OIL INDIA LIMITED
(A Govt. of India Enterprise)
P.O. Duliajan – 786602, Assam

Telephone No. (91-374) 2800491
Fax No: (91-374) 2800533
Email: materials@oilindia.in ; erp_mm@oilindia.in; mmfd1@oilindia.in

Tender No. & Date : **SDG0474P16/09**

Tender Fee : INR 4,500.00 OR USD 100.00

Bid Security Amount : USD 8,300.00 OR INR 5,60,000.00
Bid Security Validity : 03.05.2017

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

Bid Closing on : 04.05.2016 (at 11.00 Hrs. IST)

Bid Opening on : 04.05.2016 (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 GAS ENGINE DRIVEN HORIZONTAL SINGLE ACTING TRIPLEX PISTON TYPE RECIPROCATING PUMP FOR MUD CIRCULATION AS PER THE FOLLOWING ANNEXURE: a) Detailed specification & Technical Check list – Annexure – I & Appendix A. b) Bid Rejection Criteria (BRC) and Bid Evaluation Criteria – Annexure - II. c) Commercial Check list - Annexure - III	2	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 Appendix – A & 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 **11:00 Hrs (IST)** on the Bid Closing Date mentioned in the Tender.

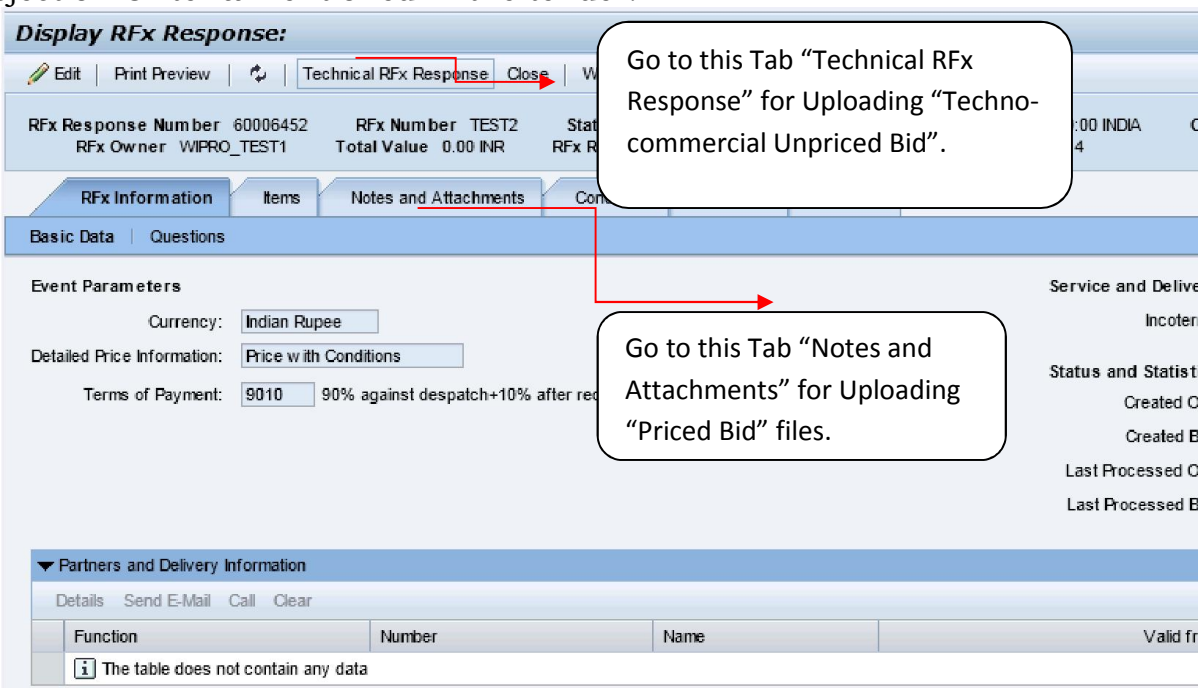
a) **Original Bid Security along with two sets of photocopy.**
b) **Details Catalogue and any other document which have been specified to be submitted in original.**

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.

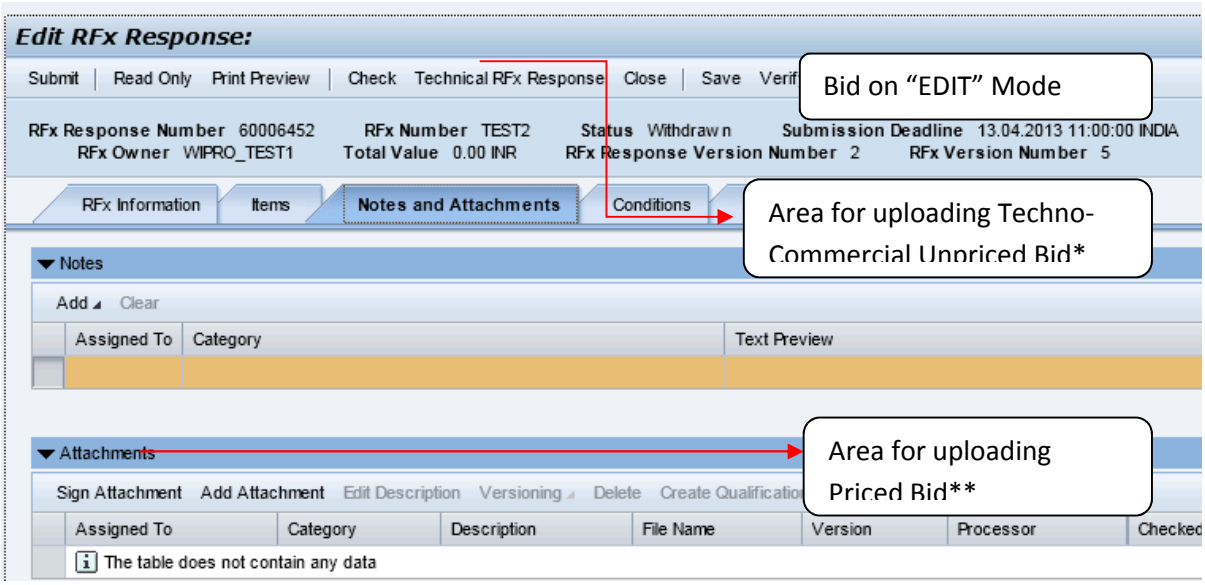
5.0 In case of SINGLE STAGE-TWO BID SYSTEM, bidders shall prepare the "Techno-commercial Unpriced Bid" and "Priced Bid" separately and shall upload through electronic form in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender. The "Techno-commercial Unpriced Bid" 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 Bidders to note that Govt. of India under Micro, Small and Medium Enterprises Development (MSMED) Act 2006, has proclaimed the Public Procurement Policy, 2012 with effect from 1st April, 2012 in respect of procurement of goods and services, produced and provided by micro and small enterprises, by its Ministries, Departments and Public Sector Undertakings for promotion and development of Micro and Small Enterprises. A new Clause on applicability of Public Procurement Policy for procurement of goods from Micro and Small Enterprises(MSE) in the tender is furnished vide Amendment to General Terms and Conditions for Global Tender (MM/GLOBAL/E-01/2005). Bidders are requested to take note of the same and to submit their offers accordingly.

8.0 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.

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

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SCOPE OF SUPPLY : SUPPLY, INSTALLATION & COMMISSIONING OF GAS ENGINE DRIVEN HORIZONTAL SINGLE ACTING TRIPLEX PISTON TYPE RECIPROCATING PUMP.

QUANTITY : 2 Nos.

1.0 TECHNICAL SPECIFICATION :-

i) The detailed Technical specification is furnished in the attached Bidder's Response Sheet vide **Appendix –A**.

ii) Bidder to submit their offer (Technical) by duly filling up the "Bidder's Offer" column of the attached Bidder's Response Sheet. Additional sheets may be used as and where necessary and the same to be clearly marked as: " Annexure No: _____, for Point No____.

2.0 General Notes for Bidders :-

(Bidders should confirm each & every point clearly. Deviations, if any, should be highlighted in the quotation.)

1.0 Materials shall be brand new, unused & of prime quality.

2.0 Pre-dispatch/Shipment Inspection & Testing charges, if any, must be quoted separately on lump sum basis which shall be considered for evaluation of the offers. To and fro fares, boarding/ lodging and other en-route expenses of OIL's Inspection team for carrying our inspection shall be borne by OIL. However, the necessary facilities required for the inspection shall be provided by the bidder.

3.0 Installation & Commissioning :

3.1 The successful bidder will be required to install and commission the unit by their competent service engineer.

3.2 Installation/ Commissioning charges must be quoted separately on lumpsum basis inclusive of service tax which shall be considered for evaluation of the offers. Total Nos. of days required for commissioning shall also be clearly indicated by the bidders.

