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

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

TENDER DOCUMENT

FOR

CLEANING, IN-SITU SLUDGE PROCESSING & OVERHAULING OF CRUDE OIL STORAGE TANK AT OIL INDIA LIMITED, MORAN

Tender No.: ROFS/2K20/04/ENQ/01

Dated: 01.09.2020
Tender Due date & Time: 21.09.2020, 16:00 Hrs

PART-I (Un-Priced)

INDEX

CHECK LIST FOR SUBMISSION OF TENDER
(TO BE SUBMITTED WITH UN-PRICED PART)

Tenderers are requested to fill up this Check List and attach supporting documentary evidence.

Sl No.	Submission of Document	Bidder's Confirmation/Submission (Yes / No)
1	Earnest Money Deposit	
2	90 days validity of the offer confirmation	
3	Audited Annual Reports (for past three years)	
4	Copy of Work Order and /or Completion Certificates for similar executed works as per Pre-qualification Criteria	
5	PAN	
6	GSTIN Registration	
7	Valid MSE Registration certificate as per NIT	
8	In case of SC/ST or woman entrepreneur, please provide details as per tender	
9	**Tender Document** (along with addendum if any) duly signed and stamped on all pages	
10	**Price quoted** strictly as per Tender price schedule	
11	**Payment Terms** in compliance to tender requirement	
12	**Completion Period** in compliance to tender requirement	
13	**LD clause** in compliance to tender requirement	
14	All others Technical & Commercial Terms & Conditions shall remain unaltered as per Tender document	

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

Tender No.	**:**	**ROFS/2K20/04/ENQ/01**
Date	**:**	**01/09/2020**
Due Date & Time	**:**	**21/09/2020, 16:00 Hrs**
Date & Time of Opening	**:**	**21/09/2020, 16:30 Hrs**

BALMER LAWRIE & CO. LTD. (BL) invites **ONLINE** bids in **2 bid system** from experienced & resourceful contractors for cleaning, in-situ sludge processing and overhauling of crude oil storage tank as mentioned below.

1.0 SCOPE OF WORK

Scope of work covered under this tender for 01 (One) No 5000 KL Capacity Floating Roof Crude oil storage tank at Central Tank Farm (CTF), Moran of Oil India Limited can be broadly summarized as below:

i) Operational Assistance for Evacuation and cleaning of Crude Oil / Tank Bottom Sludge.
ii) Operational Assistance for In-situ Sludge Processing for separation of Hydrocarbon, solid debris and liquid effluent.
iii) Internal Inspection (NDT) of the Tank.
iv) Major overhauling of the Tank (Optional Item, based on NDT results)

2.0 PRE-QUALIFICATION (PQ) CRITERIA

Bidders shall submit/upload copies of the following documents along with their bids:

(i) The Bidder should have Average Annual Turnover of **Rs. 24 Lakhs** or above for the previous 3 financial years ending FY 2018-19. Proof to be submitted in the form of Financial Statements or IT returns for 3 years.

(ii) The Bidder Should be a registered and working contractor for Oil India Limited, Assam in the local area and should have experience of executing composite work comprising of Civil/ Mechanical/ Electrical in nature during past 7 Years, ending 31st March, 2020. Necessary Work Order/ Completion certificate from OIL shall be submitted as proof of the same.

(iii) The bidder should have supplied manpower for providing Operational Assistance/Execution during past 7 (seven) years, to be reckoned from the due date of the tender of either

a) Mechanized cleaning of Crude Oil tank and Sludge Processing
or
b) Oily Sludge Processing for recovery of oil, from pits/lagoons in Oil refinery/Oil Installation for following values

Proof of experience is to be submitted through Copy of work orders and/or completion certificates/proof of execution for above mentioned job.

- 3 jobs, each of **Rs 32 Lakh**
- 2 jobs, each of **Rs 40 Lakh**
- 1 job of **Rs 64 Lakh**

(iv) Other documents to be submitted along with unpriced bid:

a) PAN Card
b) GST Registration Certificate
c) PF & ESI Registration (Declaration in case of non-applicability)
d) "Affidavit on non-judicial stamp paper in case of proprietorship firm "Partnership Deed" in case of Partnership firm/"Memorandum and Articles of Association" in case of Limited Company.

3.0 COMPLETION PERIOD

Time is the essence of the contract. The contract shall be valid for **12 months** from the from the date of the work order. Mobilisation shall be completed within **60 days** from the date of work order. Tank Cleaning and Sludge processing shall be completed within **45 days** from the date of handing over tank by OIL.

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, Detailed scope of Work and Technical Specifications. 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 EARNEST MONEY DEPOSIT

Unpriced Bid should be accompanied by a Bank Draft of **Rs 40,000/- (Rupees Forty Thousand only)** favouring `Balmer Lawrie & Co. Ltd.' payable at Kolkata towards Earnest Money Deposit (EMD).

Bidders registered as Micro & Small Enterprises (MSEs) with valid Udyog Aadhar Number shall be exempted from submission of EMD. Copy of Udyog Aadhar must be submitted as part of Unpriced bid in order to claim exemption from submission of EMD.

6.1 EMD of successful bidders will be retained with us till submission of Security Deposit. No interest shall be payable towards EMD amount.

6.2 For the unsuccessful bidders, the EMD will be refunded only after the successful bidder has accepted the work/purchase order and the acknowledgment of the same has been received by BL/the owner.

6.3 EMD is liable to forfeiture in the event of:

a) Withdrawal of offers during validity period of the offer
b) Non acceptance of orders by the bidder within the stipulated time after placement of order.
c) Any unilateral revision made by the bidder during the validity period of the offer.
d) Non-performance of the bidder during the tenure of work.
e) Bidders submitting false/fabricated/bogus documents in support of their credentials

7.0 SECURITY DEPOSIT

The bidder, 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 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 work.

8.0 TENDER TYPE & BASIS OF EVALAUTION

Estimated rate against each item of work is provided in 2(two) Schedule of Rates (SOR) named as 'SOR A - Cleaning and In-situ Sludge Processing of Crude Oil Storage Tank' & 'SOR B- Overhauling of Crude Oil Storage Tank'. Tenderer shall quote in percentage basis (in the Percentage BOQ excel file) on SOR stating whether it's at par/below par/above par for both the SORs. If any bidder quotes percentage basis only against one (1) SOR, their bid will be rejected.

Bidders will be shortlisted through evaluation of their Unpriced Bids based on fulfilment of pre-qualification criteria i.e. submission of all required PQ documents and other required documents, EMD/MSE Certificate as per the instructions contained in the tender document. Price Bids will be opened only for the bidders whose Unpriced Bids (Part-I) are found to be acceptable and order will be issued L1 basis considering both the SORs.

The Contract cannot be split and the successful single bidder shall carry out all the work mentioned in Priced Schedules.

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 Contractor 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 Contractor, shall be final and binding. Such a determined period of time be extended by the Owner to enable the Contractor to deliver the items within such extended period of time.

If Contractor is prevented or delayed from the performing any of its obligations under this agreement by Force Majeure, then Contractor 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 Registered MSME vendors shall be exempted from need to furnish EMD, subject to their submission of registration details.

15.4 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

15.5. 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

15.6 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.

15.7 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 (I) 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 CONFLICT OF INTEREST

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

17.0 PAYMENT TERMS

Payment will be made against RA Bills, duly certified by BL's site in charge. The Payment shall be released after receipt of payment from OIL for the corresponding quantity claimed in each bill by BL. All local coordination including submission of invoice by BL to OIL and payment collection from OIL shall be done by Contractor.

Any deduction made by OIL from BL's bills for the project, on account of utility consumption, quality mismatch, or any other reason attributable to the contractor shall be fully recovered from the contractor.

Payment shall be made against receipt of tax invoice and proof of payment of GST to government.

18.0 LABOUR LAWS & REGULATIONS

It shall be the responsibility of contractor to obtain necessary labour license from the Licensing Authority under the "Contract Labour (Regulation & Abolition) Act, 1970 and Central Rules made thereunder and produce the same to the Engineer-in-Charge before start of the job. You shall also comply with all obligations under the said Act/Rules as well as other applicable labour laws. Licensing Authority shall be Assistant Labour Commissioner (Central), Office of the Regional Labour Commissioner (Central), Tamil Nadu.

19.0 PROVIDENT FUND

The provisions of the EPF & MP Act, 1952 and Rules/Scheme framed thereunder shall be complied by the contractor for the contractor's manpower to be engaged for this job. Contractor shall furnish the code no. allotted by RPFC Authority to the Engineer-in-Charge.

20.0 ESI SCHEME

Contractor shall also comply with the provisions of the ESI Act, 1984 and Rules framed there under in respect of your workers to be engaged for this job. Contractor shall obtain ESI Code No. from the local ESI Authorities for the said purpose and furnish the Code No. allotted by ESI Authorities to the Engineer-in-Charge before starting the job.

21.0 INSURANCE COVER FOR WORKMEN

Contractor shall obtain Workmen Compensation policy in his name in respect of contractor's workmen to be engaged for the work towards compensations as admissible under the Workmen's Compensation Act, 1923 and Rules framed thereunder upon death/disablement and also medical treatment of a worker and the same has to be produced to the Engineer-in-Charge before start of the work.

22.0 RIGHT OF INSPECTION

OIL/BL shall have the right but not the obligation to inspect the works during its progress. The Contractor shall provide proper access for such inspection. OIL/BL shall provide Inspectors for this purpose and shall arrange for all inspection and tests to be carried out promptly after notification.

23.0 MEASUREMENT OF WORKS

i) The quantities detailed in this contract represent only the estimated quantities of works and they are not to be taken as the exact quantity of the works to be executed by the Contractor in fulfillment of his obligations under this contract. The quantities of works to be considered for purpose of payment shall be those actually executed in accordance with instruction of the BL or OIL's Engineer.

ii) All measurements shall be duly recorded by the Contractor's Engineer in the measurement book in the format prescribed by BL/OIL and the Contractor shall agree to such measurement by signing the same.

iii) Measurement so recorded shall be treated as legally binding.

