

IMPORTANT NOTE

BID DOCUMENT HAS BEEN DISPLAYED BELOW TO UNDERSTAND THE REQUIREMENT ONLY. PARTIES INTERESTED TO PARTICIPATE AGAINST THIS TENDER SHALL HAVE TO PURCHASE THE TENDER DOCUMENT FROM ANY OF OIL'S DESIGNATED OFFICES MENTIONED IN THE TENDER NOTIFICATION. PROOF OF PURCHASE OF TENDER DOCUMENT MUST BE SUBMITTED ALONG WITH THE OFFER FAILING WHICH OFFERS SHALL BE TREATED AS UNSOLICITED.

OIL INDIA LIMITED
(A Govt. of India Enterprise)
4, India Exchange Place,
Kolkata – 700 001.

OIL INDIA LIMITED (OIL) invites sealed tenders for supply of the following items :-

Srl. No.	Tender No. (Bid Closing Date)	Materials Description	Single Order Value in (Rs. Lakhs)	Annual Turnover in (Rs. Lakhs)
1.	KID6879P10/04 (19.03.2010)	Working Platform for Well Servicing Operation.	11	22
2.	KID6880P10/07 (19.03.2010)	Air Circuit Breaker, 800 A	11	22
3.	KID6883P10/09 (19.03.2010)	Safety Station with Eye / Face Wash.	8.00	17
4.	KIS6877P10/01 (19.03.2010)	Bitumen.	18	36
5.	KIS6885P10/04 (19.03.2010)	Overall / Boiler Suit. (two bid)	20	40
6.	KID6878P10/04 (26.03.2010)	Design, Supply & Commissioning of Smoke / Fire Detection & Alarm System for Gas Turbine Power Plant.	16.00	33
7.	KID6881P10/08 (26.03.2010)	Diesel Engine Driven Drenching Pump Sets.	12	24
8.	KID6882P10/08 (26.03.2010)	Diesel Engine Driven Drenching Pump Sets.	12	24
9.	KID6886P10/02 (26.03.2010)	Flow-cum-Pressure Recorder.	19	38

2.0 Bid documents (Non transferable) can be purchased from **22.02.2010** till one day prior to the respective Bid Closing Dates on payment of tender fee of Rs. 1000.00 each through Crossed Demand Draft in favour of M/s. Oil India Limited payable at the place of purchase (excepting for PSUs and SSI units registered with NSIC/Directorate of Industries for the item) from (A) Head (Calcutta Branch), Oil India Limited, 4,India Exchange Place, Kolkata - 700001 (B) Head Materials, Oil India Limited, P.O. Duliajan, Assam - 786602 (C) Sr. Adviser (Contract & Purchase), .Oil India Limited, Plot No. 19,Sector-16A, Noida – 201301 (D), Sr. Materials Manager (Pipeline), Oil India Limited, P.O: Udayan Vihar, Guwahati - 781171.

3.0 To be eligible for issue of tender documents, the applicant must meet the following qualifying criteria (documentary evidence to be provided) :

(i) Successful execution of a single order of value not less than the amount shown above for supply of similar items during last five years.

(ii) Annual turnover of the firm in any of the last three financial years or current financial year should be more than the amount shown above.

4.0 Bidders may visit OIL's website www.oil-india.com for further details on the above tenders.

CORRIGENDUM

1. The Bid Closing Date against Tender No. KID6200P10/09 for 4D Ultrasonography Machine has been extended to 05-03.2010 (14.00 Hrs).
2. Tender Nos. KIS6057P10/04 for Overall / Boiler Suit and KID6194P10/01 for Tent have been cancelled.

