OIL INDIA LIMITED
(A Govt. of India Enterprise)
P.O. Duliajan – 786602, Assam
Telephone No. (91-374) 2800491
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Email: materials@oilindia.in ; erp_mm@oilindia.in; mmfd1@oilindia.in

Tender No. & Date : **SDG8791P16/09**

Tender Fee : INR 4,500.00 OR USD 100.00

Bid Security Amount : Applicable

Bidding Type : **SINGLE STAGE TWO BID SYSTEM**

Bid Closing on : 09.12.2015 (at 11.00 Hrs. IST)
Bid Opening on : 09.12.2015 (at 14.00 Hrs. IST)

Performance Guarantee : Applicable

OIL INDIA LIMITED invites Global Tenders for items detailed below:

Item No./Mat. Code	Material Description	QTY.	UOM
10	Supply, Installation & Commissioning of Truck Mounted Mobile Steam Generator as detailed in the following Annexures – a) Detailed specification – Annexure - I. b) Bid Rejection Criteria (BRC) and Bid Evaluation Criteria – Annexure - II. c) Technical & Commercial Check list vide Annexure - III	06	Nos.

Special Notes :

1.0 The tender will be governed by "General Terms & Conditions" for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders) including Amendments & Addendum to "General Terms & Conditions" for e-Procurement.

2.0 Technical Check list and Commercial Check list are furnished vide Annexure – III. Please ensure that both the check lists are properly filled up and uploaded along with "Techno-commercial Unpriced Bid".

3.0 The items covered by this enquiry 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 against this purchase. Details of Deemed Export are furnished vide Addendum to "General Terms & Conditions". However, Indian bidders will not be issued Recommendatory Letter.

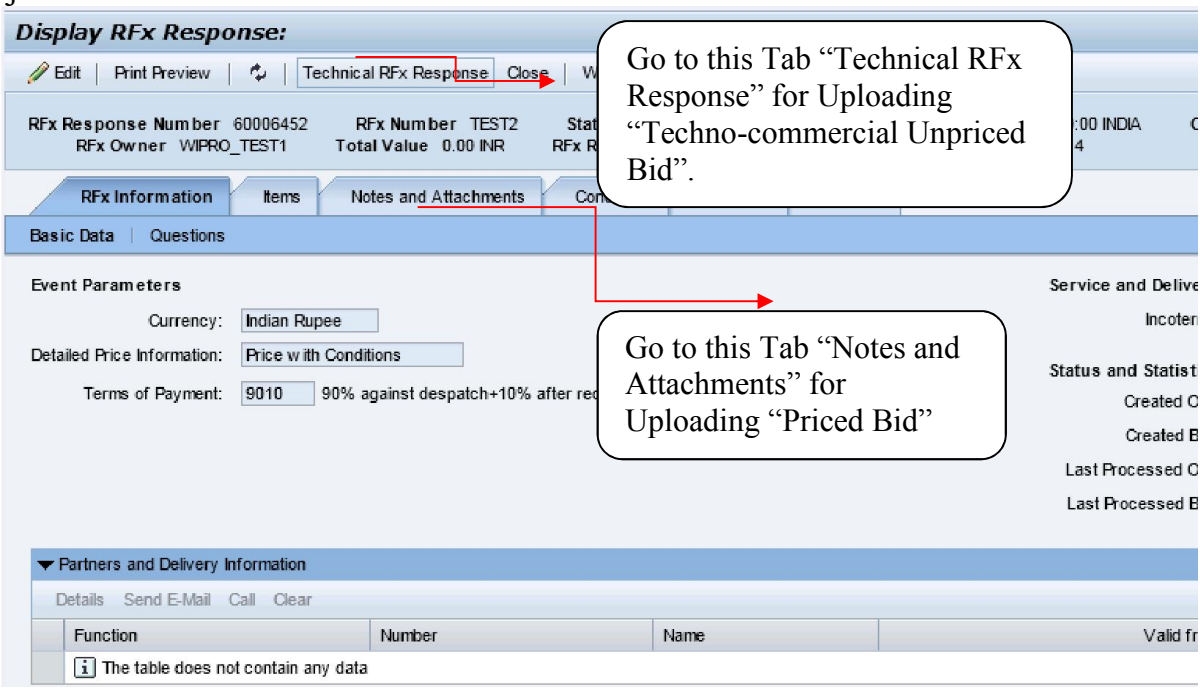
4.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with **Tender no.** and **Due date** to The **Head Materials, Materials Department, Oil India Limited, Duliajan- 786602, Assam** on or before **13:00 Hrs (IST)** on the Bid Closing Date mentioned in the Tender.

a) **Original Bid Security along with two sets of photocopy.**
b) **Details Catalogue and any other document which have been specified to be submitted in original.**

