

SBU – Greases & Lubricants, P-43, Hide Road Extension, Kolkata – 88.

Phone : [033] 2450-0124 : Fax : [033] 2449-8493

E-TENDER ENQUIRY

Tender Enquiry No. : GLK/TE18/ 373
Date of Issue : 5/2/19
Closing Date and Time : 4/3/19 15:00

Sub:_Tender for Design, Fabrication, Supply, Installation, & Commissioning of Double counter current Agitation System for an Existing Finishing Kettle

Online electronic offers are invited from contractors of repute having strong financial background and meeting pre-qualification criteria for **Design, Fabrication, Supply, Installation, Testing & Commissioning of Double counter current Agitation System** as per Specifications & Scope of work, General terms & conditions, and HSE Schedule attached in Annexure - A, B & C respectively.

If the tenderer find any discrepancy, omission, ambiguity or conflict in or among the documents forwarded or be in doubt as to their meaning and interpretations, such matter shall be brought to the attention of us, at least four working days prior to the due date of the Tender. However no change in price/value shall be allowed after placement of the order or during the execution of work at site.

The bidders are requested to kindly check all technical parameters and made a site visit, if required, and acquaint themselves before quoting against the same.

For any clarification, please contact

Mr. P.C.S.Srinivas

Chief Manager[Maint & HSE]

Tel : 033 24500124

e-mail id : Srinivas.pcs@balmerlawrie.com

Bidders are requested to submit their offer on-line before the due date and time of the tender.

Thanking you,

Yours faithfully,

for **Balmer Lawrie & Co. Ltd.**

(Arnab Ghatak)

Sr. Manager (SCM)

1.BACKGROUND AND PURPOSE OF TENDER

Tender for Design, Fabrication, Supply, Installation, & Commissioning of Double counter current Agitation System for an Existing Finishing Kettle (FK-06) with appurtinaces and allied Job work at Balmer Lawrie & Co. Ltd., Kolkata

OBJECTIVES

The purpose of this project is Design, Fabrication, Supply, Installation, Testing & Commissioning (SITC) of **Double counter current Agitation System for an Existing Finishing Kettle (FK-06) with appurtinaces and allied Job work.**

1.0 SCOPE: This specification covers general requirements for material, design, fabrication, supervision of erection, testing and commissioning of agitators along with accessories.

2.0 CODE – SPECIFICATION - REGULATIONS

2.1 Material Specifications: Materials to be used shall conform to ASME Section II.

3.0 MATERIALS

Materials of various parts of equipment shall be selected for general industrial condition/ services.

3.1 Specifications of Carbon Steel Plates

MATERIAL SELECTION: The following table gives general guidelines for material selection for various Pressure Parts/Non Pressure Parts of the equipment:-

DESIGN TEMP. °C	PRESSURE PARTS				NON PRESSURE PARTS		
	PLATE	PIPE	FORGING	BOLTS/ STUDS/ NUTS EXTERNAL	STRUCTURAL ATTACHMENT WELDED TO PRESSURE PARTS	INTERNAL PIPES/ PLATES	STUDS BOLTS NUTS INTERNAL
ABOVE – 0 °C UPTO 350°C	SA 516 Grade 70 / As specified in Data Sheets & Drawings	SA 106 GR.B	SA-105/SA-266	SA-193 B7/ SA-194 GR 2H	i) ASTM A 36/ IS2062 (UPTO 300 °C) II) SAME AS PR. PARTS (ABOVE 300 °C)	SA-106 GR.B/ SAME AS PR. PARTS	SA-193 GR-B8 SA-194 GR-4

Test & Report:

Chemical analysis by Optical Emission Spectrometer, IS: 8811-1998 thru NABL accredited lab

