ऑयल इंडिया लिमिटेड
(भारत सरकार का उद्यम)
Oil India Limited
(A Government of India Enterprise)

Contracts & Purchase Department
(Rajasthan Fields)
02-A, District Shopping Centre,
Saraswati Nagar,Basni
Jodhpur – 342 005
Rajasthan, India.
Phone -0291-2729473
Fax : 0291-2727050
e-mail: amar_singh@oilindia.in

TENDER NO. SJG3408P20 **Date: 20.12.2019**

INVITATION TO e-BID UNDER SINGLE STAGE TWO BID SYSTEM

Dear Sirs,

OIL invites Bids for **SUPPLY, INSTALLATION & COMMISSIONING ALONG WITH ANNUAL MAINTENANCE CONTRACT OF ONE (01) NO. OF TRUCK MOUNTED MOBILE STEAM GENERATOR** through its e-Procurement site under **International Competitive Bidding (ICB) - Single Stage Two Bid System**. The bidding documents and other terms and conditions are available at Booklet No. MM-RP-GLOBAL-E-01-2005. The prescribed Bid Forms for submission of bids are available in the tender document folder.

The general details of tender can be viewed by opening the RFx [Tender no.] under RFx and Auctions page. The details of items tendered can be found under Item tab and details can be found under Technical RFX.

The tender is invited with firm price for the specified quantity. Further details of tender are given in Rfx Parameters → Technical Attachments as **ANNEXURE-IA.** The details of the tender are as under:

1.	Type of Tender	:	**International Competitive Bidding (ICB)**
2.	Type of Bidding	:	**Single Stage Two Bid System**
3.	Tender Fee	:	NIL
4.	Bid Security Amount	:	**INR 2,44,000.00 Or USD 3,420.00**
5.	Performance Security	:	Applicable @10% of Order Value.
6.	Bid Closing /Opening Date	:	**07.04.2020**
7.	Bid Validity	:	Bid should be valid for **120 days** from bid opening date.
8.	Bid Bond Validity	:	Bid Bond should be valid **upto 03.11.2020** (Bid bond format has been changed. Please submit bid bond as per revised format failing which offer will be rejected)
9.	Integrity Pact	:	Applicable

THE TENDER WILL BE GOVERNED BY:

a) "General Terms & Conditions" for e-Procurement as per Booklet No. MM-RP-GLOBAL-E-01-2005 for E-procurement (ICB Tenders).

b) Technical specifications, Scope of work, Quantity and Notes for the **TRUCK MOUNTED MOBILE STEAM GENERATOR** as per **Annexure – IA**.

c) The items covered by this tender shall be used by Oil India Limited in the PEL/ML areas which are issued/renewed after 01/04/99 and hence Nil Customs Duty during import will be applicable. Indigenous bidder shall be eligible for Deemed Export Benefit / Concessional IGST against this purchase. Details of Deemed Export Benefit are furnished vide MM/RP/GLOBAL/E-01/2005 enclosed.

d) A certificate issued by a practicing Chartered/Cost Accountant (with Membership Number and Firm Registration Number/Unique Document Identification Number), certifying the Annual turnover & Net worth as per format prescribed in *"Annexure-CA certificate"*. The same must be submitted along with the bid.

SPECIAL NOTE:

1.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with Tender no. and due date to **CGM (Services), Oil India Limited, Rajasthan Project, 2A, Saraswati Nagar, District Shopping Centre, Basni, Jodhpur-342005, Rajasthan** on or before the Bid Closing Date mentioned in the Tender.

a) Original Bid Security.
b) Detailed Catalogue.
c) Any other document required to be submitted in original as per tender requirement.

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate.

2.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.

3.0 OIL INDIA LIMITED (OIL) has upgraded its E-tender Portal. As part of the new system, the intending bidder must have Encryption Certificate along with Digital Signature Certificate (DSC) of Class III [Organization]. The date for implementation of new system is 12th April 2017 and the requirement of the new DSC will be applicable for the tenders floated on 12th April 2017 onwards. All our current and prospective esteemed bidders are therefore requested to acquire Class III DSC [Organization] along with Encryption Certificate issued by any of the Licensed Certifying Authorities (CA) operating under Controller of Certifying Authorities (CCA) of India as per Indian IT Act 2000. Guideline for getting Digital Signature and other related information are available on the e-tender website www.oil-india.com. The bid signed using any other digital certificate or digital certificate without organization name of the bidder, will be liable for rejection.

4.0 Encryption certificate is mandatorily required for submission of bid. In case bidder created response using one certificate (using encryption key) and bidder subsequently changes the digital signature certificate then the old certificate (used for encryption) is required in order to decrypt his encrypted response for getting the edit mode of his response. Once decryption is done, the bidder may use his new

DSC certificate for uploading and submission of his offer. It is the sole responsibility of the bidder to keep their DSC certificate properly. In case of loss of DSC certificate, Oil India Limited is not responsible.

5.0 **Two Bid System** shall be followed for this tender and only the price-bids of the bidders whose offers are commercially and technically acceptable shall be opened for further evaluation.

6.0 Please ensure that Technical Bid / all technical related documents related to the tender are uploaded in the Technical RFx Response. The "TECHNO-COMMERCIAL UNPRICED BID" shall contain all techno-commercial details except the prices. **Please note that no price details should be uploaded in Technical RFx Response else offer shall be rejected.**

7.0 The "PRICE BID" must be strictly as per the price format provided with the e-tender portal under **"Notes & Attachments"** tab. Details of prices as per Price Bid format / Commercial bid to be uploaded as Attachment under the attachment option under "Notes & Attachments".

8.0 Please refer **Annexure-IB for BEC/BRC** applicable against this tender. Please ensure compliance to BEC/BRC and submit requisite documentation, failing which offer may be liable for rejection.

9.0 Bidder are advised to fill up the Technical bid check list and Response sheet as per given format along with the tender documents.

10.0 Please refer "**VENDOR USER MANUAL Rev2**" document for help on system settings and procedure to upload technical and price bids.

11.0 Amendments to the NIT after its issue will be published on OIL's website only. Revision, clarification, addendum, corrigendum, time extension etc. to the tender will be hosted on OIL website only. No separate notification shall be issued in the press. Prospective bidders are requested to visit website regularly to keep themselves updated.

12.0 Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.

13.0 Bidders to take special note of the following conditions:

13.1 Bidders without having E-tender Login ID and Password should complete their online registration at least seven (7) days prior to the scheduled bid closing date and time of the tender. For online registration, Bidder may visit the OIL's E-tender site https://etender.srm.oilindia.in/irj/portal

13.2 Necessary Login ID & Password will be issued by OIL only after submitting the complete online registration by the Bidder. In the event of late registration/incomplete registration by Bidder, OIL INDIA LIMITED shall not be responsible for late allotment of User ID & Password and request for bid closing date extension on that plea shall not be entertained by Company.

13.3 MSEs Units (manufacturers/Service Providers only and not their dealers/distributors) who are already registered with District Industry Centers or Khadi & Village Industries Commission or Khadi & Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts & Handloom or any other body specified by Ministry of MSME are exempted from payment of Bid Security (EMD) irrespective of monetary limit mentioned in their registration, provided they are registered for the item they intend to quote/participate.

13.4 For availing benefits under Public Procurement Policy (Purchase preference & EMD exemption), the interested MSE Bidders must ensure that they are the manufacturer/ service provider of tendered item(s) and registered with the appropriate authority for the said item(s). Bids without EMD shall be rejected, if the technical offer does not include a valid copy of relevant MSE Certificate issued by appropriate authority specifying the item as per tender. Therefore, it is in the interest of such MSE Vendors to furnish a copy of complete certificate to the concerned tender handling officer of OIL at least seven (7) days prior to the scheduled Bid Closing Date of the tender; seeking clarification/confirmation as to whether their registered item is eligible for EMD exemption or not. Late communication in this regard and request for bid closing date extension on that plea shall not be entertained by Company.

13.5 Against Bid Security/EMD/Performance Bank Guarantee – Only payments through online mode or Submission of Bank Guarantee/LC will be acceptable. No DD/Cheques/Cashier Cheque or any other mode will be acceptable.

14.0 Attention about GST: Please ignore the details given about the taxes, duties & levies in anywhere in Tender documents which is not applicable now after implementation of GST with effect from 01.07.2017. Others all terms and condition remains same. Referred annexure for GST uploaded under Technical bid.

15.0 **FURNISHING FRAUDULENT INFORMATION/ DOCUMENT:** If it is found that a Bidder has furnished fraudulent document/information, the Bid Security/Performance Security shall be forfeited and the party will be debarred for a period of 3 (three) years from date of detection of such fraudulent act, besides the legal action. In case of major and serious fraud, period of debarment may be enhanced. **In this regard, bidders to categorically fill up undertaking as per format provided vide Annexure-X and submit the same along with their bid.**

16.0 For convenience of the qualified Bidders and to improve transparency, the rates/costs quoted by bidders against OIL's e-tenders shall be available for online viewing by such Bidders whose price bids are opened by Company. A Bidder can view item-wise rates/ costs of all other such peer bidders against the tender immediately after price bid opening, if the e-tender is floated by Company witli PRICE CONDITION. In case the Price-Bid is invited by Company through attachment form under "Notes & Attachment" (i.e., NO PRICE Condition), Bidders must upload their detailed Price-Bid as per the prescribed format under "Notes & At4ichment", in addition to filling up the "Total Bid Value" Tab taking into account the cost of all individual line items and other applicable charges like freight, tax, duties, levies etc. Under NO PRICE Condition (i.e., Price Bid in attachment form), the "Total Bid Value" as calculated & quoted by the Bidder shall only be shared amongst the eligible bidders and Company will not assume any responsibility whatsoever towards calculation errors/ omissions therein, if any. Notwithstanding to sharing the "Total Bid Value" or the same is whether filled up by the Bidder or not, Company will evaluate the cost details to ascertain the inter-se-ranking of bidders strictly as per the uploaded attachment and Bid Evaluation Criteria only. Online view of prices as above shall be available to the Bidders only upto seven days from the date of Price-Bid opening of thee-tender.

Yours faithfully,
OIL INDIA LIMITED
Sd/-

(A. D. SINGH)
Manager (C&P)
Rajasthan Fields, Jodhpur, Rajasthan

ANNEXURE-I

OIL INDIA LIMITED
(A Govt. of India Enterprise)
Rajasthan Project,
02-A,SARASWATI NAGAR,
DISTRICT SHOPPING CENTRE, BASNI
JODHPUR- 342005,
RAJASTHAN, INDIA
Fax-0291 2727050
Ph-0291 2729473
Email: amar_singh@oilindia.in

Tender No. & Date : SJG3408P20 20.12.2019

Tender Fee : INR 0.00 OR USD 0.00
Bid Security Amount : INR 244,000.00 OR USD 3,420.00
(or equivalent Amount in any currency)

Bidding Type : Two Bid

Bid Closing On : 07.04.2020 at 11:00 hrs. (IST)
Bid Opening On : 07.04.2020 at 15:00 hrs. (IST)

Performance Guarantee : Applicable@10% of order value

OIL INDIA LIMITED invites Global tenders for items detailed below:

Item No./ Mat. Code	Material Description	Quantity	UOM
10 0C000042	**SUPPLY, INSTALLATION & COMMISSIONING ALONG WITH ANNUAL MAINTENANCE CONTRACT OF TRUCK MOUNTED MOBILE STEAM GENERATOR.** **THE DETAILED TECHNICAL SPECIFICATIONSAND SCOPE OF WORK ENCLOSED AS PER ANNEXURE-IA**	1	NO
	Installation & Commissioning & Training		
10	Installation & Commissioning	1	AU
	AMC for 5 year		
10	AMC for 1 year (1st Year)	1	NO
20	AMC for 1 year (2nd Year)	1	NO
30	AMC for 1 year (3rd Year)	1	NO
40	AMC for 1 year (4th Year)	1	NO
50	AMC for 1 year (5th Year)	1	NO

Standard Notes: **Delivery: Items are desired to be despatched within Nine (09) months after establishment of letter of credit (in case of foreign bidder) or after receipt of formal order (in case of indigenous bidder). However, Bidders are requested to their best delivery period.**

1) The tender is invited under SINGLE STAGE-TWO BID SYSTEM. The bidder has to submit both the "TECHNO-COMMERCIAL UNPRICED BID" and "PRICED BID" bid through electronic form in the OIL's e- Tender portal within the Bid Closing Date and Time stipulated in the e-Tender. The "TECHNO-COMMERCIAL UNPRICED BID" is to be submitted as per Scope of Work & Technical Specification of the tender and "PRICED BID" as per the Price Bid format attached under "NOTES & ATTACHMENTS" tab.

2) In Technical Bid opening, only Technical Rfx will be opened. Therefore, the bidder should

Tender No. & Date : SJG3408P20 20.12.2019

ensure that "TECHNO-COMMERCIAL UNPRICED BID" should contain details as mentioned in the technical specifications as well as BEC/ BRC. **No price should be given in above Technical bid otherwise the offer will be rejected.** Please go through the help documents in details before uploading the document and ensure uploading of technical bid as per the instructions. The "PRICE BID" must contain the price schedule. The prices of the items should be quoted in Price Bid format under "" tab.

3) **Bid should be valid for minimum 120 days from bid closing date, failing which offer shall be rejected.**

4) The original bid security (Amount is mentioned above and also in Rfx Parameters of the tender in OIL's e-portal) should reach us before bid closing date and time of the technical bid. Bid without original Bid Security will be rejected. The bidders who are exempted from submitting the Bid Bond should attach documentary evidence in the Technical RFx Response as per clause 9.8 of Section A General Terms and conditions for Global Tender (MM/RP/GLOBAL/E-01/2005). Only payments through online mode or Submission of Bank Guarantee/LC will be acceptable. No DD/Cheques/Cashier Cheque or any other mode will be acceptable.

Bidders are requested to advise the Bank Guarantee issuing bank to comply with the following and ensure to submit, the receipt of the copy of SFMS message as sent by the issuing bank branch, along with the original Bid security to OIL's order/contract issuing office or upload the same on OIL's e-tender portal.
The bank guarantee issued by the bank must be routed through SFMS platform as per following details:

(i) "MT 760 / MT 760 COV for issuance of bank guarantee
(ii) "MT 760 / MT 767 COV for amendment of bank guarantee
The above message / intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Jodhpur Branch, IFS Code - UTIB0000057; Swift Code: AXISINBB057. Branch Address - AXIS Bank Ltd, Prince Tower, Near Jaljog Circle, Residency Road, Jodhpur - 342003"

5) Performance Security is applicable against this tender. Successful bidder has to submit PBG valuing @10% of order value (supply + Installation and Commissioning) within 30 days of the issuance of LOA. Supplier has to also submit additional PBG valuing @10% of annualized value of 5 year AMC charges. The validity of the PBG shall be provided as mentioned in the LOA/PO. Bidder to categorically confirm the acceptance of this clause in their offer. Please refer clause 10.0 of Section A of General Terms and conditions for Global Tender (MM/RP/GLOBAL/E-01/2005).
Bidders are requested to advise the Bank Guarantee issuing bank to comply with the following and ensure to submit, the receipt of the copy of SFMS message as sent by the issuing bank branch, along with the original Performance Bank Guarantee to OIL's order/contract issuing office.
The bank guarantee issued by the bank must be routed through SFMS platform as per following details:

(i) "MT 760 / MT 760 COV for issuance of bank guarantee
(ii) "MT 760 / MT 767 COV for amendment of bank guarantee
The above message / intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Jodhpur Branch, IFS Code - UTIB0000057; Swift Code: AXISINBB057. Branch Address - AXIS Bank Ltd, Prince Tower, Near Jaljog Circle, Residency Road, Jodhpur - 342003"

6) PRICED BIDS OF ONLY THOSE BIDDERS WILL BE OPENED WHOSE OFFERS ARE FOUND TECHNICALLY ACCEPTABLE. THE TECHNICALLY ACCEPTABLE BIDDERS WILL BE INFORMED BEFORE OPENING OF THE "PRICED BID".

7) Bidders to note that Govt. of India under Micro, Small and Medium Enterprises Development

Tender No. & Date : SJG3408P20 20.12.2019

(MSMED) Act 2006, has proclaimed the Public Procurement Policy, 2012 with effect from 1st April, 2012 in respect of procurement of goods and services, produced and provided by micro and small enterprises, by its Ministries, Departments and Public Sector Undertakings for promotion and development of Micro and Small Enterprises. A new Clause on applicability of Public Procurement Policy for procurement of goods from Micro and Small Enterprises(MSE) in the tender is furnished vide General Terms and Conditions for Global Tender (MM/RP/GLOBAL/E-01/2005). Bidders are requested to take note of the same and to submit their offers accordingly.

8) To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

9) General terms and conditions of Global tender (document MM/RP/GLOBAL/E-01/2005) is enclosed.

10) The Integrity Pact is applicable against this tender. Therefore, please attach the Integrity Pact document duly signed along with your quotation as per BRC. The name of the OIL's Independent External Monitor at present are as under:

1. SHRI RAJIV MATHUR, IPS (Retd.),
E-mail : rajivmathur23@gmail.com
2. SHRI JAGMOHAN GARG, Ex-Vigilance Commissioner, CVC
E-Mail id : jagmohan.garg@gmail.com
3. Shri Rudhra Gangadharan, IAS (Retd.)
Ex-Secretary, Ministry of Agriculture
E-mail: rudhra.gangadharan@gmail.com

11) GST (Goods & Service Tax) will be cost loaded as quoted and in line with provisions of the bidding document. Any claim subsequently by the bidders for additional payment/liability shall not be admitted and has to be borne by the bidders. For GST clause please refer Annexure-GST.

