

IMPORTANT NOTE

BID DOCUMENT HAS BEEN DISPLAYED BELOW TO UNDERSTAND THE REQUIREMENT ONLY. PARTIES INTERESTED TO PARTICIPATE AGAINST SUCH REQUIREMENTS MAY APPROACH WITH COMPLETE CREDENTIALS TO THE FOLLOWING OFFICE:

HEAD (CALCUTTA BRANCH)
OIL INDIA LIMITED
4, INDIA EXCHANGE PLACE
KOLKATA – 700 001
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ISSUE OF ENQUIRY TO THE PARTY MAY BE CONSIDERED AGAINST PRESENT/ FUTURE TENDER BASED ON THE CREDENTIALS.

OIL INDIA LIMITED

(A Govt. Of India Enterprise) Tel :033 2230 1657, 1658
 4, India Exchange Place, Fax :91 33 2230 2596
 Kolkata-700001 E-mail :oilcalmn@cal2.vsnl.net.in

Tender No. & Date : KID0905L09/08 04.11.2008

Bid Security Amount : INR 0.00 OR USD 0.00
 (or equivalent Amount in any currency)

Bidding Type : Single Bid (Composite Bid)

Bid Closing On : 26.12.2008 at 14:00 hrs. (IST)
 Bid Opening On : 26.12.2008 at 14:00 hrs. (IST)

Performance Guarantee : Not Applicable

OIL INDIA LIMITED invites Limited tenders for items detailed below:

Item No./ Mat. Code	Material Description	Quantity	UOM
10 0C000451	SKID MOUNTED DIESEL ENGINE DRIVEN PROGRESSIVE CAVITY PUMP FOR BOWSER LOADING PURPOSE ----- For technical details refer Annexure - IA is enclosed.	1	NO
INSTALLATION & COMMISSIONING			
10	<p>INSTALLATION & COMMISSIONING INSTALLATION, COMMISSIONING, TESTING & HANDING OVER :</p> <p>Installation and Commissioning of the Bowser Loading Pumpset 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. Only competent service personnel shall be engaged for installation, testing and commissioning of pumpsets. OIL will provide necessary statutory permits in classified areas as and when required. 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.</p> <p>Note : Once commissioned at designated site the pump set will be subjected to a trial run on available load for a minimum period of 72 hrs and on satisfactory performance shall be subsequently handed over to OIL.</p>	1	AU

Special Notes :

SKID MOUNTED DIESEL ENGINE DRIVEN PROGRESSIVE CAVITY PUMP FOR BOWSER LOADING PURPOSE

SCOPE OF SUPPLY :

Diesel Engine driven progressive cavity pump set complete with Gear Box, Flexible coupling, Safety Relief valve, Radcoflex Flexible Hose for suction & delivery end with ANSI B 150 class end connections complete set mounted on robust constructed self loading OIL FIELD Skid for frequent inter location movement.

1.0 PUMP :

1.1 Type : Positive Displacement Screw Pump
(progressive cavity pump.)

1.2 Service: Continuous

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.

1.3 Maximum Capacity: 20 CuM / hour (+ or # 5 %)

1.4 Maximum Working Pressure: 25 kg/cm²

1.5 Absorbed Power (HP) : 40

1.6 Recommended Power (HP) : 45 to 55

1.7 Pump Speed : 659

1.8 Mechanical Efficiency : 60 %

1.9 Volumetric Efficiency : 85 %

1.10 Suction Lift : 3 Mtr

1.11 Pumping Temperature: 70 Deg C & above.

1.12 NPSH(R)(Mts.): 4.0 Mtr.

1.13 Liquid to be handled: Crude oil with following characteristics :

API Gravity at 60 Deg F : 30

PH : 7.2

Salinity (ppm) : 4400

Sand Particle : Traces

CO₃ : NIL

HCO₃ : 305

Pour Point (Deg C) : 27

Water Content (% v / v) : 30 to 50

Pumping Temp : 70 Deg C & above.