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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 : KID6882P10/08 09.02.2010

Bid Security Amount : INR 60,000.00 OR USD 0.00
 (or equivalent Amount in any currency)

Bidding Type : Single Bid (Composite Bid)

Bid Closing On : 26.03.2010 at 14:00 hrs. (IST)
 Bid Opening On : 26.03.2010 at 14:00 hrs. (IST)

Performance Guarantee : Applicable

OIL INDIA LIMITED invites Limited tenders for items detailed below:

Item No./ Mat. Code	Material Description	Quantity	UOM
10 0C000197	SKID MOUNTED DIESEL ENGINE DRIVEN DRENCHING PUMP SET FOR FGS - 263 (HATIALI) 273 kls/hr Capacity With 100 Meter Head Diesel Engine driven Drenching pump set. For detail specification please refer ANNEXURE A.	2	NO
	INSTALLATION AND COMMISSIONING		
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Special Notes : 1) BEC/BRC

BID REJECTION CRITERIA(TECHNICAL)

I. The bids must conform to the specifications and terms and conditions given in the enquiry. Bid shall be rejected in case the terms (s) offered do not conform to the required minimum / maximum parameters stipulated in the technical specifications. 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.

II. The offered pump should be Centrifugal Pump, horizontal split casing, single stage (preferably) with an efficiency of 70% or higher, suitable for continuous duty, with a capacity of 273 kls/hr, 100 mts head (10 kg/sq.cm) (Total Head: 104 m of liquid column) respectively.

III. The offered model of engine should conform to ISO 3046 / BS 5514 / IS 10000 (latest edition) specifications. The offered model of engine dedicated for fire fighting duties by the OEM should be rated for continuous power and should be capable of developing 10% more power than the net minimum BHP requirement of the Pump input at rated RPM at the duty conditions mentioned above.

NET H.P. Calculation for selecting the Prime Mover for the offered Pump considering the losses for Auxiliary Drive should be forwarded along with the offer. Power calculation should be made based on 150% of rated capacity and to be submitted along with the offer.

IV. The bidder should be an OEM or, an authorized dealer of OEM of the pump or, an OEM approved assembler of pump sets. In all cases the bidder has to purchase the engine from an OEM of engine or, their authorized dealer. Documentary evidence in this regard must be enclosed with the offer failing which the offer will be rejected.

V. If the bidder is an assembler of pump set, he must purchase the pump and the engine from OEM or, their authorized dealer. Documentary evidence in this regard must be enclosed with the offer failing which the offer will be rejected.

The assembler should indicate that necessary infra structural facilities for fabrication and load testing of the pump set are available with them. Bidders other than the OEM must furnish the following undertaking from the OEM.

Date of manufacturer, Make, Model, Serial No., Test certificate, Literatures and Spare Parts manual of the pump and Engine will be supplied if order is placed on the bidder.#

VI. Bidders should have the experience of completing at least two orders in the last seven financial years before the bid closing date of this enquiry against supply of continuous duty Centrifugal pump sets capacity in the range of 273 KL/Hr used for fire fighting in PSU's, Central Govt. undertakings, Public Limited Companies or, Reputed Private companies in the Oil and Gas sector. Documentary evidence in this regard must be enclosed with the offer. The offers are to be further substantiated by performance certificates from the consumers.

VII. The model of pump offered should be one that has a proven track record for continuous duty (having service operation on full load for a period of 8 to 24 hours per day)for fire fighting purpose. The model should be one that has been successfully deployed for continuous duty for a minimum period of 5000 hrs. or, one year from the date of commissioning. Documentary evidence in this regard should be enclosed.

VIII. Bidder must undertake that the equipment to be supplied are not going to be obsolete for next ten (10) years from the bid closing date and provision for supplying spares of the equipment will be continued.

2) The bidder must submit technical literature / catalogue of the offered product in duplicate along with the offer, failing which offer may be liable for rejection.

3) Each pump / engine including the base is to be painted with Signal Red paint.

4) Performance guarantee certificates for a minimum period of 2 years or, 5000 working hours in respect of pump and engine should be submitted alongwith delivery of materials.

5) The pump/engine set is to be despatched in unitized condition. Pump/engine set in un-unitized condition will not be acceptable.