12) **Price should be maintained as per the price format under "NOTES & ATTACHMENTS " tab only. The price quoted in the price format under "NOTES & ATTACHMENTS " tab will only be considered.**

13) Bidders without having E-tender Login ID and Password should complete their online registration at least seven (7) days prior to the scheduled bid closing date and time of the tender. For online registration, Bidder may visit the OIL's E-tender site https://etender.srm.oilindia.in/irj/portal.

14) Necessary Login ID & Password will be issued by OIL only after submitting the complete online registration by the Bidder. In the event of late registration/incomplete registration by Bidder, OIL INDIA LIMITED shall not be responsible for late allotment of User ID & Password and request for bid closing date extension on that plea shall not be entertained by Company.

15) MSEs Units (manufacturers/Service Providers only and not their dealers/distributors) who are already registered with District Industry Centers or Khadi & Village Industries Commission or Khadi & Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts & Handloom or any other body specified by Ministry of MSME are exempted from payment of Bid Security (EMD) irrespective of monetary limit mentioned in their registration, provided they are registered for the item they intend to quote/participate.

16) For availing benefits under Public Procurement Policy (Purchase preference & EMD

Tender No. & Date : SJG3408P20 20.12.2019

exemption), the interested MSE Bidders must ensure that they are the manufacturer of tendered item(s) and registered with the appropriate authority for the said item(s). Bids without EMD shall be rejected, if the technical offer does not include a valid copy of relevant MSE Certificate issued by appropriate authority specifying the item as per tender. Therefore, it is in the interest of such MSE Vendors to furnish a copy of complete certificate to the concerned tender handling officer of OIL at least seven (7) days prior to the scheduled Bid Closing Date of the tender; seeking clarification/confirmation as to whether their registered item is eligible for EMD exemption or not. Late communication in this regard and request for bid closing date extension on that plea shall not be entertained by Company.

17) Purchase Preference on Local Content is applicable against this tender. Please refer the Special Notes in this document for the applicable clause.

Special Notes : Purchase preference policy (linked with Local Content)(PP-LC)

This tender will be governed by the Purchase preference policy (linked with Local Content) (PP-LC) of Ministry of Petroleum & Natural Gas, Government of India. Indian Bidders are advised to refer notification no. O-27011/44/2016-ONG-II/FP dtd. 25.04.2017 and subsequent amendments, if any, and submit the necessary documents, declaration, undertaking etc. as per the policy guidelines along with their bid. As per the PP-LC policy, 50% of the tendered quantity would be awarded to the lowest techno-commercially qualified LC (Local Content) manufacturer / supplier which are within the price band of 10% of the L1, subject to matching the L1 price. Bidders seeking Purchase preference (linked with Local Content) (PP-LC) shall be required to meet / exceed the target of Local Content (LC) as per values furnished vide original notification of the policy and subsequent amendments applicable as on the bid closing date. The remaining quantity will be awarded to L1 (i.e. Non-Local Content (NLC) manufacturer / supplier not meeting prescribed LC criteria). In case a bidder is eligible to seek benefits under PP-LC policy as well as Public Procurement Policy for MSEs-Order 2012, then the bidders should categorically seek benefits against only one of the two policies i.e. either PP-LC or MSE policy. If a bidder seeks EMD exemption under the MSE policy, then it shall be considered that the bidder has sought benefit against the MSE policy and this option once exercised cannot be modified subsequently. Evaluation of bids with reference to PP-LC policy shall be done by OIL based on the documents submitted by the bidder. OIL shall not be responsible for any incorrect/incomplete submission of documents by bidder leading to non-compliance to PP-LC policy and denial of benefits under the policy.

BG CONFIRMATION

Please advise the Bank Guarantee issuing bank to comply with the following and ensure to submit, the receipt of the copy of SFMS message as sent by the issuing bank branch, along with the original Bank Guarantee to OIL's order/contract issuing office.

The bank guarantee issued by the bank must be routed through SFMS platform as per following details:

(i) "MT 760 / MT 760 COV for issuance of bank guarantee
(ii) "MT 760 / MT 767 COV for amendment of bank guarantee
The above message / intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Jodhpur Branch, IFS Code - UTIB0000057; Swift Code: AXISINBB057. Branch Address - AXIS Bank Ltd, Prince Tower, Near Jaljog Circle, Residency Road, Jodhpur - 342003.

SCOPE: SUPPLY, INSTALLATION & COMMISSIONING ALONG WITH ANNUAL MAINTENANCE CONTRACT OF TRUCK MOUNTED MOBILE STEAM GENERATOR.

QUANTITY : 1 No.

TECHNICAL SPECIFICATIONS & SCOPE OF WORK:

1.0 Design, Manufacture, unitization and supply of a truck mounted Steam Generator (boiler) unit for utilization in oil field (will be utilized for steam injection to heavy oil wells with high viscosity and in oil tanks) as per following specifications:

2.0 SCOPE OF WORK:

2.1 To design and manufacture the truck mounted mobile Steam Generator (boiler).

2.2 To procure and supply truck chassis as per specification for mounting the Mobile Steam Generator Unit.

2.3 To unitize and install the steam generator unit on a truck and to construct a weatherproof housing on the truck platform

2.4 To furnish necessary certificate/documents from competent Government authority and obtain permission from IBR, Rajasthan for operating the boiler in OIL's operational area.

2.5 To commission the unit at a site operating at the rated capacity and desired conditions to OIL's satisfaction.

2.6 To furnish three (03) copies of detailed operating and servicing manuals for smooth operation and maintenance of the unit. (Additionally one copy in a CD)

2.7 To provide chassis documents in Form 21 & 22 (Copy enclosed) for registration of the complete unit in the name of M/S Oil India Limited, Rajasthan.

2.8 AMC of the boiler for 5 years

3.0 TECHNICAL SPECIFICATIONS: Detailed technical specifications of the truck mounted Mobile Steam Generator (boiler)are as under.

3.1 **BOILER/STEAM GENERATOR**: The boiler shall have the following features.

3.1.1 **Duty Conditions**: The boiler shall meet the following duty & working condition.

Steam output capacity	:	1200 kg/hr dry & saturated Steam at 100 Deg C
Max. Working pressure	:	100 kg/sq.cm
Steam temperature	:	175-310 Deg C.
Max. Time allowed to generate steam at the rated output and pressure of 100 kg/sq.cm from cold start	:	5 to 15 minutes
Design code	:	IBR 1950 / ASME
Water tank capacity	:	8 m^3 or more (as per design)
Fuel	:	Diesel
Insulation	:	To be included
Combustion Efficiency	:	Minimum 85%
Fuel-to-Steam Efficiency	:	Minimum 85%
Burner type:	:	Monoblock

3.1.2 **Type: Fully automatic, Oil fired, once through, water tube, coil type, laterally wound, force circulation, forced draft, 3 pass design horizontal type.**

3.1.3 **Design code of Pressure parts**: The pressure parts must be designed & made as per latest edition of ASME/IBR -1950 code.

3.1.4 **Coil Tube design**: The boiler has two concentric helical, closed pitch coils fabricated out of steel, seamless tubes. The coils are connected to form continuous flow passage. Steel water tubes are to be 1" O.D., .095 wall thickness, six-pass, flexible serpentine bend design, not subject to thermal shock damage. Individual water tubes shall be easily removable and replaceable without either welding or rolling. The coil assembly is kept inside a shell assembly. The unit is horizontally mounted on a skid in the truck which is heavy steel frame and it should be so designed that less floor space is required. Removable refractory cover mounted on the jacket covers the front of the unit. The pressure parts including inner and outer coils must be made out of seamless boiler quality alloy steel tube suitable for high temperature & pressure service. The boiler shall be furnished with an adequate number of tapings and inspection openings to facilitate internal boiler inspection and cleaning. Bidder has to design the unit as per the specification mentioned above.

The coil shall be technically wound with closed pitch except at the entrance of each pass. The winding shall be done in cold condition and the ovality of the tubes shall be within tolerable limits. The tubes shall be 100% radiographed at all circumferential welds before winding and the coils are fully stress relieved at elevated temperature as per IBR code requirement. The coil ends shall be flanged joined and independent of the feed water and main steam header. That is, replacement or maintenance of the tube bundle shall be independent of the headers.

3.1.5 **Shell Design**: The shell design assembly should necessarily comprise of a double shell arrangement containing the pressure parts as described above and to preheat the combustion air between the shells along with suitable radiator to reflect radiant heat to the convection zones. Necessary refractory work at the burner and far end shall be provided, using proper quality materials. The far end shell must be independent of the coil bundle. That is, the far end wall should be easily removable without disturbing the coil for maintenance.

The shell shall be provided with a peephole for visual inspection of fire.

3.1.6 **Fuel**: The fuel for generating steam should be dual fuel type of high-speed diesel (HSD). The bidder shall indicate the gross calorific value of the fuel and fuel consumption per hour at rated output.

3.1.7 **Feed water quality**: The bidder shall specify the feed water quality for smooth and efficient operation of the unit.

3.1.8 **Prime mover (Pilot engine) of Genset**: The unit shall be designed with an air cooled or water cooled vertical, naturally aspirated, inline diesel engine of suitable HP for continuous running (24 Hrs.) with an overload capacity of 10% for a period not exceeding one Hour in any 12 hours running when running at 1500 R.P.M. as per site conditions given below and shall conform to specifications IS:10000/BS:5514. The Governing is to be in accordance with Class A-2 specifications to IS: 10000/BS: 5514.

Design should be such that all units are in a single truck and the unit can be easily transported. All the equipment and its accessories should be easily accessible for cleanout and inspection, front and rear openings, upper and lower drums. The unit will be operated in Rajasthan field of Oil India Limited where the environmental condition is as below:

CLIMATIC CONDITION:

Components	International System (SI)
Ambient Temperature (Max. / Min.)	**50 / -1 Deg C**
Humidity (Max.)	**40-60%**
Average Rainfall	**25 mm/year**
Wind velocity (Max.)	**128 KM/Hr**
Frequecy of Sand strom	**March to September and occasional during the remaining period.**
Seismic	**Zone III, Moderate**
Weather	**Four distinct seasons - Pre monsoon, monsoon, post-monsoon and Winter**
Topography of Site	**Part of Thar Desert**

The engine should be of reputed manufacturer like KIRLOSKAR/ RUSTON/ CUMMINS/ CATERPILLAR / GREAVES/ SIEMENS complete with, charging alternator, electrical self-starter with suitable maintenance free battery, drive pulley for power take off, air cleaner, fuel filter & speed regulator to run (a) air blower (b) fuel pump, (c) feed water pump and (d) Charging alternator of the mobile Steam Generator (boiler). All the above units shall be direct belt driven. Belt guard shall be provided on all the V-belt assemblies. A suitably selected flexible coupling should be incorporated to transfer power from the engine to the Alternator.

Suitable spark arrestor with silencer along with necessary piping covered with exhaust lagging shall be provided at the engine exhaust and the engine exhaust shall be provided outside the boiler hut and it shall be suitably insulated.

The engine shall have minimum 20% reserve HP. Power balance for the unit i.e. generation and consumption of power shall be clearly indicated in the bid. Alternative arrangement shall be provided for manual starting of the engine. The engine shall be firmly anchored to the truck, using vibration isolator of reputed make like DUNLOP.

The minimum requirements for the engine shall be as below –

a. Suitable air/water cooled diesel engine of adequate power and conforming to latest CECB –II / MoEF emission norms. (Engine emission norms certificate shall be submitted along with documents as mentioned in 7.0 (iii) by the supplier.

b. The engine shall be complete with Digital / manual Tachometer & Hour meter in addition to all standard Lube oil pressure gauges & meters, starting switch, ignition switch, ammeter, filters, spark arrestor etc. Emergency/Safety engine shutdown system in case of Low lubricating oil pressure &over speed should be provided. Anti-vibration mountings and Engine "Low Lube Oil Pressure" indication display red lamp should also be provided.

c. 12 V engine electric starter (Lucas or Delco Remy make) with heavy duty maintenance free battery enclosed in a safety enclosure, engine mounted Battery charging Alternator (Make: LUCAS TVS or equivalent reputed make) and Starting ring fitted to the Engine Flywheel should be provided.

d. The Fuel System should comprise of Mechanical Governor, Fuel Injectors, Fuel Pump, Fuel Filter Assembly, Fuel lines and Fuel Tank having storage capacity to meet the Fuel requirements of 12 hours of full load operations.

e. The engine with all other accessories, tanks, etc. shall be installed on a suitable skid with removable type steel protective frame cage equipped with lifting lugs for lifting of the complete unit. The skid shall have provision to facilitate transportation of the same on a TRAILER platform.

f. Lubricating System: The Lubricating System should comprise of Gear driven lubricating Oil Pump, Lubricating Oil Filter with a replaceable Filter Element, Lubricating Oil Cooler, Lubricating Oil Pan, Oil level dipstick and Crankcase breather.

g. Engine to be supplied with standard painting and it should have SAE standard rotation.

NOTE: The bidder should submit the following information along with relevant performance rating curves and engine product catalogues.

i) Gross HP developed at rated RPM
ii) Deduction of blower fan, charging alternator and other ancillary equipment

iii) Net HP developed at rated RPM
iv) Fuel consumption at rated power as 110%, 75%, and 50% of rated load.

In case of above system, the alternator, its control panel, lighting scheme, earthing scheme, electrical works & cabling etc. will be as per clause (3.1.9) – A/B//E/F/G below.

3.1.9 **ELECTRICAL SYSTEM:**

A. **Alternator:** All pumps & blower will be electrical motor driven. The details of electrical system & devices are as under:

Power for all electrical equipment inside the unit shall be provided by a diesel engine driven (as mentioned in 3.1.8 above) acoustically enclosed 3 – phase alternator. Air blower, fuel pump, feed water pump shall be driven by directly coupled electric motors. The alternator prime mover/engine shall have all the features of the engine stated above. The continuous alternator KVA output at 50 deg. C ambient shall be more than the sum of starting KVA of the largest motor and the maximum total running KVA of other electrical equipment. The engine shall be able to provide the required power during motor starting & running. The engine output rating shall be on continuous basis at 50 deg C ambient and at rated alternator output KW. The engine & alternator rated output on continuous basis shall be at least 20% more than the continuous running electrical load. The bidder shall submit detail calculations for KVA rating of alternator & KW rating of the engine along with the bid.

Alternator shall conform to IS: 13364/IEC 60034.

The alternator shall meet the following technical specifications and conform to relevant BIS
1. Rated voltage: 415V (+/-) 6% AC.
2. Rated frequency: 50 Hz (+/-) 3%, 1500 RPM
3. Phase system: 3 phase, 4 wires.
4. Power factor: 0.8 lagging.
5. Class of insulation for stator, rotor: F/H.
6. Phase sequence: UVW.
7. Rating: Continuous.
8. Connection: Star.
9. All windings should be made from electrolytic grade virgin copper.
10. Alternator Internal protection (enclosure): IP 23
11. Alternator cable terminal box protection: IP 54.
12. Excitation system: Brushless Self excited & auto regulated.
13. The automatic voltage regulator shall ensure that voltage dip during starting of highest size motor with other electrical loads running at rated output shall not be more than 10% of the alternator rated voltage.
14. Mounting: Foot mounted.
15. Suitable cable termination box for four core, copper conductor, steel armoured PVC insulated cable connection.
16. Alternator is to be mounted on anti-vibration pads.
17. Alternator shall have two external grounding terminals.
18. The following information in respect of the alternator shall also be provided: (i) Rated output, (ii) Motor starting ability (iii) Voltage swing when rated load is suddenly switched on (iv) Overload capacity (v) Short circuit withstand capacity (vi) Automatic voltage regulation (vii) Unbalanced current withstand capacity (viii) efficiency of alternator at 25%, 50%, 75% & 100% load (0.8 PF)
19. Alternator make shall be Stamford/ Kirloskar/ NGEF/Crompton Greaves. Alternative make if offered will be subject to OIL's approval.
20. Alternator shall be guaranteed for a period of one year from the date commissioning of the unit.
21. The alternator along with the Prime mover shall be housed in an acoustic enclosure.

B. **CONTROL PANEL:**

Suitable Industrial type SLC/PLC based (Non redundant, Non compartmentalized and Non Draw out type) control panel shall be provided for the alternator. The panel shall comprise of the following:

i)Four pole, 415V MCCB, minimum 25 kA breaking capacity, continuous current rating (AC23 duty) 25% higher than the gen set full load current, adjustable (in both current and time) microprocessor controlled overload, short circuit and ground fault release, with shunt trip coil, quantity – 1 no. Make: Schneider (NSX series)/Legrand (DPX3 series)/Siemens (3VT series)/ABB (Tmax series)/Indo-Asian

ii) 1 No. 3 phase, 4 wires, Microprocessor based, Over and Under Voltage
Monitoring Relay for the following protections for the alternator (Make: Schneider (Model RM3 TR114VS7)/ProkDvs(Model-LVM11-34-2CF)/ABB Ltd.)
1) Over voltage - 110 %
2) Under voltage - 85 % with 1- 10 seconds time setting
3) Incorrect phase rotation

iii) 1No. Over and Under frequency monitoring relay from 40 to 60 HZ with
accuracy 0.1%, suitable for 415V. Trip time 0-10Sec with LED indication, 2NO+ 2NC contact, Make: ProkDvs (Model –HILO-2C-F)/ Minilec (FCS D2)

iv)One no. Digital Multifunction for display of V, I, KW, Frequency, KWH shall be provided in the panel. Current Transformer: Output 5 A or 1 A of reputed make at rated primary current. Burden – 15 VA, Class-I; Quantity – 3 nos.; Make of meter: HPL-Socomec (Diris A40)/Schneider (EM 6400 series). Make of CT: Kappa/A.E./L&T.

v)MCB ('C' curve) for protection of meters and earth leakage relay.

vi)LED indication lamps for indication of incoming 3 phase power supply;
Quantity – 3 nos.

vii) Other components like pushbuttons, as required

Sub Notes for Panel:

N.1 The generator control panel shall be industrial type, self-supporting, floor mounting, built with rigid framework of suitable size MS Angle/Channel of sufficient strength with vibration dampers, dust & vermin proof made of 14SWG CRCA sheet steel, cubicle type conforming to IP54, having front and rear hinged doors with locking arrangement, danger plate fitted on both sides, lifting lugs on top, ventilation louvers with perforated sheet on both sides, detachable gland plates for easy & safe entry of cables, double earthing studs on two sides complete with suitably sized zinc plated &passivated double nuts and spring washers.
N.2 Control panel shall be thoroughly cleaned before applying 2 coats of rust preventing primer followed by 3 coats of light grey paint as per BIS code.
N.3 All control wiring shall be done with 1100V grade, single core 1.5 sq mm, ISI, FIA, TAC approved and marked, PVC insulated, flexible copper cable. CT and Ammeter wiring shall be done with 2.5 sq mm copper cable. CT wires shall be terminated with ring type lugs. All wires shall be numbered with ferrule for Identification. Make: Finolex / Havel's /equivalent reputed make.
N.4 All power connections inside the panel shall be made with copper wire or copper straps of current rating as per MCCB rating. Generator output terminals shall be connected to the control panel input at heavy duty terminals with 1100V grade, heavy duty, ISI approved and marked, PVC insulated, flexible copper conductor cables in heavy duty metallic flexible conduit.
N.5 The overall dimensions of the panel shall be sufficient for safe and comfortable working inside the panel. Panel shall conform to IS: 8623/equivalent IEC Standard.