Specific Gravity : 0.8 # 0.9

Viscosity : 13 cp @ 26 Deg C, 17 cp @ 24 Deg C,
29 cp @ 22 Deg C

Sp Gravity : 0.8574 @ 35 Deg C and
0.8718 @ 15 Deg C

Climatic conditions : Altitude # 150 meter above sea level

Temperature -- 45 Deg C Max

Average Rainfall -- 350 cms

Relative Humidity # At 21 Deg C : 10 %

At 35 Deg C : 95 %

At 40 Deg C : 70 %

- 1.14 Construction Features:
 Pump Casing - Cast Iron as per IS 210 FG 220
 Bearing Housing # Cast Iron as per IS 210 FG 220
 Stator - Hi Nitrile Black
 Rotor- Stainless Steel AISI -316 HCP
 Shaft - AISI-316 HCP
 Universal Joint- Cardon type
 Stator Entry - Tapered entry
 Stuffing Box- Externally mounted
- 1.15 Suction Size : 100mm (Top)
 1.16 Delivery Size : 100mm (End)
 1.17 Type of Drive : Direct drive through Gear Box & Diesel Engine.
 1.18 The pump should be suitable for running in both the direction for flushing the pump .
 1.19 Provision for limit switch device should be provided at the Suction side & a pressure switch at the discharge side of the pump to prevent the pump from dry running.
 1.20 A full flow type Pressure Relief Valve of reputed make shall be mounted on discharge line of the pump suitable for a working pressure of 25 Kg/Sq.cm and a set pressure of 27.5 Kg/ Sq.cm having flanged connections.

2.0 PRIMEMOVER (DIESEL ENGINE) :

The prime mover should be a four stroke, naturally aspirated or turbo charged, vertical in-line, air or water cooled, diesel engine, rated for continuous power and capable of developing a net minimum HP in the range of 45 to 55 HP at 1500 rpm at the site conditions given below

Maximum temperature : 40°C

Minimum temperature : 5°C

Maximum relative humidity at 35°C : 95%

Maximum altitude above mean sea level: 150 M

HSD conforming to IS: 1593:1982 and having the following specifications:

The engine shall conform to ISO:3046/BS5514/IS 10000 specifications and shall be rated for continuous, power with an overload power rating of 110% of the continuous power corresponding to engine application, for a period of 1hr. within a period of 12 hrs. of operation.

The engine governing should be in accordance with Class A-2 governing specified in BS: 5514/IS 10,000.

The engine should comprise of the following sub systems:

1. Cooling System

The cooling system of the air-cooled (or) water cooled engine should comprise of a belt and pulley driven blower fan assembly (or) Radiator cooling alongwith Radiator Fan with Guard.

2. Air Intake System

The air intake system of the engine should comprise a heavy duty oil bath type air cleaner and an air intake manifold.

3. Starting System

The starting system of the engine should be a 12 volt electric starting system comprising of a Maintenance Free Battery of reputed make, Battery leads, engine mounted battery charging alternator (Make : LUCAS TVS), 12 volt starter (Make : LUCAS TVS/ DELCO REMY) and a starting ring fitted to the engine flywheel. Battery 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.

4. Exhaust System

The exhaust system should comprise of an air cooled exhaust manifold, stainless steel exhaust flexible connection, exhaust silencer, spark arrestor and piping connections.

5. Fuel System

The fuel system should comprise of mechanical governor, fuel injectors, fuel pump, fuel filter assembly, fuel lines and a fuel tank having storage capacity to meet the fuel requirement of 12 hours of full load operation.

6. Lubricating System

The lubricating system should comprise of gear driven lubricating oil pump, lubricating oil filter with a replaceable filter element, lubricating oil pan, oil level dipstick and crankcase breather.

7. Instrument Panel

The instrument panel should include the following :

- i. Lubricating oil pressure gauge
- ii. Starting switch
- iii. Digital / mechanical tachometer & Hour Meter
- iv. Ammeter
- v. Engine low lube oil pressure indication display red lamp

8. Engine Safety Controls

Safety shut off/ trip system for tripping the engine in the event of #

- i. Low lubricating oil pressure
- ii. Engine over speed
- iii. High coolant temperature (For water cooled engine)

9. Other Features :

- i. Flywheel
- ii. Lifting eyes
- iii. Guards over belt drive (blower / radiator fan drive , charging alternator drive pulley).
- iv. Standard painting
- v. SAE standard rotation

N.B. : Provision of guards over belt drives and couplings has become mandatory as per recommendations of OISD & DGMs bodies.

