



बामर लॉरी एण्ड कं. लिमिटेड
Balmer Lawrie & Co. Ltd.

REFINERY & OILFIELD SERVICES
21, Netaji Subhas Road
Kolkata 700 001

TENDER DOCUMENT

FOR

SUPPLY OF CENTRIFUGAL PUMP

Tender No.: ROFS/CAPEX/20-21/ENQ/04

Dated: 28.08.2020

Tender Due date & Time: 18.09.2020, 16:00 Hrs

PART-I (Un-Priced)

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Balmer Lawrie & Co. Ltd.
Refinery & Oilfield Services
NOTICE INVITING TENDER

Tender No. : ROFS/CAPEX/20-21/ENQ/04
Date : 28/08/2020
Due Date & Time : 18/09/2020, 16:00 Hrs
Date & Time of Opening : 18/09/2020, 16:30 Hrs

BALMER LAWRIE & CO. LTD. (BL) invites online offers from experience & resourceful Suppliers/vendors (pump manufacturers or their authorized dealers only) for design, engineering, manufacture, assembly, inspection, testing at manufacturer's works and supply of **One (1) No. Centrifugal Pump with FLP motor and One (1) Centrifugal Pump without motor** mounted on a common base frame along with all accessories to be used in sludge processing operation from crude oil tanks.

1.0 SCOPE OF WORK

The scope of supply covers design, engineering, manufacture, assembly, inspection, testing at manufacturer's works and supply of One (1) No. Centrifugal Pump with FLP motor and One (1) Centrifugal Pump without motor along with other accessories as defined in Technical Specification, Data Sheet elsewhere in this tender. The pump should be delivered in a properly packed condition suitable for transportation by road.

2.0 PRE-QUALIFICATION (PQ) CRITERIA

The prospective tenderers shall fulfil the pre-qualification criteria and submit following documents in support of the same:

- a) Order copy or Commissioning report/completion certificate for supply of similar Centrifugal Pump during the last 7 years.
- b) GST Registration Certificate
- c) PAN
- d) In case of authorized dealer, the tenderer shall submit valid authorization letter/certificate from the manufacturer.

3.0 COMPLETION PERIOD

Time is the essence of the contract. Supply of Pump shall be completed within **16 (Sixteen) weeks (Ex-Works basis)** from the date of Letter of Intent (LOI)/ Purchase Order (PO) whichever is earlier.

4.0 TENDER DOCUMENTS

Tender Documents comprise two parts viz. Part-I (Un-priced) and Part-II (Priced). The Un-priced Part consists of Notice Inviting Tender, Instruction to Bidders, Technical Specifications, Data Sheets and other formats. The Priced Part consists of Price Schedule.

5.0 VALIDITY OF OFFER

Tenderers shall keep their offer valid for a period of **90 (ninety) days** from the due date of this tender. Validity may be extended, if so advised by BL.

6.0 SECURITY DEPOSIT

The tenderer, with whom the contract is decided to be entered into and intimation is so given will have to make a Security Deposit @ 2.5% of the basic Order value in the form of Demand Draft drawn in favour of Balmer Lawrie & Co. Ltd. payable at Kolkata or Bank Guarantee valid till completion of supply executed by any Scheduled bank within 15 days from the date of intimation of acceptance of their tender, failing which Balmer Lawrie & Co. Ltd. reserves the right to cancel the Order. Security Deposit shall be released after completion of the supply.

7.0 BASIS OF EVALAUTION

Bidders will be selected through evaluation of their Unpriced Bids based on fulfillment of pre-qualification criteria i.e. submission of all required PQ documents & other required documents. Price Bids will be opened only for the bidders whose Unpriced Bids (Part-I) are found to be acceptable. The tenderer shall fill the rates & amounts both in words and figures. The amount against each item is also to be filled in. In case of any discrepancy, the amount quoted in words shall be taken as correct. L1 Bidder will be determined based on total amount comprising basic amounts + Packing & Forwarding. Freight charges will be reimbursed at actual since delivery addresses will be intimated after readiness of materials.

8.0 SPLIT ORDER

This is a NO-SPLIT order.

9.0 FORCE MAJEURE

Any delay in or failure of the performance of either part hereto shall not constitute default hereunder or give rise to any claims for damage, if any, to the extent such delays failure of performance is caused by occurrences such as Acts of God or an enemy, expropriation or confiscation of facilities by Government authorities, acts of war, rebellion, sabotage or fires, floods, explosions, riots, or strikes. The Vendor shall keep records of the circumstances referred to above and bring these to the notice of the Engineer-In-Charge in writing immediately on such occurrences. The amount of time, if any, lost on any of these counts shall not be counted for the delivery period. On decision of BL/Owner arrived at after consultation with the Vendor, shall be final and binding. Such a determined period of time be extended by the Owner to enable the Vendor to deliver the items within such extended period of time.

If Vendor is prevented or delayed from the performing any of its obligations under this agreement by Force Majeure, then Vendor shall notify Owner the circumstances constituting the Force Majeure and the obligations performance of which is thereby delayed or prevented, within seven days of the occurrence of the event.