24. OTHER TERMS & CONDITIONS

Other Responsibilities of the contractor as part of the contract shall include the following:

i) Arranging all gate passes/permits for working in shifts, special permits for working on Sundays/Holidays, renewal of gate passes periodically including Police verification as and when required. Entry and exit passes for men and vehicles carrying materials etc.
ii) Providing Personal Protection Equipment, e.g., helmets, gumboots, gloves, safety goggles etc. for all the workers.
iii) Compliance with all the Safety/Environmental related requirements, fire and work permit rules of OIL.
iv) Arranging local accommodation and transport for contractor's site personnel.
v) Area cleaning and house-keeping during the entire contract period to the satisfaction of OIL.
vi) All local coordination including submission of invoice and payment collection from OIL.
vii) Preparing daily log, register and monthly report as per instruction of BL and OIL. Any other requirement for completion of job at OIL.
viii) Dismantling and handover of BL's plant & machinery after successful completion of the job.

25. EXTRA ITEMS OF WORK

During execution of job, if any additional item of work/ variation, deviation/ non-availability of item etc., is considered to be necessary, it shall have to be carried out by the contractor.

Contractor shall submit a quotation along with the rate analysis for approval of BL's Site-in-Charge for such accepted extra items before he commences work or purchases the materials in connection with such items.

For extra items, rates shall be derived from similar item rates included in the schedule of work. Where there is no such similar item available in the schedule, rate shall be analysed as follows:
Rate for extra item = Cost of material (a) + cost of labour inclusive of all necessary tools, tackles, equipment, machinery and consumable (b) required to carry out the work + 15% of (a+b) towards profit and overhead + taxes, duties etc. as applicable.

26.0 PENALTY

0.5% of the basic order value per week of delay or part thereof subject to a maximum of 10%.

27.0 HINDRANCE REGISTER & EXTENSION OF TIME

Hindrance Register shall be maintained in the format provided by OIL to record all hindrances encountered during execution of works against the contract. The items of work affected due to any hindrance shall be clearly recorded in the Hindrance Register and the Engineer-in-charge of the BL and OIL as well as the site representative of the Contractor will sign on the register against the recorded hindrance. In case of encountering multiple hindrances simultaneously over a period of time affecting the same item or different items, the net period of hindrance will be worked out considering the overlapping period.

Based on the recorded hindrance register, the contractor may desire an extension of the time for completion of the work on the grounds of his having been unavoidably hindered in the execution. After due evaluation of such request, BL may provide extension of time to contractor for completion of work without imposing Penalty.

28.0 TAXES & DUTIES

The SOR rates are exclusive of Goods & Service Tax (GST). The Goods & Service Tax shall be paid extra at actual. The present rate of Goods & Service Tax applicable for the job is 18% which shall be applicable for all items of SOR.

Any taxes and duties other than GST shall be included in the basic rate.

29.0 FIRM PRICE

Percentage quoted shall be firm and binding during the period of the contract period and any agreed extensions thereto. No escalation for quoted rates/

prices/percentage will be acceptable under any circumstances. Prices should be firm till completion of the job and no escalation for whatsoever reason shall be granted.

For further clarification on tender document, please contact Sk Abu Jafor, Manager (Business Development), Phone no +9133 2222 5283 Fax no. : + 91-33 2222 5333, E-Mail : jafor.a@balmerlawrie.com.

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

(Amitava 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).

The price bid (BOQ) in excel format (.xls) as given in the tender must be downloaded and saved at bidders' local PC /Laptop without any change. Bidders shall fill the required details/prices in BOQ, save it, print it, stamp, sign, scan and upload the same in the portal.
Total Contract Price without GST shall be entered as 'Project Contract Total' in the portal 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			
Contact Person	**E-Mail ID**	**Tel. No.**	**Helpdesk Nos are open from**
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.

DETAILED SCOPE OF WORK & TECHNICAL SPECIFICATION

I. SPECIAL TERMS & CONDISTIONS

A. Name of Work: The services to be hired for Evacuation, cleaning, In-situ Sludge Processing (Mechanized and Chemical Cleaning Method), Internal Inspection and Major overhauling of 01 (One) No 5000 KL Capacity Floating Roof Crude oil storage tank at Central Tank Farm (CTF) , Moran of Oil India Limited can be broadly summarized as below:

i) Operational assistance for evacuation and cleaning of Crude Oil / Tank Bottom Sludge.
ii) Operational assistance for In-situ Sludge Processing for separation of Hydrocarbon, solid debris and liquid effluent.
iii) Internal Inspection (NDT) of the Tank.
iv) Major overhauling of the Tank (Optional Item, based on NDT results)

BL will depute a technical supervisor/site-in-charge, complete job shall be carried out under his supervision.

B. Brief Schedule of Work:

Sl. No.	Description of Work
10	Mobilization for Sludge Removal
20	Erection of Barricade Wall
30	Emptying of crude oil from the tank
40	Isolation of the tank
50	Digging / Construction of pit
60	Laying of HDPE sheet
70	Cutting of Additional Holes on Tank roof for installation of jetting nozzles
80	Operational Assistance for Sludge Removal and Processing of Sludge
90	Manual Sludge Removal
100	Inside Cleaning of the Tank
110	Area Cleaning
120	Cutting & Removal of old steam coils
130	Ultrasonic thickness measurement
140	Ultrasonic Flaw Detection
150	Liquid penetration test
160	Thickness Measurement of Paint Coating
170	Pit Gauging
180	MS Structural steel work for jack
190	Jacking up of Tank
200	Dismantling and reassembling of Tank Roof supports
210	Placement and dismantling of Temporary Roof Supports

220	Cleaning and Visual Inspection of Roof Chambers
230	Repair of Roof Chambers
240	Plugging of additional holes made for installation of jetting nozzles
250	Inspection and Repair of Roof Drain
260	Inspection of Foam Seal
270	Replacement of Foam Seal
280	Cutting & removal of annular bottom ring
290	Concrete work at tank bottom foundation
300	Fine concrete work over concrete top
310	Fabrication of annular bottom Plate by cutting & welding
320	Fabrication of bottom Plate other than annular portion by cutting & welding
330	Welding of Shell to Bottom Plate Joint
340	Vacuum Box Test
350	Placement of 4" (100 MM) NB pipes and Fittings
360	Welding of 4" (100 MM) NB pipes and Fittings
370	Dye Penetrant Test
380	Radiography of the weld joints
390	Hydraulic testing of the entire newly fabricated steam coil
400	Hydraulic Testing of the tank
410	Calibration of Tank
420	Painting with primer & finish paint
430	Cleaning ,Hooking up, Box-up and Commissioning of the Tank
440	Dismantling of the Tank Barricade Wall
450	Demobilization

C. Tank Details:

The basic details of the 5000 KL Capacity Floating Roof Crude oil storage tank at CTF, Moran are as follows:

i) Type: External Floating Roof
ii) Capacity: 5000 KL
iii) Dimensions: Height: 11.05 M & Diameter:24.41 M
iv) Estimated Tank Bottom Sludge: 400 CuM

D. Conditions of work:

Contractor's scope for the above work includes but not limited to:

1.0 Item Nos. 180, 190, 200, 210, 270, 280, 290, 300, 310, 320, 330, 340 & 410 are optional items. OIL at it's discretion reserves the right to engage the BL's services for the said optional items based on NDT/Inspection Reports/ Observations. The optional items shall only be executed by the contractor after receipt clearance from BL/OIL.

2.0 The Contractor should appoint a Site/ Plant In-Charge who shall be responsible for execution of all the assigned jobs under the Contract. He shall also be responsible for all regular communication with BL & OIL (as directed by BL).

3.0 The Contractor should submit a Monthly Progress report to BL/OIL (as directed by BL)., detailing the jobs executed during the Month.

4.0 The Contractor should maintain a "Hindrance Register" detailing the dates, duration, causes etc for stoppage of work. The Format for the same shall be provided by OIL.

5.0 BL will transport the Plant and Machinery required for Tank Cleaning and Sludge processing from Contractor's premises to OIL's location (CTF, Moran, Distt: Dibrugarh, Assam, India). Contractor shall do unloading and setting up of plant. After completion of work, contractor is required to dismantle the plant set-up and load the Plant and Machinery on to the vehicles arranged by BL. Other equipment as required for tank health, checking and overhauling shall be mobilised by the contractor.

6.0 All electrical, mechanical, civil work, as required is included in scope of work of the contractor. The contractor to carry out necessary installation and commissioning of Plant and Machinery along with all associated pipings (free issue by BL) to make the plant ready for operation.

7.0 OIL shall provide the requisite Electrical Power for free of cost for Tank Cleaning and Sludge Processing job. However the Contractor shall do the cable laying (free issue by BL) and termination from the source provided by OIL to incomer of main MCC Panel of BL. (Distance: approximately 500 M). Electrical Power for illumination and tank overhauling/ maintenance work to be supplied by the Contractor for which the contractor shall place their DG Set at site.

8.0 The Contractors should also arrange for night time illumination of the work site.

9.0 The Electrical power cable, its laying and other electrical accessories has to be as per safety norms of OIL. Electrical accessories used by the contractor to be flame proof & suitable for use in Zone-1, as per statutory Guidelines followed by OIL.

10.0 Cutting of Additional Holes on Tank roof (by Cold cutting process) for installation of jetting nozzles, if required shall be under the Contractor's Scope. After completion of the requisite jobs, the Contractor to restore the Tank Roof, by suitably plugging the additional holes (if cut).

11.0 Removal of 400 M3 (approx) tank bottom sludge using BLABO (mechanized /chemical/combination system) process of BL.

12.0 OIL will provide Crude Oil to be used as solvent (if required) for process requirement through one of its designated storage tank(s) at site for contractor. Accounting will be done by tank gauging. Contractor to install piping from OIL's tank to its plant with pumping facility; however OIL shall supply required pipes & pipe fittings as free issue items for connection between tank and plant which contractor has to take delivery from OIL storage yard and complete the laying.