3.3 While quoting Installation/Commissioning above, bidder should take into account all charges including to and fro fares, boarding/lodging, local transport at Duliajan, Assam and other expenses of supplier's personnel during their stay at Duliajan. OIL may provide accommodation on Chargeable basis subject to availability. Bidder should confirm about providing all these services in their Bid. However, OIL reserves the right to avail such services at its own discretion.

4.0 **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 on the value of the Services rendered by the Bidder /Seller in connection with installation, commissioning, training etc. shall be deducted at source from the invoices at the appropriate rate under the I.T. Act & Rules from time to time.

5.0 **Payment** : Payment shall be released as follows:

i) 80 % of the order value shall be paid against dispatch / shipment of the goods.

ii) Balance 20 % of the order value along with the commissioning charges shall be paid after successful commissioning and acceptance of the item by OIL.

OIL may also consider 100 % payment against shipment / despatch document provided bidder agree to pay the interest for 20 % of order value and also submit Bank Guarantee equivalent to 20 % of the order value in addition to the Performance Security of 10 %.

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.

6.0 Oil India Purchase Order No. must be engraved on the body of the item. Bidder must confirm the same categorically in their quotation.

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

BID REJECTION CRITERIA:

The bids shall conform generally to the specifications and terms as well as conditions laid out in the tender. Bids will be rejected in case the items offered do not conform to the required 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 met by the bids, without which, the same shall be considered as non-responsive and stand rejected.

(A) TECHNICAL

1.0 The offered pump should be a Horizontal Single Acting Triplex Piston type pump, suitable for meeting the delivery parameters (Volume and Pressure) mentioned in the tender.

2.0 The gas engine should be a four stroke, spark-ignited, stoichiometric(Air-Fuel Ratio), naturally aspirated or turbo-charged, radiator cooled engine, rated for continuous power in accordance with ISO 3046/BS5514/IS10000 standards and capable of developing requisite horse power to power the reciprocating pump at rated load conditions with rated rpm 1500 and limiting compression ratio 12:1 (maximum).

3.0 The bidder should be an OEM of pump or authorized dealer of OEM of the pump or an OEM (of pump) recommended assembler of pump sets. Bidders other than OEM must furnish valid authorization certificate from OEM (of pump) clearly stating whether the bidder is an authorized dealer of OEM (of pump) or an OEM (of pump) authorized assembler of pump set. In all cases the bidder has to purchase the engine from an OEM of Engine or their Authorized Dealer. Undertaking from the bidder in this regard must be enclosed with the offer.

4.0 If the bidder is an OEM (of pump) recommended assembler of pump sets, he must purchase the pump and the engine from OEM or their authorized dealer. Undertaking from the bidder in this regard must be enclosed with the offer . Bidders other than the OEM must furnish the following undertaking from the OEM:
"Date of manufacture, make, model, serial no, test certificate, literatures and parts book of the pump and also the operation & maintenance manual of pump will be supplied if order is placed on the bidder."

5.0 Bidders should have the experience of completing three (3) orders in the last ten (10) years preceding the original bid closing date (technical) of the tender against supply of continuous duty pump sets of similar nature for water flood or formation water disposal or hydrocarbon service applications or Mud/ Salt Solution Pumping/ Circulation in PSUs, State/Central Govt. Undertakings, Public Limited Companies in the Oil & Gas sector . Copies of purchase orders along with performance certificates from the clients indicating the supply ,

commissioning and successful deployment of such equipment are to be forwarded with the offer.

Note:
(a) The bidder shall submit documentary evidence/details of the previous supply of such pump set along with the bid.
(b) Similar nature pump means reciprocating horizontal piston pumps of capacity minimum 90 KLPH or above.

6.0 The model of pump offered as per NIT should be one that has a proven track record for continuous duty water flood / formation water disposal / hydrocarbon services / Mud or Salt Solution service applications. The model should be one that has been successfully deployed for any of the continuous duty applications, viz: water flood or formation water disposal or hydrocarbon service applications or Mud/ Salt Solution Pumping/ Circulation, for a minimum period of 6000 hours or one year from its date of commissioning. In this regard satisfactory performance certificate of the offered model pump from the end users has to be enclosed along with the offer.

Note :
a) "Continuous duty" means pump having service operation on full load for a period of 8 hours to 24 hours per day as per Hydraulic Institute Standard application.

b) Hydrocarbon Service Application of continuous duty Piston pumps in the context of our tender refers to applications where such pumps are deployed for duties such as crude oil transfer, condensate injection, polymer injection, glycol injection, Well Stimulation Services etc in the E & P Sector and also continuous duty handling of petroleum and petrochemical products in the Refining & Distribution Sector of the Oil & Gas Industry.

7.0 The engine of the offered Pump set should have :
(i)Proven track record for pump applications in Central/State PSUs or Central Govt. Organizations of India or any other Public Limited Company.
(ii)Should have logged minimum 6000 hours or one year from its date of commissioning prior to the bid closing date (technical) of this tender.
(iii) The bidder shall have to provide the undertaking that the offered engine shall develop required BHP to meet pump requirement suitably and it's overall performance shall be satisfactory with the natural fuel gas composition as specified in this tender.

Note: Relevant documentary evidences from the end users in support of the above conditions [(i) & (ii)] mentioned above should be enclosed with the offer.

8.0 The bidder shall have to provide undertaking that in case the order is placed on the bidder, the pump packages to be supplied (including major component and all it's accessories), will be manufactured after the bid closing date of this tender.

(A) COMMERCIAL

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 $ 8,300.00 or Rs. 5,60,000.00** 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 03.05.2017**.

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 eighteen months from the date of shipment/dispatch

or twelve months from the date of commissioning whichever is earlier 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 receipt/acceptance of goods or 18 months from the date of shipment whichever is earlier. Bidder must confirm the same in their Technical Bid. Offers not complying with this clause will be rejected.

11.0 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 2 nos. pump sets along with Accessories (paraD11)
(B) Total cost of Commissioning spares, if any, for both the pump sets
(C) Total cost of 2 years Maintenance Spares and Special tools for both the pump sets (para M)
(D) Grand Total Material Cost, (A + B + C)
(E) Packing & FOB Charges
(F) Total FOB Port of Shipment value, (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 & Testing charges, if any, for both pumpsets
(K) Installation & Commissioning charges for both the pump sets including service tax
(L) Total Value, (I + J + K) above
(M) Total value in words :
(N) Gross Weight :
(O) Gross Volume

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

(A) Total material cost of 2 nos. pump sets along with Accessories (paraD11)
(B) Total cost of Commissioning spares, if any, for both the pump sets
(C) Total cost of 2 years Maintenance Spares and Special tools for both the pump sets (para M)
(D) Grand Total Material Cost, (A + B + C)
(E) Packing and Forwarding Charges
(F) Total Ex-works value
(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 & Testing charges, if any, for both pumpsets

(N) Installation & Commissioning charges for both the pump sets including service tax
(O) Total Value, (L + M + N) above
(P) Total value in words :
(Q) Gross Weight :
(R) Gross Volume :

NOTE :

1. Cost of individual items must be quoted separately.
2. The Commissioning Spares and 2 years Maintenance Spares and Special Tools should also be quoted separately indicating the unit price and quantity quoted.
3. 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.

12.0 Pre-Despatch / Shipment Inspection & Testing 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.

13.0 Installation/Commissioning charges must be quoted separately on lumpsum basis inclusive of service tax 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 bids and must confirm the same in their Technical bids.

14.0 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 declines to submit Integrity Pact with the offer, their bid shall be rejected straightway.

(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 11.0 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 2 nos. pump sets along with Accessories (paraD11)
(B) Total cost of Commissioning spares, if any, for both the pump sets
(C) Total cost of 2 years Maintenance Spares and Special tools for both the pump sets (para M)
(D) Packing & FOB Charges
(E) Total FOB Port of Shipment value, (A+ B +C+D) above
(F) Ocean Freight Charges upto Kolkata, India
(G) Insurance Charges @ 1% of Total FOB Value vide (E) above
(H) Banking Charges @ 0.5% of Total FOB Value vide (E) 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)
(I) Total CIF Kolkata Value, (E+F +G+H) above
(J) Pre-despatch Inspection & Testing charges, if any, for both pumpsets
(K) Installation & Commissioning charges for both the pump sets including service tax
(L) Total Value, (I +J + K) above
(M) 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 2 nos. pump sets along with Accessories (paraD11)
(B) Total cost of Commissioning spares, if any, for both the pump sets

(C) Total cost of 2 years Maintenance Spares and Special tools for both the pump sets (para M)
(D) Packing and Forwarding Charges
(E) Total Ex-works value, (A + B +C+D) above
(F) Excise Duty including Cess
(G) Sales Tax
(H) Total FOR Despatching station price, (E +F+G)
(I) Road Transportation charges to Duliajan
(J) Insurance Charges @0.5% of Total FOR Despatching Station Value (H) above
(K) Total FOR Duliajan value, (H +I +J)
(L) Assam Entry tax
(M) Pre-despatch Inspection & Testing charges, if any, for both pumpsets
(N) Installation & Commissioning charges for both the pump sets including service tax
(O) Total Value, (K+L+M + N) above
(P) 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.