ANNEXURE - A

TENDER NO.KID6882P10/08 OF 09.02.2010

**SKID MOUNTED DIESEL ENGINE DRIVEN DRENCHING PUMP SET FOR
FGS - 263 (HATIALI)**

273 kls/hr Capacity with 100 Meter Head Diesel Engine driven Drenching pump set
- 02 SETS:

Scope of supply: (for each pump set)

- a) Pump with gland packing.
- b) Base plate for pump and engine
- c) Coupling with non sparking type coupling guard
- d) Set of Foundation bolts
- e) Clutch-power take-off
- f) Diesel engine with spark arrestor, silencer, spare kits, radiator cooled with blower fan, fuel injection pump, starter, fuel filter, lub oil filter e.t.c
- g) Auto Control panel
- h) Maintenance free battery with inbuilt charger.
- i) Fuel tank mounted within 2 mtr. distance from the engine.
- j) Flanged type foot valve with companion flanges of reputed Make.
- k) Pair of companion flanges for pump delivery and suction line.

The detail specification of the pump unit should be as per the following format:

A) Pump:

I) Pump Specifications:

Type	: Horizontal spindle/Horizontal split casing
Stage	: Single Stage (preferably)
Capacity	: 273 kls / hr.
Head	: 100 m of liquid column
Liquid to be handled	: Water of Specific Gravity 1.0
Duty	: Continuous
Speed	: 1500 RPM
Application	: Fire Fighting /drenching
Efficiency	: 70% (minimum)
Brake Horse Power	} to be indicated by the supplier
Suction Size	} to be indicated by the supplier
Delivery Size	} to be indicated by the supplier
Suction and delivery end	: Flange end
Shaft Seal	: By gland packing

Impeller design should be such that delivery pressure of 10 kg / sq.cm. is obtained at duty point and even with 4m negative suction.

- 1) Pump should be capable of delivering 150% of rated discharge with a minimum of 65% of rated head.
- 2) Pump should be suitable for speed mentioned.
- 3) Shut-off head should not be more than 120% of rated head.
- 4) Pump performance and Testing should be as per IS:6595 (Part-2) and IS: 9137 (Latest Edition) and other applicable codes.
- 5) Pump should run for rated duty condition.

Bidder should give the following information regarding Performance at

- (a) Duty point and
- (b) 1.5 times discharge :
 - Total Head -
 - Discharge -
 - Efficiency -
 - Pump Speed -
 - BKW / BHP -
 - NPSH
 - Pump suction from positive head from overground water tank

II) CONSTRUCTIONAL FEATURES :

- i) The material of construction of the Pump body, Suction, Delivery and intermediate parts should be Close Grained Cast Iron / Cast steel.
- ii) The material of construction of the impeller should be Stainless Steel or, Bronze. The impeller should be fully shrouded and dynamically balanced for smooth running.
- iii) The material of construction of the shaft should be Stainless Steel.
- iv) The material of construction of the shaft sleeve should be Stainless Steel.
- v) The material of construction of the casing Ring should be Bronze.
- vi) The material of construction of the Gland & Gland nuts should be Cast Iron
- vii) The pump must be supported by Heavy Duty Bearings and Grease Cups should be provided for lubrication.
- viii) Accessories to be supplied along with the pump

Following Accessories should be supplied with the pump set:

- a. Flange type foot valve of reputed make matching with suction line - Total 2 (two) nos for 2 pump sets.
- b. Pressure gauge (0 to 25 KG/sq. cm.) - Total 4 nos for 2 pump sets
- c. Coupling - Total two sets for 2 pump sets
- d. Matching companion flanges with nuts, bolts and gaskets for suction and delivery ends of the pump - Total two sets for 2 pump sets.