10.0 ARBITRATION

Any dispute or difference arising under this Contract shall be referred under jurisdiction of Kolkata to a sole arbitrator to be appointed by the Chairman & Managing Director, Balmer Lawrie & Co. Ltd. and the provisions of Arbitration Act, 1996 including any statutory modifications or enactment thereof shall apply to the Arbitration proceedings. The fees of the arbitrator, if any, shall be shared equally by both the parties. The award shall be a speaking award stating reason therefor and is final & binding on the parties. The proceeding shall be conducted in English language and courts at Kolkata will have exclusive jurisdiction to settle any dispute arising out of this contract.

11.0 JURISDICTION

Notwithstanding anything contained in any other law, the courts in the city of Kolkata along shall have jurisdiction in respect of all or anything arising under this agreement and any award or awards made by the sole arbitrator

12.0 TERMINATION OF CONTRACT

In case of violation/breach of any agreed terms and conditions of contract and persistently failure/negligence to observe and perform all or any of the acts, deeds, matters or things to be observed and performed by the Supplier requiring the Owner to observe or perform the same, BL may cancel/terminate this contract. In such case, the EMD and/or Security Deposit of the Supplier will be forfeited.

13.0 RIGHT OF ACCEPTANCE/REJECTION

Mere issue of tender document, participation in e-procurement portal and submission of bids does not necessarily qualify for consideration of bids. Conditional offer or offer with deviations will not be accepted. M/s Balmer Lawrie & Co. Ltd. reserve the right to accept or reject any tender either in part or in full without assigning any reason whatsoever.

14.0 NON-CONFORMANCE

Tenders not conforming to the above-mentioned requirements are liable to be rejected.

15.0 TENDER CONDITIONS FOR BENEFITS / PREFERENCE FOR MICRO & SMALL ENTERPRISES (MSES)

15.1 As Per Public procurement Policy for Micro & Small Enterprises (MSEs) Order, 2012 issued vide Gazette Notification dated 23.03.2012 by Ministry of Micro, Small and Medium Enterprises of Govt. of India, MSEs must be registered with any of the following in order to avail the benefits/preference available vide Public Procurement Policy MSEs Order,2012

- a. District Industries Centers (DIC)
- b. Khadi and Village Industries Commission (KVIC)
- c. Khadi and Village industries Board and Coir Board
- e. National Small Industries Corporation (NSIC)
- f. Directorate of Handicraft and Handloom
- g. Any other body specified by Ministry of MSME

- 15.2 MSEs participating in the tender must submit the certificate of registration with any one of the above agencies.
- 15.3 The registration certificate issued from any one of the above agencies must be valid as on close date of the tender. The successful bidder should ensure that the same is valid till the end of the contract period.
- 15.4. The MSEs who have applied for registration or renewal of registration with any of the above agencies/bodies, but have not obtained the valid certificate as on close date of the tender, are not eligible for exemption/preference.
- 15.5 Declaration of Udyog Aadhar Memorandum [UAM Number] number by the MSME vendors on Central Public Procurement Portal [CPPP] is mandatory to qualify for availing the benefits as per Public Procurement Policy for MSMEs
- 15.6 Price Preference - Subject to meeting terms and conditions stated in the tender document including but not limiting to prequalification criteria, 25% of the total quantity of the tender is earmarked for MSEs registered with above mentioned agencies/bodies for the tendered item. Where the tendered quantity can be split, MSEs quoting a price within a price band of L1+15% shall be allowed to supply 25% of total tendered quantity provided they match L1 price. In case the tendered quantity cannot be Split, MSE shall be allowed to supply total tendered quantity provided their quoted price is within a price band of L1+15% and they match the L1 price. In case of more than one such MSEs are in the price band of L1+15% and matches the L1 price, the supply may be shared proportionately.

For Further clarity in this regard a table is furnished below:

Type of Tender	Price Quoted by MSE	How to Finalize the Tender
Can be split	L1	Full Order on MSE
Can be split	Not L1 but within L1+15%	25% order on MSE subject to matching L1 price
Cannot be split	L1	Full Order on MSE
Cannot be split	Not L1 but within L1+15%	Full Order on MSE subject to matching

- 15.7 Out of the 25% target of annual procurement from micro and small enterprises, 4% has been earmarked for procurement from MSEs owned by SC or ST entrepreneurs and 3% from within 25% has been earmarked from supply from the MSEs owned by Woman entrepreneurs. Provided that, in event of failure of such MSEs to participate in tender process or meet tender requirement and L-1 price, 4%/ 3% sub-target for procurement earmarked for MSEs owned by SC or ST entrepreneurs and woman entrepreneurs respectively shall be met from other MSEs.
- 15.8 To qualify for entitlement as SC/ST owned MSE, the SC/ST certificate issued by District Authority must be submitted by the bidder in addition to certificate of registration with

any one of the agencies mentioned in paragraph (l) above. The bidder shall be responsible to furnish necessary documentary evidence for enabling BL to ascertain that the MSE is owned by SC/ST. MSE owned by SC/ST is defined as:

- a. In case of proprietary MSE, proprietor (s) shall be SC/ST
- b. In case of partnership MSE, The SC/ST partners shall be holding at least 51% shares in the enterprise.
- c. In case of Private Limited Companies, at least 51% share shall be held by SC/ST promoters.