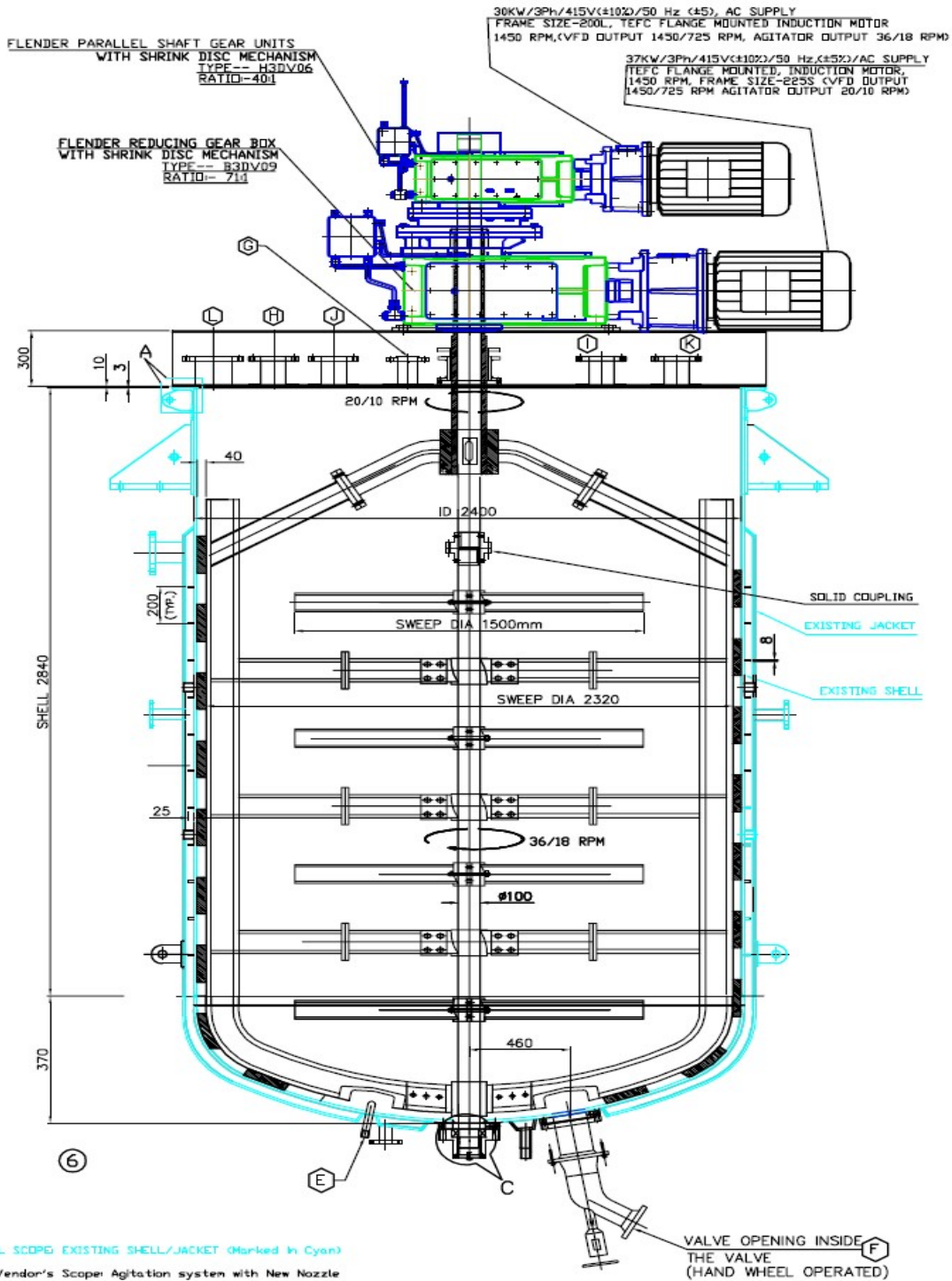
- (a) All plates : 2 samples at random
- (b) All Seamless Pipes:: 2 samples at random

DP test: 100% by the fabricator.

MTC: To be submitted

Inspection/Witness : By BLCL or by a TPI on behalf of BLCL arranged by BLCL OR **BLCL may accept based on Quality reports submitted by fabricator.**

Drawing: Enclosed drawing is for Illustration purpose Only.



NOZZLE SCHEDULE :

NOZZ. MARK	QTY.	SIZE	FLANGE	NECK	PROJ.	SERVICE	REMARKS
		NB	RATING	TYPE	SCH.		
E	1	1"	3000 #	NPT,FC	-		THERMOWELL CONNECTION WITH SS THERMOWELL
F	1	6"X4"	150 #	PAD	-		FLUSH BOTTOM VALVE (MANUAL)
G	1	3"	150 #	S.O.R.F.	40	6"	BASE OIL
H	1	3"	150 #	S.O.R.F.	40	6"	SOAP INLET
I	1	3"	150 #	S.O.R.F.	40	6"	CIRCULATION
J	1	3"	150 #	S.O.R.F.	40	6"	SOAP INLET
K	1	3"	150 #	S.O.R.F.	40	6"	CIRCULATOR
L	1	6"	150 #	S.O.R.F.	40	6"	VENT