B. DIESEL ENGINE :

The engine should be a four stroke cycle, in-line multi cylinder, naturally aspirated / turbocharged, Radiator cooled Diesel engine, capable of developing Sufficient Horse Power in the range of 198 H.P. to 220 H.P. at 1500 RPM with a maximum compression ratio of 18:1 and suitable for continuous duty. Only single stage turbo charging is allowable. The engine should be capable of developing 10% more power than the net minimum BHP requirement of the Pump input when running at rated RPM at the duty condition specified above and at site condition given below:

- Maximum Temperature : 50 deg C
- Minimum Temperature : 05 deg C
- Maximum Relative Humidity at 21 deg C : 100 %
- 35 deg C : 95 %
- 41 deg C : 70 %

Maximum Altitude above mean sea level : 150 M

Make of the Engine:

The Engine must be one of the following Make:
Cummins / Kirloskar.

Engine should conform to IS 3046 Specifications-latest edition.

(IS Certificate from Manufacturer in support of Engine to be submitted along with offer)

NET H.P. Calculation for selecting the Prime Mover for the offered Pump considering the losses for Auxiliary Drive should be forwarded along with the offer. Power calculation should be made based on 150% of rated capacity and to be submitted along with the offer.

1.0 Engine should comprise of the following sub systems :

I) COOLING SYSTEM Comprising of :

- i) Engine driven fresh water pump # Engine mounted
- ii) Heavy duty radiator (having capacity at least 20% in excess of total heat rejection of the engine) with Blower fan.
- iii) Thermostat installed in Engine coolant outlet.
- iv) Corrosion inhibitor.
- v) Spin-on filter for coolant.

II) AIR INTAKE SYSTEM comprising of :

- i) Air intake manifold # Engine mounted.
- ii) Dry type Intake Air filter # Engine mounted
- iii) Vacuum Indicator # Mounted on Intake Piping.

III) EXHAUST SYSTEM comprising of :

- i) Turbocharger # Engine mounted if engine is turbocharged.
- ii) Water cooled / air cooled exhaust manifold.
- iii) Exhaust Silencer # Residential type with Spark arrester.
- iv) Flexible connection and related piping.

IV) FUEL SYSTEM comprising of :

- i) Fuel pump
- ii) Fuel Filter # Simplex type, paper element- Engine mounted.
- iii) Mechanical Governor.
- iv) Fuel Injectors.
- v) Wire braided hoses between filter and fuel pump.
- vi) Wire braided flexible hoses for fuel supply and return to Diesel Tank.
- vii) Check (non-return) valves in Fuel supply and Drain lines.
- viii) Fuel tank built within the oil field skid (base frame) complete with level gauge, drain valve, air vent, inlet and outlet connection. The fuel tank should be large enough to hold fuel for at least 8 hours continuous operation of the engine at full load (Minimum 300 litres capacity and fabricated from 14 SWG sheet) and should be mounted within 3 metres of the engine .

V) LUBRICATING SYSTEM comprising of:

- i) Lubricating Oil Sump.
- ii) Engine Mounted Lube Oil Pump- Gear Driven.
- iii) Engine Mounted Lubricating Oil Cooler # Water Cooled- integral with Engine Coolant circuit.
- iv) Lubricating Oil filter- Simplex Type Paper Element # Engine Mounted.
- v) Oil Filter Tube with Cap and Lube Oil Dipstick Oil Level Check- Engine Mounted.

VI) ENGINE STARTING SYSTEM comprising of:

- i) Non-shielded type Electrical 24 V DC starter, Make: LUCAS-TVS / Delco Remy.
- ii) Alternator for battery charging, Make : LUCAS TVS / Delco Remy.
- iii) Battery shall be sealed maintenance free, lead acid type, battery should be housed in a hard rubber or polypropylene case with provision for venting. Required cables should be furnished and length of cable should be sufficient

for connecting battery terminals to the starter of the engine. No separate battery charger is required.

iv) Charging system consisting of Alternator, Service free battery, ammeter, all associated electrical wirings.

VII) ENGINE INSTRUMENT PANEL comprising of:

- i) Lub Oil pressure indicator
- ii) Water Temperature indicator.
- iii) Lub Oil temperature indicator.
- iv) Tachometer and Hour Meter.
- v) Starting Switch with key.
- vi) Push button switch.
- vii) Ammeter.
- viii) Remote stop/start switch
- ix) Emergency Shut down knob

VIII) AUTO CONTROL PANEL FOR BATTERY CHARGING:

ACHYAT or equivalent make Auto control panel for automatic charging of batteries during idle condition (No running condition of engine) and also Auto off during running condition of engine.

