OIL & GAS DEVELOPMENT COMPANY LIMITED
PROCUREMENT DEPARTMENT, ISLAMABAD
FOREIGN SECTION A

(To be completed, filled in, signed and stamped by the principal)

ANNEXURE 'A'

1/24

Material CRUDE DESPATCH PUMPS

Tender Enquiry No PROC–FA/CB/PROD/PUMP–4542–A/2020

Due Date

Evaluation Criteria FULL

SCHEDULE OF REQUIREMENT

Sr No	Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price C & F BY SEA	Total Price C & F BY SEA	Deviated From Tender Spec. If Any
1	DIESEL ENGINE DRIVEN CRUDE DISPATCH PUMP, CAPACITY 350 GPM, TOTAL HEAD : 100, DETIAL SPECIFICATION ATTACHED AS PER ANNEXURE 'A'. ft (feet)	Number	6					
2	ELECTRIC MOTOR DRIVEN CRUDE DISPATCH PUMP, CAPACITY 350 GPM, TOTAL HEAD : 100, DETIAL SPECIFICATION ATTACHED AS PER ANNEXURE 'A'. ft. (feet)	Number	2					

Note:

2. **Bid Bond Guarantee:** Bid(s) must be accompanied by an upfront bid bond in the form of pay order/ demand draft or bank guarantee issued by scheduled bank of Pakistan or a branch of foreign bank operating in Pakistan for an amount of US $17,500/= (United States Dollar Seventeen Thousand Five Hundred Only) or equivalent Pak Rupees, with technical bid and valid for 150 days from the date of opening of the bids.

2. **Delivery period:** Delivery period of the quoted product should not be more than 180 days after opening of Letter of Credit (LC).

Vetted

7/6/2020

ANNEXURE-A

1. GENERAL

1.1. This specification covers the minimum requirements of Horizontal Centrifugal Pumps for Crude Loading which will be utilized for either during testing of wells or continues service of crude dispatch.

1.2 Requirement of Pumps is detailed in this package. The item shall be supplied with all ancillaries required.

- Equipment shall be in compliance with technical specification and data sheets for crude loading pumps.
- The pumps supplied by the supplier shall be designed, calibrated inspected, tested, shipped and guaranteed in complete accordance with the requirement states in the specification and attached datasheets.
- In case of any conflict about the requirement of Scope of supply, Specification and Data sheets, exceptions shall be submitted to OGDCL along with the quotation supporting with documentary evidence of referral code.
- Official language for the job is English.

1.3 Pumping unit shall be in accordance to API – 610 , Latest edition in all respect regarding pump and driver wise.

1.4 Throughout this specification terms, definitions abbreviations and symbols are those used in API Std. 610 " Centrifugal Pumps for General Refinery Service" for easiness and uniformity of official terminology This refers also to mechanical seals materials, flushing and cooling arrangements, pumps parts materials and classes etc.

1.5 In order to minimize spare parts, pump types shall be held at minimum. All mechanical seals and flexible couplings shall be from a single manufacturer.

1.6 The Vendor is responsible for ensuring that materials supplied by his Sub-Vendors comply with the requirements of these specifications.

2.0 SCOPE OF SUPPLY

2.1 GENERAL

The supplier shall submit its proposal to OGDCL for approval before the start of manufacturing. The scope of supply includes design, fabrication, testing and documentation of eight (08) nos. condensate loading pumps comprising of Six (06) Nos. Diesel Engine Driven and remaining Two (02) Nos. Explosion Proof motor driven as per specification and attached Data Sheets.

Joint ventures arrangement is not acceptable. Only OEMs or OEMs approved packagers shall submit the bids for the supply of whole package. OEMs approved packagers must submit authorization letter from manufacturers.

2.2 SUPPLIER RESPONSIBILITY

Supplier shall have complete responsibility for design, fabrication, inspection, testing, provision of required documentation and preparing the Pumps for the shipment. All equipments and component parts shall be delivered at OGDCL Store KBS Karachi. The supplier shall also supply start-up and commissioning spares (if required) this must be clearly mentioned in technical bid that whether these spares are required or not. The Supplier shall also be responsible for start-up, pre-commissioning and commissioning of pumps and carrying out acceptance test.
Supplier shall obtain OGDCL's approval before the start of manufacturing of the pump. For this supplier must submit detail drawings for the complete package prior to manufacturing for approval.