13.0 If the Quantity of Crude Oil recovered by processing of tank bottom sludge is found to be LESS than the Quantity of Crude Oil Supplied to the Contractor as solvent, the Value for the differential amount of Crude Oil shall be recovered from the Bill wrt Sludge Removal and Sludge Processing of the Contract.

14.0 The Contractor shall have to set up plant and machinery (free issue by Balmer Lawrie) for in-situ Processing of Tank Bottom Sludge at the Work site. The processing should separate crude oil, solid debris and liquid effluent by Mechanical/Chemical or combination process. The process should recover maximum possible hydrocarbon present in the tank bottom sludge so that the separated solids have oil less than 10 % (W/W) and the recovered oil after processing of tank bottom sludge to have BS&W less than 1 % (V/V). The oil content in separated effluent shall have to be less than 100 ppm.

15.0 The recovered crude oil shall be tested for BS&W content (%) by OIL and the same is to be under permissible limits, ie: less than 1% (V/V). The recovered crude oil shall have to be pumped to OIL's designated tank by the Contractor upon clearance from OIL.

16.0 The effluent from processed sludge is to be stored in pit, lined with HDPE sheet required thickness to meet the APCB/CPCB requirement. The solid waste from processed sludge is to be stored in a pit at the designated site (to be identified by OIL) and handed over to OIL covered with a layer of earth for further treatment. All requisite items for the job shall have to arranged by the Contractor.

17.0 Final disposal of effluent water from the processing unit shall the responsibility of contractor. Disposal of effluent water after processing/cleaning of tank to be done into a pit near the centralized location of processing. The effluent shall transported/pumped to OIL's designated place for further treatment/disposal by OIL. All requisite items for the job shall have to arranged by the Contractor.

Clauses 18.0 , 19.0 & 20.0 Deleted.

21.0 Setting up of necessary perimeter fencing and barricade wall of CGI Sheets as directed by OIL's representative shall be under Contractor's Scope. Only pipes for Pipe supports shall be supplied as free issue item by OIL.

23.0 Any residual sludge, debris left out during the tank evacuation and cleaning process, is to be stored in pit, lined with HDPE sheet required thickness to meet the APCB/CPCB requirement.

24.0 All materials including consumables, testing appliances, tools & tackles, transportation vehicles etc. necessary for completing the work shall be supplied by the contractor.

25.0 The requisite MS plates for the repairing/ replacement job will be supplied by OIL at site. All tools and tackles, welding/cutting machines with all accessories and consumables, personnel to execute and supervise the job will have to be arranged by the contractor.

26.0 During execution of the job by the contractor and when the tank is under the custody of the contractor, if any damage occurs to the tank under his custody, the contractor has to repair it forthwith free of cost. Any compensation for damage to public/ private property has to be paid by the contractor.

27.0 At the time of jacking up the tank shell, cutting and welding job of MS plates , presence of contractor's authorized representative (of the rank of supervisor) is must at the site and he should also supervise the use of all safety appliances and safety procedures of OIL while executing the job.

28.0 If any breakdown takes place or if any corrective action is advised by BL/OIL representative pertaining to Operational, safety and environmental related matter, same has to be rectified within reasonable time otherwise BL will have right to terminate the contract.

33.0 Work Timing: All jobs shall be performed within sunrise-to-sunset regular working hours of the installation. However in case of job with extended hours, permit shall be issued accordingly at the direction of the OIL's representative. Contractor shall deploy adequate manpower in all the shifts while carrying out emergency work. Contractor must follow Indian Mines Act 1952 and Labour Law for deployment and payment of wages to their personnel.

34.0 The contractor has to work on Sundays and Holidays whenever required, as per the directive of OIL's competent personnel.

35.0 Due consideration of Govt. labour wages rate to be taken while quoting rates.

36.0 The contractor shall not engage minor labourer below eighteen (18) years of age under any circumstances.

37.0 Contractor has to maintain proper house keeping all through and restore the area in original condition on completion of job.

38.0 Contractor has to maintain daily log of activity with proper quantity of material received /processed /delivered with timing and would provide a copy to OIL regularly.

39.0 Contractor to follow all HSE related requirements, fire and work permit rules of OIL etc.

40.0 Round the clock security arrangement of Contractors' plant, machinery and crew shall be under contractor's scope.

41.0 Security and responsibility of all Company's materials issued to the contractor will have to be borne by the contractor till completion of the assigned jobs.

42.0 Water for hydraulic testing will be supplied by OIL.

43.0 All food, lodging and transportation of crew shall be under Contractor's scope.

44.0 Any non-technical/local problem causing disruption of work arising in the work site(s) shall have to be settled by the contractor at his own.

45.0 All the skilled supervising/operating/executing personnel employed by the contractor during the Evacuation, cleaning, Internal Inspection and Major overhauling of the tank should have at least 01(one) year experience in similar work. Similar work means Evacuation, cleaning, Internal Inspection and Major overhauling of Crude Oil Storage tanks. Contractor to submit requisite documents i.e. list of personnel/Bio- data's/Proof of experience etc. proposed to be deployed during operation.

46.0 Any change in personnel after mobilization has to be carried out with prior approval of OIL.

47.0 Any materials found defective due to bad workmanship will have to be replaced by the contractor at his own cost.

48.0 During transportation of any material by road or at site, the contractor shall take utmost care to prevent any kind of damage to the company's property. Any damage if found to have been caused by contractor's personnel, contractor will have to pay the amount fixed by OIL for such type of damage.

49.0 Measurement of the work done against each line item shall be carried out within seven days of its completion and the contractor/ representative should be present at the time of measurement and the same should be vetted by company's representatives.

50.0 Free Issue items apart from consumables (if any) to be returned to OIL after completion of the jobs.

51.0 After completion of work, contractor to demobilize all its plant from OIL's premises. All electrical, piping, civil work including fencing of the site, if required is included in the scope of work. All the free issue items shall have to be recovered and returned back to OIL before initiation of demobilization.

E. Safety:

(i) The contractor shall comply with OIL's General HSE points and Safety measures.

(ii) Other Safety Precautions:

1. The Contractor should carry out NDT (Ultrasonic Thickness Measurement) of the area on the Tank Roof where additional roof opening/hole is required to be made.
2. All NDT equipment to be used inside Tank Dyke Area to be Intrinsically Safe.
3. Necessary work permits are to be obtained from concerned Installation Manager before starting of the job(s) complying with OISD-STD_105.
4. While carrying out welding and cutting jobs, the contractor should strictly enforce the guidelines as stated in OMR-2017 and SOP-OIL.Vol-II.
5. The job of pipe line lying will have to be executed as per strict compliance of regulations enforced by DGMs and other statutory bodies.
6. During transportation of line pipes by road, they should be tied up securely with rope/chain on trailers, to prevent toppling over of pipes on bumpy roads. The pipes should be unloaded carefully to prevent damage at the ends/body of the pipes.
7. Necessary sign boards/warning signals etc should be used while working. The said sign boards/warning signals shall have to be arranged by the contractor. It should be Trilingual sign board (Assamese, Hindi,&English with Appropriate signs).
8. First aid box as per Mines Rule 1955,is to be arranged by the contractor for each gang working at site and same has to be carried by contractor's personnel to the site while carrying out the job.
9. Under no circumstances LPG should be used for gas cutting purpose and Flash back arrestor/NRV should be used in the flame torch.
10. All sludge carrying vehicles and stationary used by the Contractor must be equipped with Exhaust Sparks arresters.
11. The Contractor should arrange for night time illumination of the work area as per OISD-RP-149.
12. No Bamboo/Wooden structure/Clothes should be used for barricading/scaffolding.
13. Use of naked flame. moiles and any other inflammable materials is strictly prohibited inside the operational area.
14. In case of use Boiler(s), the Contractor should obtain all the requisite statutory certificates/clearances from competent authority.
15. Any equipment to be used inside Dyke area of Tank Farms or other hazardous area shall be of appropriate IS/equivalent International standards, satisfying to be used in hazardous areas/zones.

II. SCOPE OF WORK:

1.0 <u>Mobilization for Sludge Removal:</u>

The contractor shall do installation and commissioning of Plant and Machinery under supervision of BL's site –in-charge along with all associated piping's (free issue by BL/OIL) to make the plant ready for operation. All Civil Engg. Works shall be under the Contractor's Scope.

NB: OIL shall supply all the requisite Electrical Power for operation of Sludge Removal and Sludge Processing.

A) Unloading & Placement of Equipment

BL will transport its Plant and Machinery to OIL's premises at Moran. The contractor shall carry out unloading and placement of those equipment from truck/trailer arranging hydra, crane etc. to the point adjacent to 5000 KL capacity Crude Tank inside Central Tank Farm area of Oil India, Moran and shifting the same inside the dyke area (after dyke cutting , if required) as per the direction of Balmer Lawrie's Site in Charge. The broad list of materials are as under:

Sl. No.	Description	Qty.	Dimension	Approx Wight (MT)
(i)	Container Module (Store cum Electric Panel)	1	20'(L)x8'(W)x9'(H)	7
(iii)	Container Module Tricanter with its motor	1	20'(L)x8'(W)x9.5'(H)	7
(iii)	Loose Materials– (Centrifugal Pump (2 No.), Screw Pump (2 No), Air Compressor (1 No.), SNS Tool (3 Nos.), Filter (1 No), 210 Lit. Hyd. Oil (2 Nos.), SNS Nozzle - 3 nos, Hydraulic Power Pack- 1no & and misc. items etc. ,	1 Lot	One Truck Load	5
(iv)	Pipes: MS Pipe 6 mtr length-45 nos– SS Pipe 6 mtr length- 30 nos, Header Assembly (1 Nos.), Bracket Assembly (1 No.), 2"dia 6m length pipe (10 Nos.)	1 Lot	One Truck Load	5

B) Civil Work for Placement of Equipment inside Tank dyke area:

i) Cutting of RCC Dyke wall with necessary labour, tools and tackles complete including cleaning the area of all spoils/soil/debris outside the area or shifting the material inside the premises as per direction of Balmer Lawrie's Site in Charge.

ii) Cleaning up the tank surrounding area including removal of bushes, garbages for setting up Sludge cleaning and treatment plant.

iii) Construction of concrete foundation for installation of pump, pedestals for containers and pipe support.