16.0 TENDER CONDITIONS FOR BENEFITS / PREFERENCE UNDER 'MAKE IN INDIA'

Purchase preference shall be given to 'Make in India' as per followings for subject tender

–

1. This is a non – divisible tender and 'Class I local supplier' shall get purchase preference over 'Class – II local supplier' as well as 'Non-local supplier', as per following procedure –
 - a. Definitions
 - i. **'Class I local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal or more than 50% as defined below (iv)
 - ii. **'Class II local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement has local content 20% but less than 50% as defined below (iv)
 - iii. **'Non-local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement has local content less than or equal to 20% as defined in 'iv'
 - iv. **'Local content'** means the amount of value added in India which shall, be the total value of item procured minus the value of imported content (including all custom duties) in the item as a proportion of the total value in percent
2. The margin of purchase preference shall be 20%
3. Purchase preference shall be as per following procedure –
 - a. Among all qualified bids, the lowest bid will be termed L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1
 - b. If L1 is not 'Class I local supplier', the lowest bidder among the 'Class I local supplier' will be invited to match the L1 price subject to Class I local supplier's price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class I local supplier' subject to matching the L1 price
 - c. In case such lowest eligible 'Class I local supplier' fails to match the L1 price, the 'Class I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder
4. Bidder to indicate followings for evaluation purpose –

Description	Bidder to Mention
Category of Bidder	
Country of Origin of Product / Location of Manufacturing	

facility	
% of Local content (Only % shall be mentioned, however breakup shall be provided after opening of price bid for verification), if % of local content not proven, BL will have right to reject the bid, for further details please refer order no P-45021/2/2017-PP(BE-II) issued by the Government of India	

17.0 CONFLICT OF INTEREST

The bids of any tenderer may be rejected if a conflict of interest between the bidder and the company is detected at any stage.

18.0 PAYMENT TERMS

- i) **90% of the basic order** value along with full taxes shall be paid after receipt of materials in good conditions and submission of bill/invoice along with relevant test certificates and guarantee certificates.
- ii) **10% of the basic order** value shall be paid against submission of PBG (Performance Bank Guarantee) of equivalent amount valid with validity of 18 months from the date of supply or 12 months from the date of commissioning whichever is earlier. PBG shall be submitted after completion of delivery. If PBG is not submitted, the payment will be made after expiry of Warranty/ Guarantee period.

19.0 WARRANTIES & GUARANTEES

Vendor shall guarantee BL and their authorized representative against any and all defects in manufacturing, workmanship, materials and performance for a period of twelve (12) months from the date of commissioning or eighteen (18) months from the date of supply whichever is earlier. Should any defect develop during the guarantee period, it shall be remedied promptly free of charge by the Vendor and all expenses for transportation of goods necessitated for such repairs or replacement shall be borne by the vendor.

20.0 INSPECTION & TESTING

All materials and components will be subject to inspection by BL/authorised representatives of BL as per the relevant codes, standards and specification. All arrangement & costs, if any, for conduction tests during inspection at vendor's works will be deemed to be included in the quoted prices.

Before commencement of despatch, the goods shall be stamped clear for transportation to ROFS site by the Inspector and a note of acceptance will be released by the Inspector to the Vendor indicating acceptance of the goods offered by the Vendor for inspection. Only after the release of such note, it will be deemed that the goods (or concerned part thereof) are acceptable to BL/authorised representative of BL.

It shall be the option of BL/ authorised representative to allow the Vendor to replace the rejected goods or to cancel the Order for the goods rejected. All costs for carrying out inspection including that required for making arrangements for the same shall be borne by the Supplier.

21.0 LIQUIDATED DAMAGES

A reduction at **0.5% of the basic order** value per week or part thereof subject to a maximum of **5% of the basic order** value will be applicable for delay in completion schedule.

22.0 TAXES & DUTIES

GST shall be mentioned separately as per price schedule. Ant taxes and duties other than GST shall be included in the basic rate. **Prices should be firm** till completion of the job and no escalation for whatsoever reason shall be granted. Our GST Registration No. 19AABCB0984E1ZS for the state of West Bengal.

For further clarification on tender document, please contact Sk Abu Jafor, Manager (Business Development), Phone no + 91 33 2222 5706, Fax no.: + 91-33 2222 5283, E-Mail: Jafor.a@balmerlawrie.com.

Yours faithfully,
for, **BALMER LAWRIE & CO. LTD.**

(A Bandyopadhyay)
Head (ROFS)



Balmer Lawrie & Co. Ltd.
Refinery & Oilfield Services

INSTRUCTIONS TO BIDDER REGARDING BID SUBMISSION

1.0 PROCEDURE FOR BID SUBMISSION

The Tender Document comprises of two Bids viz Unpriced Part – I and Priced Part – II. The submission of offer can only be made through e-bidding as per following guidelines :