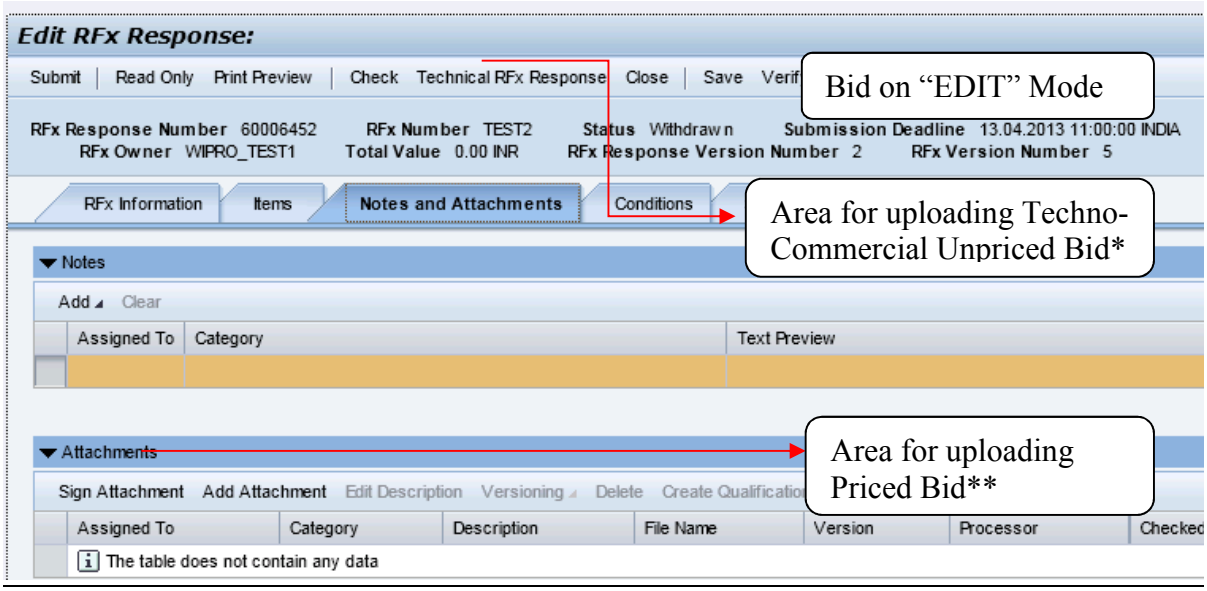
All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate.

5.0 In case of SINGLE STAGE-TWO BID SYSTEM, bidders shall prepare the "Techno-commercial Unpriced Bid" and "Priced Bid" separately and shall upload 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" shall contain all technical and commercial details except the prices which shall be kept blank. Details of prices as per Bid format / Commercial bid to be uploaded as attachment in the Attachment Tab "Notes and Attachments".

A screen shot in this regard is given below.
Any offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in the tender.



On "EDIT" Mode- The following screen will appear. Bidders are advised to Upload "Techno-Commercial Unpriced Bid" and "Priced Bid" in the places as indicated above:



Note :

* The "Techno-Commercial Unpriced Bid" shall contain all techno-commercial details **except the prices**.

** The "Price bid" must contain the price schedule and the bidder's commercial terms and conditions. For uploading Price Bid, first click on Sign Attachment, a browser window will open, select the file from the PC and click on Sign to sign the Sign. On Signing a new file with extension .SSIG will be created. Close that window. Next click on Add Atachment, a browser window will open, select the .SSIG signed file from the PC and name the file under Description, Assigned to General Data and clock on OK to save the File.

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

7.0 Other terms and conditions of the tender shall be as per "General Terms & Conditions" for e- Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders) and its amendments. However, if any of the Clauses of the Bid Rejection Criteria (BRC) / Bid Evaluation Criteria (BEC) mentioned here contradict the Clauses in the "General Terms & Conditions" for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders) of the tender and/or elsewhere, those mentioned in this BEC / BRC shall prevail.

8.0 The Integrity Pact is applicable against this tender. OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure XII of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the

Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid. **If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway.**

OIL's Independent External Monitors at present are as under:

1. **SHRI RAGHAW SHARAN PANDEY, IAS(Retd.),**
   Former Secretary MOP&NG
   e-Mail ID : rspandey_99@yahoo.com

2. **SHRI RAJIV MATHUR, IPS(Retd.),**
   Former Director (IB) Govt. of India
   e-Mail ID : rajivmathur23@gmail.com

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ANNEXURE – I

SCOPE : SUPPLY, INSTALLATION & COMMISSIONING OF TRUCK MOUNTED MOBILE STEAM GENERATOR.

QUANTITY : 6 Nos.

TECHNICAL SPECIFICATIONS

1.0 Design, Manufacture, unitization and supply of a New Modern Truck Mounted Horizontal Mobile Steam Generator (MSG) unit as per following specifications:

2.0 SCOPE OF WORK:

2.1 To design and manufacture the Mobile Steam Generator.

2.2 To procure and supply truck chassis as per specification furnished in para 4.0 to 4.2 for mounting the Mobile Steam Generator Unit.

2.3 To unitize and install the steam generator unit on the truck chassis and to construct a weatherproof housing on the truck platform as detailed at para 5.0 below.

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

(b) 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, Duliajan.

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

2.6 To furnish five (05) copies of detailed operating and servicing manuals for smooth operation and maintenance of the unit. (Additionally one copy in a CD)

3.0 TECHNICAL SPECIFICATIONS: Detailed technical specifications of the Mobile Steam Generator 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: 1000 kg/hr dry & saturated Steam at 100 Deg C.
Max. Working pressure: 42.2 Kg/sq.cm (600 psig)(Maximum)
Max. Steam temperature: 253 Deg C.
Max. Time allowed to generate: 3 to 5 minutes.
Steam at the rated output & Pressure of 42.2 kg/sq.cm from cold start.
Design code : IBR 1950 with latest amendments/ASME.

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 carbon steel, seamless tubes. The coils are connected to form continuous flow passage. This coil assembly is kept inside a shell assembly. The unit is horizontally mounted on a skid. 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 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 assembly comprises 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 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 equipped with an air 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.

Maximum Temperature : 40º C
Minimum Temperature : 5 º C
Maximum Relative Humidity at 35 º C : 95%
Maximum Altitude above mean Sea Level : 150 M
HSD conforming to IS: 1593:1982 and having the following specifications:
Cetane number : 42.5
Gross calorific Value : 19480 BTU/CFT (10000 CAL/GM)

The engine should be of reputed manufacturer like KIRLOSKAR/RUSTON/ CUMMINS/ CATERPILLAR / GREAVES, 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. 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 skid, using vibration isolator of reputed make like DUNLOP.
The minimum requirements for the engine shall be as below –

a. Suitable air cooled diesel engine of adequate power and conforming to latest EURO-IV 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 Lub 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 installation of the same on a truck 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
All pumps & blower will be electrical motor driven. The details of electrical system & devices are as under:

A. Alternator:

Power for all electrical equipment inside the MSG unit shall be provided by an air cooled 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 40 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 40 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 gray 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/Havell'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

sleeves.