The OGDCL's approval for the manufacturer model number of equipment and approval of the suppliers drawings/ documents does not in any way affect the Supplier's full responsibility to supply strictly in accordance with this specification, codes and the standards.

This specification shall not relieve the Supplier of any responsibility to provide equipment and services that are suitable for the intended duty.

3.0 PROCESS DESIGN REQUIREMENTS

3.1 Pumps shall be suitable for continuous duty, and outdoor installation.

3.2 Pump models shall be identical or similar to other pumps, which Vendor regularly manufacturers and which have been operating for at least 10 years.

3.3 Pumps with constant speed driver shall be capable of a 5% increase in head by installation of a new impeller.

3.4 Pumps shall be selected so that rated flow shall not be greater than 115% of flow at maximum efficiency for the rated impeller diameter, provided that this point falls within the predictable area of pump performance curve.

3.5 The head-capacity curve for the pump shall rise continuously from the rated capacity point to shut-off, without sharp increase of slope.

The amount of increase of head to shut-off shall be such to ensure stable operation at all capacities
Unless otherwise specified shut-off head shall be less than 120% or rated head.

3.6 The NPSHR of selected pumps shall be 0.6 (2 feet) below NPSHA as minimum.

No hydrocarbon correction shall be allowed.

In bid documents the NPSHR and NPSHA shall be referred to:

- The Pump centerline for horizontal pumps.

3.7 Vendor shall state in the proposal the value of suction specific speed for each pump.

3.8 Pump running in parallel shall have actual performance curves suitable for such service for satisfactory share of capacity at all loads.

3.9 Pumps shall be suitable for outdoor, uncovered installation.

3.10 The correction factors given in the latest edition of hydraulic Institute Standard shall be used for sizing of pumps handling liquids ore viscous than water.

4. CASING DESIGN AND IMPELLER

4.1 Horizontal pump design shall permit dismantling of internal parts without removing inlet or discharge piping.

4.2 Pump casing design pressure at maximum pumping temperature must be at least equal to the maximum possible discharge pressure when operating with the specified liquid, given maximum suction pressure and including the possible head increases per paragraph 2-3.

4.3 The casing-to-cover gasket (s) shall be confined on the atmospheric side to prevent blow-out.

3/a

4.4 Axially split case horizontal pumps shall not be furnished if specific gravity of pumped liquid is 0.7 or lower.

4.5 Vendor shall specifically note on the proposal any pump equipped with a double suction first stage impeller.

4.6 Direction of rotation shall be permanently marked on casing.

5. WEAR RINGS

5.1 Wear Rings are required for pumps with closed type impellers. Both casing and impeller wear rings are preferred. A casing wear ring is required as a minimum.

6. NOZZLES & MISCELLANEOUS CONNECTIONS.

6.1 All suction and discharge nozzles shall be flanged according to ANSI B16.5 "STEEL PIPE FLANGES & FLANGED FITTINGS".

6.2 Flange shall be integral with pump body. Both the suction and discharge nozzles shall be furnished with companion flanges, gaskets and stud nuts as of the same pressure rating and sizes and respective codes.

6.3 Vent and drain valve connections shall be provided on all pumps. Welding Procedure and stress relieving to be adequate to materials to be welded.

6.4 Connections size shall be ½ inch NPT minimum.

6.5 All threading shall be in accordance with ANSI B.1.20.1.

6.6 Proposals shall state the maximum allowable forces and moments for pumps casings

6.7 Pressure gauge holes on pump nozzles shall in to be drilled.

7. SHAFT AND SHAFT SLEEVES.

7.1 Shaft shall be one piece and provided with shaft sleeves and stuffing box, except where sleeves are not economical to use due to the small shaft size, with Purchaser's approval.

7.2 Shaft sleeves for pumps equipped with mechanical seals shall be minimum 11 – 13% Cr. Steel or Austenitic Stainless Steel hardened in correspondence of working surface of seal ring to sleeve gasket (or equivalent item).

7.3 Shaft sleeves for pumps equipped with packing shall be hardened 11 – 13% Cr. Steel or Austenitic Stainless Steel faced with Stellite.

7.4 Shaft sleeves under seals or glands shaft extend beyond the outer face of the gland.

8. BEARINGS

8.1 Bearing for horizontal pumps shall be oil lubricated and equipped with constant level oilers.

Bearing housings shall be adequately sealed to prevent the entrance of foreign matter into the housing.