IX) SAFETY CONTROLS: Safety control devices to protect the engine against the following occurrences should be provided.

- i) Low Lub oil pressure.
- ii) High water temperature.
- iii) Over speed.

X) CLUTCH POWER TAKE-OFF UNIT:

a) The pump coupled with engine through power take-off clutch make Ghatge Patil and suitable flexible coupling and also should be unitized over a robust fabricated M.S. skid frame.

b) Non sparking type coupling guards fabricated from Aluminium sheets should be placed over the flexible coupling. Coupling guards should be fixed over the M.S. skid with screws drilled in the skid.

XI) OTHER FEATURES:

- i) Viscous Vibration damper
- ii) Suitable clutch to transfer power from the engine
- iii) Flywheel suitable for the selected Clutch
- iv) Flywheel Housing
- v) Front and rear engine support
- vi) Lifting eyes
- vii) Crank Case Breather
- viii) SAE standard rotation
- ix) Suitable Hand Throttle Control
- x) Non sparking coupling guards over blower fan belt drive and water pump belt drive, charging alternator drive pulley and timing pulley.
- xi) Non-return valve in each drenching pump delivery line (total 2 nos. NRV for 2 nos pump set)
- xii) Flexible/direct coupling
- xiii) Suction and Delivery Pressure Gauge

C) GENERAL NOTES :

i) Pump should conform to IS:6595(Part 2)specification - latest edition(IS Certificate from Manufacturer in support of Pump to be submitted along with offer)

ii) The engine should conform to IS 3046 Specifications - latest edition (IS Certificate from Manufacturer in support of Engine to be submitted along with offer)

and should be rated for continuous power with an overload 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.

iii) Make of the Engine: Caterpillar / Cummins / Kirloskar.

iv) Power calculation should be made based on 150% of rated capacity and to be submitted along with the offer.

v) The bidder should submit the following information along with relevant performance rating curves and engine product catalogue :

Gross HP developed at rated RPM.

Deduction for blower fan and other ancillary equipment.

Net HP developed at rated RPM.

Specific fuel consumption at rated power as well as 110%, 75% and 50% of rated load.

vi) The engine shall be tested at manufacturer's works and relevant test certificate in this regard shall be submitted to OIL. OIL may if felt necessary, depute representative to oversee the testing of the engine at manufacturer's works.

vii) Performance chart/characteristic/graph of the centrifugal pump indicating capacity, head, efficiency, size of impeller etc. as well as all technical calculations for BHP, requirement etc. should be forwarded along with the offer. The pump performance should be as per IS: 9137 - latest edition

viii) A suitably selected and rated Clutch Power Take-Off point unit (Make: Ghatge Patil) and coupling should be incorporated in the transmission system to couple the Diesel Engine with the centrifugal pump for transfer of power.

ix) All the equipment of the pump and engine package with all components and accessories shall have to be mounted on an open structural steel base sturdy oil field type robust fabricated MS skid. All the pipings will have to be firmly anchored to the steel base by means of flange, saddle, or clamp supports as required and mounted on a robust fabricated MS skid. 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 steel plates. The skid should be fabricated out of properly sized beams to withstand loading/unloading and transfer in oil field trucks as well as air lifting. The size of the skid should be adequate enough to provide for sufficient working space in and around the pump set.