C) Electrical Work for installation of modules in dyke area:

i) Construction & installation of Earth pit using 2.5M long, 40NB GI perforated pipe, complete with earth treatment and necessary masonry work.

ii) Supply, installation & termination of Earthing strip using 6 mm x 50 mm GI from earth pit to equipment.

iii) Supply, installation & termination of 8 SWG GI wire for earthing including provision of socket at both end of each piece.

iv) Supply, installation of Sodium Vapour Lamp (500 W) – 2nos with enclosure set for illumination of site.

v) Power and Control cabling of electrical motors and equipment from Main MCC. Cabling shall also be done for incoming supply from the feeder of OIL to the incomer of main MCC of BL. All cables along with lugs shall be issued as free issue material by BL to contractor but other accessories as required for cabling shall be included in scope of the contractor. Contractor shall be responsible for collecting the free issue materials from OIL's or BL's store, carrying those materials to work site and returning back safely to OIL's/BL's store after completion of work.

D) Piping Work for installation of modules in dyke area:

i) Carrying out of Butt / Socket / Fillet weld joints with face preparation(as required) as per good engineering practice and instruction of Site in Charge for various pipe diameters (upto 4" NB) with supply of all necessary tools, tackles, consumables, power etc. (1 inch-dia = 1" dia x 1 no. joint)

ii) Placement and alignment of centrifugal pump set.

iii) All the pipes will be issued by BL to Contractor as free issue materials. Contractor shall be responsible for collecting the free issue materials from OIL's or BL's store, carrying those materials to work site and returning back safely to OIL's/BL's store after completion of work.

E) Trail Run and Commissioning of the Tank Cleaning & Sludge Processing Plant

The contractor shall provide all assistance with manpower, tools and tackles for commission of the Tank Cleaning & Sludge Processing Plant.

F) Mobilisation of DG and Electrical Connection

The contractor shall place its DG set of suitable capacity for illumination of plant area on 24 X 7 basis and also tank maintenance work. Cost of fuel, lubricants, maintenance etc. is included in the scope.

2.0 <u>Erection of Barricade Wall</u>:

Erection of Barricade Wall around the Tank Bundh area for isolation of the tank. The job involves erection of 6 M High X 120 M temporary wall of CGI sheets. All materials required for the job to be supplied by the Contractor.

3.0 Emptying of crude oil from the tank:

Laying of 100 MM (4") NB pipelines including fitting of valves, bends, unions etc. and hooking up with pump(s) for emptying out crude oil from the tank to the lowest level. The pipelines are to be dismantled after completion of work. The materials for laying the line will be supplied by OIL and the contractor will be responsible for carrying the materials from OIL's Yard & keeping the materials safely and returning it back after the job is over. A diesel engine driven pump set (alongwith HSD and consumables) will be provided by OIL for pumping out the crude from the tank.

4.0 Isolation of the tank:

Isolation of the tank: Dismantling of all the valves and connections associated with the tank, so as to isolate the tank from the system as per the advice of OIL's representative.

5.0 Digging / Construction of pit:

Digging of one pit of size: 10m x 20m x 2 m (Approx.) for storage of wax, sludge etc. removed from the tank. The exact location for digging shall be shown by OIL's representative.

NB: This job shall have to be taken up only if OIL does not provide Pit(s) for storage of the Sludge to be removed from the Tank.

6.0 Laying of HDPE sheet:

Laying of HDPE sheet inside the walls of the pit dug/ constructed under item no: 50. All the items required for the same to be supplied by the Contractor.

NB:

1. Specification of the HDPE sheet to be used should be as per IS 15351: 2008 or equivalent.
2. This job shall have to be taken up only if item no 40 has to be executed or the Pit(s) provided by OIL does not have the requisite HDPE sheet lining.

7.0 Cutting of Additional Holes on Tank roof for installation of jetting nozzles:

The job shall have to be carried out after joint inspection and decision on requirement of cutting of additional holes on the tank roof for installation of jetting nozzles by OIL's representative, BL's representative and Contractor's representative. The job involves UTM of the areas where the additional holes are proposed to be made. The holes cutting shall only be allowed by OIL after assessing the integrity of the roof plates based on the results of the UTM. The cutting process to be deployed must be a "Cold Cutting" process.

8.0 Operational Assistance for Sludge Removal and Processing of Sludge:

The job involves:

a) Installation of Jetting Nozzles.
b) Placement and necessary installation of all equipment required for Sludge Removal and Processing of Sludge near the tank (outside the tank dyke).
c) Dosing of Chemical (free issue by BL) mixed with crude oil inside the tank as directed by BL.

d) Laying of all necessary pipe lines required for Sludge Removal and Processing of Sludge. The pipes and the fitting required for the same shall be under the Contractor's Scope.
e) Removal of Tank Bottom Sludge by jetting process. The solvent fluid to be used for jetting should be the mother fluid, ie: crude oil. The crude oil required for the process shall be supplied by OIL, with an arrangement for proper measurement and custody transfer.
f) Processing of sludge removed from the tank in the sludge processing plant set up near the tank.
g) Pumping of the recovered oil to nearby Tank(s) as directed by OIL.

NB:

1. The recovered oil shall be tested for BS&W content (%) by OIL and be cleared for pumping only if the same is under permissible limits, ie: less than 1% (V/V).
2. The recovered oil parameters shall be tested by OIL and only upon meeting the stipulated parameters of the Contract, the Contractor shall hand over the custody of recovered oil to OIL.
3. The actual quantity of the sludge to be removed shall be jointly estimated by OIL's representative, BL's Representative and Contractor's Representative before starting of the job by taking tank dips.
4. All manpower required for the Sludge Removal and Processing of Sludge process shall be under the Contractor's scope.
5. OIL shall supply all the requisite Electrical Power for operation of Sludge Removal and Sludge Processing.
6. The separated effluent and solids to be disposed as directed by OIL. The oil content in separated effluent shall have to be less than 100 ppm. The effluent shall be transported/pumped to OIL's designated place for further treatment/disposal by OIL. The solid waste from processed sludge is to be stored in a pit at the designated site (to be identified by OIL).
7. All equipment set up for the process to be dismantled by the Contractor after completion of Sludge Removal and Processing of Sludge.

9.0 <u>Manual Sludge Removal:</u>

This job is to be taken up after completion of Item No-80 above. The job involves Opening of manhole covers for removal of remaining residual sludge from inside the tank and transfer to the pit dug/ constructed under item no: 40 or to any other pit provided by OIL which may be at a distance of about 200 meter away from the tank. NB: The actual quantity of the sludge to be removed shall be estimated upon opening of the manhole covers by OIL's representative and Contractor / Contractor's Representative.

10.0 <u>Inside Cleaning of the Tank:</u>

The job involves thorough cleaning of inside walls and bottom surfaces of the tank, top and bottom surfaces of the pontoon, heating coils, supporting structures inside the tank etc. , so that no trace of oil is left inside the tank after completion of Item No-90 above. Cleaning should be such that welding, gas cutting and grinding can be done inside the tank without any fire hazard and inspection of the tank and NDT of

the bottom plates can be done including ultrasonic thickness measurement. NB: Only water required for cleaning of the tank shall be provided by OIL. All other items required for the job shall have to be arranged by the Contractor.

11.0 Area Cleaning:

Cleaning of crude oil sludge etc. from outside drains, oil / water separators and from inside the tank bundh / dyke areas and transfer it to the OIL designated pit or to the pit mentioned under item no. 50 above. All necessary materials like sand etc shall have to be arranged by the Contractor.

12.0 Cutting & Removal of old steam coils:

Cutting & Removal of old steam coils: Removal of old steam coils from inside the tank to outside of the tank bundh/dyke after cutting the coil into pieces by Hacksaw/gas cutting. The area for keeping the cut pieces of old steam coils shall be shown by OIL's representative. NB: Gas testing shall be carried out by OIL prior to this operation and job must only be carried out upon receipt of approval for the same from OIL.

13.0 Ultrasonic thickness measurement:

Ultrasonic thickness measurement with supply and transportation of all materials to worksite including tools & tackles, machinery, consumables, temporary structures / staging, requisite competent and Certified manpower etc. as necessary to complete the job in all respects as per relevant codes and standards and also as per directions of OIL's representative. The Ultrasonic thickness measurement has to be carried out for Tank Bottom plate and Tank Shell upto a height of 1.5 M and the results of the same to be supplied to OIL. The results of the Ultrasonic thickness measurement should also include recommendation for OIL's consideration / action. NB: The Ultrasonic thickness measurement has to be carried out by ASNT certified personnel.

14.0 Ultrasonic Flaw Detection:

Ultrasonic Flaw Detection with supply and transportation of all materials, to worksite including tools and tackles, machinery, consumables, temporary structures / staging, requisite competent and certified manpower etc. as necessary to complete the job in all respects as relevant per codes and standards and as per directions of OIL's representative. The results of the same to be supplied to OIL. NB: The Ultrasonic Flaw Detection has to be carried out by ASNT certified personnel.

15.0 Liquid penetration test:

Liquid penetration test: Liquid penetration test in the shell to bottom joint with supply of all materials, tools and tackles, requisite competent and certified manpower etc. as per the instruction of the OIL's representative.

NB: The Liquid penetration test has to be carried out by ASNT certified personnel.