1.1 BID SUBMISSION

The bidders shall submit their response through bid submission to the tender on e-Procurement platform at <https://balmerlawrie.eproc.in> by following the procedures given below. The bidder would be required to register on the e-procurement market place <https://balmerlawrie.eproc.in> and submit their bids on line. The bidders shall submit their offers comprising the Tender Document (Part-I), duly filled up (wherever required), stamped and signed along with all pre-qualification documents, EMD. The bidders shall download the tender document, upload the same along with scanned copies of all the relevant certificates, documents etc., duly filled in, stamped and signed, in support of their eligibility criteria/NIT in the e-Procurement web site. However, bulky documents which could not be uploaded may be sent along with Unpriced Bid (Part-I) of the Tender Document, duly stamped and signed to the Tender Inviting Authority before date of tender opening along with the bank draft towards EMD amount (unless otherwise MSME). A copy of Priced Bid **without rate and amount** but with percentage of taxes and duties should be submitted along with Unpriced Bid. **The price bid file in pdf format shall be downloaded from the website, bidder to fill in their item-wise rates & amounts on hard copy, stamp, sign, scan and upload the same. Total Contract Price with GST shall be entered as 'Project Contract Total' while uploading price bid.**

1.1.1 Registration with e Procurement platform

For registration and online bid submission tenderer may contact the following officials at the HELP DESK of M/s C1 India on browsing to the website <https://balmerlawrie.eproc.in> as mentioned below: during business hours (10:00 a.m. to 06:30 p.m.) from Monday to Friday (Excluding holidays of the Company):

Dedicated email : blsupport[at]c1india[dot]com			
Dedicated Helpdesk for Balmer Lawrie			
<u>Contact Person</u>	<u>E-Mail ID</u>	<u>Tel. No.</u>	<u>Helpdesk Nos are open from</u>
1. Mr.Tirtha Das (Kolkata)	tirtha.das@c1india.com	+91-9163254290	MON - FRI
2. Mr. CH. Mani Sankar (Chennai)	chikkavarapu.manisankar@c1india.com	+91-6374241783	MON - SAT
3. Ms. Ujwala Shimpi (Mumbai)	ujwala.shimpi@c1india.com	+91-22-66865608	MON - FRI
4. Helpdesk Support (Kolkata)	blsupport@c1india.com	+91-8017272644	MON - SAT

Escalation Level 1		
Mr.Tuhin Ghosh	tuhin.ghosh@c1india.com	+91-8981165071
Escalation Level 2		
Mr.Sandeep Bhandari	sandeep.bhandari@c1india.com	+91-8826814007
Escalation Level 3		
Mr.Achal Garg	achal.garg@c1india.com	
In case, you are unable to get in touch with any of the Technical Support Associates, kindly drop a mail at blsupport@c1india.com mentioning your Name and Mobile No. One of our associates will get back shortly.		

1.1.2 Digital Certificate authentication

The bidder shall authenticate the bid with his Digital Certificate for submitting the bid electronically on e-Procurement platform and the bids not authenticated by digital certificate of the bidder will not be accepted on the e-Procurement platform.

All the bidders who do not have Digital Certificates need to obtain Digital Certificate. They may contact Help Desk of C1 India Pvt. Ltd.

1.1.3 Submission of Hard copies

After submission on-line bid, bidders are requested to submit the demand draft towards EMD along with original Affidavit and pre-qualification & documents (i.e. Unpriced Bid) which could not be uploaded due to its bulkiness to the following Tender Inviting Authority on/before the due date of opening date under cover of Unpriced Bid, Part - I.

HEAD (ROFS)
Balmer Lawrie & Co. Ltd.
Refinery & Oil Field Services
21, Netaji Subhas Road
Kolkata – 700 001

The above documents & EMD (unless bidder is a registered MSME under specific category) can be submitted either in person or through courier or by post. **Under no circumstances, physical copy of Price Bid should accompany with these documents. If price bid is submitted in hardcopy, the bid will summarily be rejected.**

Balmer Lawrie shall not take any responsibility for any delay or non-receipt of said documents. If any of the documents furnished by the bidder is found to be false / fabricated, the bidder is liable for black listing, forfeiture of the EMD, cancellation of work and criminal prosecution.

The bidder is requested to get a confirmed acknowledgment from the Tender Inviting Authority as proof of submission of hard copies.

1.1.4 Corrigendum to tender

The bidder has to keep track of any changes by viewing the addendum/ Corrigendum's issued by the Tender Inviting Authority on time-to- time basis in the e-Procurement platform. The Company calling for tenders shall not be responsible for any claims/problems arising out of this.

1.1.5 Bid Submission Acknowledgment

The user should complete all the processes and steps required for bid submission. The successful bid submission can be ascertained once acknowledgment is given by the system through bid submission number after completing all the processes and steps. Tender Inviting Authority and C1 India Pvt. Ltd. will not be responsible for incomplete bid submission by users. Users may also note that the incomplete bids will not be saved by the system and are not available for the Tender Inviting Authority for processing.

Before uploading scanned documents, the bidders shall sign on all the statements, documents, certificates uploaded by him, owning responsibility for their correctness/authenticity.

1.1.6 Disclaimer Clause

The Company (Balmer Lawrie & Co. Ltd.) nor the service provider (C1 India Pvt. Ltd.) is responsible for any failure of submission of bids due to failure of Internet or other connectivity problems or reasons thereof.