Suitable strong hook bolts should be provided with the pump and engine to take out pump and engine individually and for transferring the same to central workshop for major overhauling.

while unitizing the pump set, for taking out pump and engine for major overhauling or for maintenance of various components, there should be availability of necessary space for easy approach.

x) A Non-Sparking type Coupling Guard fabricated from thick Aluminum sheet to withstand deformation while handling, should be placed over the Coupling and the Coupling Guard and should be suitably anchored to the oil field skid.

xi) Diesel Engine and the Centrifugal pump should be painted with Fire Red paint.

xii) Bidders must quote as per DATA SHEET and TECHNICAL CHECK LIST for the engine, pump and ancillaries and filled in the above DATA SHEET and TECHNICAL CHECK LIST.

xiii) The bidder must assure that After Sales Service with respect to the pump set shall be provided by their respective OEM's or authorised dealer.

xiv) The bidder must undertake and confirm from OEM that the equipment to be supplied are not going to become obsolete for the next 10 years and provisioning of spares can be continued.

xv) The pump set should be suitable for operation at the following site conditions:

Maximum Temperature : 50 deg C
Minimum Temperature : 05 deg C
Maximum Relative Humidity at
21 deg C :100 %
35 deg C :95 %
41 deg C :70 %
Maximum Altitude above mean sea level : 150 M

xvi) HSD conforming to IS: 1593 : 1982 and having following specifications :

Cetane Number : 42.5
Gross Calorific Value : 19480 BTU / CFT

D. INSPECTION AND TESTING

The pump set shall be inspected by OIL's deputed engineer at manufacturers 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.

The pump will be factory performance tested in accordance with IS: 9137 - latest edition. The inspection shall include performance / full load test as well as NPSH test of the pump in unitized condition in presence of OIL's deputed representative. The pump sets shall be cleared for dispatch only after satisfactorily carrying out the tests specified above. Test certificates in respect of pump and engine shall have to be forwarded along with delivery of material.

N.B. Charges for carrying out the above tests at the manufacture's works / factory should be included in the purview of the offer.

E. COMMISSIONING

The pump/engine sets shall have to be commissioned by competent personnel from the respective OEM's of the Pump & Engine, deputed by the bidder for the same. OIL shall provide necessary local transportation from its operational headquarter for the commissioning personnel to and from the site. All spares, tools tackles required for commissioning of the pump/engine sets should be supplied by the supplier.

F. WARRANTY

The warranty period for the engine, pump and all ancillary equipment should be a minimum of 18 months from the date of dispatch/ shipment or 12 months from the date of commissioning.

G. AFTER SALES SERVICE

The bidder should ensure after sales service during initial commissioning and also subsequently. 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.

H. SPARE PARTS AND SPECIAL TOOLS

Bidders have to provide the price, along with the part numbers, serial no, normal delivery lead time of the spares and special tools that will be required for maintenance of the pump/ engine sets for two years with the offers. Spare parts and special tools should be properly tagged and coded so that later identification as to intended equipment usage will be facilitated. The cost of two years spares and special tools thus provided will be considered for evaluation of bid.

Foreign bidder must either have an established service centre in India or must agree to provide service back up through authorized representatives based either in India or abroad. Name of such agency to be mentioned with the offer.

I) Following documents, shall be submitted along with the dispatch details of the equipment.

List of recommended spares for two years.

2(two) sets of literature consisting of performance test certificates, Spare parts catalogue, Operation/maintenance manuals, general cross sectional drawing of pump/engine, detailed outline drawing of pump/engine, engine test certificates for each pump/diesel engine set etc. both in hard copy and in digital form to be provided against each pump set

All test certificates including /guarantee/warranty certificates..

J) #Packing and Transportation:

i) Both the pump/engine sets are to be despatched in unitised condition mounted on the skid.

ii) During transportation, unitised pump/engine sets are to be suitably packed to avoid transit damage or water ingress.

Packing should be sufficiently robust to withstand rough handling during transit. All items should have their respective identification tag and should be suitably packed to provide ease of handling / storage and offer maximum protection during transit.

iii) Crates and boxes should have a list secured to the exterior wherein the items contained inside should be mentioned in addition to a duplicate list inside. The sling points on the crates should be properly indicated. Internal parts should be sprayed with a rust inhibitor and all openings should be covered with masking tapes to prevent ingress of water.

iv)Manuals / packing cases containing electrical equipment should be lined with water proof material.