4.2.0 Specification Data sheet:

SL No.	Head/Parameter	Description
4.2.1	Equipment Name	Existing Finishing Kettle, 10 MT Capacity
4.2.2	Kettle ID	FK-06,
4.2.3	Working Temperature in Deg C	180
4.2.4	Working Pressure	Atmospheric
4.2.5	Purpose	Grease mixing
4.2.6	Nozzles at top	ref. Drawing (to be fabricated new)
4.2.7	Nozzles at bottom	ref. Drawing (to be fabricated new)
4.2.8	Top Cover	3 piece, hinged at one end (to be fabricated new)
4.2.9	Agitator & Shaft arrangement	Double counter current Agitation System (to be fabricated new)
4.2.10	Quantity	double agitation, ref drawing
4.2.11	Design Code/standard	ASME SEC VII Div I
4.2.12	Type	refer drawing
4.2.13	Duty	Continuous
4.2.14	Sweep dia of inner agitator	As per design, ref. drawing
4.2.15	Sweep dia of outer agitator	As per design,, ref. drawing
4.2.16	Plate thk of agitator arm	30 mm min or as per design
4.2.17	Agitator Speed (RPM), inner	18/36 clock wise
4.2.18	Agitator Speed (RPM), outer	10/20, anti clock wise
4.2.19	Solid Shaft OD in mm of inner agt.	100
4.2.20	Hollow Shaft OD in mm of outer agt.	150
4.2.21	Shaft length	Vendor to specify
4.2.22	MOC of shaft	EN-8 or better
4.2.23	Bottom Support	PB
4.2.24	Sealing arrangement	Vapour Seal
4.2.25	Drive with safety guard	Motor, Gearbox, Resoflex/ love Joy coupling
4.2.26	Motor rating/specification	ref drawing
4.2.27	Motor make	ABB/Siemens/Crompton/Kirloskar
4.2.28	Gear box with Shrink Disc Mechanism	ref drawing
4.2.29	Gearbox ratio	2 different ratio, ref drawing
4.2.30	Gear box Make	Flender/SEW/ Equivalent
4.2.31	Mounting of Gear box & Motor	Flanged mounted Gear box & Motor
4.2.32	Machine Guarding of all rotating parts	required
4.2.33	Other Appurtenances	
4.2.34	Flush bottom Valve	6" x 4" , CS : 1 No.

4.2.35	<p>VFD Starter Panel with LCS for motors: VFD Starter Panel with LCS for 30 KW and 37 KW motor respectively or more as per Kettle Motor's design consisting of Heavy duty ABB/Siemens make VVVF Drive with Incoming MPCB of Suitable rating with Front Drive, Incoming protection with choke, Drive/DOL Bypass selector switch, LCS will have Start/Stop/Emergency Stop -Push Button, Increase/Decrease pot. The enclosure will be made out of 2 mm thick CRCA sheet</p>
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5.0 Scope of Work of Vendor

- 5.1 Design, Drawing, Fabrication, Supply, onsite installation with existing, testing & commissioning of one set of **Double counter current Agitation System for an existing kettle** with nozzle & appurtenances as per drawing & specification. It also include replacement top plate, nozzles, agitator mounting support structure, bottom nozzle & flush bottom valve. The vendors are free to submit their detailed design & drawing as per given data for approval.
- 5.2 Dismantling and shifting of existing agitation system with drive as required to complete the job.
- 5.3 **SITC of VFD Starter Panel with LCS:** VFD Starter Panel with LCS for 30 KW and 37 KW motor respectively or more as per Kettle Motor's design consisting of Heavy duty ABB/Siemens make VVVF Drive with Incoming MPCB of Suitable rating with Front Drive, Incoming protection with choke, Drive/DOL Bypass selector switch, LCS will have Start/Stop/Emergency Stop -Push Button, Increase/Decrease pot. The enclosure will be made out of 2 mm thick CRCA sheet.
- 5.4 **SITC of Flush bottom valve:** To be fitted with the new Open Cooking Kettle.
- 5.5 **Supervision during trial run commission:** The supplier shall have to depute his person during trial commissioning at our Kolkata Plant site.

6.0 Scope of work of Balmer Lawrie & Co. Ltd. (BL)

- 6.1 Providing cleaned Kettle for job work
- 6.2 Painting of Kettle
- 6.3 Process Piping: As per requirement of BL
- 6.4 Electrical cabling & Installation: As per requirement of BL
- 6.5 Transfer pump set: Pump set, its Foundation & installation.
- 6.6 Storage: BL shall provide space for storage of equipment & allied material etc. The vendor at his own cost shall arrange temporary partition doors etc if required.
- 6.7 Security: No special security other than normal plant security shall be provided.

7.0 Schedule of Quantities:

SL No.	Description	Qty	UOM
7.1	Design, Drawing, Fabrication, Supply, onsite installation, testing & commissioning of one set of Dual motion agitation system for an existing kettle with nozzle & appurtenances as per drawing & specification. It also include replacement top plate, nozzles, agitator mounting support structure, bottom nozzle complete with drive arrangement with 2 nos. motor & 2 nos. Gear box [as per scope, technical data sheet & Drawing]	1	Set
7.2	SITC of Flush bottom Valve, 6" x 4" , MOC : CS for the above kettle as per tender spec.	1	No.
7.3	SITC of VFD Starter Panel with LCS for motors, as per tender spec.	1	Set
7.4	Dismantling and shifting of existing agitation system with drive as required for completing the job.	1	LS

The following documents must be submitted in the

Pre-Qualification Bid (technical):

Detailed list of documents indicating documents/statements submitted as part of

Pre-Qualification Criteria[Documents to be submitted by courier]

- a) The bidder should have executed at least one similar job for Supply of Agitator/Grease Processing Kettle /Blending/Reactor Kettle to any reputed plant for a value of at least Rs 30 Lacs, within the last five years.