10. General Notes :

a. The engine shall conform to ISO 3046/BS 5514/ IS 1000 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. of operation.

b. The engine governing should be in accordance with Class A-2 governing specified in BS:5514/ IS 10000.

c. 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 for blower fan & charging alternator
- iii. Net HP developed at rated RPM
- iv. Fuel consumption at rated power as well as 110%, 75% and 50% of rated load

d. Each pump set should be ready for operation after carrying out initial servicing and making provisions for fuel.

3.0 DRIVE ARRANGEMENT:

The drive arrangement will involve the following mechanisms:

The speed reduction from the diesel engine at its rated rpm to the desired rpm of the pump shall be effected by means of a separate external foot mounted gear box installed between the prime mover and the pump.

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 input shaft of the pump. Suitably selected flexible disc coupling should be incorporated to transfer power from the prime mover to the pump through the transmission.

NOTE :

a) Clutch PTO should be friction type of reputed manufacturer (GHATKE PATIL / TWIN DISC) with hand lever arrangement and is to be mounted on the flywheel housing of the engine.

b) Suitably selected Flexible Disc / Steel Flex Couplings should be incorporated to transfer power from the prime mover to the pump through the transmission, as illustrated in the schematic diagram.

c) The gear box should be of reputed manufacturer (SANTI / GREAVES), a parallel shaft , helical gear unit. The unit design should preferably include a cast iron housing , helical gear elements, anti friction roller bearings on all shafts and a self-contained splash lubricating system .

(OR)

Flow of prime mover power through a flywheel mounted clutch PTO to the pump through a suitably designed system of belts and pulleys.

N.B. : All rotating parts should be covered by suitable guards.

4.0 MASTER SKID:

The pump set is to be supplied with all components and accessories fitted and mounted on an oilfield type two runner portable master skid and should be ready for operation after carrying out initial servicing and making provision fuel supply.

While unitizing the pump set, easy approach to various components for maintenance aspects should be kept in mind. The floor of the skid should be covered with anti skid checkered steel plates. The skid should be fabricated out of properly sized beams (minimum 150 mm) to withstand loading / unloading and transfer in oil field trucks. The size should be big enough to provide for sufficient working space in and around the pump set.

5.0 Certificates and Documents to be forwarded:

I. The following documents should be forwarded along with the quotations:

i. Product line catalogue, specifying materials of construction and constructional features of the offered pump and technical literatures of all ancillary equipment.

ii. Performance chart of the pump including all technical calculations such as horse power, volumetric efficiency, mechanical efficiency, RPM, NPSH requirement, etc.

iii. Technical calculation for offering the engine with respect to the pump offered.

iv. Leaflet containing complete technical details for pump, engine, gear box, Clutch PT0, Coupling etc.

v. A schematic layout of the master skid showing the engine, pump and all other components of the pump set.

vi. A declaration from the supplier that the spare parts will be available with them for any emergency purchase or regular consumption of spares for at least 10(Ten) years after placing the formal order.

II. The following documents must be forwarded along with the supply of equipment

i. certified test results

ii. certificate of hydrostatic testing

iii. manufacturers certificate of authenticity

iv. certificate of test / conformance of pump etc.

v. 2(Two) Sets each operation and maintenance manuals, parts list manuals of pump, engine, Gear Box and all other accessory equipment.

6.0 SPARE PARTS :

Spares for 2(Two) years normal operation of the engine, pump , gear box and its accessories should be included in the offer. Bidder should indicate the manufacturers# Part Nos for each part of pump, engine, gear box and its accessories along with the suppliers# own Part No., if any.

Bidders have to provide the price along with the part numbers of the spares that they envisage shall be required for maintenance of the pump set for 2(Two) years. However, the prices of these spares will not be considered during commercial evaluation of the offer.

7.0 TOOLS :

1 (One) Set Special tools for maintenance of each pump.

8.0 INSPECTION & TESTS :

a) The plant and materials may be subjected to inspection during manufacture at the purchaser's discretion, but such inspection shall not relieve the supplier of his responsibility to ensure that the equipment supplied is free from all manufacturing and other defects and conform to correct specifications. The supplier will be notified in advance, if it is intended to inspect plant & materials.

b) Except where otherwise agreed the test called for in this specification shall be carried out in the presence of the purchaser or his representative appointed for the purpose and to his satisfaction. All appliances, apparatus, labor etc. necessary for the test shall be provided by the supplier at his cost.

c) Pre dispatch inspection will be carried out by us at the works of the manufacturer. The complete unit mounted on the skid would be inspected by our engineer. The unit would be load tested at rated pressure and capacity at supplier's factory before dispatch. Accordingly supplier should inform us well in advance. All tests are to be performed as per ISO: 10000 quality products.