K) # SPARE PARTS AND TOOLS:

List of spares in three categories should be submitted along with the offer.

i) SPECIAL TOOLS AND COMMISSIONING SPARES (The prices of these spares shall be considered during commercial evaluation of the offer).

ii) Two years maintenance spares of the pump / engine and accessories. (The prices of these spares shall be considered during commercial evaluation of the offer).

iii) Insurance spares of the pump / engine and accessories. (Cost of these spares shall however not be considered during commercial evaluation of the offer).

L) # DRAWING AND DOCUMENTATION :

i) Foundation drawing for the open structural steel base sturdy oil field type robust fabricated MS skid shall be forwarded within a month of placement of order.

ii) One set of drawings showing installation details of the skid along with pump/engine sets, components and accessories should be provided against each pump sets.

iii) For design of foundation, soil bearing capacity is to be taken as 10 tons / sq. metres.

iv) Foundation bolts for grouting the MS skid on foundation should be supplied along with the equipment.

v) 1(one) set of hand tools with tool box for maintenance purpose of pump and engine to be provided against each pump sets.

v) 2(two) sets of Spare parts catalogue, Operation/maintenance manuals both in hard copy and in digital form to be provided against each pump set.

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 APPROVED ASSEMBLER OF PUMP SETS AND WHETHER DOCUMENTARY EVIDENCES SUBMITTED? YES/NO
4. WHETHER THE OFFERED PUMP IS A HORIZONTAL SPLIT CASING CENTRIFUGAL PUMP DESIGNED FOR CONTINUOUS SERVICE/DUTY? YES/NO
5. WHETHER THE EFFICIENCY OF THE PUMP IS AT LEAST 70%? YES/NO
6. WHETHER THE OFFERED PUMP CONFORMS TO IS 6595 - (latest edition) SPECIFICATIONS? YES/NO
7. WHETHER THE OFFERED ENGINE CONFORMS EITHER TO ISO 3046/BS 5514/IS 10000 SPECIFICATIONS? YES/NO
8. WHETHER THE NET HP OF THE ENGINE HAS A RESERVE HP OF 10% MORE THAN THE NET MINIMUM BHP REQUIREMENT OF THE PUMP INPUT WHEN RUNNING AT SELECTED/RATED RPM? YES/NO
9. WHETHER THE ENGINE IS RATED FOR CONTINUOUS POWER/DUTY? YES/NO
10. WHETHER THE ENGINE STARTING IS AN ELECTRIC START ENGINE? YES/NO
11. WHETHER A SUITABLE COUPLING HAS BEEN INCORPORATED IN THE TRANSMISSION SYSTEM? YES/NO
12. WHETHER GUARDS SHALL BE PROVIDED OVER COUPLING AND BELT DRIVES AND WHETHER THE FLOOR OF THE THREE RUNNER SKID SHALL BE COVERED BY CHECKERED PLATES? YES/NO
13. WHETHER THE BIDDER HAS PROVIDED THE PRICE, ALONG WITH THE PART NUMBERS, PART DESCRIPTION, SERIAL NO, NORMAL DELIVERY LEAD TIME OF THE SPARES AND SPECIAL TOOLS THAT WILL BE REQUIRED FOR MAINTENANCE OF THE PUMP/ENGINE SET FOR TWO YEARS WITH THE OFFER? YES/NO
14. WHETHER SPECIAL TOOLS AND COMMISSIONING SPARES HAVE BEEN INCLUDED IN THE SCOPE OF SUPPLY? YES/NO
15. WHETHER SPARES SHALL BE AVAILABLE FOR 10 YEARS AFTER SUPPLY OF EQUIPMENT? YES/NO
16. WHETHER SEPERATELY HIGHLIGHTED ANY DEVIATION FROM THE TECHNICAL SPECIFICATION? YES/NO
17. WHETHER THE PUMP SETS WILL BE OFFERED FOR PRE-DISPATCH INSPECTION? YES/NO
18. WHETHER COMMISSIONING OF THE PUMP SETS INCLUDED IN THE SCOPE OF THE OFFER? YES/NO
19. WHETHER PERFORMANCE CHARACTERISTICS/CHART/GRAPH OF THE PUMPS ENCLOSED? YES/NO
20. WHETHER COUPLING DATA/DRAWING ENCLOSED? YES/NO
21. WHETHER MAINTENANCE SHEDULE(2 SETS), LAMINATED ENCLOSED? YES/NO
22. WHETHER COMPLETED DATA SHEET OF CALCULATION ENCLOSED? YES/NO
23. WHETHER CATALOGUE/LITERATURE/LEAFLET/STANDARD CURVE FOR OFFERED MODEL ENCLOSED? YES/NO
24. WHETHER CROSS SERCTIONAL DRAWING WITH PARTS LIST OF MATERIAL CONSTRUCTION ENCLOSED? YES/NO
25. WHETHER LIST OF TOOLS ENCLOSED? YES/NO
26. WHETHER VENDOR'S/MANUFACTURER'S GUARANTEE/WARRANTEE FOR THE PUMP SET ENCLOSED? YES/NO
27. WHETHER EXPERIENCE DETAILS OF THE BIDDER ENCLOSED? YES/NO