(c) OUTGOING MOTOR & LIGHTING FEEDERS:
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 amp 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:
N1. 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.
N2. 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.
N3. 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.
N4. 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
N5. 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, MSG 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 shall comprise of the following:

(a) **BURNER:** The burner shall 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 shall 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 shall 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 shall be complete with all accessories required for power transmission. It shall also be equipped with internal over pressure relief arrangement / automatic by-pass control valve. Make - Sofag, Sun strand , 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:

One (1) no hand operated HSD filling pump (gear type) complete with suction and discharge flexible rubber hoses for filling HSD tank shall 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 shall clearly specify volumetric capacity, pump HP and other technical details. Piping shall be provided for connecting the water pump to the coil inlet. A suitable strainer shall 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 anti-corrosive paint of capacity not less than 6000 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 shall 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 shall be of boiler quality duly certified by the competent authority. Suitable insulation shall be done up to the rear of the boiler housing. Drain piping for fuel, feed water and steam coil shall be suitably provided.

3.3 STEAM HOSE/PIPE:
25mm (1") NB 12 meter long flexible metal braided high pressure hose (Four nos.) of steam working pressure of 70 kg/sq.cm (1000 Psig) at 100 Deg C. complete with quick release coupling at each end shall be provided.
Or Alternatively: Two sets of 25mm (1") NB pipes of 70 kg/sq.cm (1000 Psig) working pressure duly insulated with quick release couplings at each end shall be provided. The far end of the pipe shall be 12 m away from the steam outlet of the boiler along the ground. Accordingly, necessary elbows/bends and short joints with quick release couplings shall be provided. Additionally, provision should be made to keep at least 4 Nos. of steam hose suitable coiled adjacent to the boiler housing.

3.4 VALVES:
The boiler shall be equipped with 2 nos each of coil blow down valves (at suitable position for easy operation), safety relief valves, steam stop valves (suitably covered for safe operation) and feedback (non-return) valves for coil blow down, over pressure release, steam shut off and preventing reverse flow respectively. These valves 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 MSG 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 Mobile Steam Generation (MSG) 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 MSG unit. The MSG units 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 CONDITIONS SHOULD BE OFFERED

i. Primary safety checks.
ii. Start of blower fan and fuel pump.
iii. Secondary safety checks.
iv. Start ignition and fuel supply.
v. Prove pilot flame establishment.
vi. Continue operation till high steam pressure reached.
vii. On-off operation set pressure failure.
viii. 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

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)

xxxviii. Steam pressure gauges.
xxxix. Feed water pressure gauge.
xl. Steam temperature gauge.
xli. Indicating thermostat or temperature switch for steam temperature, with a set point for high temperature (superheat alarm)
xlii. Steam pressure switch for both high & low.
xliii. Air pressure switch.
xliv. Pressure switch for fuel oil.
xlv. Pressure switch for feed water.
xlvi. Level switch for fuel oil level.
xlvii. Level switch for feed water level.
xlviii. Limit switch for blow down valve.
xlix. Alarm rest, engine start and main switch.
l. 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 (230 V AC, 50 Hz) to be provided.

F.All three phase (415 V, 3 PH, 50 Hz) 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 since the panel is truck mounted and truck is required to move very frequently, sometimes on bad road condition 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 MSG 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.

J. The control panel shall include a programmable logic controller (PLC)/SLC 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 backup 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.

L.One (1) laptop/handheld programmer for interfacing with PLC/SLC.

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.
iii. Emission norms: Latest applicable emission norms.
iv. Gearbox - Minimum 5 forward speeds & 1 reverse speed.
v. Steering - Hydraulic Power Assisted steering system.
vi. Wheelbase – In the range of 4800 mm -4910 mm.
vii. Overall length – As per OEM design.
viii. Maximum width – As per OEM design. (As per Indian MV Acts.).
ix. Suspension –As per OEM design.
x. 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 ofChassisto 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.

c. 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 - Deluxe Imperial Crimson.
Interior of Driver's cabin - Light shade as per standard.
Chassis & undercarriage - 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 at para 3.0 to 3.5 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.

c. 01 (one) no fixed type ladder at rear of the housing for climbing to housing's roof top.
d. Suitable walkway on top of housing's roof to avoid damage to roof structure/paneling.
e. Roof of the housing shall be made slanting towards sides to avoid water accumulation.
f. 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.

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 the EACH UNIT:

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.

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**.

d) 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**.
e) 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 MSG 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 the truck unit. 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 truck unit.
   - Manual for MSG 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.

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

b) Necessary certificate/documents from competent Government authority to obtain permission from IBR, Assam for operating the boiler in OIL's operational area.
c) Engine emission certificates for truck engine as well as MSG prime mover.
d) 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, Duliajan required under Indian MV Act for onward registration of the unit in Assam, India.
e) Test certificates including copy of CPRI test certificate for type of the electrical panels.
f) License copy of software for control &instrumentation system if any.

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 equipments
(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 as well as service deptt. viz. Instrumentation, Transport Dept. Field Engineering, Electrical Engineering 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. The supplier has to arrange for inspection of the units by inspecting team including the statutory bodies (state boiler authority 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, Final Chassis Built Up/Vehicle Content Record documents, etc. and **actual loading on axles**. The supplier shall arrange driver/operator, weighing facility and any other infrastructure during the process of inspection as and when required.

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.

e. Supplier shall confirm in writing compliance of all the points raised in the inspection report as well as any other subsequent additions/changes, following deliberation with the inspector after arrival at Duliajan.
10.3 Supplier shall dispatch only on receipt of OIL's dispatch advice.