9.0 INSTALLATION, COMMISSIONING, TESTING & HANDING OVER :

Installation and Commissioning of the Bowser Loading Pumpset 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. Only competent service personnel shall be engaged for installation, testing and commissioning of pumpsets. OIL will provide necessary statutory permits in classified areas as and when required.

Installation / commissioning charges should be quoted separately which shall be considered for evaluation of the offers. These charges should include 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.

Note : Once commissioned at designated site the pump set will be subjected to a trial run on available load for a minimum period of 72 hrs and on satisfactory performance shall be subsequently handed over to OIL.

10.0 MATERIAL TESTS, CERTIFICATES :

The supplier shall submit for approval, particulars of all test pieces proposed to be taken from the castings or forging subjected to high pressure and also of highly stressed parts. The purchaser will state whether he intends to witness the tests on such pieces or is prepared to accept the supplier's test certificates.

Hydraulic tests : Before being dispatched from the suppliers# works all castings/forging and valve shall be hydraulically tested to at least twice their normal working pressure for a period of 30 minutes and certificate thereof should be made available to the purchaser.

11.0 PACKING, PAINTING AND PROTECTION :

Packing shall be sufficiently robust to withstand rough handling during shipment and up country journey. All items shall have their respective identification letters or numbers painted on them and they shall be suitably packed to provide ease of handling and storage and maximum protection during transport and storage period. Crates and boxes shall have a list of items contained therein secured to the exterior by piece of an enveloping piece tin sheet nailed to the wood. A duplicate list shall also be included inside, with the contents, sling points shall be clearly indicated on the crates. Internal parts shall be sprayed with an inhibitor water splitting preservative and all openings shall be covered with masking tape to prevent ingress of water.

12.0 AFTER SALES SERVICE:

The nature of after sales services, which can be provided by the supplier during initial commissioning as also in subsequent operation should be clearly stated. It should be confirmed that spares for the Engine/Pump/Gear Box and its accessories offered would be available for at least 10 years after delivery of the material.

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

(I) BID REJECTION CRITERIA (BRC) : TECHNICAL

The bids must conform to the specifications and terms and conditions given in the tender. Bids shall be rejected in case the item(s) 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 shall have to be particularly met by the bidders, without which the offer will be considered as non-responsive and rejected :

a) The bidder should be an OEM of pump

b) The Bidder other than OEM must be an authorized dealer of OEM of pump. If the bidder is an authorized dealer of pump, necessary documentary certificates from the OEM must be submitted along with the offer. The purchase documents from the OEM must be submitted along with the supply of pump sets. The bidder must furnish the following undertaking from the OEM:-
#Date of manufacture, make, model, test certificate, literatures and part books of the pump will be supplied if order is placed on us#

c) The bidder must purchase the Engine and Gear Box from the OEM or authorized dealer of Engine and Gear Box. Necessary documentary certificates from the OEM or authorized dealer of Engine and Gear Box must be submitted along with the offer. The purchase documents from the OEM or the authorized dealer must be submitted along with the supply of pump sets. The bidder must furnish the following undertaking from the OEM or authorized dealer -

#Date of manufacture, make, model, test certificate, literatures and part books of the Engine and Gear Box will be supplied if order is placed on us#

d) Bidders should have the experience of completing 3(Three) orders in the last 10(Ten) financial years before the bid closing date of this enquiry against supply of similar type of pump set by stating the following information :

i) Capacity of each supplied pump set with copied of Purchase Order

ii) The name of clients to whom these pump sets are supplied and with certificates that these are running satisfactorily at the time of submission of the offer

e) The bidder must have after sales service facility and must submit bases of service center with list of service personals to attend the equipment in case of breakdown, provision of supply of spares etc.

f) The bidder must undertake the equipment to be supplied are not obsolete for next 10 years and provision for supplying spares of the equipment (Pump, Engine and Gear Box) to be continued.

The bidder who are not supplying the above information will be rejected and no further correspondence will be made.

14.0 PERFORMANCE GUARANTEE:

10% of the ordered value shall be given as performance guarantee in the form of bank guarantee for a period of 12 months after commissioning or 18 months from the date of dispatch. The bank guarantee will be released after successful completion of warranty period.