C. **ELECTRIC MOTOR**

Induction motors of suitable rating (with adequate reserve HP) & RPM shall be provided for running the air blower, fuel pump and feed water pump. The motors shall have the following minimum specification:
a) Voltage: 415V (+/-) 6% AC.
b) Frequency: 50 Hz (+/-) 3%
c) Duty: S-1 (Continuous)
d) Enclosure: Totally enclosed Fan cooled (TEFC)
e) Class of insulation: F but limited to temperature rise of B class insulation.
f) Degree of protection: IP: 55.
g) Suitable cable termination box.
h) 2 nos. suitable earth terminals shall be provided.
i) Standard: Motor should confirm to IS-325 for performance.
j) Motor shall be guaranteed for one year from date of commissioning of the unit.
k) Make: Kirloskar/Crompton Greaves/Bharat Bijlee/ABB.
The motors shall be directly coupled through direct, flexible couplings & complete with coupling guards.

D. **MOTOR CONTROL CENTER:**

A suitable MCC panel shall be provided for starting of the air blower, fuel pump and feed water pump motors. As the MCC panel also will house the boiler controls (with sensitive PLCs and other instrumentation), sufficient and proper isolation/space shall be provided for instrumentation items and high voltage interference generating items like contactors/MCCBs etc. of motor starters.

The MCC panel shall have the minimum technical specification as under:
(a) INCOMER: Qty. – 1 no. It shall be supplied from the output of the generator control panel. It shall comprise the following:
(a1) MCCB, 4 pole, minimum 25 kA breaking capacity, continuous current rating (AC23 duty) as per design of control panel, adjustable (in both current and time) microprocessor controlled overload, short circuit and ground fault release, with shunt trip coil, qty – 1 no. Make: Schneider (NSX series)/Legrand (DPX3 series)/Siemens (3VT series)/ABB (Tmax series)/Indo-Asian
(a2) Earth leakage relay with core balance current transformer. Range – 0.3 Amp to 3.0 Amp with adjustable time delay, indication LEDs, test and reset push button: Qty – 1 no. ELR shall trip the MCCB in case of an earth leakage. Make: Schneider/Legrand/ABB/Siemens.
(a3) Analogue ammeter (with selector switch) with current transformer, 5 A or 1 A secondary at rated primary current. Burden – 15 VA, Class-I; Qty – 3 nos; Make of meter: reputed. Make of CT: Kappa/A.E./L&T.
(a4) Analogue voltmeter with selector switch
(a5) Control MCBs ('C' curve) for protection of meters – as required

(b) BUSBAR: A suitable length of 4 nos. (Three phases and one neutral) electrolyte grade high conductivity tinned copper bus bar shall be provided. Continuous current rating of the bus bar shall be two times the current rating of the panel incomer MCCB. Bus bar insulation support material shall be non-hygroscopic SMC/GRP. Bus bar shall be insulated with colour coded heat shrinkable PVC Direct on line (DOL) starters for motors up to 5 HP and star/delta starters for motors above 5 HP shall be provided along with one no. spare starter for highest sized motor.
Besides starters one no. lighting feeder (Fitted with MCB and switch) and one no. spare feeder (Fitted with 25 amps 4 pole MCCB) shall be provided. Starters shall have following components:
(c1) Incomer MCCB, 3 pole, microprocessor controlled overload and short circuit release; suitably rated MPCB may also be offered matching the motor HP/kW.
Make: Schneider/Siemens/ABB/Legrand/Indo-Asian.
(c2) TP power contactor with auxiliary contacts. Make: Schneider/ABB/Siemens/Indo-Asian.
(c3) Thermal overload relay within built single phasing preventer. Qty. – 1 No: Make: Same as contactor.
(c4) Timer for star/delta starter, make: Schneider/ABB/Siemens

(c5) Start & Stop push button (if not controlled through PLC) Qty. – 1 set; Make: Siemens/L&T
(c6) ON/OFF/Trip LED Indication: Qty. – 1 set; Make: Siemens/L&T.
(c7) MCBs for control circuit

Sub-Note for MCC Panel:

1. The MCC panel shall be industrial type, self-supporting, floor mounting, built with rigid framework of suitable size MS Angle/Channel of sufficient strength with vibration dampers, dust and vermin proof made of 14SWG CRCA sheet steel, cubicle type conforming to IP54, having front hinged doors with locking arrangement, danger plate fitted on both sides, lifting lugs on top, ventilation louvers with perforated sheet on both sides, detachable gland plates for easy & safe entry of cables, double earthing studs on two sides complete with suitably sized zinc plated & passivated double nuts and spring washers.
2. MCC shall be thoroughly cleaned before applying 2 coats of rust preventing primer followed by 3 coats of light gray paint as per IS code.
3. All control wiring shall be done with 1100V grade, single core 1.5 sq.mm, ISI, FIA, TAC approved and marked, PVC insulated, flexible copper cable, CT and ammeter wiring shall done with 2.5 sq.mm copper cable. All wires shall be numbered with ferrule for identification. Make: Finolex/ Havell's.
4. All power connections inside the panel shall be made with copper wire or copper straps of current rating as per individual MCCB rating. Motors should be connected to the respective panel at heavy duty brought out terminals with 1100 V grade, Heavy duty, ISI approved and marked, PVC insulated, PVC sheathed, Galvanized steel armoured, stranded
Copper conductor cables. Heavy duty single compression cable glands shall be used for all cable entries. Make of Cable: Finolex/Havell's/L&T/reputed
5. The overall dimensions of the panel shall be sufficient for safe and comfortable working inside the panel. Panel shall conform to IS: 8623/IEC equivalent.
It is to be noted that the MCC panel shall also house the PLC/SLC controls and instrumentation. Hence the section 3.5, Control Panel and Instrumentation, shall also be referred while designing the MCC.

E. **EARTHING DETAILS:**

The entire earthing work shall conform to IS: 3043. Two nos. 25x5 mm galvanized GI straps shall be mounted suitably inside the unit, which will act as parallel earth bus bars. Two nos. earth connections (either with suitable size GI straps or GI wire rope, suitably terminated with crimp type lug) from alternator, motors, control panel & MCC shall be connected to these straps so as to ensure two earth connections for each device. The generator neutral shall also be earthed to the earth straps with suitable sized insulated copper cables. Earthing scheme shall be as per IS: 3043.

F**. ELECTRICAL WORKS & CABLES**

Entire electrical installation work will be as per BIS/IEC, CEA Regulations& NEC codes. All items used shall conform to relevant IS. The layout plan &
electrification work shall be planned considering safety of operating staff,
equipment & maintenance aspect.
Bidder shall refer equivalent international standards for items where only Indian Standards (as per BIS-Bureau of Indian Standards) has been mentioned.
All cables will be terminated through suitably sized Heavy duty single
compression glands and connections will be made through properly rated
terminal strips and tinned copper sockets crimped rigidly to the copper
conductors.

G**. ILLUMINATION AND LIGHTING DETAILS:**

Interior of the unit shall have sufficient illumination with minimum 3 nos. of
industrial type, 240V, IP55 bulkhead/well glass fittings with mercury vapour (125 w) /CFL (23 w) lamps. These shall be wired with metallic conduit wiring/armoured cable wiring using stranded copper conductor cables approved by ISI. Make of light fittings: Philips/Bajaj/Crompton/GE.

MCB shall be used as switches for illumination system and shall be housed in metallic enclosure, properly earthed. One no Industrial type socket outlet of 10 amps with 10 amps MCB shall be provided inside the unit. Make:
Schneider/Siemens/ABB/Legrand.

H. **DOCUMENTS:**

Complete electrical/instrumentation control scheme (with schematic drawings, component details and indicative bill of materials) for details of electrical system including gen set, control panel, earthing, illumination, MCC, Motor, PLC controls, wiring scheme shall be submitted with the offer for OIL's approval.
Three sets of above scheme (after OIL's approval) along with test report, inspection report and all drawings of electrical system and guarantee certificate for electrical items shall be submitted with the unit.

3.1.10 **FUEL BURNING COMBUSTION SYSTEM:**

The fuel burning system of the boiler should comprise of the following –

a) **BURNER**: The burner should be pressure jet, direct electric spark ignition type using spark electrodes/plugs and high tension power supply from inverter/magneto of a well proven design comprising of burner gun, electrode, air fuel mixing devices, ignition transformer and other accessories if any, all rated for continuous duty service. The burning system should be adequate to produce heat required for generating steam at the desired rate within 3 to 5 minutes of cold start. Make – Monarch/Invalco/Hauck Manufacturing Company (ELSTER) etc. Manual describing combustion principle for steam generation is to be submitted.

b) **COMBUSTION AIR BLOWER**: Centrifugal type air blower of suitable capacity is to be driven directly either by the diesel engine through belt drive or by directly coupled electric motor complete with all the accessories for power transmission. It should also be provided with an over pressure relief valve.

c) **FUEL PUMP**: Gear type fuel pump suitable for pumping HSD or any second grade fuel oil, either mounted on the same shaft as that of the air blower driven by the diesel engine through belt drive or by directly coupled suitable electric motor. The fuel pump should be complete with all accessories required for power transmission. It should also be equipped with internal over pressure relief arrangement/automatic by-pass control valve. Make – Sofag, Sunstrand or Neel or equivalent reputed make. The position of the pump should be easily accessible for maintenance.

d) **DIESEL OIL TANK**: HSD tank of suitable capacity, based on the feed water tank capacity and fuel consumption rate, for continuous full load operating time made of MS sheet, complete with inlet and drain nozzles fitted with valves, graduated level gauge shall be firmly anchored to the skid to withstand severe wrenching and shocks. Necessary MS piping up to the diesel engine and boiler fuel pump should be provided.

e) **MANUAL HSD FILLING PUMP**: 1 hand operated HSD filling pump (gear type) complete with suction and discharge flexible rubber hoses for filling HSD tank should be mounted near the tank. While the length of the discharge hose shall be as per assembly requirement, the length of the suction hose shall not be less than 40 ft.

3.1.11 **FEED WATER PUMP**: Triplex reciprocating plunger type positive displacement pumps of suitable capacity of a reputed manufacturer like SPECK etc. to be driven either by the diesel engine through belt drive or by directly coupled suitable electric motor complete with all accessories for power transmission. The pump shall be complete with fluid over pressure relief valve, suction stabilizer and pulsation dampener. The bidder should clearly specify volumetric capacity, pump HP and other technical details. Piping should be provided for connecting the water pump to the coil inlet. A suitable strainer should be provided at the suction of the pump to remove foreign materials. The position of the pump should be easily accessible for maintenance.

3.1.12 **FEED WATER TANK**: Tank/s made of MS sheets (Plate thickness min. 5 mm) with suitable anticorrosive paint of capacity not less than 10000 litre, fitted with inlet, outlet, drain and vent nozzles (in each tank) fitted with valves, level indicator/gauges shall be provided. The tank shall be properly designed to reduce water surging on turns and withstand violent wrenching and shocks. It shall be firmly anchored to a skid mounted above the chassis as shown in the attached layout diagram. The tanks shall be easily detachable from main unit for cleaning and maintenance without dismantling other units. If the tanks are made in several sections, then each section shall have isolating valve and individual tank drainage facility. Suitable air vent nozzle shall be provided in each tank to eliminate air pockets while filling up. Proper care shall be taken that the tanks are suitably connected to the feed water pump and there is no starvation of water to the pumps. Suitable provision shall be made to reduce metal to metal friction for longevity of the tanks.

3.1.13 **STEAM HEADER**: The steam header for mounting safety relief valves, steam pressure indicator, high steam pressure switch, coil blow down valves including steam stop, auxiliary and check valves. The steam header shall have flanged ends for mounting all the valves. It should be placed at the Right hand side of the Unit.

3.1.14 **DUCTING:** Ducting should be provided for the flue gases from outlet of the boiler complete with a rain head outside the boiler housing.

3.2 **PIPING**: Piping to connect water pump, boiler as well as steam outlet sho uld be of boiler quality du1y certified by the competent authority. Suitab1e insu1ation shou1d be done up to the rear of the boiler housing. Drain piping for fuel, feed water and steam coil should be suitably provided.

3.3 **STEAM HOSE/PIPE:**

1. 38mm (1-1/2") NB 12-metre-long three nos flexible metal braided high pressure hose for steam working pressure of 160 kg/sq.cm at 250-350 Deg C. complete with quick release coupling at each end should be provided.

2. A set of 38 mm (1-1/2") NB pipes (of various length) of 160 kg/sq.cm working pressure with hammer union (one end of pipe male and other end female) (for steam operation) at each end of pipes should be provided for a total length of 30 meters. The far end of the pipe should be 12m away from the steam outlet of the boiler along the ground. Accordingly, necessary elbows/bends and short joints with quick release couplings should also be provided. The steam is to be injected into the well to heat the heavy oil so that it becomes easier for the oil to flow to surface with the help of artificial light. Additional hammer union: Qty: 3 nos; Reducer: 1 ½" inch to 1" –Qty-2 nos; NRV 2 " Qty: 2 nos, ; Reducer : 1 ½" inch to 1/2" –Qty-2 nos; Tee, ½" : 4 nos; Socket, 1 ½" : 3 nos.

   All these items will be of IBR quality.

3.4 **VALVES**: The boiler should be equipped with 3 nos. each of coil blow down valves (at suitable position for easy operation), safety relief valves, steam stop valves and feed check (non-return) valves for coil blow down, over pressure release, steam shut off and preventing reverse flow respectively. These va1ves are minimum requirement for the unit.

All the valves shall be IBR quality flanged type valves. The bidder has to provide necessary document in support of this along with the quotation.

3.5 **CONTROL PANEL AND INSTRUMENTATION:**

A. Control panel shall be designed based on microprocessor based state of the art technology Programmable Logic Controller (PLC)/Sequence Logic Controller (SLC) system suitable for Truck mounted Steam Generator (boiler)operation and control. The fault functions shall be both visually and audibly indicated on the unit's control panel and shall remain 'ON' until manually reset. It will have sequence starting system to ensure that all functions associated with starting operation are performed in correct

sequence. The initiation shall be by means of a switch of push type, on the unit control panel. Provision shall also be incorporated for emergency shutdown of the unit. The unit shall be provided with automatic safety shutdown devices and annunciation system with fuel cut-off.

SHUTDOWN DEVICES WITH AUDIO-VISUAL ALARM FOR THE FOLLOWING CONDITIONS SHOULD BE OFFERED

i. Flame failure
ii. Steam Pressure high
iii. Steam Temperature high
iv. Low feed water pressure
v. Low fuel oil pressure
vi. Blow down valve open
vii. Low air pressure

SEQUENCE AND CONTROL FOR THE FOLLOWING CONDITINS SHOULD BE OFFERED

vii. Primary safety checks
viii. Start of blower fan and fuel pump
ix. secondary safety checks
x. Start ignition and fuel supply
xi. Prove Flame establishment
xii. Continue operation till high steam pressure reached
xiii. On-off operation set pressure failure
xiv. Safety lock out for flame or any other safety shutdown condition as mentioned above

B. **Field and panel mounted indicating instruments shall also be available to monitor various process parameters.**

Panel mounted indicating meter (Analog type, preferably 4–20 mA)

i. Steam temperature (Analog type input, preferably 4-20 ma)

Panel mounted Indicating lamp & Switches
Indicating Lamp:

ii. 230 V AC ON
iii. Safety Lockout Internal
iv. Start
v. Flame ON
vi. Water Pump On
vii. Water Pump Off
viii. Water Pump Trip
ix. Fuel Pump ON
x. Fuel Pump OFF
xi. Fuel Pump Trip
xii. Air Blower ON
xiii. Air Blower Off
xiv. Air Blower Trip
xv. Steam Temperature High
xvi. Steam Pressure High
xvii. Low Steam Pressure
xviii. Low Air Pressure
xix. Low Fuel Pressure
xx. Low Fuel Oil level
xxi. Low Feed Water level
xxii. Blow down valve open status

Switches (Push Buttons):
xxiii. Start push button.
xxiv. Stop push button.
xxv. Alarm Test push button.
xxvi. Alarms accept PB.
xxvii. Alarm reset PB.

xxviii. Start PB for water pump.
xxix. Stop PB for water pump.
xxx. Start PB for fuel pump.
xxxi. Stop PB for fuel pump.
xxxii. Start PB for air blower.
xxxiii. Stop PB for air blower.
xxxiv. Auto/Manual water pump selector switch.
xxxv. Auto/Manual fuel pump selector switch.
xxxvi. Auto/Manual air blower selector switch.
xxxvii. 230 V AC power ON/OFF switch.