8.2 Pump shall have a minimum B10 bearing life of 1,500 hours at continuous operating conditions.

9. MECHANICAL SEALS / PACKING

9.1 Mechanical seals shall be provided. Pump Vendor shall guarantee mechanical seal selection suitable for the specified service.

9.2 Mechanical seals shall be inside type balance type with PLAN 31 arrangement for flushing system.

Selection of mechanical seals types shall be held at minimum. Preferably, all mechanical seals for pumps covered by this specification shall be of same type and standard design with same materials for all components for the whole temperature range (-29°C to + 149°C) in order to ensure maximum interchangeability and minimize spare parts inventory.

Exceptions to these requirements will be taken for special services and conditions (corrosive or special liquids, needs for double mechanical seals and other special applications).

Mechanical seals shall be used during all running test.

Built-in or integral type mechanical seals are unacceptable except in "close-coupled" pumps.

9.3 Each mechanical seal shall be provided with a flush line arranged to flush the seal faces.

Mechanical seal materials and flushing arrangements shall be designed and selected in accordance with API Std. 610 Code.

Non metallic cyclones are not acceptable.

9.4 One mating face of mechanical seals shall be tungsten carbide, when service with liquid whose specific gravity is 0.8 and below.

9.5 Mechanical seals end plates shall be stainless steel.

9.6 The seal end plate and/or stuffing box face mating joints shall incorporate a confined gasket to prevent blowout.

9.7 When packing is specified, Vendor shall recommend, supply and describe number, size and materials of packing rings, lantern rings, etc.

Minimum five packing rings shall be installed.

Asbestos in any form is prohibited.

9.8 Stuffing box gland shall be easily removable and must permit replacement of packing without removal or disassembly of any other part of the pump.

9.9 Two (02) complete sets of packing shall be included for pump utilizing packing.

This packing shall be shipped separately for installation at the job site.

These sets are in additions to any sets included in a spare parts order.

9.10 Shaft or sleeve surface in correspondence of mechanical seal or pacing shall be hardened.

9.11 Vendor is to supply after order placement fully dimensioned drawing of stuffing box.

10. AUXILIARY PIPING FOR COOLING WATER, SEAL FLUSH, ETC.

10.1 Pumps shall be designed to operate without cooling.

10.2 If for special fluids any water cooling is required, with Purchaser approval, the pump Vendor shall supply the cooling water piping manifold to single inlet and outlet connections. Vendor shall state cooing water requirements.

11.3 Piping systems for cooling water or seal flush shall be complete with all fittings, such as valves, sight flow indicators, strainers gauges, orifices etc. required for operation and maintenance.

APPLICABLE CODES FOR PIPING.

10.4 Piping containing process fluids shall be designed and fabricated in accordance with the latest edition and revisions of the Chemical Plant and Petroleum Refinery Piping Code, ANSI B 31.3 as applicable

10.5 For parts subject to process fluid, welders and welding procedures shall be qualified in accordance with the requirements of the ASME Boiler and Pressure Vessel Code, Section IX, latest revision, as applicable.

10.6 When applicable, non-destructive examination shall be conducted in accordance with the ASME Boiler and Pressure Vessel ASME Code, Section V, latest revision.

PIPING REQUIREMENTS.

10.7 For handling non-toxic or otherwise non-dangerous fluids, pipe joints and connections may be manufacturer's Standard or as specified.

10.8 All system components such all pipe, fittings, flanges, valves etc. that contain toxic fluids shall be made of steel.

Pressure and temperature rating of piping containing pumped fluid shall be equivalent to pump design data.

10.9 When pump case is of alloy material, all components of the flushing system shall be equal or better than the casing material.

10.10 The minimum pipe size used shall be ½".

Minimum tubing wall thickness for ½", 5/8" and ¾" OD sizes shall be 0.065" (mm.).

Tubing ferrules shall be 18-8 stainless steel.

Copper tubing and brass fitting are not acceptable.

10.11 All connections 2" and larger shall be flanged and shall be as per ANSI B 16.5 standard and code.

Threaded connections may be used up to 1-1/2" maximum pipe size.

10.12 Piping shall preferably be fabricated by welding.

Welded fittings may be either socket weld or butt weld type as suitable for the service.