16.0 Thickness Measurement of Paint Coating:

Thickness Measurement of Paint Coating: Paint coating thickness measurement for the Annular plates of the bottom plates and the Shell plate upto 1.5 M height by

Magnetic-Field or Eddy- Current (Electromagnetic) Test Methods, including supply of tools, tackles and requisite competent and certified manpower required for the job.
NB: The Paint coating thickness measurement has to be carried out by ASNT certified personnel.

17.0 Pit Gauging:

Pit Gauging: Pit gauging of the bottom and shell plates at all heights wherever required as per the instruction of the OIL's representative, including supply of tools, tackles and requisite competent and licensed manpower required for the job.

18.0 MS Structural steel work for jack:

MS Structural steel work for jack : Structural Steel work for support for fixing jacks for tank shell lifting and all other miscellaneous structures related to tank including alignment, fixing to position, true to line and level of structural steel made out of rolled steel angles, channels, beams, plates etc. including splicing, cutting, bending, drilling, welding, riveting, bolting etc. as required to complete the job in all respects.
NB: The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s).

19.0 Jacking up of Tank:

The job involves: Casting and placement of RCC Blocks for jacking, fabrication and fixing of Jack Supports(including supply of all materials) made from MS structural steel, cutting of the bottom and shell plate weld joint and jacking up of the tank. All materials and consumables required for the job shall have to be arranged by the Contractor. NB: The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s).

20.0 Dismantling and reassembling of Tank Roof supports:

The job involves cutting of the existing tank roof support legs wherever necessary or as per direction of OIL's representative to facilitate cutting and removal of annular / bottom plates. After completion of work the cut/ dismantled tank roof support legs shall have to be re- fixed into original position by welding. NB: The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s).

21.0 Placement and dismantling of Temporary Roof Supports:

Placement and dismantling of Temporary Roof Supports: The job involves placement of Supports fabricated out of steel tubulars for supporting the tank roof at a height of approximately 2 Meters or as directed by OIL's representative . Required steel tubular shall be provided by OIL as Free Issue Items. After completion of work, the temporary roof supports have to dismantled and removed from inside the tank and transfer the same to OIL's designated site.

22.0 Cleaning and Visual Inspection of Roof Chambers:

Cleaning and Visual Inspection of Roof Chambers: The job involves dismantling of Doors of roof chambers, cleaning of the roof chambers (if required and as directed by OIL's Competent Person) and thorough visual inspection of the roof chambers.

The roof chambers are to be so cleaned that they should be ready for Ultrasonic thickness measurement. NB: All requisite tools and tackles for the job have to be arranged by the Contractor.

23.0 Repair of Roof Chambers:

Repair of Roof Chambers: The job involves repair of damaged/ corroded roof chamber(s) by Cold Welding or lap welding of MS plate pieces of suitable size and thickness. Only the MS Plate(s) if required for the job shall be supplied by OIL as free issue items. Necessary cutting/ forming of the same has to be carried out by the contractor. All requisite tools, tackles and consumables (including cold welding KIT, if required) shall have to be arranged by the Contractor. The roof chamber(s) to be hydraulically tested after repairs (if any). NB:

(i) The job has to be carried out if required after OIL's assessment of the roof chambers based on results of Visual Inspection (Service Item No: 220) and Ultrasonic thickness measurement (Service Item No: 130).

24.0 Plugging of additional holes made for installation of jetting nozzles:

Plugging of additional holes made for installation of jetting nozzles: The job involves welding of patch plates of identical gauge as to the existing roof plates to the roof areas for plugging of additional holes made for installation of jetting nozzles. Dye Penetration Test of the weld areas to be carried out for ascertaining integrity of the tank roof.

25.0 Inspection and Repair of Roof Drain:

The job involves visual inspection of Tank Roof exterior and interior surfaces and the roof drain line along with hydraulic testing of the roof drain line. Any damage observed during the visual inspection shall have to be reported to OIL's representative and repairs to the same to be carried out. The roof drain line to be hydraulically tested after repairs (if any).

26.0 Inspection of Foam Seal:

Visual Inspection of Foam Seal assembly for any visible damage / wear and tear etc. Any defect observed should immediately be reported to OIL's representative / Site - in- Charge.

27.0 Replacement of Foam Seal:

The job involves dismantling, removal of old tank foam seal if found damaged during Inspection to be carried out under item no: 260 above and supply and replacement of New tank foam seal. All the requisite materials including the foam seal shall have to be supplied by the contractor. The specification of the foam seal to be used should be generally guided by: I. Type of Seal: Vapour Mounted, generally conforming to Appendix - H of API - 650 for Crude oil application. II. Weather Shield, Scuff Band, Retaining Spring and all other necessary hardware for fixing the seal assembly in the Rim space of the tank should also be supplied along with the seal.

Note:

a) The replacement of Foam Seal Assembly job shall have to be taken up only after decision taken by OIL after completion of "Inspection of Foam Seal" job as detailed above under Item No: 260.
b) The Contractor to furnish the documentary evidence of Purchase of Foam Seal Assembly.

28.0 Cutting & removal of annular bottom ring:

Cutting and removal of Annular Bottom ring in small pieces after jacking the Tank Shell as per instruction of the OIL's representative. The job involves Supply and transportation of all requisite materials to work site including tools and tackles, machinery, consumables, temporary structures/staging, requisite manpower etc. as necessary to complete the job , approved fabrication drawings (if any) and as per directions of OIL's representative. NB: The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s).

29.0 Concrete work at tank bottom foundation:

Cleaning of all foreign materials and providing, mixing, compacting, laying in position and curing ordinary lean concrete of Mix 1:2:4(with 6mm & down stone aggregates) at all depth below of tank bottom plate of depressed area of tank pad foundation maintaining top level and slope to match with tank bottom plate complete as directed by OIL's representative (Plate cutting is not included under this item) Quantity measurement for payment. Wet volume of concrete used shall be measured before casting in presence of the OIL's representative. NB: The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s).

30.0 Fine concrete work over concrete top:

Providing & laying average 75 mm thick compacted crushed stone screenings, fine gravel, clean sand of similar materials mixed in hot asphalt(60/80 grade) 8 to 10 percent by volume and rolled or compacted over top surface of concrete as per direction of the OIL's representative for tank pad foundation, all materials and labours complete. NB: I. The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s). II.Only Bitumen / Asphalt required for the job shall be supplied by OIL.

31.0 Fabrication of annular bottom Plate by cutting & welding:

The job involves supply and transportation of all materials to work site including tools and tackles, machinery, consumables, temporary structures/staging requisite manpower etc. as necessary to complete the job in all respects as per relevant codes and standards, and as per directions of OIL's representative. MS plate work to be taken up by the Contractor includes cutting to required sizes, straightening , aligning, cleaning, sand blasting/ buffing, protective painting etc., radiography, NDT, vacuum box tests etc. providing for appurtenances, reinforcement pads, brackets for various supports, earthing boss and strips etc. as required to complete the job. NB: i) The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s). ii)Bottom plate & Annular Plate(complete

with datum plates and pad plate for Deck and Pontoon supports etc.) MS plates will be supplied to the Contractor as FREE ISSUE item for the plate work only.

32.0 Fabrication of bottom Plate other than annular portion by cutting & welding

The job involves supply and transportation of all materials to work site including tools and tackles, machinery, consumables, temporary structures/staging requisite manpower etc. as necessary to complete the job in all respects as per codes and standards and as per directions of OIL's representative. MS plate work to be taken up by the Contractor includes cutting to required sizes, straightening , aligning, cleaning, sand blasting/ buffing, protective painting etc., radiography, NDT, vacuum box tests etc. providing for appurtenances, reinforcement pads, brackets for various supports, earthing boss and strips etc. as required to complete the job.

NB:

I. The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s).

II. MS plate and associated work for any other portion of the tank found necessary as per the instruction of the OIL's representative etc. MS plates will be given to Contractor as FREE ISSUE item for the plate work only.

33.0 Welding of Shell to Bottom Plate Joint:

The job involves welding of Tank Shell to the bottom plate, including supply of tools and tackles, machinery, consumables, temporary structures/staging requisite manpower etc. as necessary to complete the job in all respects as per relevant codes and standards, and as per directions of OIL's representative. NB: This job will have to be taken up only if Item No 180 & 190of the Contract is required to be executed.

34.0 Vacuum Box Test:

Vacuum Box Test: Vacuum Box Test for weld joints of the Annular and Bottom plates with supply of Vacuum Box and all other tools, tackles and required requisite competent manpower as per the instruction of the OIL's representative.

35.0 Placement of 4" (100 MM) NB pipes and Fittings:

Placement of 4" (100 MM) NB pipes, bends and other associated fittings inside the tank after carrying them from outside the tank bundh so as to make the heating coil. (Pipes, bends and other associated fittings will be supplied by OIL). The pipes, bends and other associated fittings are to be placed over the existing the supports inside the tank. Any repair for the supports will also have to be done by the contractor. All pipes, bends and other associated fittings are to be swabbed and made free from foreign materials. The contractor will also have to prepare the bevel ends in case pipes, bends etc are required to be cut to match the size of the coil.

36.0 Welding of 4" (100 MM) NB pipes and Fittings:

Welding of 4" (100 MM) NB pipes and Fittings: Welding of joints of 4" (100 MM) NB pipes, bends and other associated fittings into a continuous length using minimum three (3) runs of welding inclusive of supply of welding / cutting and generating sets, approved grade and quality of electrodes, fuel, operator, welder and necessary

supervision to withstand a hydraulic test pressure for 20 kg/cm2 for a continuous period of twenty four (24) hours. The above includes welding of flanges also. Welding shall have to be of radiographic quality.

37.0 Dye Penetrant Test:

Dye Penetrant Test of weld joints with supply, of all materials, tools and tackles etc. as per the instruction of the OIL's representative.