Field mounted instruments (Analog type)

i. Steam Pressure gauges
ii. Feed water pressure gauge
iii. Steam temperature gauge
iv. Indicating thermostat or temperature switch for steam temperature, with a set point for high temperature(superheat alarm)
v. Steam pressure switch for both high & low
vi. Air pressure switch
vii. Pressure switch for fuel oil
viii. Pressure switch for feed water
ix. Level switch for fuel oil level
x. Level switch for feed water level
xi. Limit switch for blow down valve
xii. Alarm rest, engine start and main switch
xiii. Tachometer, lube oil pressure indicator, temperature indicator for the diesel engine.

C. Ignition of burner should be carried out using ignition transformer and ignition electrodes operating at 230 V AC, 50 Hz.

D. Steam temperature controller function shall be incorporated in the control programme.

E. A low voltage/under voltage (less than < 180 V AC) indication of Instrument Panel incoming power (230V AC, 50 Hz) to be provided.

F. All three phase (415V, 3PH, 50Hz) motor starter relays, overload relays, current transformers etc should be placed in the control panel in such a way that no high voltage interference will occur in the PLC side. Therefore, the control panel should be designed like that upper half of the panel should include all instrumentation items and lower half of the panel should include all three phase electrical component including ignition transformer with proper isolation.

G. The control panel shall be mounted in such a way that it can absorb maximum shock/vibration as it is required to move very frequently, sometimes on bad road condition and in sand dunes also.

H. The control panel shall have an entry for easy access and shall be suitable for use in IP-65 environment. The control system shall be designed in such a way that failure of portion of the system shall not jeopardize the health of the unit i.e. the health of various auxiliaries as well as the steam generation availability shall be always ensured.

I. All the indication as well as sequence, interlock, startup and safety shutdown through PLC using analog/digital I/O cards. Also preferred analog/digital indication in the panel as mentioned in Para 2.0.

J. The control panel shall include a programmable logic controller (PLC) with the following features to cater the operational need of the boiler.

i. Indication of status of inputs and outputs for easy debugging
ii. Expandable inputs/outputs
iii. Program memory held in EPROM
iv. Communication port for connection to PC or laptop computer
v. Designed to work in boiler environment
vi. Battery back-up for retaining memory in case of power failure

K. Control cabinets shall be industrial grade, enclosed type and shall be designed for bottom entry for cable connection and cabinet structure shall be rigid. Cabinets shall be equipped with easy access door and door shall be equipped with lockable handles and concealed hinges. All cable entry to the cabinet shall be properly rooted through conceal tray/conduit. Proper illumination shall be provided with operating door switch inside the cabinet.

4.0 TRUCK UNIT:

Brand new Truck chassis of Make: Tata/Ashok Leyland/Volvo or equivalent as per the following specifications, Fitments & Accessories, Terms & conditions, etc. The make and model of the truck chassis offered is to be clearly indicated in the bid. Bidder should provide technical leaflet of the offered truck chassis along with the bid.

(A) CHASSIS

i. Drive: 6x4 Drive with power steering system. (One single non powered front axle & two Powered rear axles.)
ii. Cowl: Full forward Control.
iii. Engine: Suitable water cooled diesel engine of adequate HP.
iv. Emission norms: Latest applicable emission norms.
v. Gearbox -Minimum 5 forward speeds & 1 reverse speed.
vi. Steering - Hydraulic Power Assisted steering system.
vii. Wheelbase – In the range of 4800 mm -4910 mm.
viii. Overall length – As per OEM design.
ix. Maximum width – As per OEM design. (As per Indian MV Acts.).
x. Suspension –As per OEM design.
Maximum permissible GVW not less than 25,000 kg. (Note para 4.1 b).
xi. Rear overhang (ROH): ROH should be as per original chassis. Extension of Chassis to accommodate Steam Generator unit/rear housing is not acceptable.
xii. Brake: Duel circuit Full Air Service Brake and spring Actuated Parking Brake acting on rear wheels.
xiii. Wheels & Tyres: Tyre size- min. 10.00x20. (with tube)
xiv. Electrical system: 12/24 volt as per OEM design.
xv. Ground clearance: - As per OEM Design.

(B) DRIVER'S CABIN

Driver's cab (Dual) suitable for accommodating minimum four co-workers excluding the driver should be complete with the following:

i. All steel structure construction with non-slippery chequered plate flooring.
ii. 2(two) lockable doors with glass window (moving up & down).
iii. Side windows on both sides with lockable sliding glass. 1 (one) No. rear peeping window with sliding lockable glass and steel wire mesh guard.
iv. Adjustable driver's seat (as per OEM design).
v. 1 (One) no co-driver's seat on the left side of the driver's seat. Additional 1 (one) bench type seat made of foam rubber cushion with full backrest suitable for minimum 3 (three) persons at the back of driver's seat. Total seating capacity of the cabin is to be for minimum 5 persons. (including driver)
vi. Suitable roof lamps and minimum 2 Nos. cabin fan.
vii. Windscreen of laminated non-splinter glass. Sliding window glasses of toughen type.
viii. The roof of the driver cabin (from inside) should have proper upholstery with heat resistance insulation to prevent heat radiation.

(C) OTHER FITMENTS & ACCESSORIES

a. All standard equipment, gauges and meters, air horn, lightings, reflectors, sunshades, lockable fuel tank with strainer, standard tool kit, lockable toolbox (inside the cabin), hydraulic jack of capacity min 30 MT, handle & wheel wrench, mud flaps etc.
b. One additional lockable toolbox of size min 1.00m x 0.50 m x 0.50 m under the truck platform at suitable location.
c. 2 (two) nos. large rectangular rear view mirrors on each side of the cabin.
d. Well covered lockable Battery Box preferably outside the driver's cabin, suitable mounting arrangement for the spare wheel and towing hooks at rear and front.
e. Audio visual alarm (Reversing horn with blinking light) while reversing of the vehicle.
f. First aid box, Glove box, Fire extinguisher(s) of adequate size and all other statutory fittings/accessories as per Indian MV Act.

(D) PLATFORM

a. A suitable platform is to be constructed on the truck chassis to mount the skid(s) with all the items of the Steam Generator Unit (SGU) described at para 3.0 to 3.5 above and to construct a weatherproof housing as detailed at para 5.0 below. The skid shall be properly mounted and for the same, adequate number of cross members in the skid is to be provided. Width and length of the platform should be as per original width of cowl/driver's cabin and length of chassis. Extension of chassis to accommodate the skid(s)/housing of SGU or any additional overhang of the housing is not acceptable.

b. The platform is to be made out of MS channels with min. 5 (five) mm thick MS chequered plate flooring.

It should be strong enough to carry the load of all the equipment and should withstand shock loads during movement.

d. For aesthetic look, extended paneling of the canopy housing is to be made to cover the tank portion of the unit. This extended portion shall either be screwed with the main paneling or is to be fixed with hinge with the main housing frame. In case of hinge, proper anchoring is to be made to hold the lifted panel.
e. The mounting of all equipment/machineries etc. on the rear platform should be of uniform load distribution for proper balancing of the vehicle.

4.1 SELECTION OF TRUCK CHASSIS

a. The total weight of the Steam Generator Unit with full capacity water, housing (rear cabin of SGU), all fittings etc., as described at para 3.0 to 3.5 above & 5.0 below is to be indicated in the bid. Approx. weight of the truck with driver's cabin & platform is also to be indicated.

b. The Laden Weight of the unit shall be within the maximum Permissible Gross Vehicle Weight (i.e. sum of Axle Capacities of all axles i.e. GVWR) of the unit.{ Laden Weight means-Weight of the complete unit with all equipment & fittings i.e. weight of the chassis with driver's cabin +weight of the all equipment permanently mounted on the unit + weight of the other tools, accessories, etc. generally being carried/kept in the unit, spare wheels, oil, etc. Accordingly, Laden Weight is the sum of actual loading on each individual axle.} Accordingly, the truck chassis specifically with respect to GVW, Engine HP & Wheelbase is to be selected and offered/quoted.

c. Positioning of the items of the SGU on the platform should be such that the load is distributed evenly on the platform.

4.2 PAINTING- Exterior of Driver's cabin Interior of Driver's cabin Chassis & undercarriage- Deluxe Imperial Crimson; Light shade as per standard; Rustproof painting.

5.0 UNITISATION & SPECIFICATIONS OF HOUSING:

a. The mobile steam generator shall be generally fabricated on the basis of the supplied layout drawing (Not to Scale) as shown in **Annexure- A**. The bidders are also to note that the supplied drawing is only a reference drawing and in no case it should be considered as the final drawing. However, the successful bidder shall have to make their own detailed lay out drawing, P&I drawing etc. and the same shall have to be submitted within 4 weeks from the date receipt of formal order for OIL's approval prior to starting actual fabrication of the unit.

b. All the items of the Steam Generator detailed above are to be installed on suitable individual skids of preferably on a single skid and the skid(s) is to be mounted on the truck platform through bolts extended up to the underneath cross members of the platform as well as chassis, as applicable. Mounting of the skid(s) either by the bolts or welding to the platform sheet (floor sheet) it should be avoided to the extent possible.

c. The skid(s) is to be covered with suitable chequered plate flooring at areas where people will generally stand to operate different items of the steam generator unit.

d. Positioning of different items of steam generator unit should be such that load is evenly distributed on the truck and does not create any problem in operating the truck as already mentioned at para. 4.1(c) above.

e. A suitable all steel construction weatherproof housing is to be constructed on the platform. Vertical posts of the housing structure are to be welded to the peripheral channels of platform through horizontal members and/or underneath cross members of platform. Welding of posts directly to the peripheral channels/floor sheet or welding of the horizontal members to the
floor sheet itself should be avoided.

The housing is to be constructed as per following specifications –

i. Structure – All welded MS structure made out of square tubing of adequate size (min 5.00 cm sides).
ii. Paneling – Aluminium internal and external paneling of thickness not less than 18 gauges.
iii. Height – Not more than 2200 mm from truck platform. Overall height of the complete MSG unit including chimney shall not be more than 3400
mm from ground.
iv. Width & length – As per size of the truck platform (to cover the complete platform).
v. Doors – 1 (One) full height 2 (two) panel door at rear of the housing (width approx. 600 mm less than the cabin width) at rear of the housing.

2 (two) full height 2 (two) panel doors of minimum 1500 mm width on either sides of the housing. Positioning of the side doors as per convenience/easy access. All doors shall be provided with strong hinges and locking provisions from inside & outside.

vi. Windows – Minimum 4 (four) nos. windows of size preferably not less than 1.50 m x 0.75 m on sides of the housing with lockable sliding toughen glasses and aluminium frame.
vii. Ventilation – For proper ventilation the housing shall be fitted with two nos. of suitable exhaust fans on opposite walls.
viii. Insulations – Glass wool packing inside all walls and doors to protect personnel from heat.
ix. Waterproofing – Suitable sealant/gasket shall be used to arrest water leakage through panel joints etc.
x. Illumination – Adequate number of lights inside the housing for proper illumination. While at least one number light is to be connected to truck electrical system, power sources for the rest will be from the steam generator circuit.

In addition, two searchlights connected to truck's electrical system (switches inside the driver's cabin) shall be provided at rear top corners of the housing.

Painting – Two coats of primer followed by two coats of paints of following shades.

Exterior – Caterpillar Yellow or Golden yellow.
Interior – Light shade.

xi. Others fitments/accessories –

a. Adequate firefighting equipment (e.g. fire extinguishers) inside the housing with suitable mounting arrangements at suitable locations.
b. Suitable foldable ladder/steps of sufficient width below each door.
ii 01 (one) no fixed type ladder at rear of the housing for climbing to housing's roof top.
iii Suitable walkway on top of housing's roof to avoid damage to roof structure/paneling.
iv Roof of the housing shall be made slanting towards sides to avoid water accumulation.
v Suitable ventilations with fixed cover on roof (Jack-roof type) and with folding cover on wall near the engine for easy escape of hot air shall be provided. Additionally, two numbers exhaust fans shall be provided inside the MSG cabin for proper ventilation.

5.1 A detailed drawing of the housing showing dimensions, construction, material descriptions, positions of doors & windows, ladders/steps & walkway, floodlights, switchboards, fire extinguishers, ventilations etc. is to be submitted along with the bid for scrutiny and acceptance.

a. The successful bidder shall have to make their own detailed lay out drawing, P&I drawing etc. and the same shall have to be submitted within 4 weeks from the date of receipt of formal order for OIL's approval prior to starting actual fabrication of the unit.

b. All the items of the Steam Generator detailed above are to be installed and commissioned by the bidder and successfully run by the bidder for 7 days at OIL's site (Baghewala) by its people and train OIL's personal for operation and maintenance of the unit.

6.0 SPARES:

a) COMMISSIONING SPARES: The supplier has to supply all the spare parts required for initial commissioning of the unit.

b) OPERATIONAL CRITICAL SPARES: Supplier shall supply the following operational critical spares along with the supply of each unit so that easy operation can be accomplished in connecting a well to the boiler:

i. 1 ½" Globe type valve – 2 nos.
ii. 1" global type valve – 3 nos.
iii. Fuel pump (Suntec/Danfoss or equivalent) – 1 no.
iv. Water pump – 1 no.
v. 1 ½" non-return valve – 2 nos.
vi. Ignition transformer – 1 no.
vii. Spray nozzle – 1 no.
viii. Safety valve – 1 no.
ix. Steam coil – 1 no.
x. Blower – 1 no.
xi. Alternator – 1 no.
xii. Ignition Electrodes 3/8" – 1 no.
xiii. ½" Non return valve – 1 no.
xiv. 1" Flange type globe valve – 3 nos.
xv. 1" Check valve – 2 nos.
xvi. 1 ½" Flange check valve – 1 no.

xvii. 1 ½" Flange type Globe valve - 2 nos.
xviii. Contactors – 1 set.
xix. Overload relays – 1 set.
xx. Fuses – 1 set.
xxi. Lamps – 1 set.
xxii. A set of instrumentation spares comprising field switch/ instruments, solenoid valve, flame sensor, programmable controller & card, power supply etc.

c) To provide Two (02) sets of tool box of reputed make.

d) Additional hammer union: Qty: 3 nos; Reducer : 1 ½" inch to 1" –Qty-2 nos; NRV 2 " Qty: 2 nos, ; Reducer : 1 ½" inch to 1/2" –Qty-2 nos; Tee, ½" : 4 nos; Socket, 1 ½" : 3 nos. All these items will be of IBR quality.

7.0 Annual Maintenance Contract:

Annual Maintenance Contract has to be provided by the bidder for a period of 5 years for the equipment. Annual Maintenance Contract will cover all sorts of Preventive Maintenance and is limited to two (2) Periodic Visits in each year where Service Engineer has to carry out all sorts of preventive maintenance job required for smooth operation of boiler. Bidder has to give a detailed list of Preventive Maintenance Job that they are going to carry out in each visit along with details of equipment/spares that needs to be changed. The list of such spares has to be accompanied by price per unit which will remain valid for the period of 05 years.

For AMC, the following points has to be considered:

1. The bidder has to quote for Annual Maintenance Contract (AMC) along with the bid submitted by the bidder.

2. The AMC will start after successful period of warranty clause for the equipment after commissioning of the equipment.

3. It is at the sole discretion of OIL whether OIL will utilize the services of AMC. However, for price comparison, the price quoted by bidder for AMC will also be considered.

4. The tenure of the AMC will be five (5) years from the end of warranty period after its successful commissioning, i.e. the AMC will start from the day after. The rate for AMC for five (05) years from the date the warranty is over, should be quoted with year-wise breakup, which shall be taken into account for evaluation of the bids.

5. Annual Maintenance Contract will involve carrying out preventive as well as corrective maintenance of the MSG Unit and its accessories.

6. Bidder must mention the critical spares which are required for AMC in the **Appendix-AMC** in the price bid format along with the prices. In case OIL decides not to enter into an AMC with the successful bidder, the bidder must categorically assure that they will supply all required spares for a period of five (05) years at the prices they have quoted along with this bid. These prices shall be considered for bid evaluation.

   Note: Bidder must include all the spares required for AMC for a period of five (05) years. During the course of AMC if any additional spares are required which are not listed in APPENDIX-AMC, the cost of the same shall be borne by the supplier/contractor.

7. Payments will be made after every 6 months after visit of Engineer of the bidder. The bidder must submit the necessary invoices to OIL along with daily report.

8. The bidder must arrange accommodation, transportation and fooding for his personnel posted at well site for the purpose of the AMC.

9. All consumables/spares required for maintenance of the equipment during its operation in the period of AMC, will be paid on actual on submission of invoice.

NOTE:
i) All spares in specified quantity as indicated above shall be supplied along with each unit.

ii) Specific description, part nos., Make etc. and Unit price of each and every item shall clearly be indicated in the bid.

iii) Bidder shall also quote separately for any additional spares with similar details as felt necessary for 2 (two) years trouble free operation & maintenance. However, **cost of the spares will not be considered for bid evaluation. (Refer APPENDIX-ASF2YR of Price bid format)**

iv) Recommended spares: The bidder is to furnish a list of spares & components that will be required for regular operation and maintenance, overhauling etc., throughout the life of the equipment complete with price of each item. Annual consumption of each spare should be furnished. The bidder should also provide detailed spare list of all the items including bought out items in the operation and maintenance manuals. The list should include a spare parts list along with OEM part numbers, make & model of the equipment and contract postal address of OEM for all items of the whole unit. The price quoted for recommended spares **will not be taken into account for bid evaluation**. **(Please refer APPENDIX- RECOMMENDED SPARES of Price bid format)**

v) The bidders must submit a written undertaking (along with the bid) that they would be able to supply all the requisite spares and consumables (including bought out items) for a minimum period of 10 (ten) years from the certified date of completion / successful field commissioning of the unit.