Use of threaded connections for toxic fluids shall be held to a minimum and shall be seal welded.

Seal welding is not required only for connections to mechanical seal end plates and where necessary (and held at minimum) for disassembly.

Auxiliary piping connections shall be plugged with solid plugs. Carbon steel plugs shall be used with cast iron casing; the plugs shall be of the same metal as the casing materials.

Plugs shall have shank to permit the use of a wrench.

10.13 The minimum nominal wall thickness for pipes shall be schedule 80 for nominal pipe size from ½" up to 1-1/2" and schedule 40 for larger sizes.

10.14 Reducing bushings shall not be used in welded or seal welded piping.

10.15 Piping shall be arranged to provide the flexibility and the accessibility necessary for proper operation, maintenance, and cleaning.
Piping shall be securely supported to minimize vibration and to prevent breakage during shipment and operation.

10.16 18-8 stainless steel piping or tubing shall be used for process fluids to mechanical seals.

PRESSURE TESTS

10.17 All piping systems containing toxic fluids, and which operate above 1 bar(g) shall be hydrostatically tested to at least 150% of the maximum operating pressure and shall also be subjected to a sensitive leak test per paragraph 337.6 of ANSI B31.3

10.18 Piping systems handling non-toxic fluids below 10.5 bar g whose design temperature is between -29°C and 150°C shall be leak tested as an assembled system at a pressure not less than 1.75 bar g using air or normal operating pressure using water.

CLEANING OF PIPING

10.19 The vendor shall clean all piping after fabrication and testing by a method suitable to ensure the system is in a operable condition.

Carbon steel piping shall be pickled; stainless steel tubing and piping shall be cleaned with suitable solvent.

The above cleaning shall be performed at the Pump Manufacturer Shop prior to assembly of the pump unit.

11. COUPLINGS & GUARDS

11.1 Couplings shall be of the non-lubricated type with stainless steel flexible discs and steel hubs.

Couplings shall be supplied and mounted by pump Vendor.

11.2 Spacer type couplings shall be furnished for all horizontal pumps and where necessary on other pumps designs to permit pump maintenance or seal removal without removing the pump or driver from its mounting.

11.3 Removable rigid all metal non-sparking guards shall be provided for all couplings.

Guards shall extend to with ½" (12.5mm) of stationary housing.

11.4 Coupling shall be dynamically balanced when the combination of size and speed is such that balancing is recommended by the coupling manufacturer.

12. BASEPLATE & MOUNTING

12.1 A suitable fabricated steel base plate shall be supplied for the entire pump unit (pump, driver and gear if fitted).

Base plate shall be of "drain-rim" type sloped towards the pump end and provided with a 1-1/2" NPS threaded drain connection.

A separate mounting flange is mandatory for vertical umps.

12.2 Bas plate shall be so designed and constructed to minimize misalignments due to piping, various internal expansions etc.

12.3 Base plate shall be fully machined.

If pump Vendor does not mount the driver, the base plates shall be machined but not drilled for the driver.

All mounting pads shall be fully machined flat and parallel o receive the equipment. Corresponding surfaces shall be in the same plane within 0.17 millimeter per meter of distance between pads, as machined. All driver-train pads on the base plate shall be machined to allow for installation of shims 3 millimeters minimum thickness under the driver train for alignment purpose.

All shims shall match the full surface of driver feet and shall straddle hold-down bolts.

12.4 Grout-holes shall be 4" minimum, with provisions to avoid oil accumulation over grout.

12.5 Vertical leveling screws spaced for stability shall be provided on the outside perimeter of the base plate.

These shall be numerous enough to carry the weight of the base plate, pump and driver without excessive deflection, but in no case shall fewer than six screws be provided.

12.6 The height of the pump shaft centerline above the base plate shall be minimized.

Adequate clearance shall be provided between the case drain connection and the base plate for installation of drain piping the same size as the connection without using a street below.

12.7 A minimum of four alignment-positioning screws shall be provided for each drive element to facilitate horizontal (transverse and longitudinal) adjustment for all units having an installed driver over 25 Kw.

13. DRIVERS

13.1 Pumps controlled by level control device or that operate in parallel shall have driver rating at least equal to the BHP requested at end of curve (consideration shall be however, given to NPSHA)

13.2 Diesel engine and motors shall be aligned and mounted on the pump base plate by the pump Manufacturer unless otherwise specified.