38.0 Radiography of the weld joints:

Radiography of the 100% of weld joints of newly fabricated steam coils. Re take shots shall be in the account of the Contractor with no extra cost to OIL. All supply and transportation of materials to work site including tools and tackles, plant and machinery, consumables, temporary structures/staging, requisite labour and competent / certified manpower etc. as necessary to complete the job in all respects as per codes and standards, tender specification and drawings, approved fabrication drawings and as per directions of OIL's representative. Necessary arrangement for keeping the radiography source in safe condition as per relevant norms shall be in the scope of the Contractor. NB: The Radiography of the weld joints shall have to be carried out by ASNT Certified personnel.

39.0 Hydraulic testing of the entire newly fabricated steam coil:

Hydraulic testing of the entire newly fabricated steam coil at 20 kg/sq. cm of pressure for a period of 24 hours (continuous). The testing of the steam coil will have to be done after complete completion of fabricated steam coil in all aspects. Necessary materials like pressure gauge, pump, recorder and recorder charts etc. will have to be arranged by the contractor. The contractor shall lay the filling lines (100 mm NB). The contractor shall engage sufficient number of competent personnel over the entire steam coil to keep total vigilance during the test. In case of failure, the contractor shall locate it and report it to the OIL's representative at site. Any failure so detected will have to rectified by the contractor and the whole pipe line will have to be retested hydraulically. Only source water and the pipes required for laying the filling lines will be supplied by OIL. The contractor will have to return the pipes after the completion of the testing in good condition.

40.0 Hydraulic Testing of the tank:

All necessary arrangement have to be made for water filling, recording of settlement, hammer testing of shell, dewatering/draining out water as per OIL's approved procedure, cleaning, blanking of all nozzle including providing temporary fasteners, test gasket, machinery, tools & tackles, requisite manpower etc. complete in all respects as per relevant codes and standards, and direction of OIL's representative. Only source water and the pipes required for laying the filling lines will be supplied by OIL. The contractor will have to return the pipes after the completion of the testing in good condition.

41.0 Calibration of Tank:

Calibration of tank including providing of all necessary scaffolding, strapping tapes with accessories, calibration charts with one copy each of non-tearable tracing for

calibration chart duly approved by competent authorities. Calibration shall include physical calibration of tank bottom at actual bottom profile conditions after hydro testing (25 M Height Floating Roof Tank). The necessary fees for statutory approval etc. has to be borne by the contractor. The calibration certificate from competent authority along with documentary evidence of submission of requisite fee etc. has to be submitted to OIL.

42.0 Painting with primer & finish paint:

Painting with primer & finish paint : Preparation by wire Brushing & sand blasting to SA 2, bare metal, supply and application of primer and finish paint to the whole bottom plate and shell plates upto a height of 1.5 M, including supply and transportation of all materials to worksite, consumables, temporary structures/staging, tools and tackles, machinery, requisite manpower etc. as necessary to complete the job in all respects as per codes and standards, paint manufacture's specifications, direction etc. and direction of OIL's representative.

43.0 Cleaning ,Hooking up, Box-up and Commissioning of the Tank:

Cleaning ,Hooking up, Box-up and Commissioning of the Tank : Cleaning of the tank after completion of all the work up to the satisfaction of the OIL's representative and hooking up of all the valves and connections associated with the tank (which were disconnected vide item no 40) . Boxing up of the tank with supply of all new gaskets suitable for crude oil application for all nozzle and connection of all pipes and commissioning of the tank.

44.0 Dismantling of the Tank Barricade Wall:

Dismantling of the Tank Barricade Wall: The job involves Dismantling of the Tank Barricade Wall erected vide item no 20. The contractor has to clear the site by removal of all materials to the satisfaction of OIL's representative.

45.0 Demobilization:

Demobilization: The job involves demobilization of plant and machinery set up vide Point No: 1.0 above and back transportation of the same to Contractor's premises. All the free issue items shall have to be recovered (as applicable) and returned back to OIL before initiation of demobilization.

ATTACHMENT – I

VENDOR'S INFORMATION

Sl no.	Description	To be filled in by the Tenderer
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

Schedule of Rate (SOR)- A

Cleaning and in-situ sludge Processing of Crude Oil Storage Tank at Oil India Limited, Moran

Tank No- 11 at CTF – Moran

a) Type External Floating Roof
b) Capacity 5000 KL
c) Dimensions Height: 11.05 M & Diameter: 24.41 M
d) Estimated Tank Bottom Sludge 400 CuM

1. OIL India Limited (OIL) shall supply all the requisite Electrical Power for operation of Sludge Removal & Sludge Processing job. **Electrical Power for illumination and tank overhauling/ maintenance work to be supplied by the Contractor.**

2. The sludge processing shall have to be carried out in-situ with setting up of Sludge Processing Plant.

Sl No	Description of Work	Unit	Qty	Rate (Rs	Amount (Rs)
10	**Mobilization for Sludge Removal:** The job involves transportation of Plant and Machinery from Contractor's premises to CTF, Moran by Balmer Lawrie (BL). The contractor to carry out installation with unloading of equipment with crane/hydra etc. and commissioning of Plant and Machinery as per BL Guidance along with all associated pipings,cabling to make the plant ready for operation. All Civil Engg. Works viz. pump foundation, pedestals for Containers and Modules, pipe support etc. shall be under the Contractor's Scope. Transportation of equipment, Supply of all pipes, cables, panels, hoses etc. are Free Issue items. However fittings and tools/tackles etc. are in the vendors scope.	Job	1	4,00,000	4,00,000
20	**Erection of Barricade Wall:** Erection of Barricade Wall around the Tank Bundh area for isolation of the tank. The job involves erection of 6 M High X 120 M temporary wall of CGI sheets. All materials required for the job to be supplied by the Contractor.	Job	1	6,50,000	6,50,000
30	**Emptying of crude oil from the tank:** Laying of 100 MM (4") NB pipelines including fitting of valves, bends, unions etc. and hooking up with pump(s) for emptying out crude oil from the tank to the lowest level. The pipelines are to be dismantled after completion of work. The materials for laying the line will be supplied by OIL and the contractor will be responsible for carrying the materials from OIL's Yard & keeping the materials safely and returning it back after the job is over. A diesel engine driven pump set (alongwith HSD and consumables) will be provided by OIL for pumping out the crude from the tank.	Job	1	40,000	40,000
40	**Isolation of the tank:** Dismantling of all the valves and connections associated with the tank, so as to isolate the tank from the system as per the advice of BL/ OIL's representative.	Job	1	10,000	10,000
50	**Digging / Construction of pit:** Digging of one pit of size: 10m x 20m x 2 m (Approx.)for storage of wax, sludge etc. removed from the tank. The exact location for digging shall be shown by OIL's representative. NB: This job shall have to be taken up only if OIL does not provide Pit(s) for storage of the Sludge to be removed from the Tank.	M3	400	210	84,000
60	**Laying of HDPE sheet:** Laying of HDPE sheet inside the walls of the pit dug/ contructed under item no: 50. All the items required for the same to be supplied by the Contractor. NB: 1. Specification of the HDPE sheet to be used should be as per IS 15351: 2008 or equivalent. 2. NB: This job shall have to be taken up only if item no 40 has to be executed or the Pit(s) provided by OIL does not have the requisite HDPE sheet lining.	M2	320	80	25,600

Schedule of Rate (SOR)- A

Cleaning and in-situ sludge Processing of Crude Oil Storage Tank at Oil India Limited, Moran

Sl No	Description of Work	Unit	Qty	Rate (Rs	Amount (Rs)
70	**Cutting of Additional Holes on Tank roof for installation of jetting nozzles:** The job shall have to be carried out after joint inspection and decision on requirement of cutting of additional holes on the tank roof for installation of jetting nozzles by OIL's representative and Contractor's representative. The job involves UTM of the areas where the additional holes are proposed to be made. The holes cutting shall only be allowed by OIL after assessing the integrity of the roof plates based on the results of the UTM. The cutting process to be deployed must be a "Cold Cutting" process.	Job	20	Inlcuded in processing	0
80	**Sludge Removal and Processing of Sludge: <u>Providing necessary operational assistance to BL Engineers</u> with trained skilled/semiskilled manpower in oily sludge operation equipped with necessary tools and tackles with one supervisor as directed by BL's Engineers. The job involves but not limited to the following works:** a) Installation of Jetting Nozzles.	M3	400	2,000	8,00,000
	b) Placement and necessary installation of all equipment required for Sludge Removal and Processing of Sludge near the tank (outside/inside the tank dyke). c) Laying of all necessary pipe lines required for Sludge Removal and Processing of Sludge .The pipes are FREE ISSUE items and the fitting required for the same shall be under the Contractor's Scope. d) **Dosing of Chemical inside the tank, as required.** Removal of Tank Bottom Sludge by jetting process. e) Processing of sludge removed from the tank in the sludge processing plant. f) Pumping of the recovered oil to nearby Tank(s) as directed by OIL. All operating crew shall be under Contractor's Scope. NB: 1. The recovered oil shall be tested for BS&W content (%) by OIL and be cleared for pumping only if the same is under permissible limits, ie: less than 1% (V/V). 2. The recovered oil parameters shall be tested by OIL and only upon meeting the stipulated parameters of the Contract, the Contractor shall hand over the custody of recovered oil to OIL. 3. The actual quantity of the sludge to be removed shall be jointly estimated by BL and OIL's representative and Contractor / Contractor's Representative before starting of the job by taking tank dips. 4. All tools and tackles, all Personal Protective Equipment and manpower required for the Sludge Removal and Processing of Sludge process shall be under the Contractor's scope. 5. **<u>DELETED</u>** 6. The separated effluent and solids to be disposed as directed by OIL. The oil content in separated effluent shall have to be less than 100 ppm. The effluent shall be transported/pumped to OIL's designated place for further treatment/disposal by OIL. The solid waste from processed sludge is to be stored in a pit at the designated site (to be identified by OIL). 7. All equipment set up for the process to be dismantled by the Contractor after completion of Sludge Removal and Processing of Sludge.				
90	**Manual Sludge Removal:** This job is to be taken up after completion of Item No- 80 above. The job involves Opening of manhole covers for removal of remaining residual sludge from inside the tank and transfer to the pit dug/ constructed under item no: 40 or to any other pit provided by OIL which may be at a distance of about 200 meter away from the tank. NB: The actual quantity of the sludge to be removed shall be estimated upon opening of the manhole covers by OIL's/BLrepresentative and Contractor / Contractor's Representative.	M3	100	2,000	2,00,000
100	**Inside Cleaning of the Tank:** The job involves thorough cleaning of inside walls and bottom surfaces of the tank, top and bottom surfaces of the pontoon, heating coils, supporting structures inside the tank etc. , so that no trace of oil is left inside the tank after completion of Item No-90 above. Cleaning should be such that welding, gas cutting and grinding can be done inside the tank without any fire hazard and inspection of the tank and NDT of the bottom plates can be done including ultrasonic thickness measurement. NB: Only water required for cleaning of the tank shall be provided by OIL. All other items required for the job shall have to be arranged by the Contractor.	Job	1	20,000	20,000

