

INTRODUCTION

10.1 PETROLEUM ACTS AND THE RULES FRAMED THEREUNDER

This is an Act to consolidate and amend the law relating to the import, transport, storage, production, refining and blending of petroleum. The salient features of the Act are as under :-

- 1) Section 2 :- It deals with the definition of petroleum with its classification on the basis of flash point.
 - (a) “Petroleum” means any liquid hydrocarbon or mixture of hydrocarbons and any inflammable mixture (liquid, viscous or solid)containing any liquid hydrocarbons.
 - (b) “Classification” :- There are 3 classes of petroleum as under -
 - i) Petroleum Class ‘A’ - means petroleum having a flash point below 23° . (e.g.Petrol, Hexane, Toluene, Naphtha)
 - ii) Petroleum Class ‘B’ - means petroleum having a flash point of 23° C. and above but below 65° C.(e.g. HSD, SKO, MTO etc.)
 - i) Petroleum Class ‘C’ - means petroleum having a flash point of 65° C and above but below 93° C.
 - (c) “ Flash point” of any petroleum means the lowest temperature at which it yields a vapour which will give a momentary flash when ignited, determined in accordance with the provisions of chapter 2 of the Act and the Rules made thereunder.
- 2) Section 3:- No one shall import, transport or store any petroleum except in accordance with the rules made under Section 4.
- 3) Section 4 :Central Government may make rules regulating import, transport and storage of petroleum prescribing various forms and conditions of licences, and also conditions subject to which petroleum may be stored.
- 4) Section 5 : No one shall produce, refine or blend petroleum except in accordance with rules made under it’s sub-section (2). Under this Sub-Section (2) of the Act, the Central Govt. may make rules prescribing the conditions to which petroleum may be produced, refined or blended.
- 5) Section 7 :- No licence needed for transport or storage of :
 - i) Petroleum Class ‘B’ (Non Bulk) in quantity not exceeding 2500 ltrs. and in receptacle not exceeding 1000 ltrs.
 - ii) Petroleum Class ‘C’ (In Bulk) in quantity not exceeding 45,000 ltr

Note :-

- a) 'Non-bulk storage' means storage of petroleum in receptacle /container/tank of water capacity not exceeding 1,000 ltrs.
 - b) 'Bulk storage' means storage of petroleum in container/tank of capacity exceeding 1,000 ltr.
- 6) Section 8 :- No licence needed for import, transport or storage of petroleum Class 'A' not intended for sale if the total quantity in possession does not exceed 30 ltr. However, such quantity of petroleum Class 'A' not requiring licence shall be kept in securely stoppered receptacles of glass or stoneware of capacity not exceeding 1 ltr. or in receptacle of metal of capacity not exceeding 25 ltrs.
 - 7) Section 10 :- No licence is needed by Railway Administration for the import or transport of any petroleum in its possession in its capacity as carrier.
 - 8) Section 11 :- No licence etc. is needed for any petroleum which has its flash point not below 93⁰C. eg. Lubricants, LSHS etc.
 - 9) Section 14 to 22 :- It deals with the testing of petroleum including inspection and sampling of petroleum, test apparatus, certification of other test apparatus, authorizing testing officers, manner of test, certificate of testing and powers of Central Government to make rules regarding tests.
 - 10) Section 23 (Penalties and procedure) : Contravention of any of the provisions of Chapter 1 of Act or of any of the rules made thereunder or rules made under section 4 or 5 is a punishable offence. (non cognizable)
Punishment :-
 - i) Simple imprisonment which may extend to one month or fine which may extend to Rs. 1000/- or both.
 - ii) In the event of repeated offences maximum punishment is – simple imprisonment upto 3 months or with fine upto Rs. 5000/- or with both.
 - 11) Section 27 (Notice of accident) : Whenever there occurs in or about, or in connection with, any place in which petroleum is refined, blended or kept, or any carriage or vessel either conveying petroleum or on or from which petroleum is being loaded or unloaded, any accident by explosion or by fire as a result of the ignition of petroleum or petroleum vapour attended with loss of human life or serious injury to person or property, or of a description usually attended with such. loss or injury, the occupier of the place or the person for the time being in charge of the petroleum or the person in charge of the carriage or the master of the vessel, as the case may be, shall, within such time and in such manner as may be prescribed, give notice thereof and of the attendant loss of human life, or injury to person or property, if any, to the nearest Magistrate or to the officer in charge of the nearest police station and to the Chief Controller of Explosives in India.

Objective, definition, enforcement, exemption etc. in the Petroleum Rules,
1976.

10.2 Form of licence/approval purpose and licensing/approving authority

Sr. No.	PURPOSE	Whether Licence is required(with form) or Approval is required	Licensing/Approving Authority
1	Transport of petroleum by tank lorry	Licence (form IX)	Cicle/sub Circle office
2	Storage of petroleum class A in barrels upto 300 ltrs.	Licence (form X)	District Authority
3	Storage of petroleum class B in barrels upto 25000 ltrs.	Licence (form XI)	District Authority
4	Retail outlet	Licence (form XII)	Cicle/sub Circle office
5	Storage of petroleum in tanks in installations	Licence (form XIII)	Chief Controller of Explosives
6	Storage of petroleum in barrel for petroleum classA exceeding 300ltrs,petroleum classB exceeding 25000 ltrs & petroleum class C exceeding 45,000 ltrs in barrels.	Licence (form XIV)	Cicle/sub Circle office
7	Storage of petroleum for crop spray	Licence (form XV)	Cicle/sub Circle office
8	Decanting SKO into barrel	Licence (form XVI)	Cicle/sub Circle office
9	Aircraft refueler	Licence (form XVII)	Cicle/sub Circle office
10	Other than above mentioned 1 to 9	Special Form	Chief Controller of Explosives
11	Refinery	Approval	Chief Controller of Explosives
12	Pipe line transportation of petroleum	Approval	Chief Controller of Explosives
13	Recognition of competent person	Approval	Chief Controller of Explosives
14	Permission for petroleum class C upto 45 kl	Approval	Cicle/sub Circle office
15	Approval of electrical equipment for hazardous area.	Approval	Chief Controller of Explosives

Form IX (Petroleum Rules)

Purpose:

The licence in **form IX** under the Petroleum Rules, 1976 is granted to transport petroleum class A and/or class B **in bulk** on land by mechanically propelled vehicle. Such vehicle for transportation of petroleum is called petroleum tank lorry or in short, tank lorry or tank truck.

Licensing Authority(i.e., the authority empowered to grant the above said licence) The Tank lorry licence in **form IX** under Petroleum Rules, 1976 granted by respective circle office of the Department of Explosives or the respective sub-circle office under whose jurisdiction the applicant belongs.

Notes:

- 1) For details please see the licence form IX given in the Petroleum Rules, 1976 and Article 2 of first Schedule under the Petroleum Rules 1976, rules 62 to 86 of the Petroleum Rules,1976, third Schedule annexed to the Petroleum Rules,1976 and page of this manual.
- 2) No licence is required for transportation of petroleum class C under the Petroleum Rules, 1976.
- 3) The net carrying capacity of a tank truck or a tank semi trailer shall not exceed 25 kl of petroleum and the net carrying capacity of any compartment shall not exceed 5kl of petroleum. The number of compartments should not exceed five.
- 4) There are fabricators of tank lorry who are approved by the CCE, Nagpur and the tank lorry must be fabricated by any of these approved fabricators.
- 5) There are competent persons recognised by the CCE, Nagpur and the tank lorry must be tested by any of these competent persons and the certificate of tank test and the safety fitting must be issued by any of those competent persons.

Procedure:

A. Grant of licence:

Various on-line steps adopted for **grant of licence** in form IX are as under:

- ?? Submission of drawings and the other required documents by the applicant to the licensing authority for grant of licence.
- ?? Grant of licence by the licensing authority.

The details of step by step procedure are as under:

Submission of documents by applicant for grant of licence (Applicants Action) :

Applicant must submit the following documents to the licensing authority for grant of licence:

?? **Bank draft of Rs 650** as scrutiny fee and licence fee for three years. The B/D should be drawn on any nationalised bank, in favour of Jt. CCE/appropriate authority and should be payable at appropriate place as applicable for the concerned licensing authority. For this please see page ... of the manual. The Bank Draft should have at least 2 months validity from the date of submission of application for grant of licence.

Note: The tank lorry licence as granted for 3 years at a time, expiring on 31st December of the third calendar year.

?? Application **form VII** duly filled in and signed by the applicant/ authorised employee. Typed copy of form VII (given in the Petroleum Rules, 1976) is acceptable. Please note that no column of the form should be left blank. Inapplicable columns should be filled as NA i.e., not applicable. Full postal address with pin code should be written. No overwriting or major corrections will be accepted. Minor correction should be initialed.

?? Certificate from the approved fabricator that the tank lorry has been fabricated by him.

?? Certificate of tank test and safety fittings by the competent person.

?? Certificate from the fabricator stating the serial no., number of compartments, capacity of the each compartment, the date of manufacture of tank lorry and details of safety fittings.

?? Original or attested copy of bills as a proof for the safety fittings provided to the tank lorry.

?? Attested copy of the RC book showing name, address, laden, unladen weight etc.

?? Copy of the calibration chart issued by the competent authority.

?? Specimen signature of the applicant.

?? Two copies of drawings (blue print or computerized one without hand correction), each signed by the competent person or the fabricator. Each copy of drawing must show the details of construction, dimensions (i.e. the length, width/diameter/ major & minor axis, height, plate thickness, distance between tyres, type of tyres, total length, gap between the cab and the tank, the rear gap, position and the nos. of the fire extinguishers, location and guarding of the fuel tank, the location of the various nozzle connections and safety fittings etc. The drawing must also show the details calculation of the stability ratio and necessary noting like registration no., engine no., chassis no., fabricator's name, applicant's full postal address with pin code etc.

?? Forwarding letter mentioning details of enclosures, Bank Draft No & date etc.

Note:

1. There are many safety fittings like spark arrestor, emergency shut off valve, fusible link, emergency vent, pressure vacuum valve etc.,

All are approved by CCE Nagpur and all such safety fittings should bear serial no.

2. For details design, fabrication and construction of tank lorry please see third schedule and rule 63 and 77 of the Petroleum Rule 1976. Some of the important points are provision of shear section at the discharge faucet, master valve at rear, painting of capacity of each compartment, selection of materials, hydro testing of each compartment at a pressure less than 0.316 kg/sq.cm , area of vent, marking on tank lorry, discharge faucet should not be interconnected etc.,

3. For each type of chassis approval from CCE Nagpur is accorded mentioning maximum quantity of petroleum class A &/or B permitted.

Grant of licence (Departmental Action) :

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

?? If bank draft is found defective or validity expiring shortly the draft should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.

?? The application form VII submitted by the party should be checked to confirm that the proper mailing address, signature of the party and all other relevant columns have been duly filled in by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

Verification of drawing(Departmental Action):

The following check to be carried out:-

If the documents are found in order and the licensing authority is satisfied that there is no legal constraint in grant of licence then the licence can be granted. However, the licensing authority is at liberty to get the premises inspected prior to grant of license. In the event of inspection is carried out then whatever variation or discrepancy noticed during the inspection must be complied with and the compliance report should be submitted for verification and there after the licence may be granted.

B. Renewal of tank lorry licence:

Renewing Authority: Respective circle office and sub-circle office.

Various on-line steps adopted for **renewal of licence in form IX** are as under:

- ?? Submission of original licence along with the approved drawings and the other required documents by the applicant to the licensing authority for renewal of licence.
- ?? Renewal of licence by the Renewing Authority.

**The details of step by step procedure are as under:
Submission of documents by applicant for renewal of licence
(Applicants Action) :**

Applicant must submit the following documents to the Renewing Authority for renewal of licence:

?? **Bank draft** as licence fee for three years. The B/D should be drawn on any nationalised bank, in favour of Jt. CCE/appropriate authority and should be payable at appropriate place as applicable for the concerned licensing authority. For this please see page ... of the manual. The Bank Draft should have at least 2 months validity from the date of receipt of application for renewal of licence.

Note :

1. Licence is renewed for maximum period of 3 year at a time.
2. Renewal application must reach the renewing authority thirty days before the date of expiry of the licence.

?? Application **form VII** duly filled in and signed by the applicant/ authorised employee. Typed copy of form VII (given in the Petroleum Rules, 1976) is acceptable. Please note that no column of the form should be left blank. Inapplicable columns should be filled as NA i.e., not applicable. Full postal address with pin code should be written. No overwriting or major corrections will be accepted. Minor correction should be initialed.

?? Original licence along with approved drawing.

?? Forwarding letter mentioning details of enclosures, Bank Draft No & date etc.

Note

1. Part B of **form VII** may not be filled for renewal.
2. Renewal application must reach the renewing authority thirty days before the date of expiry of the licence.
3. No change certificate that there is no change in the tank lorry.

Renewal of licence (Departmental Action) :

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

?? If bank draft is found defective or validity expiring shortly, the draft should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.

?? The application form VII submitted by the party should be checked to confirm that the proper mailing address, signature of the party and all other relevant columns have been duly filled in by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

?? Certificate from the licensee that there is no change in the tank lorry and other certificates submitted or not.

?? That no compliance of the inspection report is pending.

?? If the documents are found in order and the licensing authority is satisfied that there is no legal constraint in grant of licence then the licence can be granted. However, the licensing authority is at liberty to get the tank lorry inspected prior to renewal of licence. If inspection is carried out then whatever variation or discrepancy noticed during the inspection must be complied with and the compliance report should be submitted for verification and there after the licence may be renewed.

C. Amendment of tank lorry licence:

Types of amendment of tank lorry licences are as under:

Question ?

- 1. Was it useful in your work activities connected to this department?**
- 2. Are you a frequent visitor to this manual site?**
- 3. Are you a frequent visitor to the offices of this department.**
- 4. What are your specific suggestion to improve it? Give suggestions with reasons.**
- 5. Has this chapter helped you in filing/making proper documents or will you think that you may still face difficulty in filling/making proper forms and documents after reading this chapter?**
- 6. Do you have specific suggestions to make it more user friendly?**
- 7. Do you think of unnecessary element in this chapter which can be avoided/deleted ?**
- 8. Do you have any suggestion (s) for change in Legislation ? Give details with reasons.**
- 9. Give brief details of your organization/yourself through the suggestion form which can be had by clicking the feedback button.**

MODEL DRAWING

Form X (Petroleum Rules)

This license is granted by district authority.