13.3 Bidder has to clearly mention the manufacturer name, model of engine and motors with all the technical specs. Of both prime movers.

13.4 Engine must be fulfill the min. Tier-III or equivalent emission standard. Otherwise rejected.

13.5 Motors must be in accordance to Ex d Zone-I, Div-I, ATEX Category 2G, Min IP-65, IEC Std- 60072-1, Insulation Class-F, Temperature-B, Ambient Temperature 50 Deg C (Min), ASL 1000 M with continuous duty.

13.6 All the technical literature exhibiting engine and motors performance shall be submitted along with bid.

14. NAMEPLATES

14.1 Nameplates shall be in stainless steel material and secured will stainless steel screws or pins.

14.2 All pumps shall be equipped with a stainless steel nameplate containing, as minimum following data:

Manufacturer's Name
Item No.
Manufacturer Type -Size Serial
Rated speed RPM -Rated specific gravity of pumped liquid
Rated capacity m3/h -Rated pumping head m
Pump weight kg

14.3 Data reported on nameplates shall be expressed in metric system.

14.4 Direction of impeller rotation shall also be shown on pump casing, with a cast-in or permanently attached rotation arrow.

15. MATERIALS

15.1 Material of construction shall conform to ASTM or other recognized specifications / codes.

15.2 Parts fabricated from 18 Cr-8 Ni or hard surface by welding and exposed to the liquid pumped shall be stabilized or be of low carbon grade stainless steel.

15.3 Brazed or welded repairs on cast iron parts will not be accepted. The Vendor shall notify Purchaser of all plugged repairs on iron or major weld repairs on steel parts.

15.4 Carbon steel a minimum or better alloy steel shall be used for toxic liquids.

Iron is not acceptable for this service

16. INSPECTIONS & TESTS

16.1 Purchaser's inspectors shall have free access to manufacturers' shop, when required. If the manufacturer has manufacturing facilities with in Pakistan. OGDCL reps. Shall be called for final testing of the equipment at manufacturer site prior to shipment.

PERFORMANCE & NPSH TEST

16.2 All pump testing will be non-witnessed unless otherwise noted on the individual pump; specification sheet.

Test speed shall be at rated speed unless otherwise approved before purchasing.

Each pump shall be given a performance test on water.

Mechanical seals shall be used during the running test but are not required for the hydrostatic test.

16.3 NPSH test is required on all pumps when the difference between NPSHA and NPSHR is less than 0.6 m or when specified in the individual data sheet.

In this case both NPSH and performance test shall be preformed and witnessed.

16.4 Vendor shall supply certified performance curves for all pumps, showing head, NPSHR, efficiency and power requirements versus capacity.

Curves for pumps which are tested shall be based on actual test data.

16.5 Performance and NPSH test curves shall be reviewed by Purchaser before releasing the pump for shipment.

HYDROSTATIC TESTS.

16.6 Pump pressure parts and seal flush system shall be hydrostatically tested with water at ambient temperatures at not less than 150% of the casing design pressure, but not less than 8 bar g.

16.7 Mechanical seals and glands shall not be used during the hydrostatic test but shall be used during all running or performance test.

Mechanical seals and glands shall e installed in the pumps before shipment and shall be clean, lubricated and ready for initial services.

On pumps that require final adjustment in the field, the Vendor shall attach a metal tag warning of this requirement.

16.8 Each hydrostatic test shall last 30 minutes as minimum.

Witnessing is not required unless specifically requested.

16.9 Hydrostatic test certificate are always required.

STANDARD RUNNING TEST

16.10 Each pump shall be subjected to a standard running test at manufacturer workshop

Test conditions shall be at rated speed and required head: if this is impractical, manufacturer shall state expected test conditions in the bid.

16.11 Pumps shall be operated for a sufficient period to obtain curves for capacity, efficiency, power and required head.

Certified data and curves shall be sent to Purchaser.

16.12 Standard running test is normally "non-witnessed", unless otherwise required.

16.13 Engine's driver shall to be used for the testing.

16.14 Mechanical seals, if supplied, shall be used during standard running test.

16.15 Each pump shall be checked for acceptable vibration limits during the factory running and performance test.

INSPECTION & DISASSEMBLY AFTER TEST

16.16 Inspection and disassembly after test shall be witnesses when specifically required.

16.17 If a "witnessed" performance test is required, each pump, after test, shall be disassembled for check of defects, rubbing, clearance at the option of Inspector, whether or not a dismantling inspection is specified.

