges at intermediate or booster pump stations shall be checked atleast once a year.

**97. Additions and alterations in the pipeline. –**

(1) No addition or alteration to a pipeline shall be carried out without the previous approval of the Chief Controller in writing.  
(2) Every person desirous of carrying out any additions or alterations in any pipeline shall submit to the Chief Controller an application alongwith –  
(a) three copies of a drawing to scale and a full descriptive note of the proposed additions and alterations and the purpose thereof, and  
(b) a scrutiny fee of rupees five hundred.  
(3) On receipt of the drawings and fee under sub-rule (2) and after eliciting such additional information as may be required, the Chief Controller shall, if he is satisfied, approve the proposed additions or alterations subject to such conditions as he may deem fit.

**98. Repair and maintenance of pipeline. –**

No maintenance or repair involving cutting or rewelding of any pipeline shall be carried out except under following conditions, namely: -

- (i) an experienced engineer shall inspect the section requiring maintenance or repair before the work is undertaken and issue a written permit specifying therein the precautions to be observed and the procedure to be followed for carrying out the work. The permit so issued shall be preserved by the owner of the pipeline for a period of six months;
- (ii) all work involving cutting or welding shall be carried out by an experienced person in accordance with the permit referred to in clause ( i );
- (iii) the section of the pipeline shall be isolated and drained before starting repairs or maintenance.
- (iv) only mechanical cutters shall be used for cutting the pipeline or any connection thereof unless the section of the pipeline and its connections have been purged with an inert gas.
- (v) no hot work shall be carried out on any pipeline until the section thereof requiring repair has been isolated drained and purged with inert gas or steam or kept filled with water or until such section has been prepared in a manner approved in writing by the experienced engineer.
- (vi) the section of the pipeline in which repairs or maintenance work has been carried out shall not be used for transporting petroleum until such sections are replaced with hydro statically pretested sections and the repaired weld joints pass the radiography test;
- (vii) no section of any pipeline and no valve fitted to it shall be separated until an efficient electrical bond has been established between the parts to be so separated which shall not be broken until the separated parts have been rejoined.

**99. Relaying or repairs to a pipeline in public interest. –**

Where the Chief Controller is of the opinion that it is in the interest of public safety to do so, he may, by a notice in writing given to the owner of the pipeline, require such owner, to relay, renew or repair such pipeline in accordance with such requirements as may be specified in such notices.

**100. Power of inspection and examination. –**

The Chief Controller or Controller may at any time inspect and examine any pipeline, and the owner thereof or persons operating or using the pipeline and the person on whose land such pipeline is situated or his representative shall facilitate such inspection and examination and answer all inquiries put by the Chief Controller or Controller in regard to such pipeline.

**101. Reports of fire or major leakage. –**

The occurrence of any fire or major leakage in a pipeline and connected facilities thereof shall be reported immediately by the person for the time being incharge of the pipeline to the nearest Magistrate or officer-incharge of the nearest police station and to the Chief Controller by telephone/fax and also by telegram at his telegraphic address, namely "Explosives Nagpur".