7.0 DOCUMENTATION:

I) The following documents are to be submitted along with the bid:

a) Preliminary P & I diagram along with bill of equipment.
b) Instrumentation schematic diagram and interlock control circuit diagram.
c) General layout diagram showing dimensions of various components and the unit as a whole.
d) Details of weight/load distribution on the truck chassis.
e) Detailed calculation for sizing of all equipment.
f) Relevant technical catalogue/manuals of each component like water pump, fuel pump, blower, diesel engine, coil tube, alternator, burner system, instruments & control system etc. Detailed specification of each component should be provided.
g) Electrical control circuit diagram and layout diagram.
h) Test certificates including copy of CPRI test certificate for type test of the electrical panels.
i) Bill of materials for all equipment.

II) The following documents are to be submitted by the successful bidder within 4 weeks from the receipt of the formal order for OIL's approval. Only after receiving approval from OIL, fabrication of the unit shall start.

a) Detailed engineering drawing showing lay out of all equipment, load distribution, rear overhang, equipment mounting details, P&I drawing, electrical circuit diagram, panel wiring diagram, details (including make & model no) of all equipment along with quality assurance plan.

Note: During detailed designing of the unit special emphasis shall be given to the issue of ease of accessibility, servicing/maintenance and removability of individual equipment while maintaining a reasonable compactness of the unit as a whole.

b) Detailed calculation for sizing of all equipment.
c) Loop diagram and lop details.
d) PLC hardware and software.
e) Logic details of startup, sequence, interlock, safety shutdown, alarm, control & monitoring.

f) Ladder programs development for startup, sequence, interlock, safety shutdown, alarm, control & monitoring.
g) Emergency & Shutdown logic.
h) Power and control circuit diagrams of generator control panel, MCC and burner control system.
i) Details of cables, luminaries and other accessories.

III) The following documents are to be submitted prior to dispatch of the equipment. The supplier is to note that only after scrutiny of the following documents and obtaining categorical approval, the equipment shall be dispatched from works:

A) 5 sets of bounded Operation and maintenance manual (additionally one copy in a CD) covering all the equipment including truck details. The manuals shall contain details like make, model, part number etc. of all installed equipment including bought out items with contact postal address of the supplier / OEM and a detailed spares list. However, to reduce the size of the manual, the manual may be separated into following volumes

- Manual for unit with control panel and its related ancillaries like pumps, blowers etc. The manual shall contain the detailed P&I diagram, panel wiring diagram, electrical circuit diagram etc.
- Manual for alternators, Motors and related panels.
- Operation & maintenance manual and illustrated spare parts catalogue for the prime mover (pilot engine).
- Manual for Instrumentation and control system including recommended spare parts list.
- Manual for truck unit

However, one copy of the manual shall be provided as master copy containing all the details in the same volume.

a) Necessary certificate/documents from competent Government authority to obtain permission from IBR, Rajasthan for operating the boiler in OIL's operational area.

b) Test certificates including copy of CPRI test certificate for type of the electrical panels.
c) License copy of software for control &instrumentation system if any.

d) Engine emission certificates for truck engine as well as MSG prime mover.

e) Temporary registration, Insurance, Road tax, Sale letter in Form 21 & 22 (in originals) etc. of the truck as applicable, in the name of M/s OIL INDIA LTD, Rajasthan required under Indian MV Act for onward registration of the unit in Assam, India.

8.0 DEVIATIONS FROM THE SPECIFICATIONS:

The bidder shall enclose comprehensive list of intended deviations from the technical specifications, of any clearly highlighting the reasons thereof, along with the bid. If no deviations from the Technical specifications are intended, the same shall be confirmed in the offer. But OIL reserves the right for acceptance or rejection of the deviation.

9.0 BID SUBMISSION & DOCUMENTATIONS:

Bidder's response to all NIT stipulations should clearly be defined maintaining the same sequence as in the NIT. Bidder shall furnish specific details / specifications of all major components, systems with Make & Model etc. Submission of technical leaflet/catalogue alone is not sufficient.
General Response like – 'As per NIT specifications / Technical leaflet' 'Noted' etc, or in any similar fashion is not encouraged. Quoting only the NIT stipulation without any confirmation of acceptance of the same and/or without any confirmation of offering the same is also not acceptable.

10.0 INSPECTION CUM ACCEPTANCE

10.1 Third Party inspection of the unit is to be carried out for all the component of the unit by OIL approved TPI agency (viz M/s Lloyds, M/s Bureau Veritas, M/s IRS, M/s Rites, M/s DNV or M/s Tuboscope Vetco only). Scope of 3rd party inspection:

(i) Witness the manufacturing and assembly
(ii) Witness the functional and performance tests
(iii) Review of inspection procedure
(iv) Review of tests and documents related to all pressure holding equipment
(v) Any other requirement of the inspection agency to satisfy of the equipment as per applicable standards.

10.2 PRE-SHIPMENT INSPECTION:

Pre shipment inspection shall be carried out by OIL (by representative of user department and representatives of state statutory bodies (state boiler authority as per IBR 1950) at manufacturing site after accomplishment of Third Party Inspection (TPI). The supplier shall inform OIL at least 2 (two) month ahead for such inspection to enable OIL to send its inspectors.
Manufacturers and suppliers of boiler and boiler parts destined for installation in India must comply with the Indian Boiler Regulation (IBR) 1950. Compliance has to be provided as per regulation 4 C (2) of the IBR by a Competent Authority / Inspection Authority by the Central Boiler Board of India.

An agency recognized by the Central Boiler Board as an IBR certifying authority can certify compliance as per IBR Guidelines.

The supplier has to arrange for inspection of the units by inspecting team including the statutory bodies (state boiler authority- (Rajasthan) as per IBR 1950) at manufacturing site (In case of foreign Bidders). OIL will bear the expenses towards traveling and accommodation etc. of the OIL's inspection team. However, the inspection at manufacturing site by the statutory body (as per IBR 1950) and approval from the same will be the sole responsibility of the bidder. The expenses towards the travelling and accommodation of the representative form statutory body (as per IBR 1950) shall be borne by the bidder. Bidder has to quote the same accordingly in the inspection and commissioning charges. The Inspection cum Acceptance process would include the following minimum steps/tasks but not limited to –

a. Physical verification / inspection of all the items / fittings / accessories including all Parts Catalogue, Maintenance & Service Manuals, etc.
b. Operational testing of the carrier.
c. Supplier shall have to take note of any minor modification/s for operational requirement suggested by the inspector and comply with the same at no extra cost.
d. The inspection report shall be prepared at the end of the inspection and jointly signed by both the parties.

11.0 Deleted

12.0 INSTALLATION & COMMISSIONING & TRAINING:

12.1 The unit shall be commissioned at Baghewala, Rajasthan, India with 3 (three) successful field jobs as assigned after arrival of the Supplier's Commissioning Engineer within a period of 03 (three) weeks' time.
12.2 The successful bidder shall quote for commissioning charges which shall include the to and fro charges, food & lodging and daily charges of the personnel. OIL shall provide local transportation to the commissioning personnel.
12.3 The commissioning engineer shall be available at site within fifteen (15) days of the intimation given by OIL for commissioning the unit.

12.4 During installation and commissioning of the unit, the commissioning engineer shall have to provide field training as well as class room training for a period of minimum 1 (one) week to OIL's Engineer & two operators on Operation, Maintenance, troubleshooting, Working Principle and repair/ replacement of different equipment.

12.4 Bidders shall quote charges for the above separately for evaluation purposes. The charges shall be shown in Commercial bid only.

13.0 GUARANTEE / WARRANTY:

The bidder shall offer a period of at least 1 (one) year warranty for the entire equipment supplied from the date of successful field commissioning of the entire equipment. OIL reserves the right to inspect, test and if necessary reject any part / parts after delivery at site (including incomplete manuals, catalogues, etc.) in case of any fault on the part of the supplier. It shall in no way be waived by the reason that the unit / item was previously inspected and passed by OIL as per Inspection Clause detailed elsewhere in the NIT. To keep the unit fully operational, in case of failure of any item during the warranty period, it shall be the supplier's responsibility to arrange replacement / repairing at site at their cost including customs, freight, etc. within a period of maximum 3 (three) weeks from the date of notification of such failure and warranty for such items shall be extended accordingly.

14.0 CONFORMITY TO THE NIT SPECIFICATIONS

14.1 The bidder must confirm that they are approved Boiler Manufacturer.

14.2 The Indigenous bidder must confirm that the supplied truck mounted mobile Steam Generator (boiler)shall conform to the requirements, as per IBR-1950 and endorsement by respective State Boiler Authority as well as State Boiler Authority, Rajasthan, INDIA.
14.3 The foreign bidders must confirm that the supplied steam generators shall conform to the requirements as per applicable ASME code and endorsement by State Boiler Authority, Rajasthan, INDIA.
14.4 Bidder must fill the Technical check list/data sheet enclosed with the tender/offer.
14.5 The bidder must confirm that the offered unit / goods shall be of recent manufacture.
14.6 The bids and the accompanied technical documentation must be in English language only. The bids with other than English language must have an English version.
14.7 The bidders must confirm that the offered unit shall perform at the desired rate and parameters as mentioned in para 2.0 above.
14.8 The bidders are to confirm categorically the commissioning clause as mentioned in Para 12.0 above.
14.9 The bidders shall adhere to commitment of spares as per clause no 6.0 above. Bidder must undertake that the provision for supplying spares (including bought out items) of the equipment will be continued for next ten (10) years from the certified date of completion/successful field commissioning of the unit.

14.10 The bidder has to confirm categorically that all electrical/instrumentation equipment to be supplied, if any, shall meet the relevant International/ National standards and the installation shall be carried out as per the relevant rules, regulations and practice.

15.0 Following documents are to be submitted along with supply / unit:

a. Sale Letter, Pollution & Roadworthy Certificate (in similar format of Form 21 & 22A of Indian Motor Vehicle Act - sample copies enclosed), Engine Emission Norms Certificate, etc. as required under Indian Motor Vehicle Act for registration of the unit in the name of **Oil India Limited.**

b. Final Chassis built Up/Vehicle Content Record documents from chassis manufacturer.

c. Specification Sheet of unit indication all details viz Make & Model of chassis, engine, transmission etc. GVWR, Axle Capacity, Axle Loading, Wheelbase, etc., number of Axles, wheels & tyres etc., overall dimensions, turning radius, etc.

d. Certificate of Origin for the chassis in original from chassis manufacturer. Amongst others, the certificate shall contain following information – i. Make & Model of Chassis.

ii. Vehicle Identification Number (VIN i.e. Chassis No.)
iii. Month & Year of Manufacture of the chassis.
iv. Make & Model of Engine.

v. Serial No. of Engine.
vi. Month & Year of Manufacture of the engine.

e. ASME/IBR-1950 certificates of Boiler & Pressure parts.

f. Notwithstanding any clause mentioned elsewhere in the NIT, the single invoice for the complete unit shall be submitted. It shall include the cost of the truck chassis with driver's cabin alongwith cost of Boiler, all equipments, tools, accessories, etc. subsequently fitted in the original truck chassis supplied along with the unit.

g. Bidder shall confirm that in event of award of the order they will submit all the documentary evidence such as invoice etc alogwith despatch details that truck chassis are newly procured from the truck chassis manufacturers.

16.0 NOTES TO THE BIDDERS:

(a) The supplier shall provide a tool kit for operation and maintenance of prime mover, boiler & instrumental panel.

(b) 'OIL' logo will have to be marked prominently on both sides of the boiler house.

(c) The bidder has to mention the names of manufacturer of all items quoted. All the items offered shall be from manufacturers as mentioned in the NIT at the relevant places.

(d) The bidder shall do the packaging of the unit in such a manner that all the equipment are easily accessible and removable for regular operation & maintenance.

(e) The supplier shall obtain permission from the IBR, Rajasthan for operating the boiler in OIL's operational area.

(f) To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

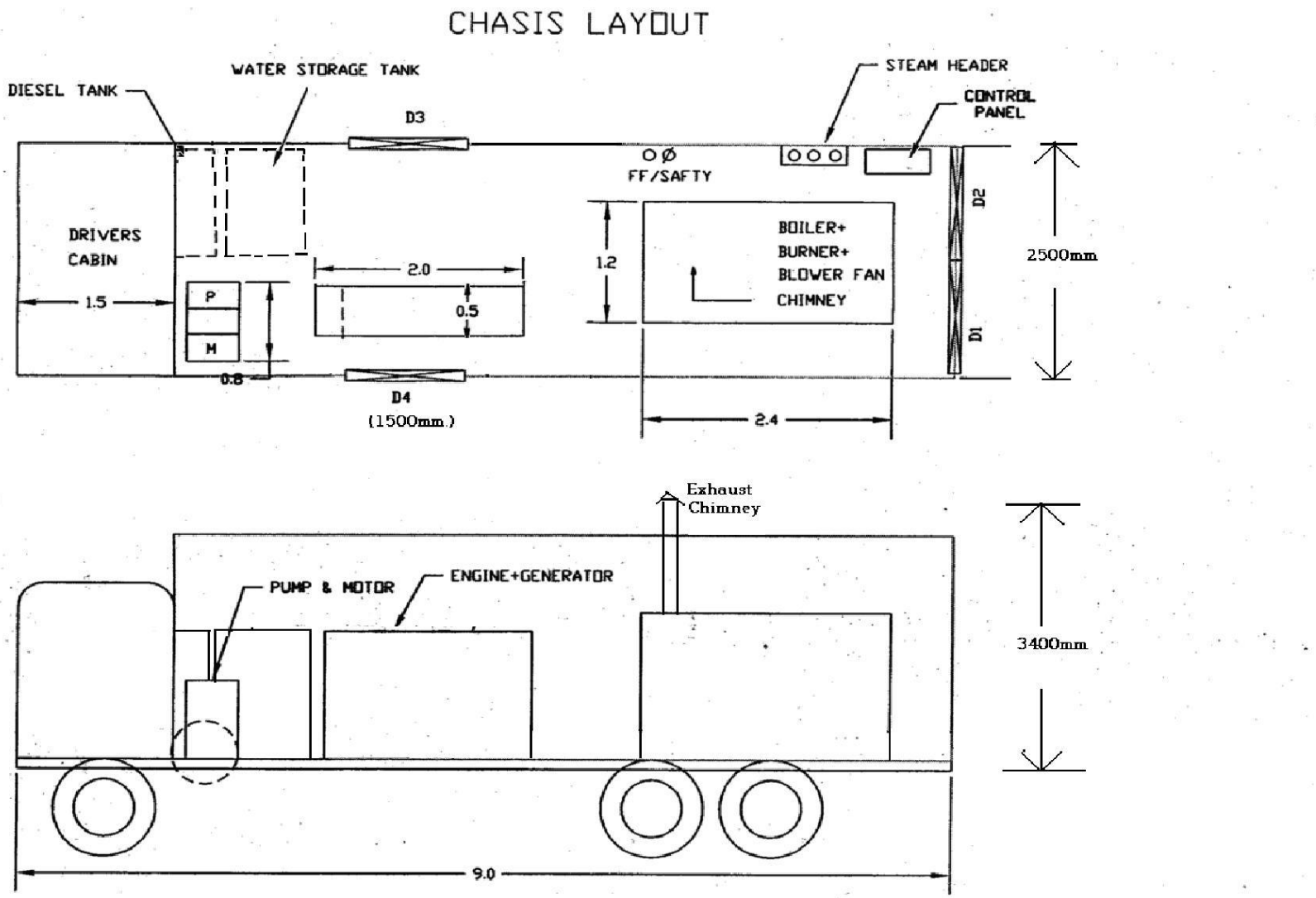
(g) Oil India Purchase order no. must be engraved on the body of the item. Bidder must confirm the same categorically in their quotation.

(h) The bidder shall submit details of the previous supply of such equipment preferably in a tabular format as shown below:

Srl. No.	Client/Customer Name and Address	Order No. / Contract No. & Date	MSG Specification	Qty. supplied	Date of supply	Supporting document enclosed

i) **Bidder to sign and submit completely filled up Technical & Commercial check list (Enclosed as per Annexure-B) and Technical Evaluation Matrix for Bid evaluation criteria (Enclosed as per Annexure-IB) failing which their offer will be rejected.**

ANNEXURE-A



SKETCH IS ONLY FOR REPRESENTATION PURPOSE-IT IS NOT TO SCALE

This is a sample copy ***similar to FORM 21 of Indian Motor Vehicle Act*** *only. The certificate to be issued by supplier shall contain following minimum information. -*

SALE CERTIFICATE

Certified that ……. (brand name of the vehicle) has been delivered by us to ……..…..…… on …… (date).

Name of the buyer ……..…..…….

Address ……

The details of the vehicles are as under -:

1. Class of vehicle ……..
2. Maker's name & address ……..
3. Chassis No. ……..
4. Engine No. ……..
5. Horse power or cubic capacity ……..
6. Fuel used ……..
7. Number of cylinders ……..
8. Month and year of manufacturing ……..
9. Seating capacity (including driver) ……..
10. Unladen weight ……..
11. Maximum axle weight, number and description of tyres –
    (a) Front axle ……..
    (b) Rear axle/axles ……..
    (c) Any other axle ……..
12. Colour (s) of the body ……..
13. Gross vehicle weight ……..
14. Type of body ……..