16.18 If disassembly is required for improving operation of for defects correction, the initial running test is not acceptable and must be repeated.

Rerun of pump after satisfactory disassembly is not required.
Any filling grinding or other reworking of impellers to meet the guaranteed performance shall be described in the test report or parts manual in sufficient detail to permit re ordering new impellers similarly reworked.

16.19 No surfaces or parts of pumps shall be painted until the inspection is completed.

17. SPARE PARTS

17.1 Spare parts for commissioning, startup and two years operation shall be offered for each pump in the financial proposal separately. Only, the cost of 02 years shall not exceed the 10% amount main equipment and it will not be the part of financial evaluation. OGDCL has the right either to procure theses spares or not. Bidder has to quote only following 02 Years Spare parts.

- Each type of mechanical seals 01 sets per unit

18. NOISE LEVEL.

18.1 Unless other noise limits are specified in the inquiry, noise levels measured I meter from the surfaces of the installed pump set including pump driver transmission and auxiliaries shall not exceed 90 dBA.

19. ENVIRONEMNTAL COMDITIONS.

19.1 The maximum and minimum ambient temperature ranges form 30 °F to 130 °F and relative humidity 100%.

20. GUARANTEE & WARRANTY

The supplier shall guarantee the equipment for a period of 18 months starting from the ex-works date against all defects of material or malfunctions, and against faulty construction.

During this period, he shall, at his own expense, remedy these faults by all necessary means, in particular.

- Replacing of any defective part or materials.
- Moving, including all expenses, of the personnel required for the repair in good running condition of the equipment.

- Repair of the equipment in the manufacturing plant, when necessary, including all transport expenses between the site of installation and the site of repair, in both directions.

20.1 Mechanical

All equipment and component parts shall be warrantee by the Vendor against defective materials, design and workmanship for 1 year after being placed in service (but not more than 18 months after date of shipment).

20.2 Performance

The equipment shall be guaranteed for satisfactory performance at all operating conditions specified on the data sheets.

If any mal-performance or defects occur during the guarantee and warranty period, the Vendor shall make all necessary alternations; repairs and replacements free of charge, free on board port of shipment.

21. Manuals

Bidder has to provide 01 set hard copy of all the O & M , parts manuals for all the installed equipments of pumping unit (Pump, coupling and Diesel engine etc.) along with each pumping unit.

22. Factory Acceptance Test (FAT)

Bidder has to inform 01 months prior to expected date of FAT to OGDCL. 02 Nos. OGDCL professionals shall carry out the FAT and bidder. All the related costs boarding, lodging, return air tickets and other miscellaneous expenses shall be borne by OGDCL. The shipment shall not be made until consignment is not cleared during FAT.

23. After Sales services

Bidder has to give the details as per the following, of after sales services for complete package within Pakistan

- Name of contact person
- Contact No.(Land line and mobile No.)
- Complete address of the firm

Same has to be provided in the technical proposal at the time of evaluation.

24. Delivery Period

Bidder has to confirm the supply of the complete consignment with in 180 days time period after LC establishment.

25. Drawings:

Bidder has to confirm the supply of all the technical drawings of skid and pumps prior to assembling of pump. OGDCL has right to alter if any alteration as per requirement is needed and bidder has to fulfill that. Also, bidder has to confirm the provision of civil and installation drawings prior to shipment of pumps so that commissioning may be carried out timely.

26. Supply Record.

Bidder has to provide last 05 years supply record for the supply of crude dispatch pumps w.r.t API-610 latest edition with in Pakistan to E &P or Refineries as per following format.

19/24

- Name of the purchaser
- Type of pump
- Qty. supplied
- Year of supply
- Detail of contact person

27. Bidder evaluation Criteria

Prospective bidder shall be evaluated on the following qualitative Evaluation criteria. Min. qualifications marks are 75%.