The related matter is available in the hard copy of the manual which can be had by placing an order(by letter or through e- mail) to the following address

**Dy. Chief Controller of Explosives
Testing Station
Amravati Road, Gondkhairy
NAGPUR 440 023**

E- mail address: ccoe.ngp@nag.mah.nic.in

Form XI (Petroleum Rules)

This license is granted by district authority.

The related matter is available in the hard copy of the manual which can be had by placing an order (by letter or through e- mail) to the following address

**Dy. Chief Controller of Explosives
Testing Station
Amravati Road, Gondkhairy
NAGPUR 440 023**

E- mail address: ccoe.ngp@nag.mah.nic.in

Form XII (Petroleum Rules)

Purpose:

The licence in **form XII** under the Petroleum Rules, 1976 is granted to store petroleum class A and/or class B in a tank or tanks in connection with a pump outfit for **fuelling motor conveyances** such premises are generally called pump outfit.

Licensing Authority(i.e., the authority empowered to grant the above said licence): Respective circle office of the Department of Explosives under whose jurisdiction, the premises belong.

Notes:

- 1) For details please see the licence form XII given in the Petroleum Rules, 1976 and Article 5 of first Schedule under the Petroleum Rules 1976.
- 2) Licence for pump outfit in form XII is granted for under ground tanks only.

Procedure:

A. Grant of licence:

Various on-line steps adopted for **grant of licence** in **form XII** are as under:

- ?? Submission of drawings and the other required documents by the applicant to the licensing authority for construction approval of the proposed premises.
- ?? Approval of the drawing by the licensing authority for construction of the facilities in the proposed premises.
- ?? After completion of construction of the facilities, submission of drawings and the other required documents by the party including the NOC from the District Authority to the licensing authority for grant of licence of the premises.
- ?? Grant of licence by the licensing authority.

The details of step by step procedure are as under:

Applicants Action : Submission of documents by applicant for construction approval

Applicant must submit the following documents to the licensing authority for prior approval for construction of facilities:

?? **Bank draft of Rs 20** as scrutiny fee. The B/D should be drawn on any nationalised bank, in favour of Jt. CCE/appropriate authority and should be payable at appropriate place as applicable for the concerned licensing authority. The Bank Draft should have 2Months validity from the date of receipt of application.

?? Application **form VIII** duly filled in and signed by the applicant/authorised employee. Typed copy of form VIII (given in the Petroleum Rules, 1976) is acceptable. Please note that no column of the form should be left blank. Inapplicable columns should be filled as NA i.e., not applicable. Full postal address with pin code should be written. No overwriting or major corrections will be accepted. Minor correction should be initialed

?? Letter of Intent from the supplier i.e., the Oil Co. (Original/Notorised)

?? Three copies of drawings (blue print or computerized one without hand correction). Each copy of drawing must show the details of **site, layout, construction, sectional, plan and elevation view and necessary noting** as stated below:

?? **Regarding site:** The site plan must show the proposed premises and details of all the structures like roads, road-directions, residential area, other buildings, structures, adjoining properties, name of the adjoining factories, approach road, the distances from the km stone, road junction etc. confined within 100 meters radius on all sides around the proposed premises, as per scale. Specific clearance observed by the proposed premises with regards to the nearest building and any open source of fire or over-head electric line coming within the 100mtrs radius should be clearly indicated.

Note:

- 1) The purpose of the site plan is to identify and demarcate the location of the premises. In many cases the area up to 100 meters is open land and hence such cases does not fulfil the main purpose. Sometimes reference structures lie or located much beyond 100 meters. Therefore all such reference structures (even not coming within the scale of the drawing) for example the nearest km stone, road crossing with road directions, temple, village, schools, hospitals, canals, rivers, railway line or other such immovable reference structures along with approach

- road to the premises may also be incorporated in the site details for proper identification of the location and approach to the premises.
2. The applicant should ensure and confirm that the site selected for the proposed premises should have a clear title or undisputed legal status.
 3. The proposed premises should have proper access and approach road for the purpose of inspection, fire-fighting and rescue operation, movement of fire-tenders etc.
 4. The proposed site should no way interfere or bring legal confrontation with other Acts and Rules administered by the Central Govt., State Govt., local authority etc. and in no way adversely affect the public interest.
 5. The proposed site should have preferably open land surrounding it and should not be vulnerable to natural calamities.

?? Regarding layout plan:

The layout of the premises should show the plan view of the pump outfit which must indicate road with its directions and the **inter-distances** among various facilities of the pump outfit like underground tanks, boundary wall/fencing, kiosk {sale room}, dispensing units, PWD boundary line, centre of PWD road, vent pipes, fill points and other buildings within the premises. The layout plan must show the dimensions of the premises, ingress & outgress, buffer island, pipelines etc.

The safety distance required to be observed among the various facilities in the premises are as under:

Dispensing units must observe minimum 6m from PWD boundary line and also from boundary wall/fencing. Tank installed in earth pits should not be less than 1.5 mts. away from any point of the boundary of the licensed premises. Every tank should be provided with an independent vent pipe not less than 4 mts high and 4 mts away from any adjoining property or opening sales room in which source of fire is likely to be present and filling points should invariably observe min 3 m safety distance from kiosk and boundary.

Further the guide lines of Indian Road Congress are to be complied with if the pump outfit is situated on the Highways.

Regarding sectional/elevation view:-

The drawing should show the sectional view the tank(s) both cross-sectional and the longitudinal view. The sectional view of the tank must show constructional details of the tank and its pipelines i.e. suction, dip, fill and vent pipe and also manhole of the tank. The suction, dip and fill pipe should be extended up to the bottom of the tank leaving 2 inches from the bottom of the tank (rule). The vent pipe should be extended up to the height of 4mtrs and attached to the upper portion of the tank. The tank should be installed about 60 cms below ground level. The tank should be properly anchored and the space between tank and the pit must be filled by earth and sand to ensure that no gap is left between the tank and the pit. The tank must be buried properly and not visible to outside.

Note: It is suggested that the under ground tanks should preferably be in masonry concrete pit and not in earth pit for various reasons.

The sectional view must also indicate diameter and length of the tank and thickness of the plate of tank. The tank must be cylindrical and not rectangular. The sectional view of structures other than the tank i.e. the enclosure wall, boundry fencing, their height and constructional and details must also be incorporated in the drawing.

Note:-

- ?? The construction of tank must conform to the approval given by CCE Nagpur.
- 1. The location of various pipelines e.g. fill, dip, vent, suction, also manhole etc. shown in the layout plan must tally with that in the sectional plan.
- 2. In many cases vent pipe is extended far beyond the tank. It is suggested that length of vent pipe should be minimised.

Noting to be depicted in the drawing :-

- ?? All important noting as given above should be incorporated in the drawing.
- ?? The drawing must indicate Khasra/Survey/Kila no. and full address of the situation of the premises including pin code no etc.
- ?? In addition to the above, adequate notes to the effect that there is no sewerage or discharge drain within 6 m. from tank position, the guide lines of Ministry of Petroleum and Natural Gas, no objection if pump

outfit is situated within 300 M highway road crossing, Indian Road Congress & Environment Forest, if any, should be complied with to be mentioned in the drawing.

?? Whether it is a resitment case or not.

?? In case of canopy, a certificate to the effect canopy has been constructed as per sound engineering practice to be incorporated.

?? That there is no court case & litigation in connection with the proposed premises.

?? Regarding wire gauze of vent pipes the noting that open ends the vent pipes should be covered by two layers of non-corrodible metal wire gauze having not less than 11 meshes per linear centimeter and shall be further protected from rain by a hood or by suitably bending it downward as per condition 5 of the license in **form XII**.

?? Construction of the tank should conform to relevant **IS specification**
.....

?? The dispensing unit should of approved type

Departmental Action :Approval of drawing

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

* If bank draft is found defective or validity expiring shortly, the draft should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.

?? The application **form VIII** submitted by the party should be checked to confirm that the proper mailing address, signature of the party and all other relevant columns have been duly filled in by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

Departmental Action: Verification of drawing

The following check to be carried out:-

In the site plan of the drawing whether proper road direction with approach has been shown for exact identification of location. Khasra no., distances from other existing structures etc. has to be shown in the plan. If most of the distances have been given but there is any/few inadvertent omission regarding distance from proposed premises to few surrounding structure/facilities, then such distance(s) will be read as per scale given in the drawing.

In the layout, the height of the boundary wall/fencing and construction details of tanks etc. to be checked as per rule. The safety distances required under the rules should be clearly available in respect of various facilities.

Sectional view have been properly shown or not. Necessary noting and full address of the situation of the premises have been incorporated in the drawing. Drawing should preferably be signed by the applicant or authorised employee (in case of company). Any other additional instruction of CCE/Licensing authority and various guideline have been complied with.

After necessary scrutiny of documents as referred above if, the documents are found in order and conforming to the Petroleum Rules-1976, then necessary approval may be accorded with intimation to the party to submit the required documents for grant of licence after completion of the construction as per the approved drawing . The licensing authority may impose conditions as deemed proper. Approval should be generally given for a certain period. In many cases it is seen that after taking approval and laps of considerable time and party even does not apply for grant of license for one reason or the other. In the mean time Rules are amended or revised executive orders are issued. These entail complicated situation both for the party and the licensing authority. To overcome these difficulties, approval may be considered valid for 6 month and may be renewable for another 6 months on request. After receipt of the approval, the party may start construction of the facilities in the proposed premises as per the approved drawing and after completion of the construction the documents should be submitted by the party for grant of licence.

Note :-

1. In this connection it is stated that one of the important documents is NOC from District Authority. In some cases it is seen that the NOC is considerably delayed and as a consequence, grant of licence is delayed and finally the party will have to suffer irreparable loss due to non-commissioning of the premises after construction. So it is advisable that soon after getting approval and before undertaking the construction work, the party should immediately approach the District Authority and submit replica of approved drawing etc. to the District Authority for NOC and get the matter cleared.
2. The party should ensure that construction of facilities and the premises are confined within the NOC land.
3. The purpose of NOC is to ensure the lawful possession of the site of the applicant.

Applicant Action:- Submission of documents by the applicants for grant of licence:-

After completion of the facilities the applicant must submit the following documents:-

1. Appropriate Bank Draft as licence fee payable in same manner as mentioned during approval
2. **Note:** The licence is granted for a period of maximum three calendar years, expiring on 31st December of the third calendar year.
3. Application Form-VIII duly filled and signed as mentioned earlier
4. Safety certificate and tank testing certificate as per rules 126 and 130 of the Petroleum Rules, 1976. It should be signed by competent engineer authorized by the CCE Nagpur for that purpose.
5. Specimen signature of the applicant/authorised person to verify the
6. reference to initial application filled by the applicant or authorised
7. person of the company.
8. Completion report that of the construction of the facilities of premises
9. have been completed as per the approved plan.
10. Three copies of the drawing which are faithful reproduction of the original approved drawing. In case of conditional approval all such conditions are to be complied with.

11. Forwarding letter mentioning details of enclosures, Bank Draft No & date etc.

Departmental Action:-Grant of licence

The document submitted by the applicant should be verified and proper scrutiny should be exercised as follows :-

?? **Bank Draft** to be checked and verified that it is drawn in favour of Jt. CCEand on any nationalized bank..... **Valid for atleast 2 months.**

?? Application Form-VIII to be checked and verified as referred earlier.

?? The NOC duly stamped and signed by the District Authority with date . The NOC should not be more than 2 years old and the NOC drawing duly signed by the District Authority should be verified with the approved drawing to conform there is no discrepancies. In case of any discrepancy in the NOC with reference to the information given by the applicants address in Form-VIII then the matter to be enquired and referred to the concerned applicant or DM as the case may be, and the action is to be initiated for reconciliation of the discrepancy /rectifying the anomaly.

If the NOC is conditional then the licensing authority should be reasonably satisfied whether the condition stipulated in the NOC will be relevant and are of serious nature or not. If the conditions are relevant in connection with safety then an undertaking from the applicant to that effect or compliance to that effect to be ensured before grant of licence.

?? The drawing should be replica of approved drawing. If not, the matter should be reconciled for necessary action.

If the documents are found in order and the licensing authority is satisfied that there is no legal constraint in grant of licence then the licence can be granted. However, the licensing authority is at liberty to get the premises inspected prior to grant of license. In the event of inspection is carried out then whatever variation or discrepancy noticed during the inspection must be complied with and the compliance report should be submitted for verification and there after the licence may be granted.

B. Renewal of licence:-

Renewing Authority : Circle/sub-circle offices depending areas under this jurisdiction:

Various on-line steps adopted for **renewal of licence in form XII** are as under:

?? Submission of original licence along with the approved drawings and the other required documents by the applicant to the renewing authority for renewal of licence.

?? Renewal of licence by the Renewing Authority.

The details of step by step procedure are as under:

Applicants Action :Submission of documents by applicant for renewal of licence

Applicant must submit the following documents to the Renewing Authority for renewal of licence:

?? **Bank draft as licence** fee for three years. The B/D should be drawn on any nationalised bank, in favour of Jt. CCE/appropriate authority and should be payable at appropriate place as applicable for the concerned licensing authority. The Bank Draft should have at least 2 months validity from the date of receipt of application for renewal of licence.

Note :

1. Licence is renewed for maximum period of 3 calender years at a time.
2. Renewal application must reach the renewing authority thirty days before the date of expiry of the licence to avoid late fee.
3. If renewal application is received after 2nd December and on or before 30th January then late fee equivalent to one year licence fee to be paid.
4. If renewal application is received after 30th January then the renewal case can not be considered since the licence stands expired as per rule. However, for grant of fresh licence in lieu of the expired licence, required documents have to be submitted afresh for consideration.

?? Application form VIII duly filled in and signed by the applicant/ authorised employee. Typed copy of form VIII (given in the Petroleum Rules, 1976) is acceptable. Please note that no column of the form should be left blank. Inapplicable columns should be filled as NA i.e., not applicable. Full postal address with pin code should be written. No overwriting or major corrections will be accepted. Minor correction should be initialed.

?? Original licence along with approved drawing. (The drawings should be attached to the licence as it forms part and parcel of the licence under description of licence premises)

?? Forwarding letter mentioning details of enclosures, Bank Draft No & date etc.

Renewal of licence (Departmental Action) :

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

?? Date of receipt of the application should be conformed.

?? If bank draft is found defective or validity expiring shortly, the draft should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.