Date: …….. ***Signature of the manufacturer / dealer***

SAMPLE COPY OF FORM 22(A)

Following is a sample copy of**FORM 22(A) of Indian Motor Vehicle Act** only. The certificate to be issued by supplier shall contain following minimum information. –

FORM 22-A

[See Rules 47 (g), 115, 124(2), 126-A and 127(1), 127(2)]

INITIAL CERTIFICATE OF COMPLIANCE WITH POLLUTION

STANDARDS, SAFETY STANDARDS OF COMPONENTS AND ROAD

WORTHINESS(FOR VEHICLES WHERE BODY IS FABRICATED SEPARATELY)

PART – I

(**TO BE ISSUED BY THE MANUFACTURER**)

Certified that the following vehicle complies with the provisions of the Motor Vehicles Act, 1988 and the rules made thereunder, including the following mass emission norms:

Brand name of the vehicle : .....

Chassis number : .....

Engine number/Motor number : .....

(In case of battery operated vehicles)

Sub-rule No…of rule 115 : .....

Emission norms :.....

[(Bharat Stage-I/II/III etc.] :.....

Signature of Chassis Manufacturer

Form 22-A, Part I shall be issued with the signature of the manufacturer duly printed in the Form itself by affixing facsimile signature in ink under the hand and seal of the manufacturer.

PART – II

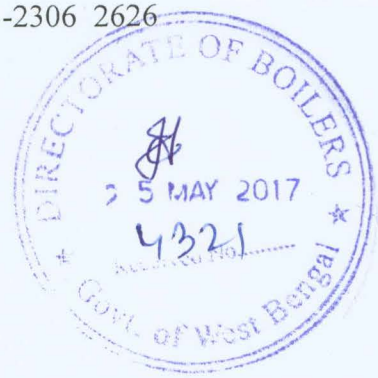
(**TO BE ISSUED BY THE BODY BUILDER**)

Certified that body of the vehicle ……(brand name of the vehicle) bearing Chassis number …….. and Engine Number …….. has been fabricated by us and the same complies with the provisions of Motor Vehicles Act, 1988 and Rules made thereunder.

Signature of body builder

Form 22-A, Part II shall be issued with the signature of the body builder duly printed in the Form itself by affixing facsimile signature in ink under the hand and seal of the body builder.

Fax : 011-2306 2626



संख्या /No.6/4/2016-Boiler

भारत सरकार

वाणिज्य और उद्योग मंत्रालय

(औद्योगिक नीति एवं संवर्धन विभाग)

उद्योग भवन, नई दिल्ली – 110 107

GOVERNMENT OF INDIA

MINISTRY OF COMMERCE AND INDUSTRY

(DEPTT. OF INDUSTRIAL POLICY & PROMOTION)

UDYOG BHAWAN, NEW DELHI-110 107

दिनांक/Dated, the 4th May, 2017

To

1. **All State Governments (Department dealing with the Boiler) – as per list**
2. **All the members of the Central Boilers Board – as per list**
3. **All Inspecting Authorities – as per list**

Subject: The Gazette of India Notification No. G.S.R. 427(E) dated 2nd May, 2017 regarding "Indian Boiler (Amendment) Regulations, 2017"

Dear Sir,

I am to forward herewith a copy of the Gazette of India Notification No. G.S.R. No.427(E) dated 2nd May, 2017 (in Hindi & English) notifying the **"Indian Boiler (Amendment) Regulations, 2017"**, for reference and necessary action at your end.

Thanking you,

Yours faithfully,

(T.S.G. Narayannen)
Technical Adviser(Boiler)
Tel.No.011-2306 2151

Encl.: As above

To
Sh S. Chakraborty, STD, BS,
for n.a.
25.5.17.

MINISTRY OF COMMERCE AND INDUSTRY

(Department of Industrial Policy and Promotion)

(CENTRAL BOILERS BOARD)

NOTIFICATION

New Delhi, the 2nd May, 2017

G.S.R. 427(E).—Whereas certain draft regulations namely, the Indian Boiler (Amendment) Regulations, 2017 further to amend the Indian Boiler Regulations, 1950 were published as required under sub-section (1) of section 31 of the Boilers Act, 1923 (5 of 1923) vide notification number G.S.R. 32(E), dated the 16th January, 2017 for inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of the period of forty-five days from the date on which the copies of the said Gazette notification were made available to the public;

And whereas, copies of the said notification were made available to the public on the 16th January, 2017;

And whereas, objections and suggestions received from various persons and stakeholders within the specified period in respect of the amendments contained in the said notification have been duly considered;

Now, therefore, in exercise of the powers conferred by section 28 of the Boilers Act, 1923 (5 of 1923), the Central Boilers Board hereby makes the following regulations further to amend the Indian Boiler Regulations, 1950, namely:--

1. **Short title and commencement.**–(1) These regulations may be called the Indian Boiler (Amendment) Regulations, 2017.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Indian Boiler Regulations, 1950 (hereinafter referred to as the principal regulations), in regulation 4H, after sub-regulation (2), the following sub-regulation shall be inserted, namely:-

"(3) For recognition as Remnant Life Assessment Organization (RLAO), the Evaluation Committee shall evaluate the performance of a firm or company applying for recognition as RLAO in accordance with the provisions of these regulations, in particular in the following areas, namely:-

(A) For undertaking Remnant Life Assessment (RLA) of boilers operating above 120 Kg/Cm² pressure—

(i) knowledge on boiler design, manufacturing and field knowledge on operation and maintenance of boilers, materials, codes and standards;

(ii) expertise in failure analysis, stress analysis to evaluate pressure part component life;

(iii) expertise on metallurgy, Non Destructive Testing (NDT) and other RLA assessment techniques;

(iv) Internal Oxide Thickness(IOT) measurement and analytical capabilities;

(v) firm or company shall have,—

(a) National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited laboratory with experts in the field and necessary equipment or instruments for testing of sample tubes, deposits;

(b) Laboratory with experts for analysis of Water Wall (WW) deposits and solvent selection with a capability to issue guidelines for chemical cleaning of boilers;

(c) Non Destructive Testing (NDT) laboratory with qualified Non Destructive Testing(NDT) personnel;

(d) skilled and experienced manpower for site work to carry out RLA tests as per regulation 391A of the Indian Boiler Regulations, 1950;

(e) all measuring and testing instruments required for RLA study of boilers as stipulated in regulation 391A of the Indian Boiler Regulations, 1950; and

(f) an experience of minimum of five numbers of RLA studies under Inspecting Authorities.

(B) For undertaking Remnant Life Assessment (RLA) of boilers operating upto 120 Kg/Cm² pressure—

(i) knowledge on boiler design, manufacturing and field knowledge on operation and maintenance of boilers, materials, codes and standards;

(ii) knowledge in failure analysis, stress analysis to evaluate pressure part component life;

(iii) knowledge on metallurgy, Non Destructive Testing(NDT) and other RLA assessment techniques;

(iv) Internal Oxide Thickness (IOT) measurement and analytical capabilities;

(v) firm or company shall have—

(a) National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited laboratory with experts in the field and necessary equipment or instruments for testing of sample tubes, deposits (It may also be outsourced);

(b) Laboratory with experts for analysis of water wall (WW) deposits and solvent selection with a capability to issue guidelines for chemical cleaning of boilers (It may also be outsourced);

(c) Non Destructive Testing (NDT) laboratory with qualified NDT personnel;

(d) skilled and experienced manpower for site work to carry out RLA tests as per regulation 391 A of the Indian Boiler Regulations, 1950;

(e) all measuring and testing instruments required for RLA study of boilers as stipulated in regulation 391A of the Indian Boiler Regulations, 1950; and

(f) experience of minimum of five numbers of RLA studies under Inspecting Authorities.".

3. In the principal regulations, in regulation 4J, —

(A) for sub-regulation (4), the following shall be substituted, namely:-

"(4) Central Boilers Board Authorisation Process:

(i) the Competent Person shall perform the work without conflict of interest;

(ii) an applicant for a Central Boiler Board Authorisation shall meet the following requirements, namely:-

(a) the applicant shall be in regular employment of, and exclusively engaged by a Central Boilers Board recognised Inspecting Authority:

Provided that for inspection and certification of boilers during use under section 8 of the Boilers Act, 1923, applicant can work independently also without taking employment with the Central Boilers Board recognised Inspecting Authority ;

(b) the applicant shall meet the minimum qualification and experience requirements as referred in sub-regulation 2 of this regulation;

(c) the applicant shall have taken and passed the Central Boilers Board examination as referred to in sub-regulation 3 of this regulation;

(d) the applicant shall apply for an authorisation not later than three years after passing the Central Boilers Board Examination and a person whose authorisation has not been issued within the three year period shall be required to take the Central Boiler Board Examination and receive a passing grade; and

(e) the maximum age for the Competent Person shall be sixty-five years provided the person is medically fit;

(iii) (a) when the applicant has met the eligibility requirements as referred to in clause (ii) of sub-regulation 4 and at the request of the applicant's employer; a Central Boilers Board authorisation card and a certificate shall be issued:

Provided that the request for authorisation card, only for undertaking inspection and certification of boilers during use under section 8 of the Boilers Act, 1923, can also be made by the applicant;

(b) the application for an authorisation shall be on forms obtained from the Central Boilers Board; and

(c) a Competent Person may possess only one valid authorisation card;

(iv) (a) the validity of an authorisation certificate shall be three years from the date of issue or in co-terminus with the validity period of recognition of employing Inspecting Authority (wherever applicable), whichever is earlier;

(b) for undertaking inspection and certification of boilers during manufacture and erection, the Competent Person must be in regular employment of the Central Boiler Board recognised Inspecting Authority failing which the authorisation lapses;

(c) where the Competent Person leaves the employment, Central Boilers Board Authorisation Card shall be surrendered by the Inspecting Authority to the Secretary, Central Boilers Board within a period of seven days from the date of such leave;

(d) the request for renewal shall be made by Competent Person's employer and the request shall certify that the Competent Person maintained inspection proficiency by performing or supervising inspection activity and that the individual has met the continuing updation requirement as laid down in clause (f) of this sub-regulation:

Provided that request for renewal of authorisation, only for undertaking inspection and certification of boilers during use under section 8 of the Boilers Act, 1923, can also be made by the Competent Person, giving details of inspections undertaken in the last three years and confirming that he has met the continuing updation requirement as given in clause (f) of this sub-regulation;

(e) on change of employment, a request for authorisation card shall be made by the Competent Person's current employer on forms obtained from the Central Boilers Board;

(f) each Central Boilers Board authorised Competent Person, at least once every three years, shall either attend a Central Boilers Board seminar or receive other instruction related to inspections and the instruction may be in any format, e.g., classroom, home study, or web-based; the topics may include any subject of relevance to the inspection process, such as new methods, products, materials, technology or changes to construction or repair codes;

(g) a person whose authorisation has not been renewed for five years or less may, on proper application, have the authorisation reinstated;

(h) the employer or Competent Person, if working independently, as the case may be , shall provide verification of continuing updation as mentioned in clause (f) ; and

(i) a person whose authorisation has not been renewed for more than five years shall be required to take the Central Boilers Board Examination and receive a passing grade;

(v) (a) a Central Boilers Board authorisation may be revoked by the Secretary, Central Boilers Board for falsification of any statement contained in any application however the person may request reconsideration by the Secretary, Central Boilers Board;

(b) when an evaluation reveals that a Central Boilers Board authorised Competent Person has been negligent in his duty or has made false statements on forms used for documentation of his duties, a Central Boilers Board Committee formed for the purpose may examine the evaluation and recommend to the Secretary, Central Boilers Board, a suitable action against such Competent Person. The Secretary, Central Boilers Board shall take the final decision;

(c) if any person is aggrieved by a decision of the Secretary, Central Boilers Board, he may prefer an appeal against such decision within thirty days from the date of the decision, to the Central Boilers Board;

(d) the decision of the Central Boilers Board shall be binding; and

(e) any person aggrieved by,-

(i) an order made or purporated to be made by a Competent Person in the exercise of any power conferred by or under the Act; or

(ii) a refusal of a Competent Person to make any order or to issue any certificate which he is required or enabled by or under the Act to make or issue;

May, within thirty days from the date on which such order or refusal is communicated to him, prefer an appeal against the such order or refusal, to the Chief Inspector of Boilers of the State in which the boiler is located;

(vi) fee fixed by the Central Boiler Board Examination Standing Committee shall be paid for each authorisation issued, renewed or reinstated.";

(B) for sub-regulation (6) , the following shall be substituted, namely:-

"(6) Competent Person's Diary:

(i) A Competent Person's Diary shall be maintained for —

(a) inspection of construction activities; and

(b) in-service inspection including repairs and alterations for each location or site as per the format laid down by the Central Boilers Board;

(ii) the diary shall be bound and numbered and the purpose of the diary shall be to provide a record of the Competent Person's activity and to support the continuity of inspections;

(iii) the Competent Person's diary shall be the property of the employer Inspecting Authority, wherever applicable, and must be available at the location or site of the inspection; and

(iv) the diary shall be maintained for a minimum of five years from the date of last entry and it may also be maintained in digitised form with provision for online entries.";

(C) In sub-regulation (7)A, for clause (i) and clause (ii) respectively, the following shall be substituted, namely:-

"(i) On receipt of an application for renewal of certificate for use of a boiler, the Competent Person shall, within fifteen days from the date of such receipt inspect the boiler on a date communicated to the owner in advance;

(ii) Memorandum of Inspection Book shall be obtained from the concerned boiler inspectorate through the inspecting Authority or directly if working independently, for in-service boilers which shall be returned within a period of one week from the date of completion of final inspection ;" ;

(D) for sub-regulation (7)B, the following shall be substituted, namely:-

"B. Inspection Fee:- Competent Person or Inspecting Authority may charge fee for the inspection subject to the condition that the fee shall not be less than the fee specified by the concerned State.";

(E) In sub-regulation (8), in clause (1), after sub-clause (c), the following sub- clause shall be inserted, namely:-

" (d) In case, inspection is not carried out as per the Indian Boiler Regulations, 1950, the Chief Inspector of Boilers shall report the matter to Secretary, Central Boilers Board for appropriate action against the Competent Person which may include cancellation of his authorisation.".

4. In the principal regulations, in regulation 98, in clause (a), for the figure and word "6 months", figure and word " 12 months" shall be substituted.".

5. In the principal regulations, in regulation 388, the sub-regulation (2) shall be omitted.

6. In the principal regulations, in regulation 390, in clause (c) and in regulation 391 respectively, for the word " Inspector" wherever it occurs, the words "Competent Person" shall be substituted.".

7. In the principal regulations, in regulation 392, in sub-regulation (3), in clause (v) , in sub-clause (b) , for the words " fifteen days ", the words " two days" shall be substituted.".

8. In the principal regulations, in Form VI, after condition number (4), the following condition shall be inserted, namely:-

"(5) Form VI shall be countersigned by the Chief Inspector at the time of registration only, as per the provisions of sub-section (5) of section 7 of the Act.".

9. In the principal regulations, after APPENDIX L, the following APPENDIX shall be inserted, namely:-

"**APPENDIX M**

Time limits for the various activities

Sl. No.	Activity	Regulation/ Provision in IBR	Time limit	Authority /Person
1	Issue of Welder qualification certificate in Form XII after submission of satisfactory reports	614	5 days	Competent Authority
2.	Approval of design and manufacturing drawings for boilers and boiler components made in India	393(a)	(i) 5 days for boilers components & boilers upto 20 TPH capacity. (ii) 15 days for boilers above 20 TPH & upto 100 TPH capacity (iii) 21 days for boilers above 100 TPH capacity	Inspecting Authority

3.	Approval of materials for boilers and boiler components made outside India	393(b)	(i) 5 days, in case of same materials as previously approved for the same design pressure & temperature (ii) 10 days, in other cases	Technical Adviser(Boilers)
4.	Approval of design and manufacturing drawings for boilers and boiler components made outside India	393(b)	21 days	Chief Inspector of Boilers
5	Inspection during construction/ manufacture	Appendix-J	2 days	Inspecting Authority/ Competent Person
6.	Issue of Certificate for manufacture and test	4(c)(1)	(i) 3 days for boiler components. (ii) 7 days for boiler	Inspecting Authority
7.	Issue of Inspecting Authority Certificate during erection in "Form IIC"	4(c)(1)	2 days	Inspecting Authority
8.	Issue of provisional order in Form-V after registration inspection	381(e)	48 Hours	Inspector
9.	Assigning of Registration No. for boilers	386(d)	30 days	Chief Inspector of Boilers
10.	Steam Tests of boiler	380(a)	30 days	Inspector
11.	Issue of Certificate for use of boiler in Form-VI	389	48 Hours	Competent Person
12.	Permission to carry out repairs/alterations in boilers	392(iv)(b)	2 days	Chief Inspector of Boilers
13.	Recognition of repairers boilers & steam pipes	392(5)	30 days	Chief Inspector of Boilers
14.	Transfer of Memorandum of Inspection Book & Registration Book	388	15 days	Chief Inspector of Boilers
15.	Submission of Remnant Life Assessment report/ recommendations	391A	30 days from date of completion of inspection/ tests	Well Known Remnant Life Assessment Organisation

Note : (1) Above time limits shall be applicable from the date of submission of complete details/documents.

(2) After expiry of prescribed time limits for an activity, approval for that activity shall be deemed to have been granted.".

[F. No. 6(4)/2016-Boilers]

T. S. G. NARAYANNEN, Secy. Central Boilers Board

Note: The principal regulations were published in the Gazette of India, *vide,* number S.O. 600, dated the 15th day of September, 1950 and last amended *vide* G.S.R. 664(E), dated the 26th August, 2015.