Sr. #	OGDCL Requirement	Total Nos.	Marks Obtained	%age acquired
i	Manufacturing experience of last 05 years of manufacturing same type of Pumps as per clause # 26. a-more than 30 pumps in 5 years b-For 21-30 pumps in 5 years c-For 11-20 pumps in 5 years d- Less Than 10 pumps in 5 years	 **25** **20** **15** **0**		
ii	After sales services (ASS) with in Pakistan both for Pump and Engines as per clause # 23. a. ASS available for both engine & Pump. b. ASS available for Pump c. ASS available for engine. d. ASS not available for engine and pump.	 **20** **15** **10** **0**		
iii	Commissioning of the units at OGDCL sites as per clause # 2.2 a-complied b-Not complied	 **10** **0**		
iv	100% compliance of OGDCL technical specifications as per Annexure "A" without any deviation. a-Acceptance without deviation b-Acceptance with any deviation	 **25** **0**		
V	Provision of letter by pump manufacturer to confirm that quoted			

	pump is as per API-610 latest edition. a- Provided. b- Not provided.	 **10** **0**		
Vi	Provision of documents as per clause # 28 of Ann"A". a- Accepted b- Not Accepted	 **10** **0**		
	Marks obtained:	**100**		

Important Note:
Bid shall be considered Non-Responsive if the bidder acquired zero marks in any one of the above points of bidder evaluation criteria (Point # i to vi). Also, if required clarifications against submitted bid shall be issued which has to be replied by pump manufacturer itself. No reply from bidder/beneficiary/local agent shall be acceptable. In this case bid shall be considered rejected.

28. Provision of Documents:
Bidder has to confirm the provision of the following documents/certificates for each pump at the time of delivery as well as during inspection at manufacturer facilities.

- Material Certificates – Test Reports 2.2 to EN 10204 (*for volute casing, casing cover, impeller & shaft*)
- Hydraulic Performance Test (*witnessed or non-witnessed*)
- Hydrostatic Test
- Vibration Test
- Bearing Temperature Test

DATA SHEET FOR COMPLIANCE OF BIDDERS

Sr. #	OGDCL Requirements	Bidders Response
01	crude loading pump complied to API 610 Std, Latest edition	
	Operation of Unit (Continuous)	
	Location for installation (Outdoor)	
PUMP		
02	Make	
03	Model	
04	Type of pump (Horizontal or Vertical)	
05	Flaw rate (min 350 GPM)	
06	Discharge head (min. 100 ft.)	
07	Differential head	
08	Suction Head (Positive suction head from Crude storage tank open to atmosphere)	
09	Specific gravity of the crude (1.0)	
10	Viscosity (0.75 to 0.80 cp)	
11	Atmospheric temperature ^{O}F (Nor./Min./Max.)110/30/130	
12	Suction and discharge flange size (Min. 300 class)	
13	Vent and drain valves (Min. size ½")	
14	Provision of suction and discharge gauges (min. dial size is 4")	
15	Supply of companion flanges, gaskets, nuts and bolts	
MECHANICAL SEAL		
16	Type (Inside balanced)	
17	Make	
18	Model	
19	Flushing system PLAN 31	
COUPLING WITH GUARD		
20	Make	
21	Model	
22	Type (Flexible coupling)	
BASE PLATE		
23	Specs as per Clause-12	
DIESEL ENGINE and Motor		
24	Make	
25	Model	

Sr. #	OGDCL Requirements	Bidders Response
For Engine:		
26	Emission standard (Min Tier-III or Equivalent)	
27	Exhaust muffler along with Flame arrestor	
28	Control Panel	
	○ Stop push button ○ Hours run meter. ○ Emergency shut down button ○ Oil pressure gauge ○ Cooling water temperature gauge ○ Speedometer	
	Emergency shutdowns ○ Lo- oil pressure ○ High water temp. ○ Over speed ○ Lo-coolant level ○ Lo-oil level	
29	Speed of the engine (as per pump requirement)	
30	Cooling system	
31	Lubrication system	
32	Air system	
33	Provision of Batteries	
Electric Motor		
34	Speed (RPM)	
35	Power KW	
36	Hazardous area Classification as per clause 13.5	
	IP Rating IP-55	
Manuals (For Engine, Motor, Pump & coupling)		
34	O & M	
35	Parts	
Miscellaneous		
36	Guarantee/Warranty (18 Months)	
37	Commissioning at site	
38	Technical literature (bidder has to provide for all the equipment along with bidder)	
39	Compliance to attached Data sheet	
40	Provision of spare parts as per Cl-17.1	
41	After sales service as per Cl-23	