Fax/e-mail offers shall not be accepted. The company will not accept any responsibility for any delay in receipt or non-receipt of bidding document sent by post. Offers not conforming to the above mentioned requirements are liable to be rejected.

TECHNICAL SPECIFICATION

1.0.0 INTENT OF SPECIFICATION

This specification is intended for procurement of Centrifugal Pumps.

2.0.0 SCOPE OF SUPPLY / WORK

The scope of supply of the vendor under this specification and associated data sheet is intended to cover design, manufacture, assembly, testing and supply of the Centrifugal Pump as specified herein under but not limited to:

- 2.1.0 Pump duty shall be continuous.
- 2.2.0 The pumps shall be suitable for operation in hazardous area.
- 2.3.0 Pumps offered shall have a minimum margin of NPSHA over NPSHR of 1.0 meter.
- 2.4.0 Pump differential head to be calculated for lower value of sp. gravity of fluid and drive motor rating shall be selected for higher value of sp. gravity specified.
- 2.5.0 Bypass Valve for each pump to ensure protection against over pressure.
- 2.6.0 Coupling (Lovejoy Spacer type) and Coupling guard (non-sparking)
- 2.7.0 Sealing / Packing as specified in the data sheet.
- 2.8.0 Drain / Vent from casing with isolation valve
- 2.9.0 Drive Motors as per specification is to be supplied.
- 2.10.0 All internal piping, fittings, valves, nipples etc. for cooling, sealing, lubrication of pump.
- 2.11.0 Base Frame for pump and Motor and other steel embedded parts, if required.
- 2.12.0 Complete set of foundation /anchor bolts. Civil work of foundation is, however, excluded from Scope.
- 2.13.0 Initial fill of Lubricant / oil for anti-friction bearing / others.

3.0.0 TECHNICAL REQUIREMENT

3.1.0 Design and Construction Features

- 3.1.1 Pumps shall be designed, manufactured and tested as per pump data sheet. Pumps shall be Back Pull Out design to facilitate removal of coupling, seal and pump without the necessity of removing the motor.

3.1.2 Material of Construction

Vendor should satisfy himself with the compatibility of MOC specified in the pump data sheet and the fluid handled. However, vendor may offer equivalent / better quality material and the same shall be indicated in the offer.

3.1.3 Pumps shall operate intermittently and shall be suitable for outdoor locations in a corrosive environment.

3.1.4 The complete rotating assembly of the pumps shall be statically balanced.

3.2.0 Operating Conditions / Performance Requirements

3.2.1 Operating conditions are detailed out in Technical Data Sheet. Design flow rate referred to standard impeller should be located close to the maximum efficiency point.

3.2.2 Pump shall be designed such that there is no damage due to reverse flow through the Pump arising out of its mal-operation.

3.2.3 Impellers shall be manufactured in a single piece and designed to withstand the maximum speed of rotation.

3.2.4 Motor selected shall be such that it is not overloaded for operation at any point of the total pump characteristic curve.

3.2.5 Casing and volute thickness shall be designed for a pressure which shall at least be 120% of the pump shut-off pressure at maximum continuous speed. For Electric Motors, the maximum continuous speed will be that corresponding to synchronous speed.

3.2.6 Rotating elements of Pumps shall be designed to ensure least vibration throughout its operation. "Peak to Peak" vibration limit at the bearings shall not exceed the values as stipulated in the code.

3.2.7 The pump shall be capable to operate continuously within the 10% to 100% flow rate range as compared to the design flow rate. The pump operation shall be stable from 25% up-to 120% of design flow rate with sufficient NPSH.

3.2.8 Casing thickness shall be designed for a pressure which shall at least be 150% of the pump maximum discharge pressure at continuous speed.

3.2.9 No available NPSH has been furnished in Purchaser's Data Sheet. However, Pumps with minimum NPSH requirements will be given due consideration while finalizing the selection.

3.2.10 Flexible spacer type coupling shall be designed with a service factor of minimum 1.20. The construction shall be such as to allow disassembly of pump without removing the driver. The coupling guard shall be made of Non-sparking material of at least 1.5 mm thickness.