?? The application **form VIII** submitted by the party should be checked to confirm that the proper mailing address, signature of the party and all other relevant columns have been duly filled in by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

?? Specimen signature of the applicant should be verified from the application and other available documents as record.

?? In case of any serious violations are found which require amendment or suspension of the licence, the renewal may be withheld or else the licence may be renewed for further period.

?? If the documents are found in order and the licensing authority is satisfied that there is no legal constraint in renewal of licence then the licence can be renewed. However, the licensing authority is at liberty to get the premises inspected prior to renewal of licence. If inspection is carried out then whatever variation or discrepancy noticed during the inspection must be complied with and the compliance report should be submitted for verification and there after the licence may be renewed.

Note:

1. If renewal application is received after 2nd December and by 31st December, then late fee which is equivalent to licence fee should be paid.

2. If renewal application is received after 31st December but within 30 days after the expiry i.e. by 30th January then explanation along with late fee should be paid.
3. If the renewal application is received after 30th January then the licence can not be renewed since licence stands expired. Fresh licence can be granted after submission of required document alongwith explanation and undertaking as applicable.

C. Amendment of licence:

Types of amendment of licences are as under:

- Any alteration of the facilities within the licensed premises.
- Any change in the name of the owner/address (commonly called transfer of licence).

As per rule 147 of Petroleum Rules, 1976, no alterations should be carried without prior approval of the licensing authority. If the licensee intends to carry out any alterations of the existing facilities within the premises then licensee is required to get constructional approval for such alterations and then carry out the alteration work as per approval. The facilities should not be commissioned unless the licence is amended by the licensing authority.

For such constructional approval, the procedure for constructional approval should be followed scrupulously as stated in Part A under grant of licence. After construction of facilities, the following documents are required to be submitted :-

- a. Form VIII
- b. Certificate under Rule 126 and 130 if applicable
- c. Three copies of approved Plan.
- d. Fees in shape of D.D. (i). Amendment fees Rs. 20 plus (ii) balance of licence fees if applicable.
- e. Ref. No. of approval by the Jt. CCE of the Circle office.

For any change in the name of the owner or address then the licensee is required to submit following documents :-

1. The consent letter from the erstwhile licensee that there is no objection in transferring the licence in name of the party
2. Form VIII duly filled and signed by the party
3. **Bank Draft of Rs. 10/-** drawn in favour of Jt. CCE on any nationalized bank payable at the appropriate place
4. Certificate of registration for change of name of the company.

If the documents have found in order, the licence may be transferred in name of the party.

CHECK LIST DURING INSPECTION

Licence Nos.	Date
Licensee's Name	Place
Present Sh	District

Tel. No.

1. Licences with appd. Plan available - Yes/No, if no attach a line diagram sketch of the premises.
Validity of licences 31.12.200...
2. Premises tallies with appd. Plan - Yes/No
If No, state the discrepancies ;
3. Licence No. displayed at vantage point - Yes/No
4. No Smoking sign board displayed at vantage point - Yes/No
5. Facilities at the time of inspection:

(i)	Tank(s)	Pumps
MS/ULP
HSD

 - a. Generator
 - b. Air Compressor
 - c. Sales Room
 - d. Stores
6. Safety Distances Observed:
 - Disp. Units
 - Vent pipes
 - Fill Pipes
 - Tanks
7. Vent Pipes covered with 2-layers proper wire mesh - Yes/No

8. Spillage of Petroleum Observed :
 - Nr. Fill Point Yes/No
 - Nr. Disp. Units Yes/No
9. Fire fighting facilities :
 - (i) Fire Extinguishers (DCP type) Nos.
 - (ii) Sand buckets Nos.
10. Staff is trained to use Fire Extinguishers - Yes/No
11. Electrical fittings;
 - FLP in disp. Units - Yes/No
 - FLP in kiosk if kiosk is located within the hazardous zone Div. 1
 - Wiring in conduit in sales room/store - Yes/No
12. High Tension Power line passing through the premises – Yes/No
If yes, details
13. Biri/Cigarette butts & match stick ends noticed - Yes/No
14. Barrels filled with Petroleum noticed – Yes/No
If Yes, details
15. Excess stock noticed - Yes/No
If Yes, details
16. DP Switch at proper place - Yes/No
17. Hose pipe electrically continuous - Yes/No
18. Maintenance of premises
19. Location of HTL/LTL if any, nearby or abutting the premises.
Whether cradles have been provided beneath the HTL/LTL -
20. Any other remarks :

Name and designation of Officer

Question ?

1. Was it useful in your work activities connected to this department?
2. Are you a frequent visitor to this manual site?
3. Are you a frequent visitor to the offices of this department.
4. What are your specific suggestion to improve it? Give suggestions with reasons.
5. Has this chapter helped you in filing/making proper documents or will you think that you may still face difficulty in filling/making proper forms and documents after reading this chapter?
6. Do you have specific suggestions to make it more user friendly?

- 7. Do you think of unnecessary element in this chapter which can be avoided/deleted ?**
- 8. Do you have any suggestion (s) for change in Legislation ? Give details with reasons.**
- 9. Give brief details of your organization/yourself through the suggestion form which can be had by clicking the feedback button.**

MODEL DRAWING

Form XIII (Petroleum Rules)

Purpose:

The licence in **form XIII** under the Petroleum Rules, 1976 is granted to store petroleum class A and/or class B and /or petroleum class C in a tank or tanks in an installation.

Licensing Authority (i.e., the authority empowered to grant the above said licence) are as under:

- 1) Respective circle office of the Department of Explosives for storage of HSD in under ground tank(s) for DG set or for storage of SKO by the dealer in under-ground tank(s).
- 2) For other cases the licence is granted by the Chief Controller of Explosives, Nagpur.

Notes:

- 2) For details please see the licence form XIII given in the Petroleum Rules, 1976 and Article 6 of first Schedule under the Petroleum Rules 1976

Procedure:

A. Grant of licence:-

Various on-line steps adopted for **grant of licence** in **form XIII** are as under:

?? Submission of drawings and the other required documents by the applicant to the licensing authority for construction approval of the proposed premises.

?? Approval of the drawing by the licensing authority for construction of the facilities in the proposed premises.

?? After completion of construction of the facilities, submission of drawings and the other required documents by the party including the NOC from the District Authority to the licensing authority for grant of licence of the premises.

?? Grant of licence by the licensing authority.

The details of step by step procedure are as under:

Submission of documents by applicant for construction approval (Applicants Action) :

Applicant must submit the following documents to the licensing authority for prior approval for construction of facilities:

?? Bank draft of Rs 20 as scrutiny fee. The B/D should be drawn on any nationalised bank, in favour of Jt. CCE/appropriate authority and should be payable at appropriate place as applicable for the concerned licensing authority. The Bank Draft should have 2Months validity from the date of submission of licence application.

?? Application **form VIII** duly filled in and signed by the applicant/authorised employee. Typed copy of form VIII (given in the Petroleum Rules, 1976) is acceptable. Please note that no column of the form should be left blank. Inapplicable columns should be filled as NA i.e., not applicable. Full postal address with pin code should be written. No overwriting or major corrections will be accepted. Minor correction should be initialed.

?? Letter of Intent from the supplier i.e., the Oil Co. (Original/Notarised), if required.

?? Three copies of drawings (blue print or computerized one without hand correction). Each copy of drawing must show the details of site, layout, construction, sectional and elevation view and necessary noting as stated below:

?? **Regarding site:** The site plan must show the proposed premises and details of all the structures like roads, road-directions, residential area, other buildings, structures, adjoining properties, name of the adjoining factories, approach road, the distances from the km stone, road junction etc. confined within 100 meters radius on all sides around the proposed premises, as per scale. Specific clearance observed by the proposed premises with regards to the nearest building and any open source of fire or over-head electric line coming within the 100mtrs radius should be clearly indicated.

Note:

- i) The purpose of the site plan is to identify and demarcate the location of the premises. In many cases the area up to 100 meters is open land and hence such cases does not fulfil the main purpose. Sometimes reference structures lie or located much beyond 100 meters. Therefore all such reference structures (even not coming within the scale of the drawing) for example the nearest km stone, road crossing with road directions, temple, village, schools, hospitals, canals, rivers,

railway line or other such immovable reference structures along with approach road to the premises may also be incorporated in the site details for proper identification of the location and approach to the premises.

- ii) The applicant should ensure and confirm that the site selected for the proposed premises should have a clear title or undisputed legal status.
- iii) The proposed premises should have proper access and approach road for the purpose of inspection, fire-fighting and rescue operation, movement of fire-tenders etc.
- iv) The proposed site should no way interfere or bring legal confrontation with other Acts and Rules administered by the Central Govt., State Govt., local authority etc. and in no way adversely affect the public interest.
- v) The proposed site should have preferably open land surrounding it and should not be vulnerable to natural calamities.

?? Regarding layout plan:

The layout of the premises should show the plan view of the installation which must indicate road with its directions and the inter-distances among various facilities of the installation like underground tanks, above-ground tanks, enclosure wall in case of above ground tanks, barrel filling facilities, petroleum storage godown in non-bulk, tank lorry platform, fill point(s), boundary wall/fencing, within the

premises. The layout plan must show the dimensions of the premises, ingress & outgress, buffer island, pipelines etc.

Safety distance required to be observed :-

For safety distance please table 1 and table 2 depending on capacity and diameter of tank in installation. Those tables are available in [licence form XIII](#) and also [table of safety distance](#) given in the manual.

Regarding sectional/elevation view:-

The drawing should show the sectional view the tank(s) both cross-sectional and the longitudinal view. The sectional view of the tank must show constructional details of the tank and its pipelines i.e. suction, dip, fill and vent pipe and also manhole of the tank. The suction dip and fill pipe should be extended up to the bottom of the tank leaving 2 inches from the bottom of the tank (**Rule**). The vent pipe should be extended up to the height of 4mtrs and attached to the upper portion of the tank. The tank should be installed about 60cms below ground level. The tank should be properly anchored and the space between tank and the pit must be filled by earth and sand to ensure that no gap is left between the tank and masonry or concrete pit and the tank is buried properly and not visible to outside.

The sectional view must also indicate diameter and length, of the tank and thickness of the plate of tank. The tank must be cylindrical and not rectangular. The sectional view of structures other than the tank i.e. non-bulk godown showing height and constructional details must also be incorporated in the drawing.

Note:-

3. The location of various pipelines e.g. fill, dip, vent, suction, also manhole etc. shown in the layout plan must tally with that in the sectional plan.
4. In many cases vent pipe is extended far beyond the tank. It is suggested that length of vent pipe should be minimised.

Noting to be depicted in the drawing :-

All important noting as given above should be incorporated in the drawing. The drawing must indicate Khasra/ Survey/Killa no. and full address of the situation of the premises.

Approval of drawing (Departmental Action) :

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

* If bank draft is found defective or validity expiring shortly should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.

?? The application form submitted by the party should be checked to confirm that the proper mailing address, signature of the party and all other relevant columns have been duly filled in by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

Verification of drawing(Departmental Action):

The following check to be carried out:-

In the site plan of the drawing whether proper road direction with approach has been shown for exact identification of location. Khasra no., distances from other existing structures etc. has to be shown in the plan. If most of the distances have been given but in case there is any inadvertent omission regarding distance from proposed premises to few surrounding structure/facilities then such distance(s) will be read as per scale given in the drawing.

In the layout the height of the boundary wall/fencing and the construction details of tanks etc. to be checked as per rule. The safety distances required under the rules should be clearly available in respect of various facilities.

Sectional view have been properly shown or not. Necessary noting and full address of the situation of the premises have been incorporated in the drawing. Drawing should preferably be signed by the applicant or authorised employee (in case of company). Any other additional instruction of CCE/Licensing authority and various guideline have been complied with.

After necessary scrutiny of documents as referred above if, the documents are found in order and conforming to the Petroleum Rules-1976, then necessary approval may be accorded with intimation to the party to submit the required documents for grant of licence after completion of the construction as per the approved drawing . The licensing authority may impose conditions as deemed proper. Approval should be generally given for a certain period. In many cases it is seen that after taking approval and

laps of considerable time and party even does not apply for grant of license for one reason or the other. In the mean time Rules are amended or revised executive orders are issued. These entail complicated situation both for the party and the licensing authority. To overcome these difficulties, approval may be considered valid for 6 month and may be renewable for another 6 months on request. After receipt of the approval, the party may start construction of the facilities in the proposed premises as per the approved drawing and after completion of the construction the documents should be submitted by the party for grant of license.

Note :-

In this connection it is stated that one of the important documents is NOC from District Authority. In some cases it is seen that the NOC is considerably delayed and as a consequence, grant of licence is delayed and finally the party will have to suffer irreparable loss due to non-commissioning of the premises after construction. So it is advisable that soon after getting approval and before undertaking the construction work, the party should immediately approach the District Authority and submit replica of

4. approved drawing etc. to the District Authority for NOC and get the matter cleared.
5. The party should ensure that construction of facilities and the premises are confined within the NOC land.
6. It is reasonable to prehend that the purpose of NOC is to ensure the lawful possession of the site and verification of antecedent of the applicant.

Submission of documents by the applicants for grant of licence (Applicant Action)

:-

After completion of the facilities the applicant must submit the following documents:-

- ~~☞~~ ~~☞~~ Appropriate Bank Draft as licence fee payable in same manner as mentioned during approval
- ~~☞~~ ~~☞~~ Application Form-VIII duly filled and **signed.....** as mentioned earlier

- ☞☞ Safety certificate and tank testing certificate as per **rules** **and.... of** the Petroleum Rules, 1976. It should be signed by competent engineer authorized by the CCE Nagpur for that purpose.
- ☞☞ Specimen signature of the applicant/authorised person to verify the reference to initial application filled by the applicant or authorised person of the company.
- ☞☞ Completion report that of the construction of the facilities of premises have been completed as per the approved plan.
- ☞☞ Three copies of the drawing which are faithful reproduction of the original approved drawing. In case of conditional approval all such conditions are to be complied with.
- ☞☞ Forwarding letter mentioning details of enclosures, Bank Draft No & date etc.