Copy of such Order / Performance Certificate in support of the above should be submitted along with the Bid.

- b) Annual turn-over of the bidder shall be minimum of Rs 60 lakhs, for any one year during last three financial Assessment Years ending 2017-2018.

Copies of balance sheets/ profit & loss statement in support of the above should be submitted along with the Bid.

- c) Bidder should accept all Technical specifications as per the tender.

- d) HSE Pre-Qualifications score must be more than 12. Bid received with less than 12 score points will be rejected.

2.0 Submission of offer

Bidder shall submit their online electronic bid in **TWO** parts within the due date and time of the tender without any deviation of technical specifications.

Also send Hard Copy of Technical bid (Annexure 'A') along with all necessary supporting documents, EMD amount and Tender document (**without price**) by Courier

Please do not leave any space blank or incomplete and write NA/NIL/Free in such case(s). Each page of the offer (enclosures) has to be acknowledged by the bidder with their acceptance (signature & company stamp). In case of offer, which are not found in line with our guidelines and Terms & Conditions, may subject to rejection. Only the technically Qualified bidders (Technical specifications, scope of work, HSE practice & submission of EMD in line with tender documents) shall be considered for price bid evaluation.

3.0 Basis of selection and Allocation of order qty

The basis of selection of vendors and allocation of order shall be as under.

- a) The price offers of only the technically successful bidders, who also qualifies pre-qualification criteria's shall be considered for further evaluation for placement of order.
- b) The on-line closed bids shall be used for grading the bidders .The lowest quoted bidder on net landed basis in the on-line closed bids shall be designated as "L1" and the next lowest quoted bidder as "L2" and so on in the grading system.
- c) Orders will be placed for 100% quantity on L1 vendor (technically accepted & pre-qualified).
- d) The bidders have no right to claim / disclaim or dispute anything during / in this process.

4.1 **Earnest Money Deposit (EMD)**

An amount of Rs. 25,000 (Rupees twenty Five thousand only) as EMD is to be submitted along with the bid by means of Pay Order / Demand Draft in favour of Balmer Lawrie & Co. Ltd. payable at Kolkata.

Payment also may be made through online Bank Transfer

The EMD of the successful bidder will be returned after submission of Security Deposit within 15 days from the date of receipt of purchase order failing which the EMD will be forfeited. Technical bid received from tenderers' without EMD will not be considered.

EMD of the unsuccessful bidder(s) will be returned to the respective bidders once the tender is finalized and acceptance of order by the successful bidder. Public sector enterprises & registered MSME/ NSIC units fulfilling clause no 4.2 are exempted for submission of EMD amount.

No interest will be payable against this EMD.

To qualify for exemption of EMD as MSME, bidder to refer tender clause on “ Provisions for MSME”

4.2 Provisions for Micro , Small and Medium Enterprises (MSME) :

(a) Qualification Criterion : MSME vendor must confirm that UAM No has been uploaded on CPPP website as required by minister vide circular no F:No21(17) / 2016 dated 06.04.18 for qualifying to be considered as MSME vendor under this tender.

(b) Micro & small scale manufacturing/ service units registered with MSME/ NSIC are exempted from payment of EMD. Small scale units registered with MSME / NSIC should enclose a copy of their valid registration certificate to make their bid eligible for consideration.

4.3 **Security Deposit (SD)**

The successful bidder upon receipt of order must submit a security deposit of 2.5% of the basic order value valid till end of supply and successful commissioning of the equipment.

The SD is payable by means of Pay Order / Demand Draft payable at Kolkata and in favour of Balmer Lawrie & Co. Ltd. or in the form of bank guarantee from any Scheduled Bank as per format of BL. No interest will be payable against this SD.

4.4 **Acceptance of offer & Placement of Order**

Balmer Lawrie & Co. Ltd. (BL) reserves the right to reject/accept all or any tender(s). A tenderer must have to quote for all the items/heads under supply for this tender. Purchase order will be placed on a single technically & commercially qualified bidder, whose total price of subject tender stands lowest. **Only technically qualified & pre-qualified bids shall be considered for price bid evaluation.**

4.5 **Completion period**

Time is the essence of the Contract and the job to be completed in time as given below.

- a) The supply of all materials be completed within 12-15 weeks from the date of receipt of Purchase Order / Contract.
- b) Installation to be completed with in 2 to 3 weeks from the Date of Handing over of Site.
- c) Job to be done during working hours ie 8.30am to 5.30pm except Sundays & holidays. Bidders have to plan their work accordingly.

4.6 **Price schedule**

The price shall be quoted as per specified format.