15.0 DATA SHEET:

A. DATA SHEET (PUMP)

MAKE
MODEL
PUMP TYPE
SERVICE
LIQUID HANDLED
OFFERED RATED SPEED
OFFERED RATED PRESSURE
DISCHARGE VOLUME@OFFERED SPEED (Vol Effi = 93%)

APPROX HP REQUIREMENT AS PER NIT PARAMETERS

NPSH REQUIRED
PUMPING TEMPERATURE
LUBRICATION
COUPLING TYPE
MATERIAL OF CONSTRUCTION
PUMP BODY, CASING
ROTOR
STATOR
SHAFT
SHAFT SEALING

B. DATA SHEET (ENGINE)

MAKE
MODEL
NUMBER OF CYLINDERS
ASPIRATION
COMPRESSION RATIO
SIZE (BORE X STROKE)

DISPLACEMENT
RATED SPEED
DUTY
GROSS HP AT RATED RPM
DEDUCTION FOR FAN, ALTITUDE , TEMPERATURE
NETT HP AVAILABLE AT 1500 RPM
SPECIFIC FUEL CONSUMPTION AT
110% LOAD
100% LOAD
75% LOAD
50% LOAD
LUBRICATING OIL CONSUMPTION (LT / HR)
ENGINE SUMP CAPACITY (LTS)
ENGINE RADIATOR CAPACITY (LTS) IN CASE OF WATER COOLED ENGINE.
MAKE AND TYPE OF GOVERNOR
MAKE OF CLUTCH PTO
MODEL OF CLUTCH PTO
MAKE OF STARTER
MAKE AND MODEL OF COUPLING BETWEEN CLUTCH PTO AND GEARBOX

16.0 TECHNICAL CHECK LIST

1. Whether quoted as OEM of Pump and whether documentary evidences submitted ? YES/NO
2. Whether quoted as authorised dealer of Pump and whether documentary evidences submitted ? YES/NO
3. Whether quoted as OEM recommended assembler of Pump sets and whether documentary evidences submitted ? YES/NO
4. Whether the offered Pump is progressive cavity pump ? YES/NO
5. Whether the Pump is designed for continuous service duty ? YES/NO
6. Whether the offered Engine conforms to IS Standard with latest amendment as per specifications ? YES/NO
7. Whether the power for normal working condition is as per NIT ? YES/NO
8. Whether the Engine meets NIT criteria ? YES/NO
9. Whether the pump is having Capacity & Pressure as per NIT ? YES/NO
10. Whether the pump meets materials of construction as per NIT ? YES/NO
11. Whether the floor of the two runner skid shall be covered by checkered plates ? YES/NO
12. Whether the skid is rigid enough to withstand vibration of the unit and suitable for self loading purpose ? YES/NO
13. Whether dry run protection device shall be provided as per NIT ? YES/NO
14. Whether the two years spares for the packages have been quoted ? YES/NO
15. Whether special tools and commissioning spares have been included in the scope of supply ? YES/NO
16. Whether spares shall be available for 10 years after supply ? YES/NO
17. Whether separately highlighted any deviation from the technical specifications ? YES/NO
18. Whether the Pre-dispatch inspection of the Pump packages shall include Full Load Performance test of the Pump Sets ? YES/NO

Tender No. : KID0905L09/08
Tender Date : 04.11.2008
Bid Closing On : 26.12.2008 at 14:00 hrs.(IST)
Bid Opening On : 26.12.2008 at 14:00 hrs.(IST)

Tender issued to following parties only:

Slno	V_Code	Vendor Name	City/Country
1	200211	STEEL & INDUSTRIAL STORES	TINSUKIA
2	201059	ROTO PUMPS LTD.	KOLKATA
3	203348	ROTOMAC INDUSTRIES (P) LTD.	KANPUR
4	203966	TUSHACO PUMPS PVT.LTD.	MUMBAI
5	204500	UT PUMPS & SYSTEMS PRIVATE LIMITED	KOLKATA
6	207417	ALPHA HELICAL PUMPS PVT. LTD	COIMBATORE
7	207603	INFINITY ENGINEERS	NEW DELHI
8	207604	GUTTA ENGINEERS PVT. LTD	KOLKATA
9	207620	R.S. ENTERPRISE	NEAMATPUR
10	207665	CHANDRA HELICON PUMPS PVT LTD	KANPUR