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ANNEXURE-IB

BID EVALUATION CRITERIA (BEC)/BID REJECTION CRITERIA(BRC)

(TO BE FILLED IN BY BIDDER DULY SIGNED)		
BID EVALUATION CRITERIA (BEC)/BID REJECTION CRITERIA(BRC)		
Clause Number DESCRIPTION	**BIDDER'S RESPONSE (Complied / Not Complied / Deviation / Not Applicable)**	**TO BE FILLED BY THE BIDDER Relevant Location of their Bid to support the remarks / compliance (Reference of Document name / Serial number / Page number of bid for documentary evidence)**
In addition to the General Terms and Conditions for Global Tender, the following BEC / BRC criteria will be applicable against this tender: The bids shall conform to the specifications, terms and conditions given in the tender. Bids shall be rejected in case the item(s) offered do not conform to technical specifications and to the respective international / national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications, and terms & conditions, the following requirements shall have to be particularly met by the bidders, without which the offer will be considered as non-responsive and rejected. All the documents related to BEC / BRC must be submitted along with the technical bid.		

I) BID REJECTION CRITERIA:		
A) TECHNICAL:		
1.0 BIDDER'S QUALIFICATION:		
1.1 The bidder shall be an Original Equipment Manufacturer (OEM) of the steam generator boiler. OR The bidder shall be authorized agent / dealer / distributor / supply house of an OEM of the steam generator boiler.		
1.2 Bidder has to provide IBR approved Certification from the IBR Authorities of Rajasthan along with the equipment. Bidder has to give an undertaking in this regard.		
2.0BIDDER'S EXPERIENCE:		
2.1 If the bidder is the original equipment manufacturer (OEM) of the steam generator boiler, then:		
2.1.1 Bidder shall have experience of manufacturing at least ONE (01) no. of steam generator boiler of same or higher capacity in the last five (05) years preceding from the original bid closing date of this tender against design, fabrication, supply, installation & commissioning of steam generator boiler to any reputed E&P company or Service provider to an E&P company. Documentary evidence shall be submitted as mentioned in para 2.1.2.		

2.1.2 The following documentary evidences to substantiate experience records of the Bidder must be submitted alongwith the technical bid, failing which the Bid shall be treated as incomplete and rejected: a) Copy of Purchase order(s)/contract(s) awarded by Client(s) b) Any one or combination of the following documents that confirms the successful execution of each of the purchase order(s) / contract(s) - True copies of Original Signed and sealed Completion report/ Commissioning Report/Performance certificate from the clients (on Client's/User's official letter head with signature & stamp). **OR** Copy of Bill of Lading **OR** Copy of Consignee delivery receipts/challans **OR** Copy of Tax Invoice/Excise Gate Pass issued under relevant Act/rules **OR** Copy of Commercial Invoice/Payment Certificate c) Additionally, the bidder shall also furnish the address including contact details of its client(s) to whom the above supplies were made. **NOTEs:** **[i] The Purchase Orders/contracts date need not be within 5 (five) years preceding original bid closing date of this tender. However, the execution of supply must be within 5 (five) years preceding the original bid closing date of this**		

tender. **[ii] In the event of any extension to the bid closing date of the tender, the original scheduled bid closing date shall be considered for evaluation of BRC clauses.** **[iii] Against all supporting documents submitted by the bidder alongwith the technical bid, originals must be kept ready and to be produced for verification of OIL, if called for.** **[iv] Possession of an order without complete supply or partially completed order shall not be considered as previous experience.**		
2.1.3 If the bidder has successfully supplied atleast one (01) of steam generator boiler units of same or higher capacity to Oil India Limited (OIL) and have Proven Track Record (PTR) of continuous field operation for at least two years from the date of supply, the bidder need not satisfy Clause 2.1.1. In this situation, the bidder shall have to indicate the Purchase Order (PO) nos. of OIL in their technical bid.		
2.2 In case the Bidder is not the OEM of the steam generator boiler, but submitted their bid as authorized agent/dealer/distributor/supply house of OEM, then:		
2.2.1 Bidder(s) must submit a valid Authorization letter and back-up warranty from the manufacturer. The Authorization and back-up warranty letter duly sealed & signed by the Manufacturer on their official letterhead must be submitted along with the technical bid. This certificate should be valid at the time of bidding and should remain valid during the entire execution period of the order. Any change of OEM of the offered product after submission of bid is not acceptable (except merger, takeover of the OEM company etc.) and such bid of authorized dealer/distributor shall be rejected.		

2.2.2 Documentary evidence in respect of manufacturer's supply experience as specified under para 2.1.1 & 2.1.2 above, from the concerned manufacturer (having supplied such items either by the manufacturer themselves or through their sole selling agent / distributor/ dealer/ supply house).		
2.2.3 In addition to manufacturer's supply experience as mentioned in Para 2.2.2, bidder himself shall have the experience of supply, installation & commissioning of at least one (01) steam generator boiler Unit (same or higher capacity) manufactured by its proposed OEM to any reputed E&P company/ Service provider to an E&P company during the last five (05) years preceding from the bid closing date of this tender. Documentary evidence in this regard shall be submitted as mentioned in para 2.1.2.		
B. FINANCIAL CRITERIA:		
1.0 The bidder shall have an annual financial turnover of minimum **US$ 85,447.00 or INR 61.00 Lakhs** during any of the preceding 03 (Three) financial/accounting years reckoned from the original bid closing date, irrespective of whether their bid is for all the tendered items or not.		
2.0 "Net Worth" of the bidder should be positive for the financial/accounting year just preceding to the original Bid Closing Date of the Tender.		
3.0 Considering the time required for preparation of Financial Statements, if the last date of preceding financial/accounting year falls within the preceding six months reckoned from the original bid closing date and the Financial Statements of the preceding financial/accounting year are not available with the bidder, then		

the financial turnover of the previous three financial/accounting years excluding the preceding financial/accounting year will be considered. In such cases, the Net worth of the previous financial/accounting year excluding the preceding financial/accounting year will be considered. However, the bidder has to submit an affidavit/ undertaking certifying that 'the balance sheet/Financial Statements for the financial year …….. has actually not been audited so far'. **Note:** a) For proof of Annual Turnover & Net worth any one of the following document must be submitted along with the technical bid:- i) A certificate issued by a practicing Chartered Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in ANNEXURE-CA. OR ii) Audited Balance Sheet alongwith Profit & Loss account. In case of foreign bidders, self-attested/digitally signed printed published accounts are also acceptable. b) In case the bidder is a Central Govt. Organization/PSU/State Govt. Organization/Semi-State Govt. Organization or any other Central/ State Govt. Undertaking, where the auditor is appointed only after the approval of Comptroller and Auditor General of India and the Central Government, their certificates may be accepted even though FRN is not available. However, bidder to provide documentary evidence for the same.		

4.0 In case the Audited Balance Sheet and Profit & Loss Account submitted along with the bid are in currencies other than INR or US$, the bidder shall have to convert the figures in equivalent INR or US$ considering the prevailing conversion rate on the date on which the Audited Balance Sheet and Profit & Loss Account is signed. A CA certificate is to be submitted by the bidder regarding converted figures in equivalent INR or US$.		
A.3) <u>COMMERCIAL CRITERIA</u>:		
1.0 Bids are invited under **Single Stage Two Bid System**. Bidders shall quote accordingly. **Price/Cost details should not be furnished in the Technical (i.e. Unpriced) bid**. The "Unpriced Bid" shall contain all techno-commercial details except the prices/rates, which shall be kept blank. The "Price Bid" must contain the price schedule and the bidder's commercial terms and conditions. Bids not complying with above submission procedure shall be rejected outright without any further reference.		
2.0 The prices offered shall have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.		
3.0 Bids received in physical form against online invitation through e-portal shall be rejected (except the documents specifically called for in hard copies, if any). Similarly, Bids received after the bid closing date and time shall be rejected. Also, modifications to bids received after the bid closing date & time shall not be considered.		
4.0 Bids containing incorrect statement shall be rejected.		
5.0 Validity of the bid shall be minimum **120** days from the date of Bid closing. Bids with lesser validity shall be rejected.		

6.0 Bid Security in ORIGINAL shall be furnished by the Bidder as a part of their TECHNICAL BID. The amount of Bid Security and its validity shall be as specified in the Bid Document. **Any bid not accompanied by a proper bid security in ORIGINAL shall be rejected without any further consideration.** A bid shall be rejected straightway if Original Bid Security is not received within the stipulated date & time mentioned in the Tender and/or if the Bid Security validity is shorter than the validity indicated in Tender and/or if the Bid Security amount is lesser than the amount indicated in the Tender. For exemption for submission of Bid Security please refer Bid security clause under Amendments of "General Terms & Conditions" for e-Procurement as per Booklet No. MM-RP-LOCAL-E-01-2005 (Rev May 2016) for E-procurement (LCB Tenders).		
7.0 Successful bidder shall be required to furnish a Performance Security equivalent to ten percent (10%) of total evaluated value of the Purchase Order. Bidders should undertake in their bids to submit Performance Security as stated above		
8.0 A bid shall be rejected straightway if it does not conform to any one of the following clauses: (a) Validity of bid shorter than the validity called for in the Tender. (b) Original Bid Security not received within the stipulated date & time mentioned in the Tender. (c) Bid Security with (i) validity shorter than the validity called for in Tender and/or (ii) Bid Security amount lesser than the amount indicated in the Tender. (d) In case the Party refuses to sign Integrity Pact.		

9.0 Bidder must accept and comply with the following clauses as given in the Bid Document, failing which bid shall be liable for rejection: i) Liquidated Damages ii) Guarantee of material iii) Arbitration / Resolution of Dispute iv) Force Majeure v) Applicable Laws vi) Performance Security		
II) <u>BID EVALUATION CRITERIA</u>: The bids conforming to the specifications, terms and conditions stipulated in the tender and considered to be responsive after subjecting to the Bid Rejection Criteria shall be considered for further evaluation as per General Terms and Conditions for Global Tender and the Bid Evaluation Criteria given below:		
1.0 The evaluation of bids shall be done as per the Price Bid Format (SUMMARY) provided in the Tender / e-tender portal.		
2.0 If there is any discrepancy between the unit price and the total price, the unit price shall prevail and the total price shall be corrected accordingly. Similarly, if there is any discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.		
3.0 For conversion of foreign currency into Indian currency, B.C. selling (Market) rate declared by State Bank of India, one day prior to the date of price bid opening shall be considered. However, if the time lag between the opening of the bids and final decision exceed 3(three) months, then B.C. Selling(Market) rate of exchange declared by SBI on the date prior to the date of final decision shall be adopted for conversion and evaluation.		
4.0 To ascertain the inter-se-ranking, bid prices shall be converted into Indian Rupees and the comparison of responsive bids shall be made strictly as per online Price bid format, subject to corrections / adjustments, if any.		

5.0 Other terms and conditions of the enquiry shall be as per General Terms and Conditions for Global Tender (MM-RP-LOCAL-E-01-2005). However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC / BRC) mentioned here contradict the Clauses in the General Terms & Conditions of Global Tender of the tender and/or elsewhere, those mentioned in this BEC / BRC shall prevail.		

&&&&&&&&&&

ANNEXURE -B

CHECK LIST

I. TECHNICAL

THE CHECK LIST MUST BE COMPLETED AND RETURNED WITH YOUR OFFER. PLEASE ENSURE THAT ALL THESE POINTS ARE COVERED IN YOUR OFFER. THESE WILL ENSURE THAT YOUR OFFER IS PROPERLY EVALUATED. PLEASE SELECT "Yes" OR "No" AND ADD REMARKS, IF ANY TO THE FOLLOWING QUESTIONS, IN THE RIGHT HAND COLUMNS.

Any difference in specification elsewhere in the tender, the specification of the check list shall be treated as final.

	PART A		
	A 1.1 (DUTY CONDITIONS OF SKID MOUNTED BOILER)		
Sl. No.	**PARAMETERS / REQUIREMENTS**	**BIDDER'S OFFER (To indicate details or yes/no, as applicable)**	**REMARKS, IF ANY**
1	Steam Output capacity:		
2	Max. working pressure:		
3	Max. Steam temperature:.		
4	Max. Time allowed to generate steam		
5	Design code of pressure parts: IBR 1950 with latest amendments/ASME		
6	Type: Fully automatic, oil fired, once through, water tube, laterally wound, force circulation, force draft, 3 pass design horizontal type.		
7	Coil tube design:		
8	Shell design:		
9	Fuel:		
10	Feed water quality: To specify for smooth & efficient operation of the unit.		
11	Fuel burning combustion system: a. Burner: pressure jet, direct electric spark ignition type using spark electrodes/plugs from ignition transformer Make: Monarch/Invalco/Hauck (ELSTER) etc. b. Combustion air blower: Centrifugal type of suitable capacity belt/electric motor drive.		
12	Fuel Pump Type: Make:		
13	Manual HSD filling tank to be provide		
14	Feed water pump: Triplex reciprocating plunger type positive displacement pump of make like SPECK , either diesel engine through belt or electric motor driven		
15	Ducting to be provided with rain head outside the boiler housing		
16	Piping should be of boiler quality duly certified with suitable insulation		

17	Steam hose: Two sets of 25 mm NB pipes of 160 Kg/sq.cm working pressure duly insulated with quick release couplings at each end.		
18	Valves: IBR quality flanged type valves at in suitable nos. & at suitable positions for easy operation		
19	Diesel Oil tank:		
21	Feed water tank capacity:		
22	**Boiler & Burner – Same design source**		
23	**Compact Design-All units in one skid with less** Floor Space		

A 1.2 :(ELECTRICAL)

A ALTERNATOR

Sl. No.	PARAMETERS / REQUIREMENTS	BIDDER'S OFFER (To indicate details yes/no or, as applicable)	REMARKS, IF ANY
1	Rated voltage: 415V (+/-) 6% AC		
2	Rated frequency: 50 Hz (+/-) 3%, 1500 RPM		
3	Phase system: 3 phase, 4 wires		
4	Power factor:		
5	Class of insulation for stator, rotor: F/H		
6	Phase sequence: UVW		
7	Rating: Continuous		
8	Connection: Star		
9	Winding material: Copper		
10	Alternator Internal protection (enclosure) : IP 23		
11	Alternator cable terminal box protection: IP 54		
12	Excitation system: Brushless Self excited & auto regulated		
13	The AVR shall ensure that voltage dip during starting of highest size motor with other electrical loads running at rated output shall not be more than 10% of the alternator rated voltage.		
14	Mounting: Foot mounted		
15	Suitable cable termination box , copper conductor, steel armoured PVC insulated cable		
16	Alternator mounting on anti-vibration pads		
17	Alternator shall have two external grounding terminals.		
18	Alternator make:		

B. CONTROL PANEL

Sl. No.	PARAMETERS / REQUIREMENTS	BIDDER'S OFFER (To indicate details yes/no or, as applicable)	REMARKS, IF ANY
1	Panel construction, ingress protection		
2	Incomer breaker – MCCB min. details		

3	Microprocessor based voltage monitoring relay for the alternator; make:		
4	Microprocessor based frequency monitoring relay for the alternator; make:		
5	Digital multi-function meter; make:		
6	Control wiring; make, conductor material, size of cable, FR quality		
7	Power wiring; make, conductor material, size of cable, FR quality		
8	Control system (PLC/SLC based) and make		

C.ELECTRICAL MOTORS:

Sl. No.	PARAMETERS / REQUIREMENTS	BIDDER'S OFFER (To indicate details yes/no or, as applicable)	REMARKS, IF ANY
1	Voltage: 415V (+/-) 6% AC		
2	Frequency : 50 Hz (+/-) 3%		
3	Duty: S-1 (Continuous)		
4	Enclosure:		
5	Class of insulation: F but limited to temperature rise of B class insulation		
6	Degree of protection: IP: 55		
7	Earth terminals		
8	Standard: Motor shall conform to IS: 325		
9	Motor make:		

A1.3: PRIME MOVER ENGINE OF GENSET

Sl. No.	PARAMETERS / REQUIREMENTS	BIDDER'S OFFER (To indicate details or yes/no, as applicable)	REMARKS, IF ANY
1	Make & Model of Engine		
2	Gross and Net Horsepower developed		
3	Engine cooling system, vertical, naturally aspirated, inline diesel engine of continuous rating and conforming to latest emission norms.		
4	Engine should be with an overload capacity of 10% for a period not exceeding one Hour in any 12 hours running when running at 1500 R.P.M.		
5	Engine shall conform to specifications IS:10000 / BS:5514		
6	Overall Dimensions (Width, Height & Length) and weight of engine		
7	The Governing is to be in accordance with Class A-2 specifications to IS: 10000/BS: 5514.		
8	Engine make:		
9	The engine shall have minimum 20% reserve HP.		
10	The engine shall be firmly anchored to the skid, using vibration isolator of reputed make like DUNLOP.		
11	Alternative arrangement shall be provided for manual starting of the engine.		
12	Emergency/Safety engine shutdown system in case of Low lubricating oil pressure &over speed should be provided.		

13	The Fuel System should comprise of Mechanical Governor, Fuel Injectors, Fuel Pump, Fuel Filter Assembly, Fuel lines and Fuel Tank having storage capacity to meet the Fuel requirements of 12 hours of full load operations.		
14	Fuel consumption at rated power at 110%, 75%, and 50% of rated load to be provided.		
15	The skid shall have provision to facilitate installation of the same on a truck platform.		
16	Type of Engine control system		
17	Engine to be supplied with standard painting and it should have SAE standard rotation		
15	Whether all the spare parts required for initial commissioning of the unit will be supplied.		