4.7 **Payment terms**

- (i) 60% of basic order value with applicable taxes and duties for the entire contract value will be released within 30 days from the date of supply.
- (ii) 30% of basic order value with applicable taxes and duties for the entire contract will be released after installation and commissioning and submission of related documents.
- (iii) Balance 10 % of basic order value shall be kept as retention money & will be released after completion of guarantee period without any interest or against submission of Performance Bank Guarantee (on BL format) for equal amount.

4.8 **Performance Bank Guarantee (PBG)**

PBG may be furnished in lieu of retention money in specified format of BL and shall be valid for the entire guarantee period from the date of successful commissioning of the complete Fume exhaust system.

4.9 **Guarantee/Warranty Period**

12 (twelve) months from the date of successful commissioning or 18 (eighteen) months from the date of last supply, whichever is earlier.

During this guarantee period the performance of the supplied & fixing of items has to be in line with the expected / agreed quality as per tender/PO and if not then vendor has to replace/rectify the same at no extra cost to BL to the satisfaction of BL.

4.10 **Validity of offer**

The offers shall remain valid for a period of 90 days from the due date of the tender.

4.11 **Documentation**

The bidders(s) **MUST** submit the following:

- (i) During tender submission (hard copy)
 - (a) Tender Document duly signed on each pages (except price schedule)
 - (b) All necessary supporting documents justifying Pre Qualification criteria.

(c) EMD / MSME documents

(d) HSE form duly filled.

Note : Bidders are requested not to send any price bid in hard copy. Price bid to be uploaded in E-portal only.

4.12 **Liquidated Damages**

In case of failure to deliver the item (of acceptable quality) by the successful vendor, as per the completion period, a pre-determined liquidated damages @ ½ % per week of the basic order value subject to a maximum of 5% of the basic order value shall be deducted from the invoice of the contractor.

4.13 **Factory Rule**

The successful bidder has to abide by the BL factory rules and regulations. Only adult and skilled workmen with necessary PPEs shall be allowed to work in BL premises.

4.14 **Jurisdiction**

All disputes are subject to Kolkata jurisdiction.

5.0 **Undertakings and Obligations of Contractor**

5.0.1 **Care of works**

5.1 The supply material shall be dispatched to the site duly packed (as required) with instructions. The material shall be delivered in good condition, necessary lifting tools and tackles to be used for loading, unloading and shifting of heavy equipment and material shall be provided by the contractor.

5.3 Contractor shall remove all wreckage, rubbish etc. from site and stack the wastage at the space allotted for the purpose. On completion of the works, the contractor will keep the space clean and fit for occupation to the satisfaction of the company, remove all debris, waste and surplus material supplied/created by them. In case the contractor does not maintain good housekeeping, the company has the right to get the work done and debit the cost to the contractor.

5.5 **Insurance**

The contractor shall cover the following insurance till the complete job is handed over.

5.5.1 All workmen/ persons employed by the contractor and subcontractor against accident, injury & death.

5.5.2 All material and entire installation against loss or damage during transit.

5.5.3 Vendor shall comply with all procedural requirements as defined in the insurance policy to ensure that it is alive till the successful execution and handing over of site back to BL.

5.6 **Statutory rules and regulations**

Please note that this is a contract for work and accordingly all liability pertaining to this contract including those of the people engaged by the contractor solely rests upon the contractor. ESI/PF/Minimum Wages and all other statutory liabilities shall be borne by the contractor.

6.0 **Procedure for Bid Submission**

The bidder shall submit their response through bid submission to the tender on e-Procurement platform at <https://balmerlawrie.eproc.in> by following the procedure given below.

6.1 **Registration with e-Procurement platform:**

For registration and online bid submission bidders may contact HELP DESK of M/s C1 India Pvt., Ltd., or they can register themselves online by logging in to the website <https://balmerlawrie.eproc.in>

6.2 **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. You may contact Help Desk of C1 India Pvt Ltd.

M/s C1 India Pvt Ltd.

C 104, Sector - 2, Noida 201 301. You may also get in touch with their representative

Mr. Tirtha Das, e-mail id : tirtha.das@c1india.com , Contact No: +91-9163254290

6.3 **Bid Submission Acknowledgement**

The user should complete all the processes and steps required for bid submission. The successful bid submission can be ascertained once acknowledgement 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.

6.4 **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.

Note :

a) Bids of any tenderer may be rejected if a conflict of interest between the bidders and Company is detected at any stage.

for Balmer Lawrie & Co. Ltd.