Grant of licence (Departmental Action):-

The document submitted by the applicant should be verified and proper scrutiny should be exercised as follows :-

- ?? Bank Draft to be checked and verified that it is drawn in favour of **.....and on any nationalised bank.....** Valid for atleast 2 months.
- ?? Application Form-VIII to be checked and verifiedas referred **earlier.....**
- ?? The NOC dully stamped and signed by the District Authority with date . **..... NOC** should not be more than 2 years **old.....** . There is other discrepancies etc..... In case of any discrepancy in the NOC with reference to the applicants address in Form-VIII then the matter to be enquired and referred to the concerned applicant or DM as the case may be, the action is to be initiated only after reconciliation of the discrepancy /rectifying the anamoly.

If NOC is conditional, the licensing authority should be reasonably satisfied that the condition stipulated in NOC will be applicable or not. If applicable an undertaking to that effect or compliance to that effect to be ensured before grant of licence.

?? The drawing should be replica of approved drawing if not, matter should be reconciled for necessary action.....

If the documents are found in order and the licensing authority is satisfied that there is no legal constraint in grant of licence then the licence can be granted. However, the licensing authority is at liberty to get the premises inspected prior to grant of license. In the event of inspection is carried out then whatever variation or discrepancy noticed during the inspection must be complied with and the compliance report should be submitted for verification and there after the licence may be granted.

B. Renewal of licence:-

Various on-line steps adopted for **renewal of licence in form XII** are as under:

?? Submission of original licence along with the approved drawings and the other required documents by the applicant to the licensing authority for renewal of licence.

?? Renewal of licence by the Renewing Authority.

The details of step by step procedure are as under:

Submission of documents by applicant for renewal of licence (Applicants Action) :

Applicant must submit the following documents to the Renewing Authority for renewal of licence:

?? Bank draft as licence fee for three years. The B/D should be drawn on any nationalised bank, in favour of Jt. CCE/appropriate authority and should be payable at appropriate place as applicable for the concerned licensing authority. The Bank Draft should have at least 2 months validity from the date of receipt of application for renewal of licence.

Note :

4. Licence is renewed for maximum period of 3 year at a time.
5. Renewal application must reach the renewing authority thirty days before the date of expiry of the licence.

?? Application form VIII duly filled in and signed by the applicant/ authorised employee. Typed copy of form VIII (given in the Petroleum Rules, 1976) is acceptable. Please note that no column of the form should be left blank. Inapplicable columns should be filled as NA i.e., not applicable. Full postal address with pin code should be written. No overwriting or major corrections will be accepted. Minor correction should be initialed.

?? Forwarding letter mentioning details of enclosures, Bank Draft No & date etc.

Renewal of licence (Departmental Action) :

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

?? If bank draft is found defective or validity expiring shortly should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.

?? The application form submitted by the party should be checked to confirm that the proper mailing address, signature of the party and all other relevant columns have been duly filled in by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

?? That no compliance of the inspection report is pending.

?? If the documents are found in order and the licensing authority is satisfied that there is no legal constraint in grant of licence then the licence can be granted. However, the licensing authority is at liberty to get the premises inspected prior to grant of license. In the event of inspection is carried out then whatever variation or discrepancy noticed during the inspection must be complied with and the compliance report should be submitted for verification and there after the licence may be granted.

C. Amendment of licence:

Question ?

- 1. Was it useful in your work activities connected to this department?**
- 2. Are you a frequent visitor to this manual site?**
- 3. Are you a frequent visitor to the offices of this department.**
- 4. What are your specific suggestion to improve it? Give suggestions with reasons.**
- 5. Has this chapter helped you in filing/making proper documents or will your think that you may still face difficulty in filling/making proper forms and documents after reading this chapter?**
- 6. Do you have specific suggestions to make it more user friendly?**
- 7. Do you think of unnecessary element in this chapter which can be avoided/deleted ?**
- 8. Do you have any suggestion (s) for change in Legislation ? Give details with reasons.**
- 9. Give brief details of your organization/yourself through the suggestion form which can be had by clicking the feedback button.**

VARIOUS MODEL DRAWINGS WILL BE PROVIDED AT WEB-SITE

Form XIV (Petroleum Rules)

Purpose:

The licence in form XIV under the Petroleum Rules, 1976 is granted to import and store, otherwise than in bulk, petroleum class A in quantities exceeding 300 litres or petroleum class B in quantities exceeding 25000 litres or petroleum class C in quantities exceeding 45000 litres or petroleum class A together with any other class of petroleum in quantities exceeding 300 litres in all in a petroleum godown.

Licensing Authority(i.e., the authority empowered to grant the above said licence) Respective circle office of the Department of Explosives.

Notes:

- 3) For details please see the licence form XIV given in the Petroleum Rules, 1976 and Article 7 of first Schedule under the Petroleum Rules, 1976.
- 4) For definition of “ otherwise than in bulk” i.e., non-bulk, please see rule 2 of the Petroleum Rules, 1976. For definition of petroleum class A, B & C, please see section ... of the Petroleum Act, 1934 .
- 5) No licence is required under the Petroleum Rules, 1976 for the storage of the following quantities of petroleum in non-bulk:
 - a) Petroleum class A 30 litres
 - b) Petroleum class B 2500 litres
 - c) Petroleum class C 45000 litres *

* For petroleum class C exceeding 2500 litres in non-bulk rule-139 & 140 of PR-1976 to be complied with and for that see serial No. 5 below.

- 6) District Authority is empowered under the Petroleum Rules, 1976 to grant licence for the storage of the following quantities of petroleum class A and petroleum class B, in non- bulk:
 - a) Petroleum class A: Exceeding 30 litres but not exceeding 300 litres.
 - b) Petroleum class B: Exceeding 2500 litres but not exceeding 25000 litres.
- 7) For storage of petroleum class C in non-bulk exceeding 2500 litres at any one time shall be stored in a storage shed of which either
 - a) The doorways
 - b) The floor shall be sunk....

- 8) If the non- bulk storage quantity of the petroleum exceeds the quantities mentioned in the serial nos. 4 and 5 above, a licence in the above form, from the DOE is obligatory under the Petroleum Rules, 1976.

Procedure:

A. Grant of licence:-

Various on-line steps adopted for **grant of licence** in **form XIV** are as under:

- ?? Submission of drawings and the other required documents by the applicant to the licensing authority for construction approval of the proposed premises.
- ?? Approval of the drawing by the licensing authority for construction of the facilities in the proposed premises.
- ?? After completion of construction of the facilities, submission of drawings and the other required documents by the party to the licensing authority for grant of licence of the premises.
- ?? Grant of licence by the licensing authority.

The details of the above step by step procedure are as under:

Submission of documents by applicant for construction approval (Applicants Action) :

Applicant must submit the following documents to the licensing authority for prior approval for construction of facilities:

?? **Bank draft of Rs20** as scrutiny fee. The B/D should be drawn on any nationalised bank, in favour of appropriate authority and should be payable at appropriate place as applicable for the concerned licensing authority.

?? Application form VIII duly filled in and signed by the applicant/authorised employee. Typed copy of form VIII (given in the Petroleum Rules, 1976) is acceptable. Please note that no column of the form should be left blank. Inapplicable columns should be filled as NA i.e., not applicable. Full postal address with pin code should be written. No overwriting or major corrections will be accepted. Minor correction should be initialed.

?? Three copies of drawings (blue print or computerised without hand correction). Each copy of drawing must show the details of site, layout, construction, sectional and elevation view and necessary noting as stated below:

?? **Regarding site:** The site plan must show the proposed premises and details of all the structures like roads, road-directions, residential area, other

buildings, structures, adjoining properties, name of the adjoining factories, approach road, the distances from the km stone, road junction etc. lying within at least 100 metres radius on all sides around the premises, as per scale. Specific clearance observed by the proposed premises with regards to the nearest building and any open source of fire or over-head electric line coming within the 100mtrs radius should be clearly indicated.

Note:

- vi) The purpose of the site plan is to identify the location of the premises. In many cases the area upto 100 metres is open land. So site showing 100 metres open land does not fulfil the main purpose. Sometimes reference structures lie much beyond 100 metres. Therefore all such reference structures (even not coming within the scale of the drawing) for example the nearest km stone, road crossing with road directions, temple, village, schools, hospitals, canals, rivers, railway line or other such immovable reference structures along with approach road to the premises may also be incorporated in the site details for easy identification of the location and approach to the premises.
- vii) The applicant should ensure and confirm that the site selected for the proposed premises should have a clear title or undisputed legal status.
- viii) The proposed premises should have proper access and approach road for the purpose of inspection, fire-fighting and rescue operation, movement of fire-tenders etc.
- ix) The proposed site should no way interfere or bring legal confrontation with other Acts and Rules administered by the Central Govt., State Govt., local authority etc. and in no way adversely affect the public interest.
- x) The proposed site should have preferably open land surrounding it and should not be vulnerable to natural calamities.

?? Regarding layout plan:

The layout of the premises should show the plan view of the godown, the length and breadth of the godown, position of door and ventilator of the godown, the safety distance all round the godown, boundary wall/fencing, position and width of gate etc in magnified scale. If the supply of petroleum is received by tank lorry, the layout should show the position of tank lorry

platform, fill point and their safety distances within the boundary of the premises.

Note:

1. The following safety distances should be kept clear at all times from any storage shed to protected works as per **condition** of the licence as under :-

Licence capacity of storage shed	Distance to be observed From storage shed.		
	Pet.cl.A	Pet. cl.B	Pet.cl.C
Total of all classes of pet . Stored in the shed.			
.....			
Not Exceeding 2500 liters	6mt.	NA	NA
Exceeding 2500 litres but not exceeding 25000 litres.	7.5mt	NA	NA
Exceeding 25000 litres but not exceeding 50000 litres	9mt	3mt	NA
Exceeding 50000 litres but not exceeding 100000 litres	12mt	4.5mt	3mt.
Exceeding 100000 litres	15mt	6mt	3mt.
.....			

2. The construction of the godown/shed should be made from non-inflammable materials only. walls of brick-cement. Roof of RCC, Asbestos etc. door of iron etc. The trusses should be made of iron. The trusses should be made of iron.
3. The door of the godown should open outwards .
4. The height of the boundary wall/fencing should be 1.8mtrs.
5. The width of the main gate should be about 4 mtrs having provision for decanting tank lorry within the premises or/else the width of the main gate should not be more than 1.2mtrs.

Regarding sectional/elevation view:-

The sectional view of the godown must show the constructional detail of walls, roof, its thickness, position of ramp, sump height, door sill level, ventilators etc.

Note:-

1. The sump should not be more than 0.3mtrs high & its capacity should be minimum to accommodate half of the licensed capacity . The purpose of the sump is to contain the petroleum inside the godown without allowing the petroleum products to spill outside in the event of any accidental leakage. The sump can be provided in two ways- either by making the floor level of the godown less than the outside ground level or if the level of ground and the floor of the godown are same then the door sill level as well as ventilators may be provided at a height of 0.3mtrs i.e. the sump height.
2. Each ventilators should be provided with **double layer**

Regarding noting :-

All important noting as given above should be incorporated in the drawing. The drawing must indicate Khasra/Survey/Kila no. and full address of the situation of the premises.

Approval of drawing (Departmental Action) :

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

* If bank draft is found defective or validity expiring shortly should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.

?? The application form submitted by the party should be checked to confirm the proper mailing address, signature of the party and all other relevant columns duly filled by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

Verification of drawing(Departmental Action):

In the site plan drawing whether proper road direction approach has been shown for exact identification of location. Khasra no., distances from other

existing structures etc. has to be shown in the plan, most of the distances have been given but in case there is any inadvertent omission regarding distance from proposed premises to few surrounding structure/facilities then such distance(s) will be read as per scale given in the drawing.

In the layout the capacity of the godown should be calculated to confirm that the godown can accommodate the proposed quantity as per rule. If provided with barrel filling facility then additional area for barrel filling to be included . The height of the boundary wall and construction details etc. to be checked as per rule. The safety distances required under the rules are clearly available in respect of various specialities. Sectional view with sump height and ramp etc. have been properly shown. Necessary noting and full address of the situation of the premises have been incorporated in the drawing. Drawing should preferably be signed by the applicant or authorised employee (in case of company). Any other additional instruction of CCE/Licensing authority have been complied with. After necessary scrutiny of documents as referred above if, the documents are found in order and confirming to the Petroleum Rules-1976, then necessary approval may be accorded with intimation to the party to submit the required documents for grant of licence after completion of the construction as per the approved drawing . The licensing authority may impose conditions as deemed proper. Approval should be generally given for a certain period. In many cases it is seen that after taking approval and laps of considerable time and party even does not apply for grant of license for one reason or the other. In the mean time Rules are amended or executive orders are issued. These entails complicated situation both for the party and the licensing authority. To overcome these difficulties, approval may be considered valid for 6 Month and may be renewable for another 6 Months on request. After receipt of the approval the party may start construction of the facilities in the proposed premises as per the approved drawing and after completion of the construction the documents should be submitted by the party for grant of license.

Note :-

7. In this connection it is stated that one of the important documents is NOC from District Authority. In some cases it is seen that the NOC is considerably delayed and as a consequence, grant of licence is delayed accordingly and finally the party will have to suffer irreparable loss due to non-commissioning of the premises after construction. So it is

advisable that soon after getting approval and before undertaking the construction work the party should immediately approach the District Authority and submit replica of approved drawing etc. to District Authority for NOC and get the matter cleared.

8. The party should ensure that construction of facility/premises are confined within the NOC land.
9. The purpose of NOC is to ensure the lawful possession of the site and verification of antecedent of the applicant.

Submission of documents by the applicants for grant of licence (Applicant Action)

:-

After completion of the facilities the applicant must submit the following documents:-

- ~~☒~~ Bank Draft as licence fee payable in same manner as submitted during approval.
 - ~~☒~~ Application Form-VIII duly filled and signed
 - ~~☒~~ Safety certificate, if any
 - ~~☒~~ Specimen signature of the applicant/authorised person to verify the reference to initial application filled by the applicant or authorised person of the company.
5. Completion report be submitted by the applicant after completion of the construction of the premises as per the approved plan.
 6. Three copies of the drawing which are faithful reproduction of the original approved drawing should be verified and in case of conditional approval whether all such conditions have been complied with to be checked and verified.

Grant of licence (Departmental Action):-

The document submitted by the applicant should be verified and proper scrutiny should be exercised as follows :-

- ?? Bank Draft to be checked and verified that it is drawn in favour ofand on any nationalised bank..... Valid for atleast 2 months.
- ?? Application Form-VIII to be checked and verifiedas referred earlier.....
- ?? The NOC dully stamped and signed by the District Authority with date NOC not more than 2 Years old..... . No other discrepancies etc..... In case of any discrepancy in the NOC with reference to the applicants address in Form-VIII then the matter to be enquired and referred to the concerned applicant or DM as the case may be, the action is to be initiated only after reconciliation of the discrepancy /rectifying the anamoly.
- ?? Verification of drawing should be replica of approved drawing if not, matter should be reconciled for necessary action.