3.2.11 Gear box would be totally weather resistant and bearing housing would be leak proof.

4.0.0 TESTING AND INSPECTION

4.1.0 Materials Test Certificates

- 4.1.1 All materials used for construction shall be of tested quality. Materials shall be tested as per relevant standards and Test Certificates are to be furnished to Purchaser. In case Mill Certificates are not available, vendor shall carry out physical and chemical tests from approved Testing Agency (ies) at his own expenses.
- 4.1.2 Material Test Certificates shall be related and verified with the actual materials used before construction by Purchasers' Inspector(s) who will approve the materials.
- 4.2.0 **Hydrostatic Test**
- 4.2.1 Pump casing shall be hydro statically tested at 200% of the pump Rated Head or at 150% of the maximum Head, whichever is higher. Test Pressure shall be maintained for at least 30 Minutes.
- 4.3.0 **Performance Tests (at Vendor's works)**
- The following Performance Tests for Pump shall be conducted at vendor's works in presence of the BL's Inspector(s). The test result will be subject to approval by Inspector(s) before despatch.
- 4.3.1 Each pump shall be given a performance test with water prior to dispatch. Test to be conducted in accordance with "Standards of Hydraulic Institute", Centrifugal Pump Section.
- 4.3.2 Acceptance will be predicated on hydraulic and mechanical performance during the performance test.
- 4.3.3 All rings and bushings shall be fitted to standard tolerances during tests.
- 4.3.4 Test shall be run at full speed.
- 4.3.5 The full speed performance test is to be run over a flow range from zero flow and maximum head to a point exceeding all design points/or point of maximum efficiency by a minimum of ten percent.
- 4.3.6 Pump shall be completely disassembled and rotating element removed for inspection of clearances and for any unusual wear upon completion of all performance tests. BL's Inspector may witness this inspection.
- 4.4.0 **Performance Tests (after installation at Site)**
- 4.4.1 After installation, Pump shall be tested for above performances by BL. In case, the site tests are found not to meet the specified requirements, the Pump shall be rectified by the vendor at his own expenses.
- 5.0.0 **ELECTRIC MOTOR**
- Electric Motors shall fully conform to General Specification of Motors attached and as per details given in Pump Data Sheets and Technical Specification for Electric Motor.
- 6.0.0 **DOCUMENTATION**
- Vendor shall submit drawings, datasheet, information, test certificates, catalogs etc. in the manner prescribed below:
- With the offer**
- 6.1.1 Preliminary outline drawings indicating principal dimensions, weight and location of pump suction and discharge connection.
- 6.1.2 Cross-sectional drawing of the Pumps along with Materials of construction.

6.1.3 Characteristics curves of pump showing NPSH, BHP, Head, Efficiency against capacity, Speed vs Torque curve etc. Minimum recommended flow through pump shall also be indicated in the curve.

6.1.4 Catalogues and illustrated literature of pump.

6.1.5 Experience list for similar type of pump for similar services.

6.2.0 Drawings, data and information required from Vendor after placement of the order.

The following drawings and data must be submitted within the stipulated time mentioned against each item from the date of placement of order/issue of Letter of Intent, whichever is earlier, for the BL's approval:

6.2.1 Foundation drawings with dead load as well as operating and dynamic load (2 weeks).

6.2.2 GA and other drawings, documents (2 weeks)

6.2.3 Material test certificates, test reports for hydrostatic, performance and dynamic balancing tests, certified performance curves and other particulars as required by applicable clauses of this specification (prior to dispatch of equipment).

6.2.4 Original Manufacturer's certificate for bought out items.

6.2.5 Operation, Erection and Maintenance manual of Pump (along with dispatch of equipment).

6.3.0 No. of copies of drawings, data, curves, etc. to be submitted by Vendor.

6.3.1 'For Approval' – drawings : Two (2) copies.

6.3.2 Final approved drawings : Four (4) copies + Soft Copy

6.3.3 Test & Guarantee Certificates : Four (4) copies. + Soft Copy

6.3.4 Operation & Maintenance Manual : Four (4) copies + Soft Copy

7.0.0 MARKING

7.1.0 Connections furnished on the equipment shall be die-stamped or permanently tagged to agree with the pump manufacturer's connection table or general arrangement drawing.

7.2.0 Each couplings half and spacer shall be electrically etched or die-stamped with the equipment number of the pump for which it is intended.

7.3.0 Nameplates shall have the following information :

Equipment No.

Manufacturer's name

Serial No. of pump

Model No.
Rated capacity
Pumping head
Sp. Gravity of fluid
Speed in RPM Driver rating
Direction of rotation.

8.0.0 PACKING

8.1.0 All equipment shall be packed, securely anchored (skid-mounted when required) and protected for domestic shipment by truck. All un-mounted components, except drivers, shall be suitably crated and firmly attached to the main pump unit for shipment.

8.2.0 One complete set of installation, operation, and maintenance instructions shall be packed and shipped with equipment, if required.

GENERAL REQUIREMENT OF MOTOR

1.0.0 MOTORS

- 1.1.0 All drive motors required for the system shall be included under the scope of the vendor as specified in the Scope of Work.
- 1.2.0 Motors shall be suitable for the voltage ratings indicated in the Data Sheet and shall conform to the following Motors provided shall have adequate performance characteristics such as starting torque, pull out torque, etc. and rating for meeting the driving and starting duty of the driven equipment.
- 1.3.0 All Motors shall be **Energy Efficient Motors confirming to Eff Level 1 / IE 2 standards of IEEMA : 19-2000; IS 12615; IS-325; IS-1231, IS-1271, IEC 34.**
- 1.4.0 All motors shall be suitable for variable speed operation with speed controlled by VFD or, Soft Starter.
- 1.5.0 Unless otherwise specified in Data Sheet, all motors shall be squirrel cage induction type with insulation class F with temperature rise limited to Class B and totally enclosed Flame Proof Type Enclosure
- 1.6.0 Motors shall be provided with 240 V anti-condensation heaters, if so specified in data sheet and shall be wired upto separate terminal box with cable glands suitable for the cables sizes specified in Data Sheet.
- 1.7.0 Motors shall be provided with FLP type (if mentioned specifically in the Schedule of Work) terminal boxes (where in all six winding ends are brought), FLP double compression brass cable glands etc. suitable for the type and sizes of cables. In addition the motor shall have the largest terminal box possible in the frame size.
- 1.8.0 All motors are envisaged to be started on DOL unless otherwise specified in the Data Sheet.
- 1.9.0 All motors shall be suitable for number of starts specified in the Data Sheet.
- 1.10.0 Motor frame sizes shall be in accordance with IEC recommendations.
- 1.11.0 For unidirectional motors, the direction of rotation shall be clearly marked on the body of motor.
- 1.12.0 Motors shall have a starting time, which is less than hot locked rotor withstand time of motor by at least two seconds at the rated conditions of voltage and frequency specified with driven machine coupled.
- 1.13.0 Motors shall be suitable for starting at 80% of the rated voltage against torque speed characteristics of the driven equipment.
- 1.14.0 The terminal box of MV motors shall be capable of withstanding the calculated fault level in terms of the let through energy of combination starter unit at the place of installation.
- 1.15.0 An inedible warning inscription shall be provided on the motor to indicate that switching of anti-condensation heater supply shall also be ensured before carrying out any work on the motor.