(Arnab Ghatak)
Sr. Manager (SCM)

Annexure C

HSE Chapter

In order to achieve the tender goal in a very smooth & SAFE manner, all the bidders are required to comply with this HSE chapter, before, during and after the tender finalization or related job execution, in following prescribed procedure :

Annexure C 1

Pre-Qualification Questionnaire for Contractor

Guidelines for Completion of Questionnaire

- i. The potential bidder is to ensure that the answers provided are focussed against the activities indicated in the pre-tender document.
- ii. The information is supplied in the same format and sequence in which they appear in the questionnaire. A minimum of 12 has to be obtained in the HSE pre-qualification questionnaire.
- iii. Failure to supply information that accurately and fully covers the material requested may result in an individual Contractor failing to meet minimum expectations and therefore being disqualified.
- iv. Contractor shall provide information that is authentic and documentary evidence.
- v. Even after getting pre-qualified, if it comes to the notice that non-authentic documents are provided, the Contractor may be disqualified and if any Contract is in place, it may be terminated immediately.
- vi. BL shall have right to audit Contractors records to verify the authenticity of the documents, during any phase of the Contract.

Questionnaire for HSE Pre-Qualifications of contractors :

Contractor Details	
Company Name	
Contact Person for HSE :	
Name	
Cell Number	
e-mail address	

	Question	Response		Evidence Required at bidding Stage	Weightage if complied
		Yes	No		
1	Do you have a signed and dated HSE Policy?	<input type="checkbox"/>	<input type="checkbox"/>	Attach HSE Policy	1
2	Do you confirm that you will comply with BL HSE Policy in as much as it is applicable to your scope of work?	<input type="checkbox"/>	<input type="checkbox"/>	None	1
3	Do you have a Health and Safety System certified by an accredited body to a recognized standard? (e.g : OHSAS 18001)	<input type="checkbox"/>	<input type="checkbox"/>	Provide Current Certificate	3
4	Do you have an Environmental Management System Certified by an accredited body to a recognized standard? (e.g : ISO 14001)	<input type="checkbox"/>	<input type="checkbox"/>	Provide Current Certificate	3
5	Have you identified, documented and maintained your Health and Safety risk assessment of your activities?	<input type="checkbox"/>	<input type="checkbox"/>	None	3
6	Have you identified, documented and maintained your Environmental Impact Assessment of your activities?	<input type="checkbox"/>	<input type="checkbox"/>	None	3
7	If you use subcontractors, will you assess them in terms of HSE?	<input type="checkbox"/>	<input type="checkbox"/>	None	2
8	Have you produced project/contract HSE plans for recently completed work?	<input type="checkbox"/>	<input type="checkbox"/>	None	2
9	Is HSE Covered in your company's organization chart?	<input type="checkbox"/>	<input type="checkbox"/>	Provide Current Org Chart.	2
10	Have HSE roles and responsibilities been defined in your company?	<input type="checkbox"/>	<input type="checkbox"/>	None	2
11	Have your employees received documented HSE training appropriate to the task they will undertake?	<input type="checkbox"/>	<input type="checkbox"/>	None	2
12	Do you identify and monitor compliance with HSE Legislation?	<input type="checkbox"/>	<input type="checkbox"/>	None	2
13	Do you carry out regular medical examination for your employees?	<input type="checkbox"/>	<input type="checkbox"/>	None	1
14	Is your company free from any charges or notices served by the regulatory authorities in relation to HSE in the last 3 years?	<input type="checkbox"/>	<input type="checkbox"/>	None	1
15	Do you have any procedure of reporting HSE Incident and investigation?	<input type="checkbox"/>	<input type="checkbox"/>	None	2

	Please provide your accident data for the current year and the last 2 calendar years Note: this must include the data of any contractors working for your organization.	Current Year	Current Year 1	Current Year 2	Period Average (Three years average)
16	Number of Fatalities				

17	Number of Environmental Incidents reported to Pollution Control Board				
18	Number of accidents with 2 or more days lost time.(LTI)				
19	Man Days Lost				
20	Total Hours Worked				
I confirm that the above information is correct and that further evidence to support this will be provided to BL on request.					
Name		Position	Company	Date	Signature

Annexure – C 2

HSE Requirements BY CONTRACTORS

(To be a part of contract document)

1.0 Housekeeping

Contractors shall ensure that their work area is kept clean tidy and free from debris. The work areas must be cleaned on a daily basis. Any disposal of waste shall be done by the Contractor.

All equipment, materials and vehicles shall be stored in an orderly manner. Access to emergency equipment, exits, telephones, safety showers, eye washes, fire extinguishers, pull boxes, fire hoses, etc. shall not be blocked or disturbed.

2.0 Confined Space

Before commencing Work in a confined space the Contractor must obtain from BL a Permit to Work, the Permit to Work will define the requirements to be followed.

As minimum Contractors must ensure the following:

- i. Confined spaces are kept identified and marked by a sign near the entrance(s).
- ii. Adequate ventilation is provided
- iii. Adequate emergency provisions are in place
- iv. Appropriate air monitoring is performed to ensure oxygen is above 20%.
- v. Persons are provided with Confined Space training.
- vi. All necessary equipment and support personnel required to enter a Confined Space is provided.