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ANNEXURE III

CHECK LIST

(A) **TECHNICAL CHECK LIST** :

PLEASE REFER APPENDIX – A of ANNEXURE-I FOR THE TECHNICAL CHECK LIST WHICH MUST BE COMPLETED AND SUBMITTED WITH THE OFFER. PLEASE ENSURE THAT ALL THE POINTS ARE COVERED IN YOUR OFFER. THESE WILL ENSURE THAT YOUR OFFER IS PROPERLY EVALUATED. PLEASE TICK MARK #YES# OR #NO# TO THE QUESTIONS, IN THE RIGHT.

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 pump manufacturer?	Yes / No
2.1	Whether quoted as Pump OEM Dealer / Pump OEM Recommended Assembler. To Specify-	Yes / No
2.2	If quoted as Pump OEM Dealer / Pump OEM Recommended Assembler, (a) Whether submitted valid and proper authorization letter from pump manufacturer confirming that bidder is their authorized Dealer / Recommended Assembler for the product offered ?	Yes / No
	(b) Whether manufacturer's back-up Warranty/Guarantee certificate submitted?	
3.0	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 and balance 20% after successful commissioning along with commissioning charges?	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 11.0 of BRC vide Annexure – II)?	Yes / No
7.0	Whether cost of Recommended Spares for 2 years of operations 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 confirmed to offer the equipment for Pre-despatch/shipment Inspection & testing?	Yes / No
12.1	Whether Pre-despatch/shipment inspection & testing charges applicable?	Yes / No
12.2	If Pre-despatch/shipment inspection & testing charges applicable, whether quoted separately on lumpsum basis?	Yes / No
12.3.	Whether confirmed to carry out Installation & Commissioning of the equipment at Duliajan(Assam) ?	Yes / No
12.4	Whether Installation & Commissioning charge applicable?	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	Yes / No

	in the quoted charges ?	
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 _____