If the documents are found in order and the licensing authority is satisfied that there is no legal constraint in grant of licence then the licence can be granted. However, the licensing authority is at liberty to get the premises inspected prior to grant of license. In the event of inspection is carried out then whatever variation or discrepancy noticed during the inspection must be complied with and the compliance report to be submitted and there after the licence should be granted.

Question ?

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VARIOUS MODEL DRAWINGS WILL BE PROVIDED AT WEB-SITE

Form XV (Petroleum Rules)

Purpose:

The licence in **form XV** under the Petroleum Rules 1976 is granted to store petroleum class A temporarily in quantities not exceeding 50,000 litres. for refueling of aircrafts in connection with crop spraying work only.

Licensing Authority (the authority empowered to grant the above said licence): The licence in form XV is granted by the respective circle office of the Department of Explosives.

Notes:

- 9) For details please see the licence form XV given in the Petroleum Rules, 1976 and Article 7(a) of first Schedule under the Petroleum Rules 1976.

Procedure:

A Grant of licence :

Various on-line steps adopted for **grant of licence** in form XV are as under:

- ?? Submission of drawings and the other required documents by the applicant to the licensing authority for grant of licence.
- ?? Grant of licence by the licensing authority.

Submission of documents by applicant for grant of licence

Applicants Action :

Applicant must submit the following documents to the licensing authority for grant of licence:

?? **Bank draft of Rs. 20** as scrutiny fee and licence fee Rs 150 for one year or a part thereof. The B/D should be drawn on any nationalised bank, in favour of Jt. CCE/appropriate authority and should be payable at appropriate place as applicable for the concerned licensing authority. The Bank Draft should have at least 2 months validity from the date of submission of application for grant of licence.

?? Application **form VIII duly** filled in and signed by the applicant/ authorised employee. Typed copy of form VIII (given in the Petroleum Rules, 1976) is acceptable. Please note that no column of the form should be left blank. Inapplicable columns should be filled as NA i.e., not applicable. Full postal address with pin code should be written. No overwriting or major corrections will be accepted. Minor correction should be initiated.

?? Specimen signature of the applicant.

?? Two copies of drawings (blue print or computerized one without hand correction).

?? Forwarding letter mentioning details of enclosures, Bank Draft No & date etc.

Grant of licence (Departmental Action) :

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

?? If bank draft is found defective or validity expiring shortly the draft should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.

?? The application form VIII submitted by the party should be checked to confirm that the proper mailing address, signature of the party and all other relevant columns have been duly filled in by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

Verification of drawing(Departmental Action):

The following check to be carried out:

If the document are found in order and the licensing authority is satisfied that there is no legal constraint in grant of licence then the licence can be granted.

Question ?

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Form XVI (Petroleum Rule 1976)

Purpose:

The licence in **form XVI** under the Petroleum Rules 1976 is granted to decant Kerosene (Petroleum Class B) from Mechanically-Propelled Vehicle (tank lorry i.e. tank truck) in Containers.

Licensing Authority (i.e., the authority empowered to grant the above said licence): The licence in form XVI is granted by the respective circle office of the Department of Explosives.

Notes:

- 1) For details please see the licence **form XVI** given in the Petroleum Rules, 1976 and Article 10 of the First Schedule under the Petroleum Rules 1976.
- 2) The licence in form XVI is issued for a period of maximum three calendar years expiring on 31st December of last calendar year.

Procedure:

A. Grant of licence:

Various on-line steps adopted for **grant of licence** in form XVI are as under:

- ?? Submission of required document by the applicant to the licensing authority for grant of licence.
- ?? Grant of licence by the licensing authority

Submission of documents by the applicant for the grant of licence (Applicants Action):

Applicant must submit the following documents to the licensing authority for grant of licence:

?? **Bank draft of Rs. 20 as scrutiny fee and licence fee @ Rs 100** for one year or a part thereof. The B/D should be drawn on any nationalised bank, in favour of Jt. CCE/appropriate authority and should be payable at appropriate place as applicable for the concerned licensing authority. The Bank Draft should have at least 2 months validity from the date of submission of application for grant of licence.

?? Application **form VIIIA** duly filled in and signed by the applicant/ authorised employee. Typed copy of form VIIIA (given in the Petroleum

Rules, 1976) is acceptable. Please note that no column of the form should be left blank. Inapplicable columns should be filled as NA i.e., not applicable. Full postal address with pin code should be written. No overwriting or major corrections will be accepted. Minor correction should be initiated.

?? Specimen signature of the applicant.

?? Copy of valid licence in **form IX** (duly attested) which is in the name of applicant. Otherwise affidavit from the owner of tank lorry licensee to be submitted to the effect that the tank lorry will ply under his control on contract basis.

?? A letter/licence from Food and Civil Supply Department stating the area of distribution.

?? List of licence holders to whom the SKO will be delivered.

?? Letter of intent from Oil Co/Supplier.

?? Forwarding letter mentioning details of enclosures, Bank Draft No. & date etc.

Notes:

1. A licensed tank truck can deliver upto 2500 litres once in a day to a particular place and only two vehicle load in a day are allowed under the licence.
2. There would not be any objection if the vehicle is used to fill barrels in a licensed **form XI** godown upto 2500 litres once in a day. However, in such a case, as per conditions 18 of licence **form XVI, approval** for decantation of kerosene should be obtained from the licensing authority in case the product delivered is in firm XI premises.
3. For operation convenience it has been agreed to allow any one five such vehicles (maximum). The particulars of road tankers should be mentioned against item 2 of application **form VIIIA**. In case of any subsequent change in the list of these road tankers the licensing authority would be kept informed by the licensee.
4. The licence would authorise the licensed distribution of kerosene to two tanker loads in one or two particular areas where the retail points are located. Particulars of these area of operation and location of retail points would be given against items 3 and 4 of application form VIIIA. At each place not more than 2.5 kl can be unloaded at any one

time. The tanker load will be catering to 10 to 12 retail points in the maximum per day.

5. It was clarified that the licence would be granted to the agent dealer appointed by the Oil Company. Agents/dealers would be suitably advised/trained by oil companies regarding the requirements of rules and safety precautions.

Grant of licence (Departmental Action) :

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

?? **If bank draft is found defective or validity expiring shortly the draft should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.**

?? The application form VIII submitted by the party should be checked to confirm that the proper mailing address, signature of the party and all other relevant columns have been duly filled in by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

The following check to be carried out:

If the document are found in order and the licensing authority is satisfied that there is no legal constraint in grant of licence then the licence can be granted.

B. Renewal of Licence:

B. Renewal of licence in form XVI:

Various on-line steps adopted for **renewal of licence in form XVI** are as under:

?? Submission of original licence along with other documents.

?? Renewal of licence by the Renewing Authority.

The details of step by step procedure are as under:

- 1.** Renewal application must reach the renewing authority thirty days before the date of expiry of the licence.

Renewal of licence (Departmental Action) :

The documents submitted by the applicant should be verified and proper scrutiny should be exercised as follows:-

?? If bank draft is found defective or validity expiring shortly should be returned to the party. On receipt of proper bank draft, scrutiny and other checks to be carried out.

?? The application form submitted by the party should be checked to confirm that the proper mailing address, signature of the party and all other relevant columns have been duly filled in by the applicant. No overwriting or major corrections will be entertained. Minor correction if any, should be attested by the applicant.

?? If the documents are found in order and the licensing authority is satisfied that there is no legal constraint in renewal of licence then the licence can be renewed.

B Amendment of licence:

Amendment of licence in form XVI is generally done when there is change in area of distribution allotted by Dist. Food & Supply Officer.

For amendment of licence, the following documents are to be submitted to the licensing authority(**Applicant Action**):

?? Original licence along with the copy of letter from Food & Supply Deptt. ,Form VIIIA, D.D. for Rs. 20/- only.

Departmental Action:

If the above documents are in order the licence is amended in respect of change of area of operation and the amended licence is forwarded to the licensee.

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VARIOUS MODEL DRAWINGS WILL BE PROVIDED AT WEB-SITE

Special Form (Petroleum Rules,1976)

The related matter is available in the hard copy of the manual which can be had by placing an order (by letter or through e- mail) to the following address

**Dy. Chief Controller of Explosives
Testing Station
Amravati Road, Gondkhairy
NAGPUR 440 023**

E- mail address: ccoe.ngp@nag.mah.nic.in

[HOME](#)

Refinery

Refining in general means fractional distillation of mixture of hydrocarbons of various boiling constituents. When a mixture of hydrocarbon is heated, the lowest boiling constituents are evaporated first and then successively the higher boiling constituents and hence by successive stages of cooling, the different constituents are separated.

The Refineries are categorized as :

?? Grass- root Refinery &

?? Mini or small Refinery

The Grass root Refinery uses crude petroleum raw material. Crude petroleum is made up of various series and classes of hydrocarbons for example paraffines; naphthenes aromatics; small amounts of olefins, i.e. “unsaturated” hydrocarbons, high percentage of asphaltic material with combination of radicals from two or more different series for example naphthene or aromatic nucleus with side chain belonging to the paraffin grouped together in the same molecule etc.

Some small amount other constituent containing Sulphur, Oxygen, Nitrogen etc. are also present in those mixture are hydrocarbons.

Grass root Refinery produces various products on distillation, each of which is again treated chemically and physically to obtain better finished products of desired requirement of quality and quantity. Therefore grass root Refinery consist of various different units for distillation/processing for example atmospheric distillation unit (ADU), Vacuum distillation unit (VDU) cracking (i.e. thermal decomposition), hydrocracking, fluidised catalytic cracking (FCCU), catalytic Reforming, Visbreaker unit, sweetening operation for example sulphur recovery unit, adsorption process, treatments with acid, alkalis, dewaxing process etc. As the grass root Refinery is very large plant, it provide its own power plant, control room, effluent treatment plant, large storage tank farm area for crude oil as well as finished products and also LPG or other compressed gases Horton spheres/pressure vessels etc. The temperature of the processing units in the grass root Refinery is more than flash points and auto ignition temperature of many hydrocarbons. It also consist of marketing terminals, tank wagon loading/unloading facilities. Therefore inventory and risk of grass root Refinery is very high. The control room must be blast proof one and there should be large network of fire fighting system.

The Site selection of the refinery is generally based on convenience of crude availability, demand of petroleum product in the area, large resources of water, power and disposal systems for effluents and emissions from it from environmental point of views and risks as per APAR(ALARP).

The layout of the refinery is planned keeping in view the sequential order of the process involved, raw material and products storage, distribution/marketing and various utilities required. The various process units are planned separately, depending on their

shutdown philosophies for preventive maintenance and repairs and movement of heavier and large equipments, cranes etc. Each unit has its own battery limit and necessary safety distances from such battery limits to the extent of containing its extended hazardous area classification is observed from other facilities/units. The inter distances from equipment to equipment as per standards (OISD Std. 117) in each unit is also observed. The electric equipment fittings, etc also should be as per the requirement of OISD Standards 5171 and 5172 Part I. The control room for each unit or combined control room from various units should preferably be far away from units but not less than 30 meters and should be of blast proof construction. The fire fighting facilities depending on products processed stored and handled should be as per the requirement of OISD Standards 116. For tall process towers/columns elevated monitors, hydrants, spray systems are essential, which can be operated in emergencies. The flare system of the refinery for flue gases should be designed to take care of maximum loads (during commissioning/shutdown of various units) in compliance of emission norms applicable for that area as prescribed by the Ministry of Environment & Forest/Pollution Control Board's but should not be less than 90 mtrs. From process units/storage facilities. Thus for approval of refinery operations & shutdown, philosophies throughput capacities, which are more, refinery and site/location specific are considered.

The other type of Refinery is mini Refinery where any particular fraction obtained from grass root Refinery is further distilled to produced say 3-4 fraction in a small scale unit. It is simple distillation process by application of heat (say by thermic fluid). It does not involved any chemical process, or effluent etc. The inventory is hence, less the risk is also less.

However, the mini refinery's distillation unit should also observe minimum 15 mtrs safety distance from other facilities including the aboveground storage tanks, and utilities. Other norms regarding suitability of electric appliances/equipments will be as for the grass root refinery. Fire fighting facilities for mini refineries need not be elaborate-only water tank & hydrant system is considered enough.

As per Petroleum Rule, 1976, only approval (not licence) is required for Refinery. In view of the above, the procedure for these two types of Refinery are different.

Procedure for Grass Root Refinery (Applicant Action) :

The applicant for major Refinery must submit the following documents to the Chief Controller of Explosives, Nagpur :

1. Detailed Project Report
2. Environment Impact Assessment report
3. Risk Analysis Report
4. Approval from the Ministry of Environment & Forest
5. Detailed write-up on Fire Fighting System, all safety interlocking control system & mechanism, safety system, shut down philosophy etc.
6. Four sets of detailed drawings.
7. Fees as per Petroleum Rules (Which is under Revision)

Details of drawing :

The each set of drawings must contain the followings :

- ?? Location/key plan survey showing the topography of the area.
- ?? General Site Plan showing the entire plant layout, pipelines, expansion loops, the inter safety distances between each unit (minimum 30 mtr.), distance of flare from various facilities (minimum 90mtrs) etc.
- ?? location of each processing unit/storage area control room etc.
- ?? Detailed drawing showing each of the specific process unit
- ?? Detailed drawing showing storage unit i.e. tank farm areas.
- ?? Detailed drawing showing hazardous area classification zone

For Grass Root i.e. major Refinery/guidelines/norms given in OISD-118 are to be observed.

Departmental Action :

After receiving the above mentioned documents, the Chief Controller of Explosives conducts detailed scrutiny and generally asks the applicant to give presentation and also to discuss the various matters with a technical team and the applicant. During presentation and discussion the various deficiencies and other matters are cleared and rectified and after fully satisfying with the documents and technical aspects for the interest of safety, the Chief Controller of Explosives grant as initial approval to the applicant for construction of the facilities.

During construction stage, the various stage wise construction of different units are inspected by the Chief Controller of Explosives or Senior Officers of Department of Explosives and if any discrepancies are observed , suggestion are offered. After completion of the construction, either in part or fully, the applicant submit documents to Chief Controller of Explosives for getting final permission.