DATA SHEET

A. GENERAL	
1. ITEM	Crude Oil Transfer Pump (Non API)
2. QUANTITY	Pump Without Motor-1 No, Pump with Motor-1 No
3. LOCATION	OUT DOOR
4. MAKE	*
5. MODEL NO.	*
B. OPERATING CONDITIONS	
1. SERVICE	CRUDE OIL SLUDGE TRANSFER PUMP
2. SOLID CONTENT / SIZE	Rust / Sand / Mud
3. NATURE OF FLUID	Crude Oil with Contamination, Viscos
4. TEMPERATURE Deg.C	60 DEG C TO 90 DEG c
5. VISCOSITY Cst	100 - 150 cst at Pumping temperature
6. SPECIFIC GRAVITY	Varies (0.8-1.1)
7. VAPOUR PRESSURE	ATM
8. SUCTION PRESSURE	FLOODED
9. NPSH AVAILABLE (M)	FLOODED
10. CAPACITY (Cum/Hr)	130
11. DIFFERENTIAL HEAD Kg/cm ² g	5
12. SAFETY VALVE SET PRESSURE (Kg/cm ²)	
C. TYPE OF CONSTRUCTION	
1. CASTING MOUNTING	HORIZONTAL
2. TYPE OF IMPELLER	*
3. DESIGN TEMP./PRESSURE	90 Deg C Max / 9.0 Kg / Cm ² g
4. NOZZLE SIZE SUCTION/DISCHARGE	*
5. END CONNECTION	ANSI B16.5, ASA 150#
6. TAPPED OPENING	VENT / DRAIN
7. LUBRICATION	SELF LUBRICATING
8. BEARING TYPE	*
9. BASE FRAME	FABRICATED
10. NOZZLE SIZE INLET /OUTLET FOR TF	NA
D. MATERIAL OF CONSTRUCTION	
1. CASING /BACK PLATE	CARBON STEEL
2. IMPELLER	SS316
3. END PLATES	SS316
4. SAFETY VALVE	
5. SHAFT	SS-410 / SS-431
6. SHAFT SLEEVE	SS-316
7. GLAND / SEAL PLATE	*
8. BASE FRAME	IS : 2062 WITH ANTI-CORROSIVE PAINT
9. FOUNDATION BOLTS	EN-8
10. NUTS & BOLTS	A 193 Gr. B7 / A194 Gr.2H, DULY GALVN.
11. COUPLING GUARD (ZERO ACCESS)	ALUMINIUM
12. JACKET	NA

E. SEALING	
1. SHAFT SEALING	Flushless Mechanical seal
2. MATERIAL TYPE & CODE	*
3. MECHANICAL SEAL MAKE	Eagle Burgman/ Leak Proof
4. SEAL FACES	*
5. FLUSHING FLUID	NA
F. PERFORMANCE CHARACTERISTICS	
1. NPSH REQD. IN MTRS.	*
2. OVERALL EFFICIENCY AT DUTY POINT (%)	*
3. VOLUMETRIC EFFICIENCY (%)	*
4. BKW @ DUTY	*
5. KW @ DUTY **	*
6. PUMP SPEED (RPM)	*
7. GEAR SIZE (MM)	*
8. PERFORMANCE CURVE NO	*
9. SAFE MINIMUM FLOW (M3/Hr.)	*
10. SHUT OF HEAD (METER)	*
11. WEIGHT OF PUMP SET (Kg) ***	*
12. CRITICAL SPEED	*
G. DRIVE SPECIFICATION	
1. TYPE	Squirrel Cage High Efficiency Dol Type (Eff 1/2 As Per Is: 12615) Flame Proof Induction Motor
2. ENCLOSURE	TEFC, IP-55, CI. 'F' INSULATION
3. TRANSMISSION	Directly Coupled Through Reduction Gear Unit (as reqd.)
4. COUPLING MFGR / TYPE	LOVEJOY / FLEXIBLE
5. POWER SUPPLY	415 ± 10%V, 3 Phase, 50 ± 3% Hz.
6. MOTOR MAKE	SIEMENS / ABB / BHARAT BIJLI / CGL / KIRLOSKAR
7. MOTOR RATING (KW / POLES)	* Min 50 KW, 4 Poles
8. MOTOR FRAME SIZE	*
9. WEIGHT OF MOTOR (Kg.)	*
10. REDUCTION GEAR BOX MAKE	Elecon/Siemens/Bonfiglioly/New Allen Berry/ Shanti/Fennar
H. ANCILIARIES	
1. MOTOR	REQUIRED
2. IN BUILT SAFETY VALVE	REQUIRED
3. COUPLING GUARD	REQUIRED
4. FOUNDATION BOLTS	REQUIRED
I. INSPECTION & TESTING	
1. RUNNING & PERFORMANCE	REQUIRED
2. NPSH	REQUIRED
3. DISMANTLING	REQUIRED
4. HYDRO TESTING	REQUIRED