Schedule of Rate (SOR)- A

Cleaning and in-situ sludge Processing of Crude Oil Storage Tank at Oil India Limited, Moran

Sl No	Description of Work	Unit	Qty	Rate (Rs	Amount (Rs)
110	**Area Cleaning:** Cleaning of crude oil sludge etc. from outside drains, oil / water separators and from inside the tank bundh / dyke areas and transfer it to the OIL designated pit or to the pit mentioned under item no. 50 above. All necessary materials like sand etc shall have to be arranged by the Contractor.	LSM	1	20,000	20,000

Total Estimated Value excluding GST (Rs.): 22,49,600

Total Estimated Value excluding GST (in Words) : Rupees Twenty Two Lakh Forty Nine Thousand and Six Hundred Only

NB: Above rates are exclusive of GST. GST will be paid extra at prevailing rate.

Schedule of Rates (SOR)-B

Major overhauling of Crude Oil Storage Tank at Oil India Limited, Moran

Tank No- 11 at CTF – Moran

a) Type External Floating Roof
b) Capacity 5000 KL
c) Dimensions Height: 11.05 M & Diameter: 24.41 M
d) Estimated Tank Bottom Sludge 400 CuM

1. OIL India Limited (OIL) shall supply all the requisite Electrical Power for operation of Sludge Removal & Sludge Processing job. **Electrical Power for illumination and maintenance work to be supplied by the Contractor.**

2. The sludge processing shall have to be carried out in-situ with setting up of Sludge Processing Plant.

Sl No	Description of Work	Unit	Qty	Rate (Rs	Amount (Rs)
120	**Cutting & Removal of old steam coils :** Removal of old steam coils from inside the tank to outside of the tank bundh/dyke after cutting the coil into pieces by Hacksaw/gas cutting. The area for keeping the cut pieces of old steam coils shall be shown by OIL's representative. NB: Gas testing shall be carried out by OIL prior to this operation and job must only be carried out upon receipt of approval for the same from OIL.	Job	1	35,000	35,000
130	**Ultrasonic thickness measurement:** Ultrasonic thickness measurement with supply and transportation of all materials to worksite including tools & tackles, machinery, consumables, temporary structures / staging, requisite competent and Certified manpower etc. as necessary to complete the job in all respects as per relevant codes and standards and also as per directions of OIL's representative. The Ultrasonic thickness measurement has to be carried out for Tank Bottom plate and Tank Shell upto a height of 1.5 M and the results of the same to be supplied to OIL. The results of the Ultrasonic thickness measurement should also include recommendation for OIL's consideration / action. NB: The Ultrasonic thickness measurement has to be carried out by ASNT certified personnel.	NO	680	30	20,400
140	**Ultrasonic Flaw Detection:** Ultrasonic Flaw Detection with supply and transportation of all materials, to worksite including tools and tackles, machinery, consumables, temporary structures / staging, requisite competent and certified manpower etc. as necessary to complete the job in all respects as relevant per codes and standards and as per directions of OIL's representative. The results of the same to be supplied to OIL. NB: The Ultrasonic Flaw Detection has to be carried out by ASNT certified personnel.	M	80	200	16,000
150	**Liquid penetration test:** Liquid penetration test in the shell to bottom joint with supply of all materials, tools and tackles, requisite competent and certified manpower etc. as per the instruction of the OIL's representative. NB: The Liquid penetration test has to be carried out by ASNT certified personnel.	M	80	70	5,600
160	**Thickness Measurement of Paint Coating:** Paint coating thickness measurement for the Annular plates of the bottom plates and the Shell plate upto 1.5 M height by Magnetic-Field or Eddy-Current (Electromagnetic) Test Methods, including supply of tools, tackles and requisite competent and certified manpower required for the job. The job shall have to conform to ASTM E 376-11. NB: The Paint coating thickness measurement has to be carried out by ASNT certified personnel.	Job	1	20,000	20,000
170	**Pit Gauging:** Pit gauging of the bottom and shell plates at all heights wherever required as per the instruction of the OIL's representative, including supply of tools, tackles and requisite competent and licensed manpower required for the job.	NO	50	150	7,500
180	**MS Structural steel work for jack :** Structural Steel work for support for fixing jacks for tank shell lifting and all other miscellaneous structures related to tank including alignment, fixing to position, true to line and level of structural steel made out of rolled steel angles, channels, beams, plates etc. including splicing, cutting, bending, drilling, welding, riveting, bolting etc. as required to complete the job in all respects. NB: The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s).	Job	1	80,000	80,000

Schedule of Rates (SOR)-B

Major overhauling of Crude Oil Storage Tank at Oil India Limited, Moran

Sl No	Description of Work	Unit	Qty	Rate (Rs	Amount (Rs)
190	**Jacking up of Tank:** The job involves: Casting and placement of RCC Blocks for jacking, fabrication and fixing of Jack Supports(including supply of all materials) made from MS structural steel, cutting of the bottom and shell plate weld joint and jacking up of the tank. All materials and consumables required for the job shall have to be arranged by the Contractor. NB: The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s).	Job	1	4,50,000	4,50,000
200	**Dismantling and reassembling of Tank Roof supports:** The job involves cutting of the existing tank roof support legs wherever necessary or as per direction of OIL's representative to facilitate cutting and removal of annular / bottom plates.After completion of work the cut/ dismantled tank roof support legs shall to be re-fixed into original position by welding. NB: The job shall have to be taken up if required on the advice of OIL's representative after review /evaluation of the NDT report(s).	Job	1	60,000	60,000
210	**Placement and dismantling of Temporary Roof Supports:** The job involves placement of Supports fabricated out of steel tubulars for supporting the tank roof at a height of approximately 2 Meters or as directed by OIL's representative. Required steel tubular shall be provided by OIL as Free Issue Items. After completion of work, the temporary roof supports have to dismantled and removed from inside the tank and transfer the same to OIL's designated site.	No	15	4,500	67,500
220	**Cleaning and Visual Inspection of Roof Chambers:** The job involves dismantling of Doors of roof chambers, cleaning of the roof chambers (if required and as directed by OIL's Competent Person) and thorough visual inspection of the roof chambers. The roof chambers are to be so cleaned that they should be ready for Ultrasonic thickness measurement. NB: All requisite tools and tackles for the job have to be arranged by the Contractor.	No	23	5,500	1,26,500
230	**Repair of Roof Chambers:** The job involves repair of damaged/ corroded roof chamber(s) by Cold Welding or lap welding of MS plate pieces of suitable size and thickness. Only the MS Plate(s) if required for the job shall be supplied by OIL as free issue items. Necessary cutting/ forming of the same has to be carried out by the contractor. All requisite tools, tackles and consumables (including cold welding KIT, if required) shall have to be arranged by the Contractor. The roof chamber(s) to be hydraulically tested after repairs (if any). NB: (i) The job has to be carried out if required after OIL's assessment of the roof chambers based on results of Visual Inspection (Service Item No: 220) and Ultrasonic thickness measurement (Service Item No: 130).	NO	5	35,000	1,75,000
240	**Plugging of additional holes made for installation of jetting nozzles:** The job involves welding of patch plates of identical gauge as to the existing roof plates to the roof areas for plugging of additional holes made for installation of jetting nozzles. Dye Penetration Test of the weld areas to be carried out for ascertaining integrity of the tank roof.	Job	20	Included in Processing	
250	**Inspection and Repair of Roof Drain:** The job involves visual inspection of Tank Roof exterior and interior surfaces and the roof drain line alongwith hydraulic testing of the roof drain line . Any damage observed during the visual inspection shall have to be reported to OIL's representative and repairs to the same to be carried out. The roof drain line to be hydraulically tested after repairs (if any).	Job	1	12,000	12,000
260	**Inspection of Foam Seal:** Visual Inspection of Foam Seal assembly for any visible damage / wear and tear etc. Any defect observed should immediately be reported to OIL's representative / Site -in- Charge.	Job	1	6,000	6,000
270	**Replacement of Foam Seal:** The job involves dismantling, removal of old tank foam seal if found damaged during Inspection to be carried out under item no: 260 above and supply and replacement of New tank foam seal. All the requisite materials including the foam seal shall have to be supplied by the contractor. The specification of the foam seal to be used should be generally guided by: I. Type of Seal: Vapour Mounted , generally conforming to Appendix – H of API – 650 for Crude oil application. II. Weather Shield, Scuff Band, Retaining Spring and all other necessary hardware for fixing the seal assembly in the Rim space of the tank should also be supplied along with the seal. Note: (a)The replacement of Foam Seal Assembly job shall have to be taken up only after decision taken by OIL after completion of "Inspection of Foam Seal" job as detailed above under Item No: 260. (b)The Contractor to furnish the documentary evidence of Purchase of Foam Seal Assembly.	Job	1	9,00,000	9,00,000