Applicant Action :

The applicant against submit drawings with various test & safety certificate and completion certificate confirming that the facilities have been constructed/installed as per the drawing approved by the Chief Controller of Explosives.

Departmental Action :

The Officers of the Department of Explosives, on receipts of completion documents as stated above, inspects the Refinery.

Also a pre-commissioning inspection by a team of expert officers mostly from Oil Industry is carried out and detailed report is submitted to the Chief Controller of

Explosives, Nagpur. Based on the departmental inspection and the precommissioning inspection, CCE if satisfied, issues permission for commissioning the Refinery, or issues further directives for rectification/modification.

As the Refinery contains tank farm areas, Horton spheres/pressure vessels of compressed gases, for which licences are required, the applicant have to simultaneously apply to CCE with necessary documents for approval, grant of licence etc, the procedure of which have been stated in the licensing part of this manual.

Procedure for mini i.e. small Refinery :

The mini Refinery is a small scale unit as stated above and hence the procedure for obtaining permission for Refinery premises and licences for tank farm area are simple.

Applicant Action :

The applicant for mini Refinery shall submit to the Chief Controller of Explosives the following documents

1. The name and specification of petroleum raw materials proposed to be distilled and those of the products.
2. Process write-up stating various parameters of physical processes involved in the refining process.
3. Detailed statement stating the names, designation, qualification & experience of personnel employed.
4. Four sets of drawings
5. Fees as per Petroleum Rule (the fees under revision)

Details of Drawing :

The drawings must show the location, topography of the site, of distillation unit, tank farm area, tank lorry loading/unloading plat form, electrical fittings, static water tank, hydrants, monitors, office building, shed for heating tharmic fluid, refrigeration system etc. The drawing must show the safety distances of distillation unit (minimum 15 mtrs all round), tank lorry platform (minimum 9 mtrs all round), boundary fencing tank from as per table of petroleum products.

Departmental Action :

The Chief Controller of Explosives after scrutinizing the documents, grants prior approval for construction of the facilities, if all the documents meet the requirement of the Petroleum Rule 1976.

Applicant Action :

The applicant, after completion of construction/installation, must submit the **No Objection Certificate** from the district authority, drawings (replica of approved drawing) test and completion certificates to the Chief Controller of Explosives.

Departmental Action :

On Scrutiny of the documents the Chief Controller of Explosives grants final permission for the mini Refinery. But before handing over the permission letter, the premises are inspected by officers of the Department of Explosive and if the premises are found as per the approved drawing, the final permission for commissioning the mini Refinery is given.

In the mini Refinery, licences in **form XIII** under Petroleum Rule 1976 are also granted for the tank farm area.

ADDITIONS AND ALTERATION :

Before carrying out any alteration in the Refinery, whether grass root or mini, prior approval shall be obtained from the Chief Controller of Explosives. For obtaining approval the applicant must submit the following to the Chief Controller of Explosives :

1. Four sets of Drawing showing the addition and alterations (proposed facilities should be shown in red and the facilities to be removed should be shown in yellow colour code)
2. If the change in any of the process is involved or new process units are proposed, a detailed write-up as in the fresh case, as stated above.
3. Fees as per the Petroleum Rule 1976.

If the documents are found in order, the Chief Controller of Explosives grants approval for construction/installation of the proposed addition and alteration.

After the construction/installation the complete, the applicant has to submit documents for final permission/amendment of licence.

Blending :

Under Preparation

NB : The Petroleum Rules, 1976 are under revision and the modified version of procedure and other provision will be available in the web after publication of final Gazette Notification by Ministry of Petroleum and Natural Gases, Government of India.

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VARIOUS MODEL DRAWINGS WILL BE PROVIDED AT WEB-SITE

Pipe line transportation of petroleum

There is no Pipe Line Act in India though pipe line Act is prevailing in some countries. The Petroleum Rules 1976, Chapter VIII provides for the pipe line transportation of petroleum coming under the purview of the Petroleum Rules 1976.

As per Petroleum Rules 1976 only Liquid Petroleum is coming under the definition of 'Petroleum' i.e. liquid hydrocarbon or mixture of hydrocarbon other inflammable liquid having flash point upto 93°C(liquid in ambient condition). Thus compressed gases line LPG etc. are not covered under the Petroleum Rule 1976.

Pipe Lines are generally cross-country pipe line which is defined as a pipe line having a length of more than 500 mtrs from the boundary of a premises.

For cross-country pipe line, approval is required from the Chief Controller of Explosives, Nagpur. The procedure for obtaining approval for pipe line are as under :

Applicant Action :

The Applicant shall submit the following documents to the Chief Controller of Explosives :

1. Project Report giving details of the project, design parameters of pipe line, root map, Right of way, etc.
2. Right of way.
3. Detailed drawings (4 sets) showing the root map and also the typical section of installation of pipe line, which may be under ground, above ground, crossing road, railways, water ways etc. at various places . The drawing must show those typical section and their support.
4. Design calculations stating the code, standards, specification, material of construction etc.
5. Detailed write-up stating the communication system, petroleum system, monitoring system, safety system, flow detection system, location of booster pumps, inter locking arrangement for emergency purpose, intermediate storage etc.
6. If the pipe line installation is a big project then in addition to above , Environment Impact Assessment Report, Risk Analysis Report must also be submitted.
7. If marine loading/unloading is involved, then detailed Fire Fighting Facilities, Hazard Analysis, LFL area, Risk Analysis Report also to be submitted.
8. If marine loading/unloading is involved, approval letter form Port authority, Ministry of Surface Transport, Ministry of Environment & Forest (from Pollution angle) and also Ministry of Finance (declaring the Port in question is a Custom's Notified Port)
9. Fees as per Petroleum Rule 1976 (under revision)

Departmental Action :

The above said documents are thoroughly scrutinized. The codes applicable (OISD-141, ASME/ ANSI B 31.4, API etc.) and the design calculations are verified and if the documents are found in order, permission for installation of the pipe line is accorded by the Chief Controller of Explosives.

Applicant Action :

On receipt of permission from Chief Controller of Explosives for installation, the applicant should start the installation work and when installation of pipe line (or part thereof) will be complete, the applicant shall submit pressure test certificates alongwith its graph and drawings and other details/ documents complying with codes to the Chief Controller of Explosives.

Departmental Action :

After thorough scrutiny, if all the documents are found in order complying with the Petroleum Rule 1976 and the codes/ standard / specification , the Chief Controller of Explosives grants final permission for commissioning pipe line.

ADDITIONS AND ALTERATION :

Before carrying out any alteration in the pipeline shall be obtained from the Chief Controller of Explosives. For obtaining approval the applicant shall submit the following to the Chief Controller of Explosives :

1. Four sets of Drawing showing the addition and alterations (proposed facilities should be shown in red and the facilities to be removed should be shown in yellow colour code)
2. Fees as per the Petroleum Rule 1976.
3. Similar documents (as for new pipelines) in respect of additional lines.

If the documents are found in order, the Chief Controller of Explosives give approval for construction/installation of the proposed addition and alteration.

After the construction/installation the complete, the applicant shall submit document for final permission.

Inspection :

For inspection of pipe line there are codes available for example OISD – 138.

Testing :**Work permit:**

Isolation, cleaning and purging:

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Fabrication of tank lorry

APPROVAL FOR TRANSPORTATION OF PETROLEUM ON LAND BY VEHICLES(ROAD TANKERS)

Purpose

Transportation of petroleum products by road involves considerable hazards as it involves movement of petroleum through highways and congested localities. It is for this reason that provisions have been made in the Petroleum Rules for regulation of design and construction of petroleum carrying tankers. Rule 63 of the Petroleum Rules, 1976 requires that all tank trucks used for transportation of petroleum shall be of the type approved by Chief Controller of Explosives. In order to ensure this, it is essential that the tank trucks should be fabricated at fabrication shops approved by Chief Controller of Explosives so that quality of workmanship. Further, the design and mounting drawing of each model of vehicle and each capacity of tank truck is also required to be approved by Chief Controller of Explosives to ensure uniformity in design & verify that the vehicle retains stability when moving on the road.

1) Types of Approval

Under mentioned approvals are issued for regulation of transport of petroleum by road tankers :-

- (i) Approval of shop for fabrication of petroleum tank trucks.
- (ii) Approval for manufacture of safety fittings.
- (iii) Type approval for model and capacity of tank truck.

2) Authority

Rule 63 of Petroleum Rules, 1976 authorises Chief Controller of Explosives to issue approval as above.

3) Exemptions

- (i) The provisions regarding approval do not apply to transportation in bulk not exceeding 100 ltrs.
- (ii) Petroleum of any class transported by the Defence forces of Union.

Salient features involving transportation of Petroleum by tank trucks

In order to ensure safety during transportation and to impart uniformity in construction & design, certain basic parameters involving physical characteristics of material of construction of the tankers, the minimum thickness of the material, the requirement of safety fittings and the testing procedures etc., have been laid down in the

Third Schedule of the Petroleum Rules, 1976. Further more, certain additional limitations have also been imposed with respect to tanker vehicles so as to limit the hazards involved in Petroleum transportation. Some of the limitations imposed are as under :-

- a) The net carrying capacity of the petroleum road tanker has been limited to 97% and its volume in case of petroleum class 'A' & 'B' and 98% in case of petroleum class 'C' product.
- b) The net carrying capacity of tank truck or tank trailer is not to exceed 25KL and the net carrying capacity of tank trailer has not to exceed 5KL.
- c) In case of tank trailer attached to tank truck, the total quantity is not to exceed 15KL. Also no tank trailer is to be attached to a tank truck whose capacity exceeds 12KL.
- d) In case of articulated vehicles the weight of the carrying axles on the ground is not to exceed 60% of the gross laden weight of the vehicle.

Documents required to be submitted for approval of shop for fabrication of petroleum tank trucks :-

The application should comprise all following details :-

- 1) Name & address of the applicant.
- 2) Location of the place where the tanks are proposed to be fabricated.
- 3) The status of the unit whether small scale unit or not. A copy of SSI registration certificate to be enclosed in case the unit is a small scale unit.
- 4) Organisational set up of the fabricator (list of key personnel with details regarding their qualification and experience in fabrication).
- 5) Details of infrastructure regarding land, fabrication shed, availability of power, water etc., (Drawing showing the covered area with location of shop floor, machine shop, store & utilities).
- 6) Details of machinery and other equipments.
- 7) Details of testing equipment/precision equipment. Procedure involved in fabrication of tanks & mounting.
- 8) Details of quality control set up.

Departmental Action

On receipt of application, a preliminary assessment is made regarding adequacy of infrastructure, machinery and experienced manpower available with the firm. If from the details provided by the applicant, the same is found to be adequate, a reference is made to the Circle office or Sub-circle office in whose jurisdiction the workshop is located and the said office is advised to inspect the facilities and verify

the details regarding workshop furnished by the applicant. The inspecting officer is also required to give his assessment on the capability of the firm to undertake petroleum fabrication work. On receipt of the report from the concerned Circle or Sub-circle office action towards approving the workshop or otherwise is taken.

Question ?

- 1. Was it useful in your work activities connected to this department?**
- 2. Are you a frequent visitor to this manual site?**
- 3. Are you a frequent visitor to the offices of this department.**
- 4. What are your specific suggestion to improve it? Give suggestions with reasons.**
- 5. Has this chapter helped you in filing/making proper documents or will you think that you may still face difficulty in filling/making proper forms and documents after reading this chapter?**
- 6. Do you have specific suggestions to make it more user friendly?**
- 7. Do you think of unnecessary element in this chapter which can be avoided/deleted ?**
- 8. Do you have any suggestion (s) for change in Legislation ? Give details with reasons.**
- 9. Give brief details of your organization/yourself through the suggestion form which can be had by clicking the feedback button.**

VARIOUS MODEL DRAWINGS WILL BE PROVIDED AT WEB-SITE

TYPE APPROVAL FOR PETROLEUM ROAD TANKERS :

PURPOSE :

The purpose of issuing the approval is as under :

- 1) To regulate the design of the tankers manufactured by individual fabricators.
- 2) To ensure that the tankers conform to the requirements laid down in **Schedule III** of the Petroleum Rules, 1976.
- 3) To ensure that the load distribution on the tankers is within the parameters specified by the vehicle manufacturers and the transport authorities.
- 4) To ensure that the vehicles fabricated maintain stability both under laden & unladen conditions.

Documents required for type approval

The following documents are required to be submitted by the fabricator of tank trucks for obtaining approval for each model and capacity of petroleum tank trucks :-

- 1) **Scrutiny fee of Rs.50/-** for each capacity of model vehicle.
- 2) 3 copies of drawings showing following details :-
 - i) Make & model of the vehicle.
 - ii) The capacity for which approval is required.
 - iii) The class or product for which the tanker will be used.
 - iv) Name of the fabricator of the tanker.
 - v) The side view, the top view and the end view of the tanker indicating under mentioned details -
 - a) the wheel base;
 - b) front over-hang and rear over-hang;
 - c) overall length & width of the tank and the chassis;
 - d) the large and small diameters of the tank;
 - e) the number of compartments of the tank with capacity of each tank;
 - f) details and location of safety fittings of each compartment;
 - g) filling and discharge arrangement of the tanker;
 - h) dip pipe arrangement on each compartment;
 - i) details of saddle plate and bolting arrangement of the tank with the chassis;
 - j) details of fire screen;

- k) details of safety fittings, location of exhaust, material of construction, thickness of material used, description of electrical wiring and battery cut-off arrangement.