42	Delivery period as per Cl-24	
43	Provision of drawings as per Cl-25	
44	Compliance to all the OGDCL tender docs. requirements	
45	Provision of supply record as per Cl-26	

DATA SHEET FOR CONDENSATE LOADING PUMP

Datasheet No.	DS-05/04-2012
Prep. By	SM
Date	22/02/2012
Sheet	

Application To: Proposal ○ Purchaser ○ As Built ○

Note: ○ Indicates Information to be Completed by Purchaser

□ By Manufacturer

Client: Oil & Gas Development Company
Plant:
Req.No.:
Vendor:
Vendor Dwg. No.:

Unit: Loading Area
Order No.:
Job No.:
Model No.:
Liquid to handle: Crude/Condensate

Service Crude Oil — Total Pumping units required 8

No. Pumps Req'd 8 — No. Motors Req'd 2 — Provided By — Pump Vendor — Mtd By
Item No. — Item Description

No Engines Req'd 6 — No Turbines Req'd NA — Provided By — Pump Vendor — Mtd By
Item No. — Item Description

Pump Mfr. — Size and Type — Serial No.

OPERATING CONDITIONS, EACH PUMP

Liquid, gpm: Hydrocarbon Liquid — Pt. Nor. — Rated 350
Disch. Press Reqd., ft — 100
Pt, F, Nor/Min/Max: 110/30/130 — Suct. Press., — Rated
Sp.Gr.at Pt, 1 — Diff. Press., psi
Vap. Press. Aat Pt, psi — Diff. Head, ft.
From above ground Crude storage tank at
Vis. At Pt, cp — NPSHA, ft — Atmospheric pressure
Corr/Eros. Caused by

Location: □ Indoor ■ Outdoor — Area: □ Safe ■ Hazardous

Working: ■ Continuous □ Intermittent □ Random

PERFORMANCE

Proposal Curve No.
RPM — NPSHR (Water)
Eff. — BHP Rated
Max. BHP rated IMP
Max. Head Rated IMP
Min. Continuous gpm
Rotation (Viewed from CPLG End)

CONSTRUCTION

	Size	Rating	Facing	Location
Nozzles				
Suction	6-8"	150#	RF	Hazardous Area
Discharge	4-6"	300#	RF	Hazardous Area

Case-mount: □ Centerline □ Foot □ Bracket □ Vert. (Type)
-Split □ Axial □ Rad; Type Volute. □ SGL □ DBL □ Diffuser
- Press □ □ Max. Allow psig °F Hydro Test psig
-Connect: □ □ Vent □ Drain □ Gage
Impeller Dia.: □ Rated □ Max. □ Type:
Mount: □ Between Brgs □ Overhung
Bearing-Type: □ Radial □ Thrust
Lube: □ Ring Oil □ Flood □ Oil Mist □ Flinger □ Pressure
Coupling: □ Mfr. □ Model
Driver Half Mtd By: • Pump Mfr. ○ Driver Mfr. ○ Purchaser
Packing □ Mfr.& Type Size / No. of Rings
Mech. Seal □ Mfr. & Model API Class. Code
□ Mfr.Code

SHOP TESTS

○ Non-Wit. Perf. • Wit. Perf.
○ Non-Wit. Hydro • Wit.Hydro
○ NPSH Req'd. • Wit. NPSH
• Shop Inspection
○ Dismant. & Insp. After Test
○ Other

MATERIALS

Pump: Case / Trim Class ○ S-1

Baseplate:

AUXILIARY PIPING

○ C.W. Pipe Plan ○ CU: ○ SS: Tubing: Pipe
Total Cooling Water Req'd. gpm — Sight F.I.Req'd
○ Packing Cooling Injection Req'd. — Total gpm — psig
○ Seal Flush Pipe Plan ○ CS ○ SS: ○ Tubing: ○ Pipe
○ External Seal Flush Fluid gpm psig
○ Auxiliary Seal Plan ○ CS ○ SS: ○ Tubing: ○ Pipe
○ Aux. Seal Quench Fluid

ENGINE DRIVER

□ HP □ Make
□ RPM □ Model
□ Type □ Speed regulation
□ Fuel consumption MJ/bkW-hr@100% load

Approx. WT. Pump & Base
Motor Engine

MOTOR DRIVER

□ HP □ Make
□ RPM □ Model
□ Type □ Speed regulation
□ Fuel consumption MJ/bkW-hr@100% load