****

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
A. BRIEF DESCRIPTION	Horizontal Single Acting Triplex Piston type Reciprocating Pumps for Mud Circulation Purpose.		
B. QUANTITY	Two (02) Nos.		
C. NOTE TO BIDDERS	1. Bidders are to submit their offer(Technical) by duly filling up the "Bidder's Offer" column of the attached Bidder's Response Sheet. Additional sheets may be used as and where necessary and the same to clearly marked as: " Annexure No: _____, for Point No____. 2. Offers submitted in other form than filling up of the "Bidder's Offer" column of the attached Bidder's Response Sheet shall not be accepted for evaluation. 3. All the Annexures / Attachments are to be suitably marked and a list of the same to be submitted alongwith the offer.		
D. PUMP	1. Pump Type	Horizontal Single Acting Triplex Piston type Reciprocating Pumps.	
	2. Standards	API – 674 or ANSI Hydraulic Institute Standards	
	3. Duty	Continuous Duty (Note : "Continuous duty" means pump having service operation on full load for a period of 8 hours to 24 hours per day as per Hydraulic Institute Standard application .)	
	4. Rated Capacity	1500 to 2000 LPM (90 KLPH to 120 KLPH)	
	5. Rated Discharge Pressure	18 to 20 Kg/cm^2	
	6. Liquid to be Handled	The pumping unit should be suitable for pumping fresh water or following corrosive salt solution either single solution or mixture of salt solutions, the characteristics of individual salt solutions are given below: *(Bidder to Confirm that the offered pump is suitable for pumping of the fluids as mentioned below)*	
		a) Fresh Water: PH 7.3 - 6.3 Total dissolved solids (ppm) - 130 - 160 Carbon dioxide (ppm) - 0 -30 Carbonate (ppm) - NIL Bi-Carbonate (ppm) - 115 - 122 Silica (ppm)- 15 - 45 Sulphate (ppm) - 23 - 2 Chloride (ppm)- 2 - 1	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		Calcium (ppm) - 31 - 14 Magnesium (ppm) - 3 - 10 Iron (ppm) - 4 -10 Sodium (ppm) - NIL Potassium (ppm) - NIL Oil content (ppm) - NIL Total Suspended Solids (ppm) - NIL	
		b) Fresh Water Based Mud system: Constituents : Barytes, Bentonite , Caustic Soda, Linseed oil, CMC (LVG), CMC(HVG) etc. Density: 68 – 70 lbs/cft PH : 8.5 – 9.0 Salinity: 1000 ppm Marsh Funnel Viscosity: 40 – 45 secs. Oil content (vegetable oil based) – 2-3% Sand content: 0.1%	
		c) Saline Water Based Mud system: Constituents: KCL- 2-3%, Barytes, Bentonite, KOH, Poly Anionic cellulose, Linseed oil, EP lub etc. Density: 70 – 80 lbs/cft PH: 9.0 – 9.5 Salinity : 20,000 – 30,000 ppm March Funnel Viscosity: 40 – 45 secs Oil Content (vegetable oil based) – 2-3% Sand Content: 0.1%	
		d) KCL-Polymer Mud System: Constituents: KCL – 3-5%, Baryte, Bentonite, PHPA-3%, CP glycol – 3%, Poly Anionic Cellulose, XC-Polymer, KOH, EP lub etc. Density: 80-85 lbs/cft PH: 9.0-9.5 Salinity : 30,000 – 50,000 ppm Marsh Funnel Viscosity: 40 – 45 secs Oil Content (vegetable oil based) – 1% Sand Content: 0.1%	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		e) Glycol – Amine Mud System Constituents: Glycol – 2.5%, PHPA – 0.3%, XC-Polymer, PGS, Amine-1%, XC-Polymer, Barytes, Caustic Soda etc. Density: 68 - 70 lbs/cft PH: 9.0 – 9.5 Salinity : 1000 ppm Marsh Funnel Viscosity: 40 – 45 secs. Oil Content (vegetable oil based) – NIL Sand Content: 0.1%	
	7. Suction Condition	4 Meters Negative Suction	
	8. Design Features	The guiding salient points are detailed below:	
		(a) Fluid End Features:	
		i. Mono Block Fluid End with bolt on type valve covers.	
		ii. Suction and Discharge on either side of the fluid end.	
		iii. Suction and discharge shall be flanged and suitable for the working pressure as specified.	
		iv. Any connection welded on to the fluid cylinder shall have to meet the material requirement of the fluid cylinder rather than the requirements of the connected pipings.	
		v. Should be provided with liners a and the derails of the same to be furnished alongwith the offer.	
		vi. Surfaces of piston rods & cylinders in contact with packing shall have to hardened or coated or shall have a minimum surface hardness of Rockwell C35. Surface finish shall have to be $16R_a$ or better.	
		vii. Piston rods, both liquid and drive end, shall be of corrosion resistant material.	
		viii. Design of the pistons should match the mentioned service condition.	
		ix. Pistons to be fastened and locked with rod and cross head as suitable for the specified service conditions.	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		x. Interchangeable valve assemblies with replaceable tapered valve seats pressed onto mono block fluid end.	
		(b) Power End Features:	
		i. The Power end frame shall be a cast enclosure that will house crank shaft, connecting rods, crossheads and bearings.	
		ii. Flooded sump Splash / Lift gravity Lubrication for power end.	
		iii. Crankshaft shall have to be wrought or cast or forged alloy steel in one piece.	
		iv. The crank pin bearings shall be two piece precision type (preferably steel backed, precision type, Aluminum alloy/ Tin & babbit lined)	
		v. Sealing to be provided at all openings in the power frame to prevent contamination of the power end lubricant.	
		vi. The power end shall have to be provided with a filtered vent and a NPS ¼ (minimum) connection for purging. An accessible drain (NPS ¼ minimum) shall have to be provided at the lowest point of the sump.	
		(c) Lubrication:	
		i. The power end lubrication system to be splash or lift gravity type. (Type of lubrications method offered to be indicated.) A sight glass, gauge or oil level dipstick to be provided.	
		ii. Bearing oil temperature shall not exceed 70^0C (160^0F) anywhere in the system.	
	9. Material of Construction (MoC)	(a) The material of construction (MOC)of following Fluid End and Power End components shall have to be suitable for operating conditions as mentioned in the tender. The bidder shall have to mention in their offer the MOC of the following Fluid end and Power end components of the offered pump with the applicable ASTM, AISI, ASME or SAE	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		numbers, including material grade. When no such designation is available, the bidder's material specification, giving physical properties, chemical compositions, and test requirements, shall be included in the offer. Bidder furnish the MoC the followings in details:	
		(b) Fluid end components: i. Fluid End Block ii. Valve cover/valve iii. Hard coated Pistons iv. Valve seats v. Valve spring	
		(c) Power end components: i. Power frame ii. Crank shaft iii. Connecting rod iv. Crosshead v. Crosshead pin vi. Crosshead pin bushing vii. Extension rod viii. Crank pin bearing (two piece)	
		(d) Testing of Materials: (i)The bidder shall specify the ASTM optional tests and inspection procedures that may be necessary to ensure that materials are satisfactory for the service. Such test shall have to be mentioned in the bidder's offer. The bidder shall have to submit detail test certificates for the material testing mentioned in their offer prior to pre- dispatch inspection of the pump sets. (ii)The bidder shall have to provide undertaking along with the offer that the offered materials of construction of the pump are suitable for the specified operating conditions (as mentioned in the tender).	
	10. Name plate and Rotation Arrows	(a) A nameplate shall be securely attached at a readily visible location wherein the manufacturer's name, purchaser name and purchase order number, machine	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		serial number, maximum and minimum design limits and rating data, maximum allowable working pressure and temperatures, hydrostatic test pressure etc. should be clearly indicated.	
		(b) Rotation arrows indicating direction of rotation of major items should be cast in	
	11. Accessories	Following Accessories are required to supply along with each pump set:	
		(a) Accessories in discharge line:	
		i. Full flow, suitably sized and rated, spring loaded, Reset Relief Valve, mounted on the discharge piping. (Make : Preferably OTECO/ BAIRD / CAMERON) – Qty. – 01 no N.B: The relief valve is to be set at 110% of our maximum pressure requirement at the time of delivery.	
		ii. Liquid filled discharge pressure gauge having a range up to 100 Kg/ Sq.cm, with built in dampening mechanism to minimize fluctuations for accurate response to pressure changes. (Make : Preferably OTECO/ CAMERON / MARTIN DECKER) – Qty. – 01 no	
		iii. Suitably designed **Maintenance Free** Discharge Pulsation Dampener with no replaceable parts whatsoever. The working principle of the same to be forwarded along with the offer for review at our end. The maximum peak to peak pressure fluctuations should not exceed 5% of the maximum operating pressure. – Qty. – 01 no	
		iv. Discharge Valve: Gate or Ball Valve with RTJ Flanged end of suitable size and pressure rating conforming to API 600 with a pair of companion RTJ flanges (weld neck) conforming to ANSI B16.5 (latest edition)complete with two no RTJ gaskets and requisite no of studs and nuts. – Qty. – 01 no	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		v. Bypass valve: Gate or Ball Valve with RTJ Flanged end of suitable size and pressure rating conforming to API 600 with a pair of companion RTJ flange (weld neck) conforming to ANSI B16.5 (latest edition) complete with two no RTJ gaskets and requisite no of studs and nuts . The size of the bypass valve should be same as discharge valve. – Qty. – 01 no	
		vi. Check Valve of suitable size and pressure rating, full opening/full bore type conforming to API 600 specification with bolted cover, renewable seat, RTJ Flanged ends along with a pair of companion RTJ flanges (weld neck) conforming to ANSI B16.5 (latest edition) complete with two no RTJ gaskets and requisite no of studs and nuts . The size of the Check valve should be same as discharge valve. – Qty. – 01 no	
		vii. Drain valve of suitable size and pressure rating (to depressurize the system when carrying out maintenance of the unit). – Qty. – 02 nos	
		viii. Complete set of fittings, interconnection piping and companion flanges with proper bolting, gaskets, dampener brackets, blind flanges etc. required for mounting all items mentioned above.	
		(b) Accessories in Suction lines:	
		i. Maintenance free suction stabilizer (volume bottle type) – Qty. – 01 no	
		ii. Pressure gauge	
		iii. Suction Valve: Flanged end Gate/ Ball valve of suitable size and pressure rating conforming to API 600 specification, with a pair of companion flanges, gaskets nuts and bolts. – Qty. – 01 no	
		iv. Complete set of fittings, interconnection piping and companion flanges with proper bolting, gaskets, dampener brackets, blind flanges etc. required for	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		mounting all items mentioned above.	
		(c) NB: i. All the pipes valves and fitting of the discharge and suctions lines should be designed to work satisfactorily for the fluid(s) to be handled as specified above. ii. All the pipes valves and fitting of the discharge and suctions lines should be of same size. iii. All valves should be individual**. Combo valves are not acceptable**. iv. Dampeners should be of Carbon Steel, construction built to ASME pressure vessel codes and code stamped.	
E. SPEED REDUCTION GEAR BOX	(a)The speed reduction from the prime mover (gas engine) at its rated rpm to the desired rpm of pump shall be effected by means of a separate **external** foot mounted gear box installed between the prime mover and the pump.		
	(b) The Gear Box should be parallel shaft speed reducer with a gear rated to designed HP from an engine at 1500 rated RPM to the pump at desired RPM, with a suitable Gear ratio . The gear unit shall conform to AGMA 6010 (latest editions). The service factor should not be less than that as required by AGMA 6010 (latest editions), the same to be mentioned in the offer for evaluation at our end.		
	(c) The unit design includes cast housing, helical gear elements, anti-friction roller bearings on all shafts, and a self-contained splash lubrication system and suitable cooling system.		
F. PRIME MOVER (GAS ENGINE)	General Description:	The Prime Mover should be a four stroke, spark-ignited, stoichiometric (Air-Fuel Ratio), naturally aspirated or turbo-charged, radiator cooled Gas Engine, rated for continuous power capable of developing the requisite horse power to power the reciprocating pump at rated load conditions.	
	Conforming Standards	Rated for continuous power in accordance with ISO 3046/BS5514/IS10000 standards and capable of developing the requisite horse power to power the reciprocating pump at rated load conditions.	
	Rated RPM	1500 RPM (Max)	
	Limiting Compression Ration	12:1 (Max)	
	BHP	The selected Gas Engine should be capable of developing	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		the requisite horse power to power the reciprocating pump at rated load conditions at **1500 rpm** with a **maximum compression ratio of 12:1** and rated for continuous power in accordance with ISO 3046/BS5514/IS10000 standards. NB: The bidder has to furnish the basis and detailed calculation wrt the selection of the offered Engine wrt the offered Pump for the specified operating conditions alongwith the offer.	
	Fuel	Natural Gas. Composition of Fuel Gas : The engine should be capable of developing required BHP as detailed in Clause F.1. above with fuel gas composition given below- CONSTITUTION Range by % VOLUME Methane 93.50 Ethane 3.56 Propane 1.11 Nitrogen 0.20 Carbon-dioxide 0.42 Iso-Butane 0.23 N-Butane 0.37 Iso-Pentane 0.15 N-Pentane 0.11 Hexane+ 0.35 Gas Gravity 0.6089 Gross Calorific Value 9462.8 Kcal/SCUM Net Calorific Value 8706.3 Kcal/SCUM Moisture content: 21.0 - 120.0 LB/MMCFT(336.0 - 1992.0 KG/MMSCM) NB: Bidder has to include required gas conditioning & fuel supply system in the scope of work to suit the requirement of the engine offered.	
	Site Condition	The prime mover of pump should be suitable for operation at the following site condition :	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		➢ Maximum Temperature : 48 DEG C ➢ Minimum Temperature : 05 DEG C ➢ Maximum Humidity at 21 DEG C : 100 % ➢ at 35 DEG C : 95 % ➢ at 41 DEG C : 70 % ➢ Maximum Altitude above sea level : 150 mt	
	Aspiration	Naturally aspirated or Turbo-charged	
	Engine Cooling	Radiator Cooled (Blower type)	
	Details of Engine Sub - Systems	The engine should comprise of the following sub systems:	
	i. Cooling System	a) The cooling system of water cooled engine should comprise of an engine mounted water pump, an industrial type heavy duty radiator suitable for operation in ambient temperature of 48 Deg C and a blower fan.	
		b) The engine jacket water cooling system should be a closed circuit design with provision for filling, expansion, and de-aeration. The cooling pump should be driven by the engine. Coolant temperature should be internally regulated to disconnect external cooling system until operating temperature is achieved.	
		c) Radiator, Engine Mounted: Heat rejected to the engine jacket water shall be discharged to the atmosphere through a close coupled radiator. The radiator shall be sized to cool the engine continuously while operating at full rated load and at site conditions of 48 Deg C ambient.	
		d) Blower Fan: The radiator cooling fan shall be a blower type driven from the engine. Air shall be drawn from the engine side and exhausted through the radiator core with no more than 12.7 mm(0.5 Inch) of water external restriction in addition to core restrictions.	
		e) Fan and Belt guarding: The fan, fan drive, and fan belts shall be covered with punched steel mesh guarding for personnel protection.	
	ii. Air Intake System	The air intake system should comprise of a heavy duty	