The drawing should also exhibit details of load distribution in tabular form as mentioned below :

LOAD DISTRIBUTION

SR. NO.	ITEMS	LOAD ON FRONT AXLE IN K.G.	LOAD ON REAR AXLE IN K.G.	TOTAL LOAD IN K.G.	HEIGHT OF C.G. FOR	
					UNLADEN CONDITION	LADEN CONDITION
I	CHASSIS WITH SPARE WHEEL & TOOLS					
II	CABIN					
III	DRIVER/CLEANER					
IV	TANK MOUNTING					
V	PAY LOAD					
VI	TOTAL LADEN LOAD					

VII	MAX.PERMISSIBLE LOAD BY VEHICLE MANUFACTURER								
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The details of the various approved models of TATA Make and Ashok Leyland Make along with their unladen weight, front axle weight, rear axle weight, gross vehicle weight, wheel base, front overhang, rear overhang and overall length & breadth as approved by the vehicle manufacturers is as follows :-

DESCRIPTION OF VEHICLE : TATA MAKE

Sl. No	MODEL	ULW (Kgs)	FAW (Kgs)	RAW (Kgs)	GVW (Kgs)	WHEEL BASE (mm)	FRONT OVER-HANG (mm)	REAR OVER-HANG (mm)	OVER ALL	
									Length (mm)	Width (mm)
1.	LP-609/34	2430	2500	4200	6700	3400	1275	1750	6425	2140
2.	LP-407/31	2250	2050	3250	5300	3100	745	1000	4845	1910
3.	LP-609/34	2430	2500	4200	6700	340	1275	1750	6425	2140
4.	LP-609/38	2455	2500	4200	6700	380	1275	2050	7125	2140
5.	LPT-807/32	3125	2800	5600	8400	3200	1210	1560	5970	2159
6.	LPT-807/36	3145	2800	5600	8400	3600	1210	1560	6370	2159
7.	SE-1210/32	3785	5465	10200	15660	3225	1185	960	5370	2434
8.	SE-1210A/32	3840	6000	10200	16200	3225	1185	960	5370	2434
9.	SE-121B/32	3890	6000	10200	16200	3225	1185	960	5370	2434
10.	SE-121C/32	3855	5460	10200	15660	3225	1185	960	5370	2434
11.	SE-1210/36	3835	5460	10200	15660	3625	1185	1290	6100	2434
12.	SE-1210A/36	3890	6000	10200	16200	3625	1185	1290	6100	2434
13.	SE-1210B/36	3940	6000	10200	16200	3625	1185	1290	6100	2434
14.	SE-1210C/36	3905	5460	10200	15660	3625	1185	1290	6100	2434
15.	SE-1210/42	3890	5460	10200	15660	4225	1185	1560	6970	2434
16.	SE-1210A/42	3945	6000	10200	16200	4225	1185	1560	6970	2434
17.	SE-210B/42	3995	6000	10200	16200	4225	1185	1560	6970	2434
18.	SE-1210C/42	3960	5460	10200	15660	4225	1185	1560	6970	2434
19.	LPT-1210/32	3675	5460	10200	15660	3225	1185	960	5370	2434
20.	LPT-1210A/32	3730	6000	10200	16200	3225	1185	960	5370	2434
21.	LPT-1210B/32	3780	6000	10200	16200	3225	1185	960	5370	2434
22.	LPT-1210C/32	3745	5460	10200	15660	3225	1185	960	5370	2434
23.	LPT-1210/36	3750	5460	10200	15660	3625	1185	1620	6430	2434
24.	LPT-1210A/36	3805	6000	10200	16200	3625	1185	1620	6430	2434
25.	LPT-1210B/36	3855	6000	10200	16200	3625	1185	1620	6430	2434
26.	LPT-1210C/36	3820	5460	10200	15660	3625	1185	1620	6430	2434

27.	LPT-1210/42	3810	5460	10200	15660	4225	1185	1970	7380	2434
28.	LPT-1210A/42	3865	6000	10200	16200	4225	1185	1970	7380	2434
29.	LPT-1210B/42	3915	6000	10200	16200	4225	1185	1970	7380	2434
30.	LPT-1210C/42	3880	5460	10200	15660	4225	1185	1970	7380	2434
31.	LPT-1210/4B	3860	5460	10200	15660	4855	1185	2285	8325	2434
32.	LPT-1210A/4B	3915	6000	10200	16200	4855	1185	2285	8325	2434
33.	LPT-1210B/4B	3965	6000	10200	16200	4855	1185	2285	8325	2434
34.	LPT-1210C/4B	3930	5460	10200	15660	4825	1185	2285	8325	2434
35.	LPT-1210/52	3880	5460	10200	15660	5196	1185	2455	8835	2434
36.	LPT-1210A/52	3935	6000	10200	16200	5196	1185	2455	8835	2434
37.	LPT-1210B/52	3985	6000	10200	16200	5196	1185	2455	8835	2434
38.	LPT-1210C/52	3960	5460	10200	15660	5196	1185	2455	8835	2434
39.	SE-1510/32	3805	5465	10200	15660	3225	1185	960	5370	2434
40.	SE-1510A/32	3860	6000	10200	16200	3225	1185	960	5370	2434
41.	SE-1510/36	3855	5460	10200	15660	3625	1185	1290	6100	2434
42.	SE-1510A/36	3910	6000	10200	16200	3625	1185	1290	6100	2434
43.	SE-1510/42	3910	5460	10200	15660	4225	1185	1560	6870	2434
44.	SE-1510A/42	3965	6000	10200	16200	4225	1185	1560	6970	2434
45.	SE-1510/48	3980	5460	10200	15660	4855	1185	2285	8325	2434
46.	SE-1510A/48	4035	6000	10200	16200	4855	1185	2285	8325	2434
47.	SE-1612/32	3910	5460	10200	15660	3225	1185	2455	5370	2434
48.	SE-1612/36	3960	5460	10200	15660	3625	1185	2455	6100	2434
49.	SE-1612/42	4015	5460	10200	15660	4225	1185	6970	5370	2434
50.	SE-1612/484085	4085	6000	10200	16200	4855	1185	2455	8325	2434
51.	LPT-1612/42	3935	6000	10200	16200	4225	1185	1970	7380	2434
52.	LPT-1612/48	3985	6000	10200	16200	4855	1185	2285	8325	2434
53.	LPT-1613/42	3935	6000	10200	16200	4225	1185	1970	7380	2434
54.	LPT-2213 (3 axle)	5540	5460	16540	22000	4165	1260	2155	9010	2440
55.	LPT-2213/56 3 axle (1000x20x16 ply)		6000	19000	25000	4165	1260	2155	9010	2440
56.	LPT-2416 (3 axle)	6035	6000	19000	25000	4165	1260	2155	9010	2440
57.	LPT-2516TC (3 axle)	6000	6000	19000	25000	4165	1260	2155	9010	2440
58.	LPS-1612/32 (Tractor)	4150	6000	10200	26400	3225	1185	960	5370	2435
59.	LPS-1616/32 (Tractor)	5440	6000	10200 + 19000	35200	3200	1260	1120	5580	2440

DESCRIPTION OF VEHICLE : ASHOK LEYLAND

Sl. No	MODEL	ULW (Kgs)	FAW (Kgs)	RAW (Kgs)	GVW (Kgs)	WHEEL BASE (mm)	FRONT OVER-HANG (mm)	REAR OVER-HANG (mm)	OVER ALL	
									Length (mm)	Width (mm)
1.	Cargo-909	4000	3870	6780	10650	3600	1338	1620	1558	2207
2.	Cargo-Hanlaga 1412	3850			14270	3600	1338	1620	6558	2207
3.	Cargo-Hanlaga 1412/1	4050			14270	4250	1338	1420	7008	2207
4.	Comet (ALCO-3/1)	3760	5670	10200	15875	4470	1118	1676		
5.	Comet NC 1/1	3980	5460	10200	15660	4470	1236	1524		
6.	Comet NC 1/2	3980	5675	10200	15875	4470	1236	1524		
7.	Comet Super (CS-42)	3980	5675	10200	15875	4216	1372	1676	7264	2425
8.	Comet Super (CS-42)	3940	6000	10200	16200	4470	1118	1676	7264	2425
9.	Tusker-13C-47	4150	6000	10200	16200	4700	1372	1955		
10.	Tusker Super 13-C-47/2	4150	6000	10200	16200	4700	1372	1955		
11.	Tusker Super 1613/1	4200	6000	10200	16200	4700	1326	1955	7981	2432
12.	Tusker-2214 (3 axle)	5760	5000	17000	22000	4572	1326	2559	8457	2432
13.	Tusker-2214/1 (3 axle)	5680	5000	17000	22000	4572	1326	2559	8457	2432
14.	Taurus-2516-T	6050	6000	19000	25000	5029	1326	2838	9193	2432
15.	Taurus-2516-T/1	5900	6000	19000	25000	4572	1326	2559	8457	2432
16.	Comet-ALCO-4/5-A	3960	6000	10200 + 10200	26400	2800	1372	889		
17.	Tusker-Turbo 3416	4940	5000	10200 + 19000	34200	3023	1508	896		2432
18.	Tusker-Turbo 3416	4940	5000	10200 + 19000	34200	3023	1508	896		2432
19.	Tusker-Turbo 3516	4540	6000	10200 + 19000	35200	3023	1311	915	5249	2432
20.	Beaver-ALB-1/4	5810	6000	10200 + 24000	40200	3353	1456	932	5741	2476
21.	Hippo-ALH-1/4	7930	6000	19000 + 24000	49000	3810	1456	1505	6771	2476

The drawing should indicate the location of center of gravity of the vehicle under both laden & unladen conditions and based on the location of center of gravity of the vehicle, the stability of the vehicle should be confirmed.

DEPARTMENTAL ACTION :

On receipt of application along with 3 copies of drawing, the following scrutiny is done by the Department :

- (A) Confirmation regarding receipt of Scrutiny Fee.
- (B) Scrutiny of drawing for following :-
 - 1) The drawing should indicate the side elevation, top view and end view of the tanker.
 - 2) The dimensions of wheel base, front overhang and rear overhang and width of the chassis should match with the dimensions as indicated in the technical specification of model issued by the vehicle manufacturer.
 - 3) The fire screen with asbestos lining should be provided between the cabin body and the tank and should extend upto 150mm from the ground.
 - 4) A minimum of 150mm gap should exist between the forward tank end and the cabin body. The width of the tank should not exceed the width of the cabin of the vehicle.
 - 5) The minimum distance of 75mm should exist between the rear end of the tank and the end of chassis.
 - 6) The total capacity of the tanker should not exceed 25KL and capacity of each compartment should not exceed 5KL.
 - 7) The fill point and dip pipe of the tank should extend right upto bottom of the tanker compartment.
 - 8) Location of emergency shut off valve, shear section, means of remotely operating shut off valve, location of fusible link, emergency vent and pressure vacuum valve should be verified and should be as required under Schedule III of the Petroleum Rules, 1976.
 - 9) The details of the thickness of the tank shell has to be verified based on the capacity as detailed in [Schedule III](#) of the Petroleum Rules, 1976.
 - 10) Load distribution details have to be verified to ensure that the distribution of chassis weight on the front axle and the rear axle is within limits prescribed by the vehicle manufacturer. Also, verification of load due to cabin, driver/cleaner, tank mounting and pay load has to be verified to confirm that they are realistic. The load on the front axle, rear axle and the total load thereof has to be determined to verify that the loads thus calculated do not exceed the maximum load permitted by the manufacturer on the front axle, rear axle and the GLW as recommended by the vehicle manufacturer.

From the data provided in the drawing, a calculation has to be made regarding the center of gravity of the tanker both in laden & unladen condition and from the same it is to be determined whether the vehicle will be suitable under both laden & unladen conditions. A model calculation for determination of the same is reproduced below :-

ASSUMPTIONS :

A	=	Load due to Chassis
B	=	Load due to Cabin
C	=	Load due to Driver & Cleaner
D	=	Load due to Tank mounting
E	=	Load due to Product
F	=	Total load (Determined by multiplying Density of the product with capacity)
X	=	Distance between centres of rear tyres
K	=	Centre of gravity of Chassis
L	=	Centre of gravity of Cabin
M	=	Centre of gravity of Driver & Cleaner while sitting
N	=	Centre of gravity of Empty tank
O	=	Centre of gravity due to pay load
Y	=	Centre of gravity of tanker under laden condition
YUL	=	Centre of gravity of tanker under unladen condition

? Taking movement $Y_L \times F = A \times K + B \times L + C \times M + D \times N + E \times O$

$$Y_L = \frac{A \times K + B \times L + C \times M + D \times N + E \times O}{F}$$

? Z_1

Similar calculation is also made for unladen condition.

? Stability ratio = $\frac{\text{height of centre of gravity}}{\text{Distance between centres of rear tyres}} = \frac{Z_1}{X}$ (as calculated)

& should be less than '1' for the vehicle to be stable.

Question ?

1. Was it useful in your work activities connected to this department?
2. Are you a frequent visitor to this manual site?
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6. Do you have specific suggestions to make it more user friendly?
7. Do you think of unnecessary element in this chapter which can be avoided/deleted ?
8. Do you have any suggestion (s) for change in Legislation ? Give details with reasons.
9. Give brief details of your organization/yourself through the suggestion form which can be had by clicking the feedback button.

VARIOUS MODEL DRAWINGS WILL BE PROVIDED AT WEB-SITE

Manufacture of Safety fittings under the Petroleum Rules,1976

Background :

The third schedule of Petroleum Rules, 1976 provides that each compartment of Road tanker used for transportation of Petroleum Class A & B should comprise of under mentioned fittings for safety of tank truck during transportation and operation. The fittings required to be provided are as under :-

1. **Pressure Vacuum Valve :** The purpose of this valve is to provide normal venting of the compartments of the tanker. The valve prevents development of pressure inside the compartment and at the same time also avoids development of vacuum while petroleum is being drained of. The pressure vacuum valve should have a minimum area of 3 sq.cm and is required to be covered with 2 layers of non corroding metal gauge wire and having maximum size of 11 mesh/linear cm. Further the valve is required to be designed so as not to allow the pressure not to exceed 0.21 kg/cm sq., and the vacuum not to exceed 5 cm water gauge.
2. **Emergency Vent :** In addition to normal venting as above each compartment of the tanker is required to have a emergency vent of the fusible type with a minimum area in sq.cm equal to 8 plus 4.3 times the gross capacity of the compartment in kiloliter. The fusible part of the vent is required to fuse at a temperature not exceeding 93⁰ C.
3. **Emergency shut off valve :-** Each compartment of the tanker is required to be provided with an effective and reliable shutoff valve located inside the shell or in a sump forming an integral part of the shell with a secondary means of operation provided at an easily accessible position which should be removed from the discharge faucet.
4. **Fusible link :-** The operation of remotely operated valve is required to be conducted through a fusible section which will permit the shut off valve to close in case of fire. The material of this link shall be such as to fuse at the temperature not exceeding 93⁰ C.
5. **Spark Arrester :-** The exhaust of each tanker has to be provided with an arrester for not allowing the sparks escaping from the exhaust of the vehicle to cause ignition of hazardous vapours which may be present at the location where tanker is loading/unloading petroleum.