11.0 TRAINING TO OIL PERSONNEL ON MSG SYSTEM:
The supplier shall have to provide training to OIL personnel in two (02) phases –
11.1 During the pre-dispatch inspection visit of OIL's engineers the supplier shall arrange comprehensive training at their manufacturing plant/works for a period of minimum 02 (Two) weeks on Operation & Maintenance, Troubleshooting and Working Principle of followings system/items used in the unit amongst other relevant subjects –
i) Engine and its Electronic Controller System.
ii) Transmission, Transfer Case and their control systems.
iii) Brake & ABS - including their electronic control system.
iv) Power assisted steering system including hydraulic pump and gearbox.
v) Pneumatic system for brake, transmission, PTO shifters including different valves.
vii) Hydraulic system
viii)Electrical and Instrumentation Control Panel
ix) MSG operation & trouble shooting
11.2 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 operating crew and technicians on Operation, Maintenance, troubleshooting, Working Principle and repair/ replacement of different equipment.
Bidders shall quote their training charges separately for evaluation purposes. The charges shall be shown in Commercial bid only.

12.0 INSTALLATION & COMMISSIONING:
12.1 The unit shall be commissioned at Duliajan, Assam, India with 3 (three) successful field jobs at different wells 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 will provide accommodation (on payment basis) subject to availability. 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 Bidders shall quote commissioning charges 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 Mobile steam Generators shall conform to the requirements, as per IBR-1950 and endorsement by respective State Boiler Authority as well as State Boiler Authority, Assam, INDIA.

14.3 The foreign bidders must confirm that the supplied Mobile steam generators shall conform to the requirements as per applicable ASME code and endorsement by State Boiler Authority, Assam, INDIA.

14.4 Bidder must fill the Technical check list/data sheet enclosed with the 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 MSG 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 invoice for the complete unit shall be submitted in 2 (two) parts separately as under -

i. **Invoice for truck chassis** - it shall include the cost of the truck chassis with driver's cabin only.

ii. **Invoice for Mobile generator unit -** it shall include cost of Boiler, all equipments, tools, accessories, etc. subsequently fitted in the original truck chassis as well as supplied, separately along with the unit.

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, Assam 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

17.0 TAX & DUTIES:

(i) All taxes, stamp duties and other levies imposed outside India shall be the responsibility of the Bidder/Seller and charges thereof shall be included in the offered rates.

(ii) All Taxes & levies imposed in India, for the services including installation & commissioning shall be to the Bidder/Seller's account.
(iii) Income Tax/Corporate Tax/Personal Tax/Service Tax etc. on the value of the Services rendered by the Bidder /Seller in connection with installation/ commissioning shall be deducted at source from the invoices at the appropriate rate under the I.T. Act & Rules from time to time.

18.0 PAYMENT : Payment shall be released as follows:

i) 80 % of the supply value shall be released against proof of despatch/shipment of the goods and test certificates.
ii) Remaining 20 % of the supply value along with installation & commissioning charges shall be paid after successful commissioning and acceptance of each MSG by OIL at site.

OIL may consider making 100 % payment of the supply value towards supply of each MSG against proof of dispatch/shipment and submission of test certificates provided bidders agree to pay interest @ 1% above prevailing Bank Rate (CC rate) of State Bank of India for 20 % of the supply value and also submit Bank Guarantee for the equivalent amount plus interest valid till successful commissioning of 6 nos. MSG at site. This is in addition to the 10 % of the order value towards Performance Security as per the NIT requirement.
Any offer not complying with the above shall be loaded at one percent above the prevailing Bank Rate (CC rate) of State Bank of India for evaluation purpose.

***

*- 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.

ANNEXURE – II

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

I. BID REJECTION CRITERIA:

The bids shall in general conform to the specifications and terms and conditions given in the tender. Bids shall be rejected in case the goods offered do not conform to the required minimum/maximum parameters stipulated in the technical specifications and to the respective international / national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, the following requirements will have to be particularly met by the bids, without which the same will be considered as non-responsive and be rejected.

A) TECHNICAL:

1.0 In case of Indigenous Original Equipment Manufacturer (OEM):

1.1 **Bidder's Qualification**: The bidder (i.e. the Indigenous OEM) shall be an Original Equipment Manufacturer (OEM) of Mobile Steam Generator (MSG).

1.2 Bidder's Experience:

1.2.1 The Indigenous bidder i.e. the Original Equipment Manufacturer (OEM) of Mobile Steam Generator (MSG) shall have the experience of successful completion (including commissioning of the equipment) of at least two (02) nos. of Horizontal Mobile Steam Generators in the last seven (07) years preceding from the original bid closing date of this tender against design, fabrication, supply, installation & commissioning of Mobile Steam Generator (MSG) to any reputed E&P / Service company. The OEM shall submit copies of Purchase order together with any or combination of the following documents related to the Purchase order viz. invoice, bill of lading /Inspection Release Note/ Commissioning Report/completion certificate from the clients and/or any documentary evidence which confirms that the bidder's past supply has been successfully executed. Additionally, the bidder shall also furnish the address including contact details of its client(s) to whom the above supplies were made.

Note: Possession of an order without complete supply or partially completed order shall not be considered as previous experience of the Indigenous bidder.

1.2.2 The above clause 1.2.1 shall not be applicable to the Indigenous bidders if they have successfully supplied horizontal MSG Units to Oil India Limited (OIL) and have Proven Track Record (PTR) of continuous field operation for at least two (02) years from the date of supply. However, such bidders shall either submit copy of OIL's Purchase Order or mention the OIL's P.O. No. for reference purpose.