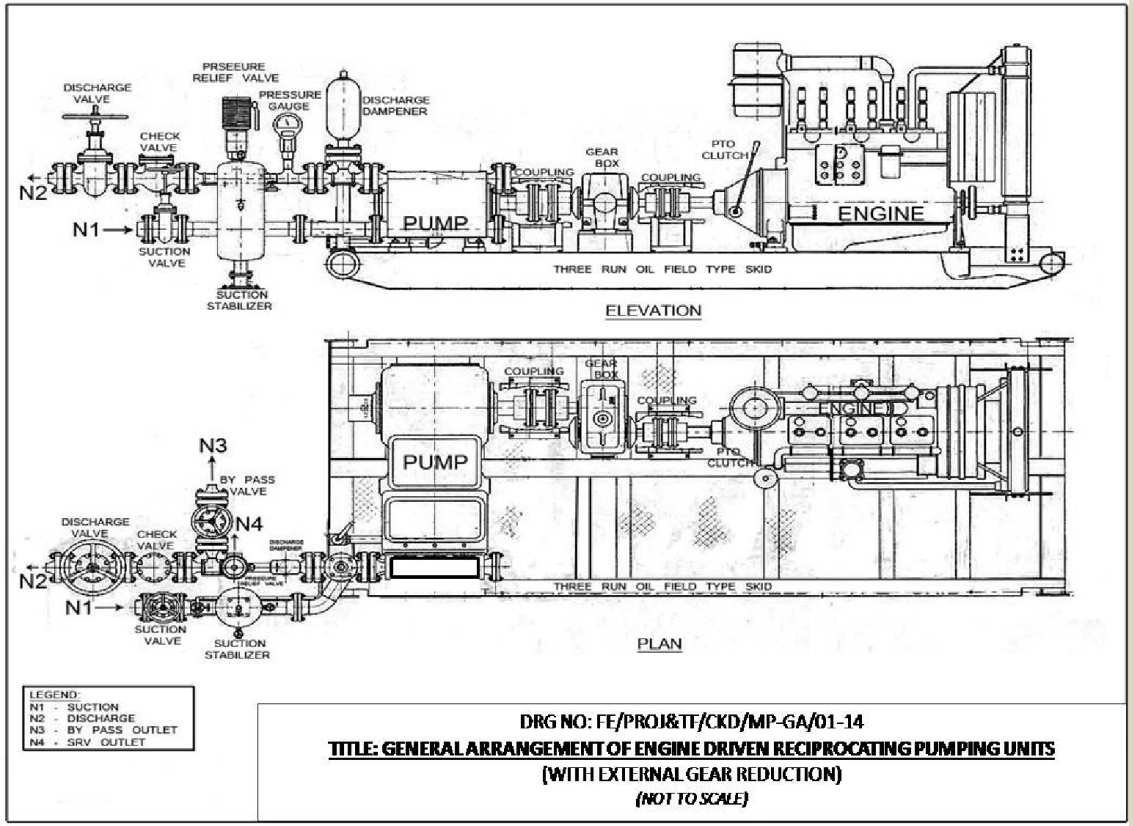
BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		engine air cleaner mounted on the engine with a vacuum indicator and air intake manifold with dry element requiring replacement no more frequently than 500 hours or once each year. Level of suspended particulate matter in ambient air at site is 75µg/m³ (maxm.)	
	iii. Electric Starting System	The engine should have an electric starting system comprising of a Maintenance Free Heavy Duty Battery pack of reputed make having a minimum capacity 180 ampere hours with a alternator mounted on the engine for a battery charging and a 24 Volt starter (preferably of LUCAS TVS/DELCO REMY make), starter relay, and automatic reset circuit breaker to protect against butt engagement. Batteries shall be maintenance free, lead acid type mounted near the alternator. Batteries should be housed in a hard rubber or polypropylene case with provision for venting. Required cables should be furnished and sized to satisfy circuit requirements.	
	iv. Battery Charger	The battery charger is to be a solid-state device with adjustable float voltage control. It is to be a constant voltage device with current limit.	
	v. Ignition System	The ignition system should be a **Non**-shielded ignition comprising Altronic III/V Engine driven ignition timer, Ignition Coil, High Tension and Low Tension Wiring Harness, Transformer and Spark Plugs shall incorporate gold palladium electrodes for reliability and life (Preferably STITT/ CHAMPION make)	
	vi. Exhaust System	a) The exhaust system should comprise of water cooled exhaust manifold, stainless steel exhaust flexible connection, residential type exhaust silencer, spark arrestor and piping connections.	
		b) Heavy walled piping of schedule 40 with radii of 90 Degbend at least 1½ times the pipe diameter. Piping should be installed with appropriate insulation and shielding.	
		c) Piping should be supported and braced to prevent	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		weight or thermal growth being transferred to the engine and flexible expansion fittings provided to accommodate thermal growth.	
	vii. Fuel System	The fuel system should comprise of:	
		a) Governor (Preferably WOODWARD make).The engine governor shall be Mechanical- Hydraulic / Electronic Speed Control with EG Electro-Hydraulic actuator or Barber Coleman Equal. Speed drop shall be extremely adjustable from 0 (isochronous) to 10% from no load to full rated load.	
		b) Carburetor (Preferably IMPCO make),	
		c) Gas pressure regulators (preferably VANAZ/FISHER) to regulate gas pressure from 50 PSIG-20 PSIG to the required pressure at carburetor intake point. 50 PSIG-20 PSIG fuel gas shall be available at site for taping	
		d) Gas Filter and related linkages. The gas Filtration unit should be place on a separate skid for convenience of operators.	
		e) Fuel inlet line to the engine shall be having stainless steel flexible connection to take care of vibration/shock if any, in the system.	
	viii. Lubricating System	a) The lubricating system should comprise of lubricating oil pump, lubricating oil filter with a replaceable paper element, lubricating oil cooler, lubricating oil pan and crankcase breather.	
		b) The lubricating oil pump shall be a positive displacement type that is integral with the engine and gear driven from the engine gear train. The system shall incorporate full flow filtration with bypass valve to continue lubrication in the event of filter clogging.	
		c) The bypass valve must be integral with the engine filter base of receptacle.	
	ix. Instrument Panel	The engine mounted instrument panel shall consist of a shock-mounted formed and welded enclosure. Provide Metric marked gauges as above. The instrument panel	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		should include the following :	
		a) Lubricating Oil pressure gauge	
		b) Lubricating oil temperature gauge	
		c) Water temperature gauge	
		d) Starting Switch	
		e) Ignition Switch	
		f) Mechanical/Digital tachometer and hour meter	
		g) Ampere meter	
	x. Engine Safety Controls	Engine mounted safety shut off/trip system for tripping the engine in the event of:	
		a) Low lubricating oil Pressure	
		b) High cooling water temperature	
		c) Engine over speed	
		d) Over crank	
	xi. Other Features	a) flexible coupling / direct coupling	
		b) flywheel with housing	
		c) lifting eyes	
		d) coupling guard if applicable	
		e) guards over belt drives (blower fan, water pump drive pulley, timing	
		pulley)	
		f) standard painting	
		g) suitable hand throttle control	
		h) mechanical hour meter	
		i) SAE standard rotation.	
		N.B: Provision of guards over belt drives and couplings has become mandatory as per recommendation of OISD (Oil Industry Safety Directorate) & DGMS (Director General of Mines & Safety).	
	xii. General Notes On Engine	a) The engine shall conform to ISO : 3046 specifications and shall be rated for continuous power with an over load power rating of 110% of the continuous power corresponding to engine application for a period of 1 hr within a period of 12 hrs operation.	