PURPOSE

The purpose of the approval is to ensure that the quality of workmanship and uniformity in design and manufacture of safety fittings.

Documents required for approval of safety fittings.

1. **The scrutiny fee of Rs. 50/- in the form of Demand Draft drawn in favour of the Chief Controller of Explosives.**
2. **Application giving following details :-**

Name & address of the applicant.

Location of the place where the fittings are proposed to be fabricated.

The status of the unit whether small scale unit or not. A copy of SSI registration certificate to be enclosed in case the unit is a small scale unit

Organisational set up of the fabricator (list of key personnel with details regarding their qualification and experience in fabrication).

Details of infrastructure regarding land, fabrication shed, availability of power, etc., (Drawing showing the covered area with location of shop floor, machine shop, store & utilities).

Details of machinery and other equipments.

Details of testing equipment/precision equipment.

Procedure involved in fabrication of fittings.

Details of quality control set up.

Testing procedure.

Departmental Action

On receipt of application, a preliminary assessment is made regarding adequacy of infrastructure, machinery and manpower available with the firm.

Scrutiny of drawings is also carried out to verify whether the design of the safety fittings confirms to the requirements laid out in the schedule III of the Petroleum Rules 1976. The requirements for Petroleum tankers as laid in the Schedule III of the Rules is shown at **page _____**.

Also scrutiny of the drawings of the safety fittings is carried out to ensure that the design is functional and meets the requirement of Rules. The procedure of manufacturing is also scrutinised.

If on the basis of above assessment and scrutiny, verification of the design drawings of the safety fittings, it is found that the firm is capable of manufacturing safety fittings. Reference is made to the Circle/sub-Circle in which the fabrication unit for safety fittings is located. The Inspecting Officer of the Circle and sub-circle will visit the location and confirm the details provided by the firm regarding its infrastructure and capability. The Inspecting officer also makes his own assessment on the capability of the firm to undertake manufacture of safety fittings. Besides the above he also performs functional tests on the prototype of the safety fittings which have been manufactured in his presence. The functional tests are to be witnessed by the Inspecting Officer. The tests performed and the set up for the same is described as under

1. **Spark arrestor :**

A spark arrestor when fitted to the exhaust of a diesel driven tank truck shall not allow escape of any spark capable of igniting a flammable mixture. The internal component with vanes shall be made of LM-6 alloy (Alluminium)

A tray (30cm x 25cm) containing 11 liter of motor spirit shall be placed before the spark arrestor at a distance of 20 to 30 cm. in such a way that the exhaust is directed onto the tray. A small quantity of motor spirit shall be sprayed over the exhaust gases through a hand pump (like a Flit pump). No ignition shall occur. The tray shall be fitted with a handle for operational convenience and at least one bucket having dry sand shall be kept ready during the test, for extinguishing fire, if any.

2. Emergency Vent (Fusible type):

The fusible plug shall be flushed with the upper and lower surface of the opening of the vent cover and should have adequate mechanical strength. The material shall have an approved composition with the Melting Point not below 90°C and not above 91°C . A simple apparatus consisting of a glass beaker with water as heating medium and an appropriate thermometer can be used for undertaking this type of test.

3. Fusible Link :

The material shall have composition and Melting Point as in 2 above. The link shall be tested for its mechanical strength by subjecting it a horizontal pull of at least 35 kgs. The test may be carried out by fixing the link alongwith an appropriate spring balance, horizontally with a wire rope similar to the one used in tank trucks and then applying tension manually. Any other arrangement using pulleys and fixed weights may also be used.

4. Emergency Shut off valve :

This shall be operable with convenience by pulling lever at the rear of the tank truck and shall not allow leakage of the product through it.

Each valve shall be operated at least ten times and it shall open and close with ease. It shall be then subjected to water head of atleast 2.5 m. for 15 minutes. No leakage of water shall occur. A simple apparatus as shown in the enclosed sketch or any other approved arrangement may be used.

5. P.V. Valve :

The pressure valve shall open at a pressure of $0.21 \pm 0.02 \text{ kg/cm}^2\text{g}$ ($16 \pm 1.5 \text{ cm. of Hg}$) and the vaccum valve shall open at the vaccum of $5 \pm 1 \text{ cm. of water gauge}$. An apparatus as shown in the enclosed sketch can be used. Each P V valve shall be tested.

After the above tests have been carried out the Inspecting Officer shall forward his report on the capability of the firm to undertake manufacture of safety fittings and also the results of the functional tests witnessed by him. Based on these above reports and the assessment of the Approving authority the approval for manufacture of safety fittings or otherwise is issued. The design drawings of the Safety fittings are also endorsed as a token of approval.

which is then allowed to cool and form a solid block. This avoids direct contact between the electrical apparatus and the explosive atmosphere.

V. 'n' type or non sparkling type of equipment: For achieving this type of protection it is to be ensured that the equipment is so constructed and maintained that no incendive spark is formed in normal operation and no fault is likely to occur which can lead to ignition.

VI Increased safety type of protection :- This type of protection is achieved by adopting measures in the design and manufacture of electrical apparatus to ensure security against occurrence of arcs, sparks and excessive temperature.

In addition to the type of protection provided, the nature of explosive gas which will occur in the atmosphere around the equipment has also to be borne in mind. As per the Indian standards the explosive gases are classified under two broad categories viz.,

i. Group I - Methane

ii. Group II is subdivided into IIA, IIB, IIC

IIA represents Propane

IIB represents Ethylene

IIC represents Hydrogen

Since areas coming under the Petroleum Rules will have presence of hydrocarbon constituents of C2 and above, the equipment to be used should be appropriate to IIB classification. However, if the equipment is to find applicability in refinery areas where presence of hydrogen cannot be ruled out, approval under Group 2C would be required in such case.

APPROVAL FOR ELECTRICAL FITTINGS FOR USE IN HAZARDOUS AREAS FALLING UNDER THE PURVIEW OF PETROLEUM RULE

Note: Only those Equipments/ Instruments/ Apparitions/ Fittings finding application / use in hazardous areas of Petroleum refineries/ Installation/ Terminals and other license premises corrected under Petroleum Rules 2002 may only apply for obtaining approved.

Types of approvals issued :

1. Approval for flameproof equipment
2. Approval for intrinsically safe equipments/circuits
3. Approval for increased safety equipment
4. Approval for pressurised equipment
5. Approval for 'n' nonsparking type of protected equipment

Further classification about the requirements of documents is based on whether the equipment is imported or indigenous

Documents for indigenous – A) Flameproof equipment – The application for issue of approval for flameproof equipment shall comprise of following details :

I.(A) APPROVAL FOR FLAMEPROOF EQUIPMENT

1. i) Name and address of applicant
- ii) Name and address of manufacturer
- iii) Profile of the manufacturer
- iv) Organizational setup of the manufacturer
- v) Quality control set up of the manufacturer

- vi) Details of equipment and machinery provided for manufacture
- vii) Details of testing facilities available with manufacturer
- viii) Service and maintenance setup by the manufacturer
- 2. Group of gas for which approval is sought
 - a) Applicable standards under which testing has been done – IS2148 or IS2206
 - b) Zone of hazardous area for which approval is sought
 - c) Applicable temperature category – T1, T2, T3, T4, T5
 - d) Technical details of electrical apparatus intended to be housed in flameproof enclosure
 - e) Volume of each enclosure, gross and net
 - f) Minimum thickness of enclosure
 - g) Material of construction of enclosure. Whether the material is incendive
 - h) Type of flameproof joints of rotating electric equipment, type of glands and type of bearings.
 - i) Type and size of fasteners used
 - j) Connection from internal circuit
 - i. Whether direct entry or indirect entry
 - ii If indirect entry – whether terminal box provided or plug and socket arrangement provided
- 3. Brief technical write-up of the enclosure
- 4. Copy of CMRI Test certificate with copy of approved drawings showing length of FLP path , gaps, diameter clearance, type of flameproof joints etc
- 5. Copy of licence under BIS marks scheme.

I. (B) APPROVAL FOR ELECTRICAL FITTINGS FOR IMPORTED EQUIPMENT

- 1. Name and address of the applicant
- 2. Name and address of the manufacturer
- 3. Profile of the manufacturer
- 4. Details of customers in petroleum, petrochemical field to whom the equipment has been supplied abroad
- 5. Name of the Indian subsidiary or authorised agent and documentation in support of the same.
- 6. Profile of the Indian agent , subsidiary and its set up in the country
- 7. Name of the product for which approval is sought
 - a. Zone of hazardous area in which the equipment is proposed to be installed
 - b. Type of Gas group for which approval is sought
 - c. International standard under which the equipment has been tested alongwith copy of the test report
 - d. Agency which has conducted tests
 - e. Applicable temperature T1, T2, T3, T4, T5

Question ?

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VARIOUS MODEL DRAWINGS WILL BE PROVIDED AT WEB-SITE

Recognition of Competent persons under the Petroleum Rules,1976.

Under Preparation

Intimation regarding Petroleum Class C

Under preparation

VARIOUS MODEL DRAWINGS WILL BE PROVIDED AT WEB-SITE

Approval of electrical equipments for hazardous area (Flame proof fittings, intrinsically safe etc.)

Approval of Flameproof equipment

Requirement under Rule 102 of the Petroleum Rule, 1976 lays down that no electrical apparatus shall be used in Petroleum Refinery, Storage installation, storage shed, service shed or any other shed where petroleum is refined, blended, stored, loaded or unloaded unless it is approved by the Chief Controller of Explosives. It is in this context that electrical equipment which has to be used in an area covered under Petroleum Rule, 1976 will require permission from the Chief Controller of Explosives.

For the purpose of installation of electrical equipment the areas have been divided into 3 categories of hazardous areas namely :

- i. Div '0' area where inflammable gas and vapours are expected to be continuously present eg., inside the tank.
- ii. Div '1' area where inflammable gas and vapours are expected to be present under normal operating conditions eg., on the Mouth of the ventpine or near fillpoint, unloading point etc., during the operation.
- iii. Div '2' area where inflammable gas and vapours are expected to be present under abnormal operating condition eg., during the failure or rupture of the equipment.

The extent of the hazardous area for refiner equipments, Storage Installation, Storage sheds and Service stations has been laid in Schedule IV of the Petroleum Rules 1976.

Whether electrical equipment is fit for use in particular hazardous area, depends upon the type of electrical protection provided to the equipment. For this purpose following type of electrical protections are considered acceptable for use in various hazardous areas :-

- I. **Flameproof protection** :- In this type of protection the enclosure which houses the electrical equipment is designed in a manner that the explosion in the enclosure because of presence of explosive gas will not be transmitted/communicated to outside atmosphere.
- II. **Intrinsically safe** :- In this type of protection the equipment is designed in such a manner that the electrical energy which can enter explosive environment is restricted in a manner that it cannot ignite a explosive gas air mixture .

III Pressurised protection :- In this type of protection the pressure inside the enclosure housing the equipment is maintained at a positive pressure so as not to allow ingress of inflammable gas mixture thus avoiding possibility of explosion.

- IV Encapsulated protection : - The principle of this type of the protection is that the apparatus to be protected is submerged in a suitable substance in liquid state

- f. Technical details of electrical apparatus intended to be housed in flameproof enclosure
8. Brief write up of the equipment for which approval is being sought
9. Copy of the drawings mentioned in the certificate to be enclosed.

II. (A) APPROVAL FOR INTRINSICALLY SAFE EQUIPMENTS

Application for equipment manufactured indigenously

1. Application shall comprise of following details :
 - a. Name and address of the applicant
 - b. Name and address of the manufacturer
 - c. Profile of the manufacturer
 - d. The standard under which designed and tested
 - e. Name of the product
 - f. Applicable gas group
 - g. Applicable category of intrinsic safety ia or ib
 - h. Zone of hazardous area where it is to be installed
 - i. Applicable temperature T1, T2, T3, T4, T5, T6
 - j. Classification of equipment
 - i. Whether Associated equipment i.e., barrier, isolation etc.,
 - ii. IS apparatus i.e, transmitter, converter, activator etc.,
 - iii. IS system
 - k. Type of protection provided for intrinsic safety
1. Write up of electrical equipments, principles of operation, description of the equipment preferably in the form of functional blocks.
1. Circuit analysis report in respect of power and energy ratings and temperature rise under normal and abnormal operation of the equipment.
2. Copies of CMRI/ERTL test certificate alongwith drawings

II.(B) FOR IMPORTED EQUIPMENT

1. Name and address of the applicant
2. Name and address of the manufacturer
3. Profile of the manufacturer
4. Details of customers in petroleum, petrochemical field to whom the equipment has been supplied abroad
5. Name of the Indian subsidiary or authorised agent and documentation in support of the same.
6. Profile of the Indian agent , subsidiary and its set up in the country
7. Name of the product for which approval is sought
 - a. Zone of hazardous area in which the equipment is proposed to be installed
 - b. Type of Gas group for which approval is sought
 - c. International standard under which the equipment has been tested alongwith copy of the test report
 - d. Agency which has conducted tests
 - e. Applicable temperature T1, T2, T3, T4, T5, T6

- f. Technical details of the intrinsically safe circuit indicating power and energy rates and temperature rise under normal or abnormal condition of the equipment.
- g. Write up of electrical equipments, principles of operation, distribution of the equipment in the form of functional block
- h. Whether associated equipment , IS apparatus or IS system
- i. Test reports of the certifying rates alongwith copies of drawings

III (A) Approval for increased safety equipment

The same details as called for in case for Flameproof equipment will be required to be submitted. However, since this type of equipment can be considered only for approval for Zone II.

IV.(A) APPROVAL FOR PRESSURISED PROTECTED TYPE OF EQUIPMENT

The same details as called for in case for in Flameproof equipment are required to be submitted. However, additional details regarding interlocks provided for mantaining pressurised enclosure are required to be furnished . The approval are based on 100% tests of the equipment.

Departmental Action :

Based on the documentation submitted following assessment has to be made

- a) Whether the manufacturer is of repute and has the necessary infrastructure to produce safe and quality product.
- b) Whether he has the necessary set up to provide technical back up/maintenance and service once installed in hazardous area.
- c) Whether the equipment is suitable for the class of gas where it is proposed to be installed. A confirmation to this effect has to be assessed from the certification submitted.
- d) Whether the equipment based on its electrical protection will be suitable for the Division of hazardous area where it is intended to be put to use.
- e) Whether there is scope of any hazard in the use of electrical equipment in the hazardous area.

Based on the above assessment, approval will be issued or denied.

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