NOTE: REVIEW OF THE DRAWING/LITERATURE BY THE COMPANY DOES NOT RELIEVE THE SUPPLIER OF HIS RESPONSIBILITIES FOR THE CORRECTNESS OF THE DESIGN TO SUIT THE STATED CONDITIONS.

DATA SHEETS FOR ENGINE DRIVEN DRENCHING PUMP SET :

DATA SHEET (ENGINE)

- 1.0 MAKE
- 2.0 MODEL
- 3.0 NUMBER OF CYLINDERS
- 4.0 ASPIRATION
- 5.0 DISPLACEMENT
- 6.0 BORE X STROKE
- 7.0 LENGTH X WIDTH X HEIGHT
- 8.0 RATED SPEED
- 9.0 GROSS HP AT RATED RPM
- 10.0 DEDUCTION FOR FAN, ALTITUDE & TEMPERATURE
- 11.0 NET HP AVAILABLE AT RATED RPM
- 12.0 SPECIFIC FUEL CONSUMPTION AT:
 - I) 110% LOAD
 - II) 100% LOAD
 - III) 75 % LOAD
 - IV) 50% LOAD
- 13.0 LUBRICATING OIL CONSUMPTION (Ltr / hr.)
- 14.0 COMPRESSION RATIO
- 15.0 MAKE OF STARTER
- 16.0 MAKE OF CHARGING ALTERNATOR
- 17.0 MAKE & MODEL OF CLUTCH PTO

DATA SHEET (PUMP)

- 1.0 MAKE
- 2.0 MODEL
- 3.0 NUMBER OF STAGE
- 4.0 RATED SPEED
- 5.0 DISCHARGE CAPACITY
- 6.0 DISCHARGE PRESSURE / HEAD
- 7.0 TYPE
- 8.0 SERVICE
- 9.0 NEGATIVE SUCTION HEAD

10.0 EFFICIENCY

11.0 IMPELLER DIAMETER

12.0 BEARING TYPE

13.0 IMPELLER MOUNTING

14.0 SHAFT SEAL

15.0 BHP / KW

16.0 STATIC LOAD

17.0 DYNAMIC LOAD

18.0 LENGTH X WIDTH X HEIGHT
OF COMPLETE PUMP PACKAGE

19.0 DRY WEIGHT

20.0 TYPE/MAKE AND SIZE OF COUPLING BETWEEN CLUTCH PTO AND PUMP

21.0 SCOPE OF SUPPLY:

PUMP AS PER SPECIFICATION AND COMPONENTS AS IN POINT A
ENGINE AS PER SPECIFICATION AND COMPONENTS AS IN POINT B
ALL COMPONENTS AND SPECIFICATIONS AS IN POINT NO C

NOTE: While quoting bidder should specifically mention point wise requirement as per NIT. Simply writing "AS PER NIT" will not be acceptable.