Notes: 1. Vendor to furnish data marked thus *

2. ** KW @ duty includes all losses due to motor efficiency and transmission.

3. *** Weight of pump set includes base pump, base plate, coupling, motor and accessories.

4. Motor shall be selected for duty at the end of the characteristic curve

ATTACHMENT-I**To**

Balmer Lawrie & Co. Ltd.
 Refinery & Oilfield Services
 21, Netaji Subhas Road
 Kolkata – 700 001

BG No. : _____
 DATED : _____
 VALID UPTO : _____

This deed of Guarantee made this ____ day of ____ 20__ by the _____ a Bank registered under the _____ and having its registered office at _____ and wherever the context so requires includes its successors and assigns (hereinafter called 'The Surety') in favour of Balmer Lawrie & Co. Ltd. a Company registered under Indian Companies Act and having its registered office at 21, Netaji Subhas Road, Kolkata 700001 and wherever the context so requires include its successors and assign (hereinafter called the Company).

Whereas

1. The Company has placed a Purchase Order No. _____ dated _____ (hereinafter referred to as the Order) on M/s. _____ a Company registered under Indian Companies Act 1956 having its registered office at _____ and whereas the context so require includes its successors and assigns (hereinafter called or referred to as the Supplier).
2. Under the terms of the order, the supplier is required to furnish the Company at his own cost a Bank Guarantee for an amount of Rs. _____ (Rupees _____ only) being the amount equivalent to ____% of the total value of the order for fulfilling the contract.
3. The Surety at the request of the Supplier, agreed to issue Bank Guarantee in terms of the said order on behalf of the Supplier and the Company has agreed to accept the same. It is hereby stipulated and agreed that the Supplier shall repair or replace free of cost equipment, machinery, its parts and components found defective on account of Workmanship or defective material or inferior manufacturer, as mentioned in Warranty & Guarantee clause of the order for a period of 12 months from the date of last delivery or 18 months from the date of commissioning.
4. The Surety binds himself to pay to the extent of Rs. _____ in case of failure on the part of the Supplier to perform this guarantee provided the Company inform the Surety in writing to this effect.
5. Notwithstanding anything contained hereinafter the liability of the Surety in respect of this guarantee is restricted to Rs. _____ being ____ % value of the order.
6. The Surety shall not be discharged or released from this guarantee by any arrangement between the Company and the Supplier with or without consent of the Surety or by any alteration in the obligation of the parties or by any indulgence, forbearance whether as to payment time performance or otherwise.
7. Notwithstanding anything contained hereunder, our liability under this Guarantee shall be restricted to Rs. _____ and the guarantee shall remain in force upto ____ 20__ unless a claim is lodged under this Guarantee within three months from the date of expiry of Bank Guarantee, your rights under the Guarantee shall be forfeited and we shall be relieved and discharged from all liabilities thereunder.

In witness whereof the said Surety subscribed and set its name and seal here onto ____ the day of 20____.

Place : _____
 Date : _____

ATTACHMENT – II**VENDOR'S INFORMATION**

<u>Sl no.</u>	<u>Description</u>	<u>To be filled in by the Tenderer</u>
1	Name1 (max. 35 char.)	
2	Name2 (max. 40 char.)	
3	Street/House No. (max. 50 char.)	
4	Street1 (max. 40 char.)	
5	Street2 (max. 40 char.)	
6	PIN Code (Postal Index No. e.g. "700001") (max. 6 char.)	
7	City/Place (e.g. "Kolkata" or "Dehradun") (max. 40 char.) or as the name of the city	
8	Country ("India" or "England" or as the name of country be)	
9	State (Name the state from where the office of Vendor/Supplier operates)	
10	First Tel. No. (With STD Code): (e.g. 033-22225280 or 022-66552814) (max. 30 char.)	
11	First Fax No. (with STD Code)	
12	Contact Person	
13	First Mobile No.	
14	E-mail Address) (max. 40 char.)	
15	PAN No. :	
16	GSTIN Registration No. :	
17	GSP Name (GST Suvidha Provider)	
18	Bank Name (max. 60 char.)	
19	Street (max. 35 char.)	
20	City (max. 35 char.)	
21	Branch (max. 40 char.)	
22	IFSC Code	
23	MICR Code	
24	Account No.	
25	Type of Account (Current, Savings, etc.)	

Seal and Signature of the Vendor