2.0 In case of Foreign Original Equipment Manufacturer (OEM):

2.1 **Bidder's Qualification:** The Foreign bidder shall be an Original Equipment Manufacturer (OEM) of Mobile Steam Generator (MSG) or Authorized Dealer of

the Foreign Original Equipment Manufacturer (OEM). In case of Authorized Dealer, the authorized dealer shall submit valid authorization certificate from the Foreign OEM with necessary warranty/guarantee back-up. 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 Bidder's Experience:

2.2.1 The principal (i.e. Foreign OEM) shall have experience of manufacturing at least two (02) nos. of Horizontal Mobile Steam Generators in the last seven (07) years preceding from the original bid closing date of this tender against design, fabrication, supply, installation & commissioning of Mobile Steam Generator (MSG) to any reputed E&P / Service company. The Foreign OEM's documentary evidence in this regard shall be provided in the form of copies of Purchase order together with any or combination of the following documents related to the Purchase order viz. invoice, bill of lading /Inspection Release Note/ Commissioning Report/completion certificate from the clients and/or any documentary evidence which confirms that the bidder's past supply has been successfully executed. Additionally, the bidder shall also furnish the address including contact details of its client(s) to whom the above supplies were made.

2.2.2 In case the bidder is an Authorised Dealer of the Foreign OEM, the authorized dealer shall have the experience of supply, installation & commissioning of at least one (01) horizontal Mobile Steam Generator Unit (MSG) manufactured by its proposed foreign OEM to any reputed E&P / Service company during the last seven (07) years preceding from the bid closing date of this tender. The bidder shall submit copies of Purchase order together with any or combination of the following documents related to the Purchase order viz. invoice, bill of lading /Inspection Release Note/ Commissioning Report/completion certificate from the clients and/or any documentary evidence which confirms that the bidder's past supply has been successfully executed. Additionally, the bidder shall also furnish the address including contact details of its client to whom the above supply was made. However, the bidder's proposed foreign OEM shall fulfill the criteria mentioned in Clause No. 2.2.1 above.

B) <u>COMMERCIAL</u>

1.0 Bids are invited under Single Stage Two Bid System. Bidders shall quote accordingly under Single Stage Two Bid System. Please note that no price details should be furnished in the Technical (i.e. Unpriced) bid. The "Unpriced Bid" shall contain all techno-commercial details except the prices which shall be kept blank. The "Priced Bid" must contain the price schedule and the bidder's commercial terms and conditions. Bidder not complying with above submission procedure will be rejected.

2.0 Bid security of US $ 23,400.00 or Rs. 15,60,000.00 shall be furnished as a part of the TECHNICAL BID (refer Clause Nos.9.0 & 12.0 (Section A) of "General Terms & Conditions" for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders)). **Any bid not**

accompanied by a proper bid security in ORIGINAL will 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.

2.1 For exemption for submission of Bid Security, please refer Clause No. 9.8 (Section A) of "General Terms & Conditions" for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders).

2.2 The Bid Security shall be valid for one year from the date of tender opening i.e, valid upto 08.12.2016.

3.0 Validity of the bid shall be minimum 180 days from Bid closing date. Bids with lesser validity will be straightway rejected.

4.0 The prices offered will 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.

5.0 Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.

6.0 Bidders shall quote directly and not through Agents in India. Offers made by Indian Agents on behalf of their foreign principals will be rejected. Similarly offers from unsolicited bidders will be rejected.

7.0 Bids containing incorrect statement will be rejected.

8.0 No offers should be sent by E-mail or Fax. Such offers will not be accepted.

9.0 Bidders must confirm that Goods, materials or plant(s) to be supplied shall be new of recent make and of the best quality and workmanship and shall be guaranteed for a period of twelve months from the date of successful commissioning against any defects arising from faulty materials, workmanship or design. Defective goods/materials or parts rejected by OIL shall be replaced immediately by the supplier at the supplier's expenses and no extra cost to OIL.

10.0 Successful bidder will be required to furnish a Performance Bank Guarantee @10% of the order value. The Performance Bank Guarantee must be valid for one year from the date of successful commissioning. Bidder must confirm the same in their Technical Bid. Offers not complying with this clause will be rejected.

11.0 Offers should be submitted with Integrity Pact duly signed by the authorized signatory of the bidder. If any bidder refuses to sign Integrity Pact or declined to submit Integrity Pact with the offer, their bid shall be rejected straightway.

12.0 Bidders are required to submit the summary of the prices in their commercial bids as per bid format (Summary), given below :

(i) <u>Commercial Bid Format (SUMMARY) for Foreign Bidders</u> :

(A) Total material cost of 6 nos. MSG
(B) Total cost of spares under para 6.0 a,b & c of Annexure-I for 6 nos. MSG
(C) Grand Total Material Cost, (A + B)
(D) Packing & FOB Charges
(E) Third Party Inspection charges
(F) Total FOB Port of Shipment value, (C + D + E) above
(G) Ocean Freight Charges upto Kolkata, India
(H) Insurance Charges
(I) Total CIF Kolkata value, (F + G + H)
(J) Pre-despatch Inspection charges,
(K) Training charges including service tax
(L) Total Installation & Commissioning charges including service tax
(M) Total Value, (I + J + K +L) above
(N) Total value in words :
(O) Gross Weight :
(P) Gross Volume

(ii) <u>Commercial Bid Format (SUMMARY) for Indigenous Bidders</u> :

(A) Total material cost of 6 nos. MSG
(B) Total cost of spares under para 6.0 a,b & c of Annexure-I for 6 nos. MSG
(C) Grand Total Material Cost, (A + B)
(D) Packing and Forwarding Charges
(E) Third Party Inspection charges
(F) Total Ex-works value (C + D +E)
(G) Excise Duty, (Please indicate applicable rate of excise duty)
(H) Sales Tax, (Please indicate applicable rate of Tax)
(I) Total FOR Despatching station price, (F + G + H)
(J) Road Transportation charges to Duliajan
(K) Insurance Charges
(L) Total FOR Duliajan value, (I + J + K)
(M) Pre-despatch Inspection charges,
(N) Training charges including service tax
(O) Total Installation & Commissioning charges including service tax
(P) Total Value, (L + M + N + O) above
(Q) Total value in words :
(R) Gross Weight :
(S) Gross Volume :

<u>NOTE :</u>

1. Cost of individual items must be quoted separately.
2. The items covered under this enquiry shall be used by OIL in the PEL/ML areas issued/renewed after 01/04/99 and hence, applicable Customs Duty for import of goods shall be ZERO. Indigenous bidders must quote Deemed Export prices. Excise Duty under Deemed Export exempted.