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
		b) The engine governing should be in accordance with Class A Governing specified in BS : 3109 : 1985 (or latest)	
		c) The bidder should submit the following information along with relevant performance rating Curves and engine product catalogue: i. Gross HP developed at rated RPM ii. Deduction for fan and other ancillary equipment. iii. Net HP developed at rated RPM iv. Specific fuel consumption at rated power as well as at 110%, 75%, 50% and 25% of rated load.	
		d) The fuel gas system shall consists of a minimum of following components but shall not be limited to these : i. Main line pressure regulator. ii. Pressure relief safety valve. iii. Gas scrubber tank. iv. Gas fuel filter. v. Interconnecting gas piping from main line pressure regulator to engine. vi. The gas conditioning & piping should be carried out in such a way as to prevent condensate carry over to engine .	
		e) The bidder must undertake and confirm from OEM's that the equipment to be supplied are not going to become obsolete for the next 10 years and provisioning of spares can be continued.	
G. DRIVE ARRANGEMENT	i. The drive arrangement will involve flow of prime mover power through a flywheel mounted clutch PTO to the input shaft of an external foot mounted gearbox and finally to the crankshaft of the reciprocating pump.		
	ii. Suitably selected Flexible Disc with **taper lock bushing** should be incorporated to transfer power from the prime mover to the reciprocating pump through the transmission , as illustrated in the Sketch of "General Arrangement of Engine Driven		

BIDDER'S RESPONSE SHEET		
Description	**OIL's Specification**	**Bidder's Offer**
	Reciprocating Pumping unit".	
	iii. All rotating parts should be covered by suitable non sparking guards.	
H. PUMP PACKAGE UNITIZATION	(i) The pump set is to be supplied with all components and accessories fitted and mounted on an oilfield type three runner portable master skid as shown on the attached indicative drawing, Drawing No: FE/PROJ&TF/CKD/MP-GA/01-14 (NB: The drawing is indicative only but should not be treated as exhaustive, any addition as per the design considerations of the pump package may be incorporated by the manufacturer). The floor of the skid should be covered with anti skid steel plates. While unitizing the pump set, easy approach to various components should be kept in mind, to facilitate operational and maintenance requirements The skid should be fabricated out of properly sizes beams to withstand loading / unloading and transfer in oil field trucks. The skid shall be sized to contain the entire pump and engine unit and should include the following components: a) Drip pan for cradle/fluid area of pump and packing area complete with threaded drain b) Dip lip for cradle / fluid area of pump and packing area c) Grouting holes d) Radiator bumper guard e) Exhaust tubing and supports f) Horizontal adjustment screws for minor adjustment g) Two grouting bosses on skid h) Interconnection piping spool pieces on suction and discharge with ancillary components i) Non sparking Aluminum safety guards. j) One set of proper size foundation bolts and nuts with each pump sets. The foundation Bolt for the skid is to be in accordance with ASTM #A193 and nut as per ASTM # A193. (ii) N.B.: Paint / finish specifications shall consist of wire brushing structural pieces and piping, solvent cleaning of components, one coat of red oxide alkyd primer 2.0 to 2.5 mils dry film thickness. The top coat shall be one coat of gloss sakyd national blue enamel 1.0 to 2.0 mils dry film thickness.	

BIDDER'S RESPONSE SHEET		
Description	**OIL's Specification**	**Bidder's Offer**
		
I. PRE DESPATCH INSPECTION AND TESTING	(a)The pump set shall be inspected by OIL's deputed engineer at manufacturers / assembler's works / factory prior to dispatch. However, such inspection will not relieve the supplier of his responsibility to ensure that the equipment supplied conforms to the correct specifications and is free from manufacturing and all other defects.	
	(b)The supplier shall carry out full load performance test on the pump set ,at duty conditions , in the presence of OIL's deputed representative .	
	(c) N.B. : (i) The QAP (Quality Assurance Plan) for the Pump sets shall have to be submitted to OIL for approval prior to Pre despatch inspection at supplier's works. (ii) Charges for carrying out the above tests at the manufacturer's facility should be included in the purview of the offer. However, cost of travelling, boarding, lodging of OIL's engineers will be to OIL's account.	

<table>
<tr><th colspan="4">BIDDER'S RESPONSE SHEET</th></tr>
<tr><th>Description</th><th colspan="2">OIL's Specification</th><th>Bidder's Offer</th></tr>
<tr><td></td><td colspan="2">(d) A draft copy of the composite operation manual of the complete pump packages including control panel shall be submitted to representative of OIL during pre-despatch Inspection at supplier's works for approval. Three (03) copies of the approved copy of the composite operation manual to be supplied along with the documents as mentioned under Clause J.4</td><td></td></tr>
<tr><td rowspan="3">J. CERTIFICATES AND DOCUMENTS TO BE FORWARDED</td><td rowspan="3">1. Documents should be forwarded along with the quotations:</td><td>a) Product line catalogue, specifying materials of construction and constructional features of the offered pump and technical literatures of all ancillary equipment.</td><td rowspan="3"></td></tr>
<tr><td>b) Performance chart of the piston pump including all technical calculations such as hydraulic horse power, volumetric efficiency, mechanical efficiency, RPM, gear ratio, maximum piston load, NPSH requirement, etc.</td></tr>
<tr><td>c) Detail calculation to justify that BHP of the offered prime mover engine is suitable to meet the pumping requirement as specified in the tender. The power losses or mechanical efficiency of each component of the drive system such as coupling , gear box etc. are to be mentioned clearly.</td></tr>
<tr><td></td><td>d) The experience details of the bidder to be submitted in a tabular form as under :
<table>
<tr><th rowspan="2">Sl. No.</th><th rowspan="2">Purchase Order Reference & Date</th><th rowspan="2">Client</th><th colspan="2">Details of Attached Document (please indicate the name of attached file)</th></tr>
<tr><th>Purchase Order</th><th>Performance Certificates from client</th></tr>
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<tr><td></td><td>2. The following documents shall have to be forwarded within a month of issue of LOI or</td><td>a) A foundation diagram for the complete pump set indicating the static and dynamic loads of the package.</td><td></td></tr>
</table>

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**		**Bidder's Offer**
	placement of firm order	b) Pump Package Unitization plan/ drawing.	
	3. Material test (MOC) certificate of the fluid end components and power end components must be forwarded along with the pre-despatch inspection notice from supplier.		
	4. The following documents must be forwarded along with the supply of equipment	a) Certified test results b) Certificate of hydrostatic testing c) Manufacturers certificate of authenticity d) Certificate of test / conformance of pump and associated ancillaries like relief valves, pressure gauges, dampeners, Flexible Metallic braided hose etc. e) Two sets of operation and maintenance manuals including trouble shooting, parts catalogue of pump, engine , gear box and all other accessory equipment for each set. f) Three (03) sets of composite operational manual per pump set for the complete pump package including control panel consist of clear cut simple instruction for start, stop, restart , significance of various display in the control panel, and negotiation of alarms etc.	
	NOTE: All the above mentioned document Under Clause J.4 shall have to be packed separately with a packing list and prominently labeled with OIL's Purchase order No:_____ and to be addressed to: To, Head- Field Engineering OIL INDIA LIMITED DULIAJAN- 786602 ASSAM, INDIA		
K. INSTALLATION & COMMISSIONING	a) The pump set is to be supplied in assembled condition, ie: coupled with gear box, prime mover (engine) and all valves , accessories , engine exhaust silencer etc fitted and mounted on an oilfield type three runner portable master skid. The pump set to be so supplied that, after construction of recommended foundation and completion of necessary grouting, the pump set can be run by simply connecting the engine fuel and		

BIDDER'S RESPONSE SHEET		
Description	**OIL's Specification**	**Bidder's Offer**
	pump suction – discharge pipings. Necessary Civil work and engine fuel and pump suction – discharge pipings shall be done by OIL.	
	b) Installation and Commissioning of the Pump set shall be carried out by the bidder in the presence of OIL representatives at its fields at Duliajan, Assam (India). Services of qualified and competent personnel from equipment manufacturer is essential during installation and commissioning of the pump sets. OIL will provide necessary statutory permits in classified areas as and when required. Arc welding / Gas Cutting services if required shall be provided by OIL.	
	c) Installation / commissioning charges should be quoted separately which shall be considered for evaluation of the offers. These charges should included amongst others to and fro fares, boarding/ lodging and other expenses of the commissioning engineers during their stay at Duliajan, Assam (India). All Personal, Income and Service Tax etc. towards the services provided by the supplier shall be borne by the supplier and will be deducted at source. Bidders should also confirm about installation/ commissioning in the Technical Bid.	
	d) The pump set shall be treated as commissioned only after successful completion of a trial run on available load for a minimum period of 72 hrs and on satisfactory performance shall be subsequently handed over to OIL.	
L. WARRANTY	The warranty period for the engine, pump set and all ancillary equipment shall be a minimum of 18 months from the date of dispatch / shipment or 12 months from the date of commissioning whichever is earlier.	
M. SPARE PARTS AND SPECIAL TOOLS	(a) Bidders have to provide the price , along with the part numbers , of the following spares in the commercial bid and confirm the same in the un-priced technical bid [as detailed under clause nos. M. (b) , (c) & (d)] that we envisage shall be required for maintenance of the pump set for two years . THE PRICES OF THESE SPARES SHALL BE CONSIDERED FOR COMMERCIAL EVALUATION OF THE OFFER.	
	(b) Piston PUMP : i. SUCTION VALVE ASSEMBLY : 6 NOS PER PUMP ii. DELIVERY VALVE ASSEMBLY : 6 NOS PER PUMP iii. VALVE COVER GASKET : 6 NOS PER PUMP iv. VALVE SEAT (SUCTION) : 6 NOS PER PUMP v. VALVE SEAT (DELIVERY) : 6 NOS PER PUMP vi. ROD WIPER : 6 SETS PER PUMP vii. PISTON : 3 NOS PER PUMP viii. PISTON PACKING : 6 SETS PER PUMP	