A 1.4 CONTROL PANEL AND INSTRUMENTATION

[A] Controller & Control Panel

Sl.	PARAMETERS / REQUIREMENTS	BIDDER'S OFFER (To indicate details or yes/no, as applicable)	REMARKS (IF ANY)
1	Control Panel Make & Model		
2	Controller to be used (PLC/SLC)		
3	Make & Model of the Controller		
4	Audio-visual Alarm (Yes/No)		
5	Manual Reset (Yes/No)		
6	Automatic safety shutdown devices (YES/NO)		
7	Annunciation system with fuel cut-off (YES/NO)		
8	Emergency shutdown system (YES/NO)		
9	Ignition Transformer operating power 230VAC, 50Hz?		
10	Steam Temperature Controller (YES/NO)		
11	Under voltage Indication (YES/NO)		
12	Control Panel is offered with anti-vibration system (YES/NO)		
13	Control Panel Rating IP-65 (YES/NO)		
14	Proper Illumination inside the panel (YES/NO)		
15	Laptop with programmable software/handheld programmer for interfacing with PLC/SLC(YES/NO)		

[B] Shutdown devices for the following conditions along with Audio-visual alarms (□)

Conditions	Shutdown	Audio-visual Alarm
i. Flame failure		
ii. Steam pressure high		
iii. Steam temperature high		
iv. Low feed water pressure		
v. Low fuel oil pressure		
vi. Blow down valve open		
vii. Low air pressure		

[C] Panel mounted indicating Meter, lamps & Push Buttons & Selector switches (□)

Indicating Lamps		
a)	230 V AC ON.	
b)	Safety Lockout Internal.	
c)	Start	
d)	Flame ON	
e)	Water pump on	
f)	Water pump off	
g)	Water pump trip	
h)	Fuel Pump ON.	
i)	Fuel Pump Off	
j)	Fuel Pump trip	
k)	Air blower ON	
i)	Air blower Off	
m)	Air blower trip	
n)	Steam Temperature high	
o)	Steam pressure high	
p)	Low steam pressure	
q)	Low air pressure	
r)	Low fuel pressure	
s)	Low fuel oil level	
t)	Low feed water level	
u)	Blow down valve open status	

Push Buttons:		
a)	Start push button	
b)	Stop push button	
c)	Alarm Test push button	
d)	Alarms accept push button	
e)	Alarm reset PB	
f)	Start PB for water pump	
g)	Stop PB for water pump	
h)	Start PB for fuel pump	
i)	Stop PB for fuel pump	
j)	Start PB for air blower	
k)	Stop PB for air blower	
Selector Switches :		
m)	Auto/Manual water pump selector switch	
n)	Auto/Manual fuel pump selector switch	
o)	Auto/Manual air blower selector switch	
p)	230 V power ON/OFF switch	
Indicating Meter		
r)	Steam temperature. (Analog type input, preferably 4-20 ma)	

[D] Field mounted instruments: Analog type (□)

a)	Steam pressure gauge	
b)	Feed water pressure gauge.	
c)	Indicating thermostat or temperature switch for steam temperature, with a set point for high temperature (superheat alarm)	
d)	Steam pressure switch for both high & low	
e)	Air pressure switch	
f)	Pressure switch for fuel oil	
g)	Pressure switch for feed water	
h)	Level switch for fuel oil level	
i)	Level switch for feed water level	
j)	Limit switch for blow down valve	
k)	Alarm rest, engine start and main switch	
l)	Level glass gauge for Fuel Tank	

TECHNICAL (<u>TRUCK CHASSIS)</u>

Srl. No.	**PARAMETERS / REQUIREMENTS**		**BIDDER'S OFFER (To indicate details or yes/no, as applicable)**	**REMARKS, IF ANY**
1	Make & Model of Truck Chassis			
2	Max. Permissible Gross Vehicle Weight (GVWR)			
3	Drive- 6x4			
4	Cowl-Full Forward Control			
5	Ground Clearance			
6	Laden Weight (Total weight of the unit)			
7	Engine	a) Make & Model		
		b) Max. Output Power		
		c) Max. Output Torque		
		d) Naturally Aspirated or Turbo Charged		
		e) Emission Norms		
8	Transmission			
	a	Make & Model		
	b	No. of gears		

9	Make, Model & Type of Steering system			
10	Wheelbase			
11	Overall Dimensions (Width, Height & Length) of complete unit			
12	Make, Model & Type of Front Suspension			
13	Make, Model & Type of Rear Suspension			
14	Rear Overhang			
15	Minimum Turning Radius			
16	Axle Capacity	a Front		
		b Rear		
17	Actual loading on axles.	a Front		
		b Rear		
18	Type, Size of Wheel & Tyre	a Front		
		b Rear		
19	Type of Service Brake (S-cam or not)			
20	Type of Wheel Brake Servos (screw type manual release or not)	a Front		
		b Rear		

21	Fuel Tank capacity		
22	Seating Capacity in the Driver's cabin.		
23	Reversing Alarm with Blinker Lights		
24	Electrical fittings/equipment suitable for hazardous oilfield area.		
25	Speedometer/Odometer in Metric (KM) calibration.		
26	Towing Hooks at Front & Rear of truck.		
27	Electrical System: 12 volt or 24 volt		
28	Make of Starter, Alternator, etc. of engine.		
29	One additional lockable toolbox of size min. 1.00 m x 0.50 m x 0.50 m.		

[E] For Diesel Engine ()

a)	Tachometer	
b)	Lube oil pressure indicator	
c)	Temperature indicator	

PART B. <u>DOCUMENTATIONS</u>

Sl No	**Descriptions**	**Document enclosed (Yes / No or Confirm to supply along with the units**	**Remarks if any**
1	Technical leaflets with detailed specifications, Make & Model of chassis, engine, transmission, suspension, axle, steering, wheel & rim, brake, etc.		
2	Technical leaflets with detailed specifications, Make & Model of chassis, engine, transmission, suspension, axle, steering, wheel & rim, brake, etc.		
3	List of tools that shall be supplied under Tool Kit for general maintenance of the truck.		
4	Sale Letter, Pollution & Roadworthy Certificate (in similar format of Form 21 & 22A of Indian Motor Vehicle Act - sample copies enclosed), Engine		
5	Emission Norms Certificate, etc. as required under Indian Motor Vehicle Act		

	for registration of the unit in the name of Oil India Limited		
6	All necessary IBR Certificates the IBR items of MSG unit & the IBR/ASME testing reports wherever applicable		
7	Literature/leaflets with detailed specifications of all items fitted in the Boilers ,mountings and accessories of the MSG Unit		

II. COMMERCIAL CHECKLIST:

THE CHECK LIST MUST BE COMPLETED AND RETURNED WITH YOUR OFFER. PLEASE ENSURE THAT ALL THESE POINTS ARE COVERED IN YOUR OFFER. THESE WILL ENSURE THAT YOUR OFFER IS PROPERLY EVALUATED. PLEASE SELECT "Yes" OR "No" TO THE FOLLOWING QUESTIONS, IN THE RIGHT HAND COLUMN.

Sl#	REQUIREMENT	COMPLIANCE
1.0	Whether bid submitted under Single Stage Two Bid System?	Yes / No
2.0	Whether quoted as manufacturer?	Yes / No
2.1	Whether quoted as OEM Dealer / Supply House. To Specify-	Yes / No
2.2	If quoted as OEM Dealer / Supply House	Yes / No
	(a) Whether submitted valid and proper authorization letter from manufacturer confirming that bidder is their authorized Dealer / supply House for the product offered ?	
3.0	(b) Whether manufacturer's back-up Warranty/Guarantee certificate submitted?	
	Whether ORIGINAL Bid Bond (not copy of Bid Bond) as per Revised Format(Annexure VII Revised) Sent separately? If YES, provide details	Yes / No
	(a) Amount :	
	(b) Name of issuing Bank :	
	(c) Validity of Bid Bond :	
4.0	Whether offered firm prices ?	Yes / No
4.1	Whether quoted offer **validity of 120 days from** the bid closing date of tender?	Yes / No
4.2	Whether quoted a firm delivery period?	Yes / No
4.3	Whether agreed to the NIT Warranty clause?	Yes / No
4.4	Whether confirmed acceptance of NIT Payment Terms	Yes / No
5.0	**Whether confirmed to submit PBG as asked for in NIT?**	**Yes / No**
5.1	**Whether agreed to submit PBG within 30 days of placement of order?**	**Yes / No**
6.0	Whether Price submitted as per Price Schedule ?	Yes / No
7.0	Whether quoted as per NIT (without any deviations)?	Yes / No
7.0	Whether quoted any deviation?	Yes / No
7.1	Whether deviation separately highlighted?	Yes / No
8.0	Whether indicated the country of origin for the items quoted?	Yes / No
8.1	Whether technical literature / catalogue enclosed?	Yes / No
8.2	Whether weight & volume of items offered indicated?	Yes / No
9.0	For Foreign Bidders - Whether offered FOB / FCA port of despatch including sea / air worthy packing & forwarding?	Yes / No
9.1	For Foreign Bidders – Whether port of shipment indicated. To specify:	Yes / No

9.2	For Foreign Bidders only - Whether indicated ocean freight up to Kolkata port (Excluding marine insurance) ?	Yes / No
9.3	Whether Indian Agent applicable ?	Yes / No
	If YES, whether following details of Indian Agent provided?	
	(a) Name & address of the agent in India – To indicate	
	(b) Amount of agency commission – To indicate	
	(c) Whether agency commission included in quoted material value?	
10.0	For Indian Bidders – Whether indicated the place from where the goods will be dispatched. To specify :	Yes / No
10.1	For Indian Bidders – Whether road transportation charges up to Duliajan quoted?	Yes / No
10.2	For Indian Bidders only - Whether offered Ex-works price including packing/forwarding charges?	Yes / No
10.3	For Indian Bidders only - Whether indicated import content in the offer?	Yes / No
10.4	For Indian Bidders only - Whether offered Deemed Export prices?	Yes / No
10.5	For Indian Bidders only – Whether all applicable Taxes & Duties have been quoted?	Yes / No
11.0	Whether all BRC/BEC clauses accepted ?	Yes / No
12.0	Whether Integrity Pact with digital signature uploaded?	Yes / No
12.1	Whether all the clauses in the Integrity Pact have been accepted?	Yes / No

III) TO BE FILLED UP IN DETAIL:

Sl No	Requirement	Bidder's Reply
01	Name of Manufacturer	
02	Bid validity	
03	Payment Terms	
04	Guarantee/Warranty Terms	
05	Delivery Period	
08	Port of Despatch / Despatching Station	
09	Confirm submission Integrity pact, if required as per NIT	
10	Confirm submission PBG, if required as per NIT	
11	Compliance to: Liquidated Damage Warranty/Guarantee Arbitration/Resolution of Dispute Force Majeure Applicable laws	
12	Confirm submission of the balance sheet/Financial Statements for the **financial year 2018-19**. If not, whether declaration as per BRC submitted.	
13	Exception/Deviations quoted, if any, to be given in details or refer to respective page of the bid documents	

ANNEXURE – CA

CERTIFICATE OF ANNUAL TURNOVER & NET WORTH

TO BE ISSUED BY PRACTISING **CHARTARD ACCOUNTANTS' FIRM** ON THEIR LETTER HEAD

TO WHOM IT MAY CONCERN

This is to certify that the following financial positions extracted from the audited financial statements of M/s……(Name of the bidder) for the last three (3) completed accounting years upto…… **(as the case may be)** are correct

YEAR	**TURN OVER In INR (Rs.) Crores/ US $ Million) ***	**NET WORTH In INR (Rs.) Crores / US $ Million) ***

***Rate of conversion (if used any): USD 1.00 = INR …….

Place:
Date:

Seal

Membership No:
Registration Code:
UDIN:

Signature

***Applicable only for GLOBAL tenders**

Annexure-X

Format of undertaking by Bidders towards submission of authentic information/documents
(To be typed on the letter head of the bidder)

Ref. No_____ Date _____

Sub: Undertaking of authenticity of information/documents submitted

Ref: Your tender No._____ Dated _____

To,
The HOD-Materials
Materials Deptt,
OIL, Duliajan

Sir,

With reference to our quotation against your above-referred tender, we hereby undertake that no fraudulent information/documents have been submitted by us.

We take full responsibility for the submission of authentic information/documents against the above cited bid.

We also agree that, during any stage of the tender/contract agreement, in case any of the information/documents submitted by us are found to be false/forged/fraudulent, OIL has right to reject our bid at any stage including forfeiture of our EMD and/or PBG and/or cancel the award of contract and/or carry out any other penal action on us, as deemed fit.

Yours faithfully,

For (type name of the firm here)

Signature of Authorised Signatory

Name :

Designation :

Phone No.

Place :

Date :

(Affix Seal of the Organization here, if applicable)

ANNEXURE - GOODS AND SERVICES TAX

1. For the purposes of levy and imposition of GST, the expressions shall have the following meanings:

   (a) GST - means any tax imposed on the supply of goods and/or services under GST Law.

   (b) Cess – means any applicable cess, existing or future on the supply of Goods and Services as per Goods and Services Tax (Compensation to States) Act, 2017.

   (c) GST Law - means IGST Act 2017, CGST Act 2017, UTGST Act, 2017 and SGST Act, 2017 and all related ancillary Rules and Notifications issued in this regard from time to time.

2. The rates quoted by the bidders shall be inclusive of all taxes, duties and levies except GST. However, bidders are required to provide separately the rate and amount of all types of taxes, duties and levies. In case, the quoted information related to various taxes, duties & levies subsequently proves wrong, incorrect or misleading, OIL will have no liability to reimburse the difference in the duty/ tax, if the finally assessed amount is on the higher side and OIL will have to right to recover the difference in case the rate of duty/ taxes finally assessed is on the lower side. Further, bidders have to clearly show the amount of GST separately in the Tax Invoices. Further, it is the responsibility of the bidders to make all possible efforts to make their accounting / IT system GST compliant in order to ensure availability of Input Tax Credit (ITC) to Oil India Ltd.

3. Offers without giving any of the details of the taxes (Including rates and amounts) as specified above will be considered as inclusive of all taxes including GST. When a bidder mentions taxes as extra without specifying the rates & amount, the offer will be loaded with maximum value towards taxes received against the tender for comparison purposes. If the bidder emerges as lowest bidder after such loading, in the event of order on that bidder, taxes mentioned by OIL on the Purchase Order/ Contracts will be binding on the bidder.

4. Bidders are required to pass on the benefit arising out of introduction of GST, including seamless flow of Input Tax Credit, reduction in Tax Rate on inputs as well as final goods by way of reduction of price as contemplated in the provision relating to Anti-Profiteering Measure vide Section 171 of the CGST Act, 2017. Accordingly, for supplies made under GST, the bidders should confirm that benefit of lower costs has been passed on to OIL by way of lower prices/taxes and also provide details of the same as applicable. OIL reserves the right to examine such details about costs of inputs/input services of the bidders to ensure that the intended benefits of GST have been passed on to OIL.

5. **When Input tax credit is available for Set Off**
   Evaluation of L-1 prices shall be done based on Quoted price after deduction of Input Tax Credit (ITC) of GST, if available to OIL. OIL shall evaluate the offers on the basis of the quoted rates only and any claim subsequently by the bidders for additional payment/liability shall not be admitted and has to be borne by the bidders

When Input tax credit is NOT available for Set Off

Evaluation of L-1 prices shall be done based on Quoted price only.OIL shall evaluate the offers on the basis of the quoted rates only and any claim subsequently by the bidders for additional payment/liability shall not be admitted and has to be borne by the bidders.

6. Bidders agree to do all things not limited to providing GST compliant Tax Invoices or other documentation as per GST law relating to the supply of goods and/or services covered in the instant contract like raising of and /or acceptance or rejection of credit notes / debit notes as the case may be, payment of taxes, timely filing of valid statutory Returns for the tax period on the Goods and Service Tax Network (GSTN), submission of general information as and when called for by OIL in the customized format shared by OIL in order to enable OIL to update its database etc. that may be necessary to match the invoices on GSTN common portal and enable OIL to claim input tax credit in relation to any GST payable under this Contract or in respect of any supply under this Contract.

7. In case Input Tax Credit of GST is denied or demand is recovered from OIL by the Central / State Authorities on account of any non-compliance by bidders, including non-payment of GST charged and recovered, the Vendor/Supplier/Contractor shall indemnify OIL in respect of all claims of tax, penalty and/or interest, loss, damages, costs, expenses and liability that may arise due to such non-compliance. OIL, at its discretion, may also withhold/recover such disputed amount from the pending payments of the bidders.

ANNEXURE - VIII

PERFORMANCE SECURITY FORM

TO,

OIL INDIA LIMITED
RAJASHTAN PROJECT,
JODHPUR - 342005
RAJASTHAN, INDIA

WHEREAS.....

(Name of the Seller)

(herein after called 'the Seller') has undertaken, in pursuance of Order No. .....dated...../...../..... to supply.....
.....(description of Goods and Services) hereinafter called 'the Contract'.

AND WHEREAS it has been stipulated by you in the said Contract that the Seller shall furnish you with a Bank Guarantee by a recognized Bank for the sum specified therein as security for compliance with the Seller's performance obligation in accordance with the Contract.

AND WHEREAS we have agreed to give the Seller a Guarantee :

THEREFORE we hereby affirm that we are Guarantors on responsible to you, on behalf of the seller, upto a total of…… (Amount of the Guarantee in words and figures) and we undertake to pay you, upon first written demand declaring the Seller to be in default under the contract and without cavil or argument and sum or sums within the limits of ..... (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee is valid until the ..... day of ....

The details of the issuing bank and controlling bank are as under:

A.Issuing Bank

1. Full address of the bank:
2. Email address of the bankers:
3. Mobile nos. of the contact persons:

B.Controlling Office

1. Address of the controlling office of the BG issuing banks:
2. Name of the contact persons at the controlling office with their mobile nos. and email address:

Signature & Seal of the gurantors

Date ……..

.....

Witness