13.0 Pre-Despatch / Shipment Inspection charges, if any, shall be quoted on lumpsum basis separately which shall be considered for commercial evaluation of the offers. However, all to and fro fares, boarding/lodging and other expenses of OIL's Inspection Engineer(s) shall be borne by OIL.

14.0 Training charges, if any, shall be quoted on lumpsum basis separately which shall be considered for commercial evaluation of the offers. However, all to and fro fares, boarding/lodging and other expenses of OIL's personnel shall be borne by OIL.

15.0 Installation/Commissioning charges must be quoted separately on lumpsum basis which shall be considered for evaluation of the offers. These charges should include amongst others to and fro fares, boarding/lodging, local transport at Duliajan and other expenses of supplier's commissioning/training personnel during their stay at Duliajan, Assam(India).

Bidders must categorically indicate the above charges in their commercial offers and must confirm the same in their Technical bids.

(II) BID EVALUATION CRITERIA (BEC) :

The bids conforming to the specifications, terms and conditions stipulated in the enquiry and considered to be responsive after subjecting to the Bid Rejection Criteria will be considered for further evaluation as per the Bid Evaluation Criteria given below:

A. **COMMERCIAL** :

1.0 The evaluation of bids will be done as per the Commercial Bid Format (SUMMARY) detailed vide Para 12.0 of BRC.

2.0 If there is any discrepancy between the unit price and the total price, the unit price will prevail and the total price shall be corrected. 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, the comparison of the responsive bids will be made as under, subject to corrections / adjustments given herein.

4.1 When only foreign bidders are involved :

Comparison of bids will be done on the basis of "TOTAL VALUE" which is estimated as under :

(A) Total material cost of 6 nos. MSG

(B) Total cost of spares under para 6.0 a,b & c of Annexure-I for 6 nos. MSG
(C) Grand Total Material Cost, (A + B)
(D) Packing & FOB Charges
(E) Third Party Inspection charges
(F) Total FOB Port of Shipment value, (C + D + E) above
(G) Ocean Freight Charges upto Kolkata, India
(H) Insurance Charges @ 1% of Total FOB Value vide (F) above
(I) Banking Charges @ 0.5% of Total FOB Value vide (F) above in case of payment through Letter of Credit (If confirmed L/C at buyer's account is required, 1.5% of Total FOB Value will be loaded)
(J) Total CIF Kolkata Value, (F+G+H+I) above
(K) Pre-despatch Inspection charges,
(L) Training charges including service tax
(M) Total Installation & Commissioning charges including service tax
(N) Total Value, (J + K + L + M) above
(O) Total value in words :

NOTE : Banking charge in the country of the foreign bidder shall be borne by the bidder.

4.2 When only domestic bidders are involved or when more than one domestic bidders are in contention in case of mixed response :

Comparison of bids will be done on the basis of "TOTAL VALUE" which is estimated as under :

(A) Total material cost of 6 nos. MSG
(B) Total cost of spares under para 6.0 a,b & c of Annexure-I for 6 nos. MSG
(C) Grand Total Material Cost, (A + B)
(D) Packing and Forwarding Charges
(E) Third Party Inspection charges
(F) Total Ex-works value (C + D +E)
(G) Excise Duty, (Please indicate applicable rate of excise duty)
(H) Sales Tax, (Please indicate applicable rate of Tax)
(I) Total FOR Despatching station price, (F + G + H)
(J) Road Transportation charges to Duliajan
(K) Insurance Charges @0.5% of Total FOR Despatching Station Value (I) above
(L) Total FOR Duliajan value, (I +J + K)
(M) Assam Entry tax
(N) Pre-despatch Inspection charges
(O) Training charges including service tax
(P) Total Installation & Commissioning charges including service tax
(Q) Total Value, (L+M+ N+O+P) above
(R) Total value in words :

NOTE: Excise Duty in case of the indigenous bidder is EXEMPTED under Deemed Export.

4.3 When both foreign and domestic bidders are involved :

The Total Value of domestic bidder (inclusive of customs duty on imported raw material and components etc. and applicable terminal excise duty on the finished products and Sales Tax) excluding inland transportation to destination, Assam Entry Tax and Insurance charges worked out as per Para 4.2 above and Total Value of the foreign bidder worked out as per Para 4.1 above will be compared. No price preference will be allowed to indigenous bidders except that for capital goods, the domestic manufacturers would be accorded a price preference to offset CST to the extent of 4 % or actuals, which ever is less subject to 30 % local content norms as stipulated for World Bank Funded project to the satisfaction of OIL. When more than one domestic bidders fall within price preference range, inter-se-ranking will be done on Total Value basis.

Note: If the Government of India revises these evaluation criteria the same as applicable on the bid closing date will be adopted for evaluation of the offers.

5.0 Other terms and conditions of the enquiry shall be as per General Terms and Conditions for Global Tender. 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 -III