BIDDER'S RESPONSE SHEET		
Description	**OIL's Specification**	**Bidder's Offer**
	ix. CRANK PIN BEARING : 4 SETS PER PUMP	
	(c) GAS ENGINE : i. SPARK PLUG : 1 SET PER ENGINE ii. IGNITION TRANSFORMER : 1 SET PER ENGINE iii. LUB OIL FILTER ELEMENT : 6 NOS PER ENGINE iv. SET OF VEE BELTS : 2 SETS PER ENGINE v. AIR FILTER ELEMENT : 4 NOS PER ENGINE vi. SET OF GASKETS : 1 SET PER ENGINE	
	(d) The following special tools / spares (one set against each pump set) should also be quoted separately which shall be considered for evaluation of the offers. Moreover commissioning spares, if any shall be quoted separately which shall also be considered for evaluation of the offers i) A set of each type and size of coupling installed in the pump set ii) A valve seat puller and special wrenches for tightening stuffing box glands, studs etc.	
	All the above mentioned Spares/ tools [as detailed under clause nos. M. (b) , (c) & (d)], shall have to be packed separately indicating OIL's Purchase order No with packing list and to be supplied along with the supply of the pump packages addressed to : Head- Field Engineering OIL INDIA LIMITED DULIAJAN- 786602 ASSAM, INDIA	
N. AFTER SALES SERVICE	a) The nature of after sales service, which can be offered by the bidder during initial commissioning and also subsequently should be clearly stated.	
	b) Bidders should also confirm that spares , both regular consumable ones as well as vital / insurance spares, for engine, pump and all accessories quoted, shall be available for at least 10 years after the delivery of the material.	
O. BID REJECTION CRITERIA (Technical)	The bids shall conform generally to the specifications and terms as well as conditions laid out in the tender. Bids will be rejected in case the items offered do not conform to the required 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 met by the bids, without which, the same shall be considered as non-responsive and stand rejected.	
	1.0 The offered pump should be a Horizontal Single Acting Triplex Piston type pump, suitable for meeting the delivery parameters (Volume and Pressure) mentioned in the tender.	
	2.0 The gas engine should be a four stroke, spark-ignited, stoichiometric(Air-Fuel Ratio), naturally aspirated or turbo-charged, radiator cooled engine, rated for continuous power in accordance with ISO 3046/BS5514/IS10000 standards and capable of developing requisite horse power to power the reciprocating pump at rated load conditions with rated rpm 1500	

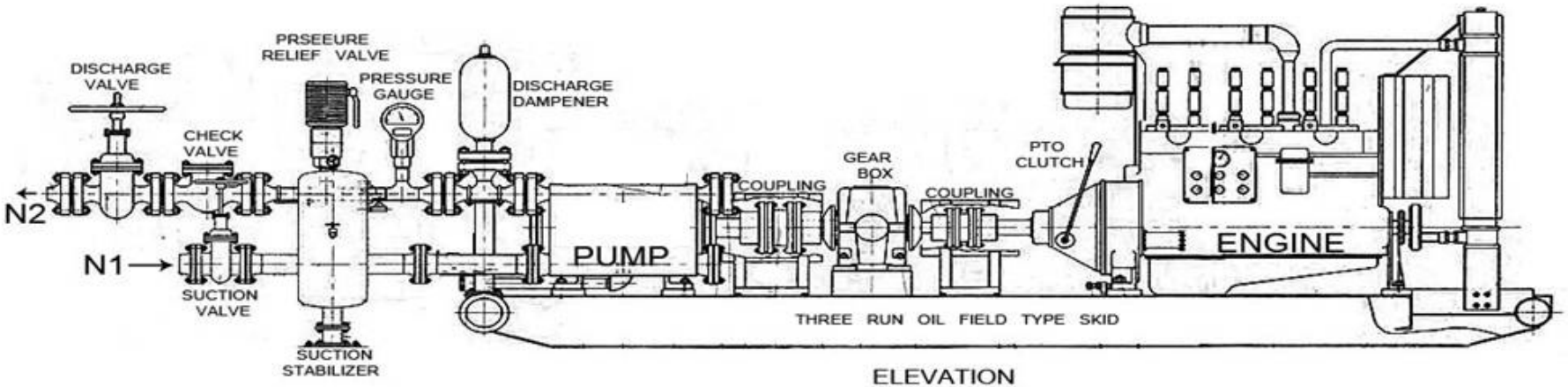
BIDDER'S RESPONSE SHEET		
Description	**OIL's Specification**	**Bidder's Offer**
	and limiting compression ratio 12:1 (maximum).	
	3.0 The bidder should be an OEM of pump or authorized dealer of OEM of the pump or an OEM (of pump) recommended assembler of pump sets. Bidders other than OEM must furnish valid authorization certificate from OEM (of pump) clearly stating whether the bidder is an authorized dealer of OEM (of pump) or an OEM (of pump) authorized assembler of pumpset. In all cases the bidder has to purchase the engine from an OEM of Engine or their Authorized Dealer. Undertaking from the bidder in this regard must be enclosed with the offer	
	4.0 If the bidder is an OEM (of pump) recommended assembler of pump sets, he must purchase the pump and the engine from OEM or their authorized dealer. Undertaking from the bidder in this regard must be enclosed with the offer. Bidders other than the OEM must furnish the following undertaking from the OEM: "Date of manufacture, make, model, serial no, test certificate, literatures and parts book of the pump and also the operation & maintenance manual of pump will be supplied if order is placed on the bidder."	
	5.0 Bidders should have the experience of completing three orders in the last ten (10) years preceding the original bid closing date (technical) of the tender against supply of continuous duty pump sets of similar nature for water flood or formation water disposal or hydrocarbon service applications or Mud/ Salt Solution Pumping/ Circulation in PSUs, State/ Central Govt. Undertakings, Public Limited Companies in the Oil & Gas sector . Copies of purchase orders along with performance certificates from the clients indicating the supply, commissioning and successful deployment of such equipment are to be forwarded with the offer. Note: (a) The bidder shall submit documentary evidence/details of the previous supply of such pump set along with the bid. (b) Similar nature pump means reciprocating horizontal piston pumps of Capacity minimum 90 KLPH or above.	
	6.0 The model of pump offered as per NIT should be one that has a proven track record for continuous duty water flood / formation water disposal / hydrocarbon services / Mud or Salt Solution service applications. The model should be one that has been successfully deployed for any of the continuous duty applications, viz. water flood or formation water disposal or hydrocarbon service applications or Mud/ Salt Solution Pumping/ Circulation, for a minimum period of 6000 hours or one year from its date of commissioning. In this regard satisfactory performance certificate of the offered model pump from the end users has to be enclosed	

BIDDER'S RESPONSE SHEET		
Description	**OIL's Specification**	**Bidder's Offer**
	along with the offer. Note : a) "Continuous duty" means pump having service operation on full load for a period of 8 hours to 24 hours per day as per Hydraulic Institute Standard application. b) Hydrocarbon Service Application of continuous duty Piston pumps in the context of our tender refers to applications where such pumps are deployed for duties such as crude oil transfer, condensate injection, polymer injection, glycol injection, Well Stimulation Services etc in the E & P Sector and also continuous duty handling of petroleum and petrochemical products in the Refining & Distribution Sector of the Oil & Gas Industry.	
	7.0 The engine of the offered Pump set should have : (i)Proven track record for pump applications in Central/State PSUs or Central Govt. Organizations of India or any other Public Limited Company. (ii)Should have logged minimum 6000 hours or one year from its date of commissioning prior to the bid closing date (technical) of this tender. (iii) The bidder shall have to provide the undertaking that the offered engine shall develop required BHP to meet pump requirement suitably and it's overall performance shall be satisfactory with the natural fuel gas composition as specified in this tender. Note: Relevant documentary evidences from the end users in support of the above conditions [(i) & (ii)] mentioned above should be enclosed with the offer.	
	8.0 The bidder shall have to provide undertaking that in case the order is placed on the bidder, the pump packages to be supplied (including major component and all it's accessories), will be manufactured after the bid closing date of this tender.	
P. DATA SHEETS	A. DATA SHEET FOR PUMP:	
	1. MAKE	
	2. MODEL	
	3. SIZE (PISTON DIAMETER X STROKE LENGTH)	
	4. LIMITING PRESSURE AND VOLUME AT OFFERED SIZE	
	5. OFFERED SPEED	
	6. DISCHARGE VOLUME @ OFFERED SPEED (η vol = 95%)	
	7. HHP REQUIREMENT AS PER NIT PARAMETERS	
	8. MAKE AND MODEL OF EXTERNAL GEAR BOX	