3.0 Tools, Equipment and Machinery

The Contractor must ensure that all tools & equipment provided for use during the Work is:

- i. suitable for its intended use
- ii. safe for use, maintained in a safe condition and where necessary inspected to ensure this remains the case (any inspection must be carried out by a competent person and records shall be available);
- iii. Used only by people who have received adequate information, instruction and training to use the tool or equipment.

- iv. Provided with Earth leakage circuit breaker (ELCBs) at all times when using electric power cords. Use of electrical tape for temporary repairs is prohibited.

4.0 Working at Height

Any Work undertaken where there is a risk of fall and injury is considered to be working at height. For any Contractor Personnel working at height, Contractors shall provide fall prevention whenever possible and fall protection only when fall prevention is not practicable. Before commencing Work in a height for more than 6 ft height, the **Contractor must obtain Permit to Work from BL**, the Permit to Work will define the requirements to be followed. Supervisor must be present at all point of time, to ensure no deviation occur during the course of work.

Fall Prevention System

Fall prevention systems (e.g. fixed guardrails, scaffolds, elevated work platforms) must provide protection for areas with open sides, including exposed floor openings.

Fall Protection Systems

Where fall protection systems are used then the Contractor must ensure the following is applied:

- i. Only approved full body harness and two shock-absorbing lanyards are used,
- ii. Prior establishment of a rescue plan for the immediate rescue of an employee in the event they experience a fall while using the system,
- iii. Anchorage points must be at waist level or higher; and capable of supporting at least the attached weight,
- iv. Lifeline systems must be approved by BL before use.
- v. Use of ISI marked industrial helmet at all point of time.
- vi. **Safety net must be fixed in the working zone for double layer protection.**

5.0 Scaffolding

All scaffolds shall subject to a documented inspection by a competent person and clearly marked prior to use. The footings or anchorage for scaffolds shall be sound, rigid and capable of carrying the maximum intended load without settling or displacement. All scaffolding materials should be of **MS tubular type**.

Guardrails and toe-boards shall be installed on all open sides and ends of scaffold platforms. Scaffolds shall be provided with an access ladder or equivalent safe access. Contractor Personnel shall not climb or work from scaffold handrails, mid-rails or brace members.

6.0 Stairways and Ladders

Ladders should only be used for light duty, short-term work or access in line with the below and the Site Requirements.

- i. Fabricated ladders are prohibited.
- ii. Ladders will be secured to keep them from shifting, slipping, being knocked or blown over.
- iii. Ladders will never be tied to facility services piping, conduits, or ventilation ducting.
- iv. Ladders will be lowered and securely stored at the end of each workday.
- v. Ladders shall be maintained free of oil, grease and other slipping hazards
- vi. Ladders will be visually inspected by a competent person and approved for use before being put into service. Each user shall inspect ladders visually before using.
- vii. Ladders with structural defects shall be tagged "Do Not Use," immediately taken out of service, and removed from the Site by the end of the day.

7.0 Roof Work/Access

Roof work and access to roofs must not be undertaken without prior authorization from BL.

8.0 Overhead Work

A secure exclusion zone shall be maintained by Contractor below overhead work to prevent access. It is forbidden to work beneath a suspended load.

9.0 Lifting Operations Cranes and Hoisting Equipment

Contractors shall operate and maintain cranes and hoisting equipment in accordance with manufacturers' specifications and legal requirements.

Only Contractor Personnel trained in the use of cranes and hoists are permitted to use them.

10.0 Lifting Equipment and Accessories

All lifting equipment / accessories e.g., slings, chains, webbing, chain blocks, winches, jacks etc shall be indicated with their safe working load have an identification number visible on the unit and be inspected and tested in accordance with legal requirements.

Damaged equipment / accessories and equipment shall be tagged "out of use" and immediately removed from Site.

11.0 Lockout Tag out ("LOTO")

Prior to performing work on machines or equipment, the Contractor shall ensure that it is familiar with LOTO and Permit to Work procedures and that all of its affected Contractor Personnel receive the necessary training.

12.0 Barricades

Floor openings, stairwells, platforms and walkways, and trenching where a person can fall any distance shall be adequately barricaded and where necessary, well lit. Where there is a risk of injury from a fall then rigid barriers must be used.

Barricades must also be used to prevent personnel entering an area where risk of injury is high e.g., during overhead work activity or electrical testing etc. Such barricading must provide clear visual warning.

13.0 Compressed Gas Cylinders

Gas cylinder shall be securely stored and transported, and identified and used in line with the local requirements. Hose lines shall be inspected and tested for leaks in line with local requirements. Flash Back arrestor to be used to prevent any explosion due to back fire.

14.0 Electrical Safety

Prior to undertaking any work on live electrical equipment the Contractor must obtain a Permit to Work from BL. Where ever possible live work should be avoided. Any control measures highlighted shall be implemented prior to work commencing.