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 BOILER)				
Sl. No.	**PARAMETERS / REQUIREMENTS**		**BIDDER'S OFFER (To indicate details or yes/no, as applicable)**	**REMARKS, IF ANY**
1	Steam Output capacity:1000 Kg/hr. dry & saturated steam at 100 Deg C.			
2	Max. working pressure: 42.2 Kg/Sq.cm (600 psig)			
3	Max. Steam temperature:253 Deg C.			
4	Max. Time allowed to generate steam: 3 to 5 minutes, at the rated output & pressure of 42.2 Kg/sq.cm from cold start.			
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: Two concentric helical, closed pitch coils fabricated out of carbon steel, connected to form continuous flow passage, kept inside a shell assembly.			
8.	Shell design: Double shell arrangement, preheat the combustion air between the shells along with suitable radiator for heat convection and independent of coil bundle with peephole for visual inspection.			
7	Fuel: High speed diesel			
8.	Feed water quality: To specify for smooth & efficient operation of the unit.			
9.	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.		
10.	Fuel Pump: Gear type fuel pump suitable for pumping HSD, belt or electric motor dive. Make: Sofag,Sun strand, Neel or equivalent reputed			
11.	Manual HSD filling tank to provide			
12.	Feed water pump: Triplex reciprocating plunger type positive displacement pump of make like SPECK , either diesel engine through belt or electric motor driven			
12.	Steam Header shall have flanged ends which is to be placed at right hand side of unit.			
13.	Ducting to be provided with rain head outside the boiler housing			
14.	Piping should be of boiler quality duly certified with suitable insulation			
15.	Steam hose: Two sets of 25 mm NB pipes of 70 Kg/sq.cm working pressure duly insulated with quick release couplings at each end.			
16.	Valves: IBR quality flanged type valves at in suitable nos. & at suitable positions for easy operation			
17.	Diesel Oil tank: Suitable capacity commensurate with feed water tank capacity & fuel consumption rate.			
18.	Feed water tank capacity: Not less than 6000 liters			

A 1.2 :(ELECTRICAL)

A ALTERNATOR

Sl. No.	PARAMETERS / REQUIREMENTS	BIDDER'S OFFER (To indicate details or yes/no, 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: 0.8 lagging		
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 for 4 core, 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: Stamford/ Kirloskar/ NGEF/Crompton Greaves/other		

B. CONTROL PANEL

Sl. No.	PARAMETERS / REQUIREMENTS	BIDDER'S OFFER (To indicate details or yes/no, as applicable)	REMARKS, IF ANY
1	Panel construction, ingress protection		
2	Incomer breaker – MCCB min. 25 kA breaking capacity and current rating (shall be min. 25% higher than generator FLC), Microprocessor bases OL/SC/GF release. Make: Schneider/Legrand/Siemens/ABB		

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 or yes/no, as applicable)	REMARKS, IF ANY
1	Voltage: 415V (+/-) 6% AC		
2	Frequency : 50 Hz (+/-) 3%		
3	Duty: S-1 (Continuous)		
4	Enclosure: Totally enclosed Fan cooled (TEFC)		
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: Kirloskar/Crompton Greaves/Bharat Bijlee/ABB/ equivalent		

D. MOTOR CONTROL CENTRE:

Sl. No.	PARAMETERS / REQUIREMENTS	BIDDER'S OFFER (To indicate details or yes/no, as applicable)	REMARKS, IF ANY
1	Details of incomer MCCB: Rated current, voltage, short circuit rating, microprocessor controlled trip settings		
2	Make of MCCB: Schneider/Siemens/ ABB/ Legrand/ Indo-Asian		
3	Busbar capacity; material; panel construction		
4	Earth leakage relay with core balance current transformer; settings		
5	Ammeter details		
6	Voltmeter details		
7	Outgoing starter panel details: Incomer MCCB details, starter contactor, thermal overload relay, timer details		

8	Outgoing feeder to instrumentation panel: details		

A 1.3: 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.		

A1.4: PRIME MOVER ENGINE OF GENSET OF MSG

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 should be air cooled, vertical, naturally aspirated, inline diesel engine of continuous rating and conforming to latest EURO-IV 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: KIRLOSKAR/ RUSTON / CUMMINS/ CATERPILLAR / GREAVES / Other		
9	Engine should have 12 V electrical self-starter with suitable maintenance free battery and charging alternator		
10	Make and model of Self-starter and battery charging alternator		
11	It should have drive pulley for power take off		
12	A suitably selected flexible coupling should be incorporated to transfer power from the engine to the Alternator		
13	Air blower, fuel pump, feed water pump and Charging alternator of the Mobile Steam Generator shall be direct belt driven and belt guards to be provided over them.		
14	Suitable spark arrestor with silencer along with necessary piping covered with exhaust lagging shall be provided at the engine exhaust and it shall be suitably insulated		

15	The engine shall have minimum 20% reserve HP.		
16	The engine shall be firmly anchored to the skid, using vibration isolator of reputed make like DUNLOP.		
17	Alternative arrangement shall be provided for manual starting of the engine.		
18	Emergency/Safety engine shutdown system in case of Low lubricating oil pressure &over speed should be provided.		
19	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.		
20	Fuel consumption at rated power at 110%, 75%, and 50% of rated load to be provided.		
21	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.		
22	The skid shall have provision to facilitate installation of the same on a truck platform.		
23	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.		
24	Type of Engine control system		
25	The engine shall be complete with Digital / manual Tachometer & Hour meter in addition to all standard Lub oil pressure gauges & meters, starting switch, ignition switch , ammeter etc.		
26	Engine to be supplied with standard painting and it should have SAE standard rotation		
27	Whether all the spare parts required for initial commissioning of the unit will be supplied.		
28	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.		

A 1.5: MSG 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.	
l) Air blower OFF.	
m) Air blower trip.	

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 :

n) Steam Temperature high.		a) Auto/Manual water pump selector switch	
o) Steam pressure high.		b) Auto/Manual fuel pump selector switch	
p) Low steam pressure.		c) Auto/Manual air blower selector switch	
q) Low air pressure.		d) 230 V AC power ON/OFF switch	
r) Low fuel pressure.			
s) Low fuel oil level.		**Indicating Meter**	
t) Low feed water level.		a)Steam temperature. (Analog type input, preferably 4-20 ma)	
u) Blow down valve open status.			