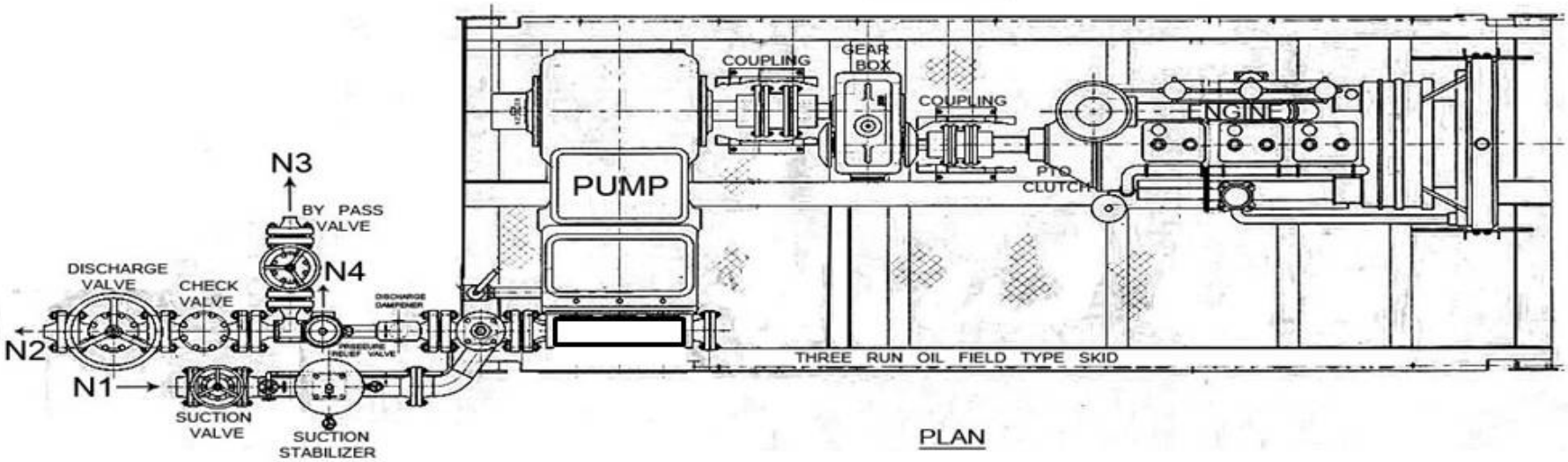
BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**	**Bidder's Offer**	
	9. GEAR RATIO OF EXTERNAL FOOT MOUNTED GEAR BOX		
	10. TYPE AND SIZE OF COUPLING BETWEEN CLUTCH PTO AND GEAR BOX INPUT SHAFT		
	11. TYPE AND SIZE OF COUPLING BETWEEN GEAR BOX OUTPUT SHAFT AND PUMP INPUT SHAFT		
	B. DATA SHEET FOR ENGINE:		
	1. MAKE		
	2. MODEL		
	3. NUMBER OF CYLINDERS		
	4. ASPIRATION		
	5. COMPRESSION RATIO		
	6. SIZE (BORE X STROKE)		
	7. DISPLACEMENT		
	8. RATED SPEED		
	9. DUTY		
	10. GROSS HP AT RATED RPM		
	11. DEDUCTION FOR FAN, ALTITUDE , TEMPERATURE		
	12. NETT HP AVAILABLE AT 1500 RPM		
	13. SPECIFIC FUEL CONSUMPTION AT		
	14. # 110% LOAD		
	15. # 100% LOAD		
	16. # 75% LOAD		
	17. # 50% LOAD		
	18. LUBRICATING OIL CONSUMPTION (LT / HR)		
	19. ENGINE SUMP CAPACITY (LTS)		
	20. ENGINE RADIATOR CAPACITY (LTS)		
	21. MAKE AND TYPE OF GOVERNOR		
	22. MAKE OF CLUTCH PTO		
	23. MODEL OF CLUTCH PTO		
	24. MAKE OF STARTER		
	25. MAKE AND MODEL OF COUPLING BETWEEN CLUTCH PTO AND GEARBOX		
Q. CHECK LIST	TECHNICAL CHECK LIST FOR PUMP PACKAGES (Please tick YES or NO)		
		YES	NO
	1. Whether the bidder has submitted their offer(Technical) by duly filling up the "Bidder's Offer" column of the attached		

BIDDER'S RESPONSE SHEET			
Description	**OIL's Specification**	**Bidder's Offer**	
	Bidder's Response Sheet.		
	2. Whether quoted as OEM of Pump and whether documentary evidences submitted ?		
	3. Whether quoted as authorised dealer of Pump and whether documentary evidences submitted ?		
	4. Whether quoted as OEM recommended assembler of Pump sets and whether documentary evidences submitted ?		
	5. Whether the offered Pump is a horizontal, triplex piston Pump ?		
	6. Whether the Pump is designed for continuous service duty ?		
	7. Whether the offered engine conforms to ISO3046 / BS 5514 / IS 10000 specifications ?		
	8. Whether the Minimum Net HP of the engine is as per NIT requirement ?		
	9. Whether the engine is rated for continuous power ?		
	10. Whether the engine is water cooled ?		
	11. Whether the speed reduction gear box is external foot-mounted ?		
	12. Whether the floor of the three runner skid shall be covered by checkered plates ?		
	13. Whether Flexible disc / grid member couplings have been incorporated in the transmission ?		
	14. Whether guards shall be provided over couplings and belt drives ?		
	15. Whether the two years spares for the packages indicated have been quoted ?		
	16. Whether special tools and commissioning spares have been included in the scope of supply ?		
	17. Whether spares shall be available for 10 years after supply of equipment?		
	18. Whether separately highlighted any deviation from the technical specifications ?		
	19. Whether the Pre-despatch inspection of the Pump packages shall include Full Load Performance test of the Pump Sets ?		
	20. Whether the bidder has submitted the undertaking that the offered materials of construction of the pump are suitable for the specified operating conditions (as mentioned in the tender)?		
	21. If the bidder is an OEM (pump) or authorized dealer of OEM of the pump or an OEM(pump) recommended assembler of pump sets, whether the bidder has submitted undertaking that bidder will purchase the engine from OEM of Engine or their authorized dealer?		
	22. If the bidder is an OEM (pump) recommended assembler of pump sets, whether the bidder has submitted undertaking that the bidder will purchase the Engine and the pump from OEM or their authorized dealer?		
	23. If the bidder is other than OEM of pump, whether the bidder has submitted undertaking from OEM that, Date of manufacture, make, model, serial no, test certificate, literatures and parts book of the pump will be supplied if order is placed on the bidder?		
	24. Whether the bidder has submitted undertaking that the offered engine shall develop required BHP to meet pump requirement suitably and it's overall performance shall be satisfactory with the natural fuel gas composition as specified in this tender?		
	25. Whether the bidder has submitted undertaking that in case the order is placed on the bidder, the pump packages will be supplied (including major component and all it's accessories), will be manufactured after the bid closing date of this tender?		

BIDDER'S RESPONSE SHEET		
Description	**OIL's Specification**	**Bidder's Offer**
Signature		
Name		
Designation		
Contact Number		
E-mail ID		
Name of Company / Organization		
Stamp / Seal of Company / Organization		



ELEVATION



PLAN

LEGEND:
N1 - SUCTION
N2 - DISCHARGE
N3 - BY PASS OUTLET
N4 - SRV OUTLET

DRG NO: FE/PROJ&TF/CKD/MP-GA/01-14

TITLE: GENERAL ARRANGEMENT OF ENGINE DRIVEN RECIPROCATING PUMPING UNITS

(WITH EXTERNAL GEAR REDUCTION)

(NOT TO SCALE)