The below measures will be taken :

- i. Work practices must protect against direct or indirect body contact by means of tools or materials and be suitable for work conditions and the exposed voltage level.
- ii. Energized panels will be closed after normal working hours and whenever they are unattended. Temporary wiring will be de-energized when not in use.
- iii. Only qualified electrical Contractor Personnel may enter substations and/or transformer and only after being specifically authorized by BL.
- iv. Distribution switch board must have ELCB .

15.0 Hot Works

A **Permit to Work** must be obtained from BL prior to any hot works (welding, grinding, open flame work). Suitable fire extinguishing equipment shall be immediately available. Objects to be welded, cut or heated shall be moved to a designated safe location, or, if they cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place. Personnel working around or below the hot works shall be protected from falling or flying objects.

Prior to the use of temporary propane or resistance heating devices approval must be obtained from BL.

16.0 Trenching, Excavating, Drilling and Concreting

A Permit to Work must be obtained from BL and all underground lines, equipment and electrical cables shall be identified and located prior to beginning the work. The Contractor shall assign a competent Contractor Personnel to all trenching and excavation work.

Safe means of access and egress shall be located in trench excavations. Daily inspections shall be conducted by a competent Contractor Personnel for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems or other hazardous conditions.

Physical barriers shall be placed around or over trenches and excavations. Flashing light barriers shall be provided at night.

17.0 Environmental Requirements Waste Management

The Contractor is responsible to remove any waste generated by the work being done on the Site. The Contractor must dispose of the waste in line with the relevant local legislative requirements. The waste disposal route shall be documented and made available for BL to review at any time and may be subject to BL's prior approval.

Wastes (includes rinse from washing of equipment, PPE, tools, etc.) are not to be poured into sinks, drains, toilets, or storm sewers, or onto the ground. Solid or liquid wastes that are hazardous or regulated in any way are not to be disposed of in general site waste receptacles.

Spills

The Contractor is responsible for the provision of adequate spill kits/protection and the clean-up and disposal costs arising from such spills.

18.0 Emissions

The Contractor shall identify and quantify any emission sources associated with the Works. The control measures associated with these emission shall be subject to the approval of BL. Emissions include but are not limited to noise, dust, fumes, vapours.

(To be filled after the job completion ONLY - by the job executor)

POST CONTRACT HSE EVALUATION			
	Question	Answer (Yes / No)	Remarks
1	The contractor demonstrated the application of an effective and robust HSE management system.		
2	The contractor did not cause any additional cost or delays to the project through poor HSE performance.		
3	The contractor prepared suitable and sufficient HSE risk assessments and method statements in a capable, proactive and timely manner.		
4	The contractor proactively reported on HSE Events and Deviations.		
5	The contractor's workforce fulfilled their HSE roles and responsibilities.		
6	The contractor's own/subcontracted workforce demonstrated the required level of competency.		
7	The contractor demonstrated knowledge of and proactively ensured compliance with HSE legislation.		
8	All goods/materials/equipment/substances supplied by the contractor were compliant with the HSE requirements.		
9	The contractor ensured that appropriate and timely medical examinations were performed for his own/subcontracted workforce.		
10	The contractor proactively demonstrated housekeeping and cleanliness.		
11	The contractor demonstrated compliance with the Balmer Lawrie Contractors General Terms and Conditions.		
12	The contractor demonstrated control of high risk activities		
13	Number of accidents with 1 or more days lost time		
14	Fatalities during the Contract		
15	Man Day Lost		
16	Man Hours Worked		

Based on the overall HSE performance of the Contractor, the Contractor

1. Can be re deployed for future assignments
2. Needs extensive training & Counseling before reappointing
3. Cannot be considered for future assignments

Sign of the Evaluator/Contract Manager

Sign of the Unit/ Project Head

PRICE SCHEDULE

SL No.	Description	Qty	UOM	Basic rate	GST AMOUNT	TOTAL Rs.
1	Design, Drawing, Fabrication, Supply, of Dual motion agitation system for existing Kettle.	1	Set			
2	SITC of Flush bottom Valve, 6" x 4" , MOC : CS for the above kettle as per tender spec.	1	No.			
3	SITC of VFD Starter Panel with LCS for motors, as per tender spec.	1	Set			
4	Dismantling and shifting of existing agitation system with drive as required for completing the job.	1	LS			
5	onsite installation, testing & commissioning of one set of Dual motion agitation system for an existing kettle with nozzle & appurtenances as per drawing & specification. It also include replacement top plate, nozzles, agitator mounting support structure, bottom nozzle complete with drive arrangement with 2 nos. motor & 2 nos. Gear box [as per scope, technical data sheet & Drawing]					
6	GRAND TOTAL-BASIC VALUE					
7	GRAND TOTAL INCLUDING GST					