[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	

[E] For Diesel Engine (✓)

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

PART B. DOCUMENTATIONS

Srl. 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.	Detailed dimensional layout drawing illustrating Driver's Cabin, Rear Cabin and all major items/ components 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		

	Emission Norms Certificate, etc. as required under Indian Motor Vehicle Act for registration of the unit in the name of **Oil India Limited.**		
5	The invoice for the complete unit shall be submitted in **2 (two) parts** separately as under - i. **Invoice for truck chassis** - it shall include the cost of the truck chassis with driver's cabin only. ii. **Invoice for Mobile generator unit -** it shall include cost of Boiler, all equipments, tools, accessories, etc. subsequently fitted in the original truck chassis as well as supplied, separately along with the unit.		
6.	All necessary IBR-1950/ASME certifications for 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		

ANNEXURE III

(B) COMMERCIAL CHECK LIST

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, (a) Whether submitted valid and proper authorization letter from manufacturer confirming that bidder is their authorized Dealer / Supply House for the product offered ?	Yes / No
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	
	(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 180 days from the date of closing 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 tender Payment Terms of 80% against shipment/dispatch documents & test certificates and balance 20% after successful commissioning along with commissioning charges or so as mentioned in the tender ?	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 (refer Para 12.0 of BRC vide Annexure – II)?	Yes / No
7.0	Whether list of Recommended Spares for 2 years of operations with part No., quantity & unit rate quoted?	Yes / No
7.1	Whether confirmed that all spares & consumables will be supplied for a minimum period of 10 years ?	Yes / No
8.0	Whether quoted as per NIT (without any deviations)?	Yes / No
8.1	Whether quoted any deviation?	Yes / No
8.2	Whether deviation separately highlighted?	Yes / No
8.3	Whether indicated the country of origin for the items quoted?	Yes / No
8.4	Whether technical literature / catalogue enclosed?	Yes / No
8.5	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

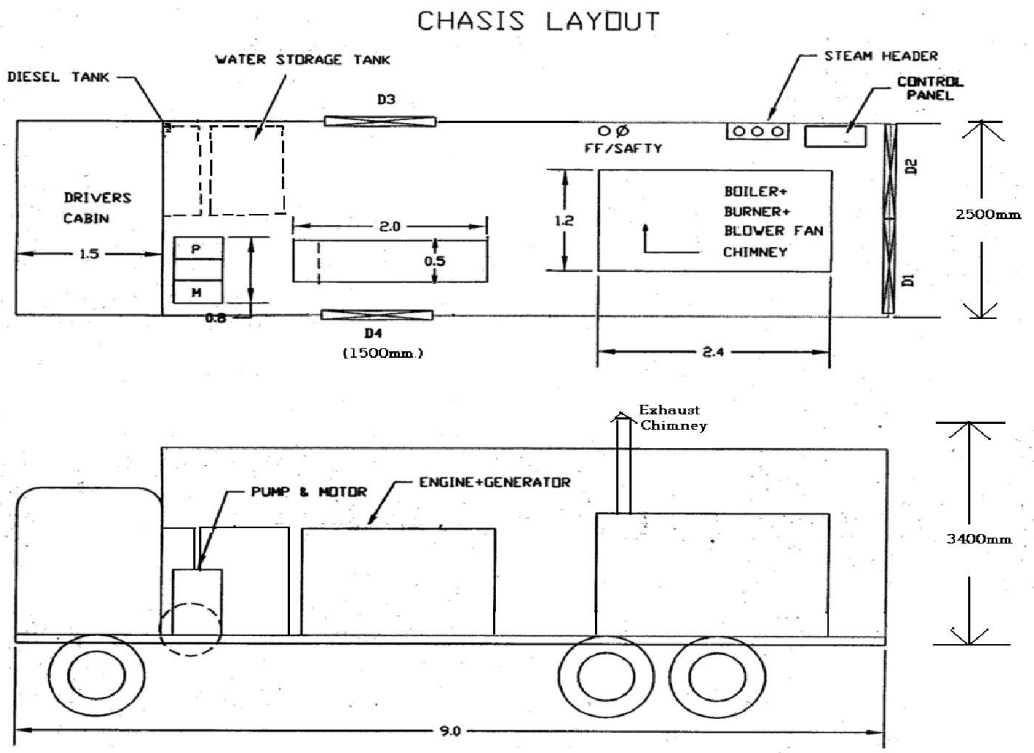
10.5	For Indian Bidders only – Whether all applicable Taxes & Duties have been quoted?	Yes / No
11.0	Whether all BRC/BEC clauses accepted ?	Yes / No
12.0	Whether offered for Third Party Inspection and if so, whether quoted separately on lumpsum basis?	
12.1	Whether confirmed to offer the equipment for Pre-despatch/shipment Inspection & testing?	Yes / No
12.2	Whether Pre-despatch/shipment inspection & testing charges applicable and if so, whether quoted separately on lumpsum basis?	Yes / No
12.3	Whether quoted for training charges separately on lumpsum basis?	Yes / No
12.4	Whether confirmed to carry out Installation & Commissioning of the equipment at Duliajan(Assam) ?	Yes / No
12.5	If Installation/ Commissioning charges applicable, whether separately quoted on lumpsum basis?	Yes / No
12.6	Whether to & fro air fares, boarding/lodging of the installation & commissioning personnel at Duliajan, Assam(India) included in the quoted charges ?	Yes / No
12.7	Whether confirmed that all Service, Income, Corporate tax etc. applicable under Installation/ Commissioning are included in the prices quoted ?	Yes / No
13.0	Whether Integrity Pact with digital signature uploaded?	Yes / No
13.1	Whether all the clauses in the Integrity Pact have been accepted?	Yes / No

Signature _____

Name _____

Designation _____

ANNEXURE - A


CHASIS LAYOUT
DIESEL TANK
WATER STORAGE TANK
D3
STEAM HEADER
CONTROL PANEL
FF/SAFTY
DRIVERS CABIN
1.5
P
M
0.8
2.0
0.5
D4
(1500mm)
1.2
BOILER+
BURNER+
BLOWER FAN
CHIMNEY
2.4
D2
D1
2500mm
Exhaust Chimney
PUMP & MOTOR
ENGINE+GENERATOR
3400mm
9.0

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