Schedule of Rates (SOR)-B

Major overhauling of Crude Oil Storage Tank at Oil India Limited, Moran

Sl No	Description of Work	Unit	Qty	Rate (Rs	Amount (Rs)
280	**Cutting & removal of annular bottom ring :** Cutting and removal of Annular Bottom ring in small pieces after jacking the Tank Shell as per instruction of the OIL's representative. The job involves Supply and transportation of all requisite materials to work site including tools and tackles, machinery, consumables, temporary structures/staging, requisite manpower etc. as necessary to complete the job , approved fabrication drawings (if any) and as per directions of OIL's representative. NB: The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s).	Job	1	1,20,000	1,20,000
290	**Concrete work at tank bottom foundation :** Cleaning of all foreign materials and providing, mixing, compacting, laying in position and curing ordinary lean concrete of Mix 1:2:4(with 6mm & down stone aggregates) at all depth below of tank bottom plate of depressed area of tank pad foundation maintaining top level and slope to match with tank bottom plate complete as directed by OIL's representative (Plate cutting is not included under this item) Quantity measurement for payment. Wet volume of concrete used shall be measured before casting in presence of the OIL's representative. NB: The job shall have to be taken up if required on the advice of OIL's representative after review /evaluation of the NDT report(s).	M3	8	9,000	72,000
300	**Fine concrete work over concrete top :** Providing & laying average 75 mm thick compacted crushed stone screenings, fine gravel, clean sand of similar materials mixed in hot asphalt(60/80 grade) 8 to 10 percent by volume and rolled or compacted over top surface of concrete as per direction of the OIL's representative for tank pad foundation, all materials and labours complete. NB:I. The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s). II.Only Bitumen /Asphalt required for the job shall be supplied by OIL.	M3	8	7,200	57,600
310	**Fabrication of annular bottom Plate by cutting & welding :** The job involves supply and transportation of all materials to work site including tools and tackles, machinery, consumables, temporary structures/staging requisite manpower etc. as necessary to complete the job in all respects as per relevant codes and standards, and as per directions of OIL's representative. MS plate work to be taken up by the Contractor includes cutting to required sizes, straightening , aligning, cleaning, sand blasting/ buffing, protective painting etc., radiography, NDT, vacuum box tests etc. providing for appurtenances, reinforcement pads, brackets for various supports, earthing boss and strips etc. as required to complete the job. NB: i) The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s). ii)Bottom plate & Annular Plate(complete with datum plates and pad plate for Deck and Pontoon supports etc.) **MS plates will be supplied to the Contractor as FREE ISSUE item for the plate work only.**	MT	15	52,000	7,80,000
320	**Fabrication of bottom Plate other than annular portion by cutting & welding :** The job involves supply and transportation of all materials to work site including tools and tackles, machinery, consumables, temporary structures/staging requisite manpower etc. as necessary to complete the job in all respects as per codes and standards and as per directions of OIL's representative. MS plate work to be taken up by the Contractor includes cutting to required sizes, straightening , aligning, cleaning, sand blasting/ buffing, protective painting etc., radiography, NDT, vacuum box tests etc. providing for appurtenances, reinforcement pads, brackets for various supports, earthing boss and strips etc. as required to complete the job. NB: i) The job shall have to be taken up if required on the advice of OIL's representative after review / evaluation of the NDT report(s). ii) MS plate and associated work for any other portion of the tank found necessary as per the instruction of the OIL's representative etc. **MS plates will be given to Contractor as FREE ISSUE item for the plate work only.**	MT	2	52,000	1,04,000
330	**Welding of Shell Joint:** The job involves welding of Tank Shell to the bottom plate, including supply of tools and tackles, machinery, consumables, temporary structures/staging requisite manpower etc. as necessary to complete the job in all respects as per relevant codes and standards, and as per directions of OIL's representative. NB: This job will have to be taken up only if Item No 160 of the Contract is required to be executed.	Job	1	80,000	80,000
340	**Vacuum Box Test:** Vacuum Box Test for weld joints of the Annular and Bottom plates with supply of Vacuum Box and all other tools, tackles and required requisite competent manpower as per the instruction of the OIL's representative. NB: This job will have to be taken up only if Item No 160 of the Contract is required to be executed.	M	350	110	38,500

Schedule of Rates (SOR)-B

Major overhauling of Crude Oil Storage Tank at Oil India Limited, Moran

Sl No	Description of Work	Unit	Qty	Rate (Rs	Amount (Rs)
350	**Placement of 4" (100 MM) NB pipes and Fittings:** Placement of 4" (100 MM) NB pipes, bends and other associated fittings inside the tank after carrying them from outside the tank bundh so as to make the heating coil. **(Pipes, bends and other associated fittings will be supplied by OIL).** The pipes, bends and other associated fittings are to be placed over the existing the supports inside the tank. Any repair for the supports will also have to be done by the contractor. All pipes, bends and other associated fittings are to be swabbed and made free from foreign materials. The contractor will also have to prepare the bevel ends in case pipes, bends etc are required to be cut to match the size of the coil.	Job	1	30,000	30,000
360	**Welding of 4" (100 MM) NB pipes and Fittings:** Welding of joints of 4" (100 MM) NB pipes, bends and other associated fittings into a continuous length using minimum three (3) runs of welding inclusive of supply of welding / cutting and generating sets, approved grade and quality of electrodes, fuel, operator, welder and necessary supervision to withstand a hydraulic test pressure for 20 kg/cm2 for a continuous period of twenty four (24) hours. The above includes welding of flanges also. Welding shall have to be of radiographic quality.	JT	220	620	1,36,400
370	**Dye Penetrant Test:** Dye Penetrant Test of weld joints with supply, of all materials, tools and tackles etc. as per the instruction of the OIL's representative.	M	380	90	34,200
380	**Radiography of the weld joints:** Radiography of the 100% of weld joints of newly fabricated steam coils. Re take shots shall be in the account of the Contractor with no extra cost to OIL. All supply and transportation of materials to work site including tools and tackles, plant and machinery, consumables, temporary structures/staging, requisite labour and competent / certified manpower etc. as necessary to complete the job in all respects as per codes and standards, tender specification and drawings, approved fabrication drawings and as per directions of OIL's representative. Necessary arrangement for keeping the radiography source in safe condition as per relevant norms shall be in the scope of the Contractor. NB: The Radiography of the weld joints shall have to be carried out by ASNT Certified personnel.	No	220	540	1,18,800
390	**Hydraulic testing of the entire newly fabricated steam coil:** Hydraulic testing of the entire newly fabricated steam coil at 20 kg/sq. cm of pressure for a period of 24 hours (continuous). The testing of the steam coil will have to be done after complete completion of fabricated steam coil in all aspects. Necessary materials like pressure gauge, pump, recorder and recorder charts etc. will have to be arranged by the contractor. The contractor shall lay the filling lines (100 mm NB). The contractor shall engage sufficient number of competent personnel over the entire steam coil to keep total vigilance during the test. In case of failure, the contractor shall locate it and report it to the OIL's representative at site. Any failure so detected will have to rectified by the contractor and the whole pipe line will have to be retested hydraulically. Only source water and the pipes required for laying the filling lines will be supplied by OIL. The contractor will have to return the pipes after the completion of the testing in good condition.	Job	2	10,000	20,000
400	**Hydraulic Testing of the tank :** All necessary arrangement have to be made for water filling , recording of settlement ,hammer testing of shell, dewatering/draining out water as per OIL's approved procedure, cleaning, blanking of all nozzle including providing temporary fasteners, test gasket, machinery, tools & tackles, requisite manpower etc. complete in all respects as per relevant codes and standards, and direction of OIL's representative. Only source water and the pipes required for laying the filling lines will be supplied by OIL. The contractor will have to return the pipes after the completion of the testing in good condition.	Job	1	30,000	30,000

Schedule of Rates (SOR)-B

Major overhauling of Crude Oil Storage Tank at Oil India Limited, Moran

Sl No	Description of Work	Unit	Qty	Rate (Rs	Amount (Rs)
410	**Calibration of Tank :** Calibration of tank including providing of all necessary scaffolding, strapping tapes with accessories, calibration charts with one copy each of non-tearable tracing for calibration chart duly approved by competent authorities. Calibration shall include physical calibration of tank bottom at actual bottom profile conditions after hydro testing (25 M Height Floating Roof Tank). The necessary fees for statutory approval etc. has to be borne by the contractor. The calibration certificate from competent authority along with documentary evidence of submission of requisite fee etc. has to be submitted to OIL.	Job	1	70,400	70,400
420	**Painting with primer & finish paint :** Preparation by wire Brushing & sand blasting to SA 2, bare metal, supply and application of primer and finish paint to the whole bottom plate and shell plates upto a height of 1.5 M, including supply and transportation of all materials to worksite, consumables, temporary structures/staging, tools and tackles, machinery, requisite manpower etc. as necessary to complete the job in all respects as per codes and standards, paint manufacture's specifications, direction etc. and direction of OIL's representative.	SME	900	630	5,67,000
430	**Cleaning ,Hooking up, Box-up and Commissioning of the Tank :** Cleaning of the tank after completion of all the work up to the satisfaction of the OIL's representative and hooking up of all the valves and connections associated with the tank (which were disconnected vide item no 40) . Boxing up of the tank with supply of all new gaskets suitable for crude oil application for all nozzle and connection of all pipes and commissioning of the tank.	Job	1	30,000	30,000
440	**Dismantling of the Tank Barricade Wall:** The job involves Dismantling of the Tank Barricade Wall erected vide item no 20. The contractor has to clear the site by removal of all materials to the satisfaction of OIL's representative.	Job	1	10,000	10,000
450	**Demobilization:** The job involves demobilization of plant and machinery set up vide Point No: 10 above and necessary loading of equipment for back transportation of the same to BL's premises. All the free issue items shall have to be recovered (as applicable) and returned back to OIL before initiation of demobilization.	Job	1	1,50,000	1,50,000

Total Estimated Value excluding GST (Rs.): 44,30,400

Total Estimated Value excluding GST (in Words) : Rupees Forty Four Lakh Thirty Thousand and Four Hundred.

NB: Above rates are exclusive of GST. GST will be paid extra at prevailing rate.