



Brahmaputra Cracker and Polymer Limited

(A Government of India Enterprise)

ADMINISTRATIVE BUILDING, PO: LEPETKATA

DISTT.: DIBRUGARH, ASSAM

PIN CODE:786006

PHONE NO. 0373 2914636

e -TENDER NO:BCPL/C&P/LE18W219ND/0983

Dated 19.03.2019

(Tender to be submitted in e-mode only)

TENDER DOCUMENT

FOR

**HIRING OF SERVICES TOWARDS INSULATION,
REPAIRING AND MAINTENANCE WORKS FOR A
PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA,
LAKWA & DULIAJAN**

Tender Submission Date & Time	:	05.04.2019 at 14:30 Hrs
Tender Opening Date & Time	:	06.04.2019 at 15:00 Hrs
Pre Bid meeting Date & Time	:	25.03.2019 at 15:00 Hrs
Tender Fee	:	Not Applicable

EMD Amount	:	Rs. 3,00,000/-
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IMPORTANT INSTRUCTIONS

PLEASE NOTE THAT THIS "REQUEST FOR QUOTATION [RFQ]" IS ON "ZERO-DEVIATION" BASIS. BCPL WILL ACCEPT OFFERS BASED ON TERMS AND CONDITIONS OF THIS "REQUEST FOR QUOTATION [RFQ] & TENDER DOCUMENT" ONLY. DEVIATION TO TERMS AND CONDITIONS OF "REQUEST FOR QUOTATION [RFQ] & TENDER DOCUMENT" MAY LEAD TO REJECTION OF OFFER.

"INCOMPLETE BIDS SHALL NOT BE CONSIDERED"

PRIOR TO DETAILED EVALUATION, PURSUANT TO "BID EVALUATION AND REJECTION CRITERIA", BCPL WILL DETERMINE THE SUBSTANTIAL RESPONSIVENESS OF EACH BID TO THE "RFQ & TENDER DOCUMENT". FOR THE PURPOSE OF THIS, A SUBSTANTIALLY RESPONSIVE BID IS ONE WHICH CONFORMS TO ALL THE TERMS AND CONDITIONS OF THE BIDDING DOCUMENTS WITHOUT 'DEVIATIONS' OR 'RESERVATIONS / EXCEPTIONS'. BCPL'S DETERMINATION OF A BID'S RESPONSIVENESS IS BASED ON THE CONTENT OF THE BID ITSELF, WITHOUT RECOURSE TO EXTRINSIC EVIDENCE.

'TECHNICAL' AND/OR 'COMMERCIAL' QUERY(S), IF REQUIRED, MAY BE RAISED ON THE BIDDER(S) – THE DECISION FOR WHICH WILL BE SOLELY BASED ON CIRCUMSPECTION BY 'BRAHMAPUTRA CRACKER AND POLYMER LIMITED'. HOWEVER, ISSUANCE OF REQUEST FOR SUCH 'CLARIFICATIONS' SHALL NOT BE RESORTED TO MORE THAN 'ONCE'. THE 'RESPONSE(S)' TO THE SAME SHALL BE IN WRITING AND NO CHANGE IN THE 'PRICE(S)' OR 'SUBSTANCE' OF THE BIDS SHALL BE SOUGHT, OFFERED OR PERMITTED. THE SUBSTANCE OF THE BID INCLUDES BUT NOT LIMITED TO PRICES, COMPLETION, SCOPE, TECHNICAL SPECIFICATIONS, ETC.

BIDDERS ARE REQUESTED TO NOT TO TAKE ANY 'DEVIATION/EXCEPTION' TO THE TERMS AND CONDITIONS LAID DOWN IN THIS "RFQ & TENDER DOCUMENT", AND SUBMIT ALL REQUISITE DOCUMENTS AS MENTIONED IN THIS "RFQ & TENDER DOCUMENT", FAILING WHICH YOUR OFFER WILL BE LIABLE FOR REJECTION.



TENDER NO: BCPL/C&P/LE18W219ND/0983 FOR “HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA,”

FAQ

[QUESTIONS AND ANSWERS]

SN.	QUESTIONS	ANSWER
1	Where the bidder can see the Tender floated by BCPL?	Yes, please visit GAIL's/BCPL's website: http://www.gailtenders.in ; http://www.bcplonline.co.in and Government portal https://www.eprocure.gov.in for complete details of tender document including qualifying requirements, important dates, etc.
2	Whether Hard copy of Bids are acceptable?	No, Bids shall be submitted only through e-tender mode in the E-TENDER PORTAL in the manner specified elsewhere in tender document (SECTION-III → Annexure – III). No Manual/ Hard Copy (Original) of offer/bid is acceptable.
3	In case of Domestic e-Tender, whether there is sale of Tender Document?	Sale of tender document is not applicable. However, Tender fee shall be applicable in case of open tender.
4	Whether EMD are prerequisite for qualification of bidder in any tender?	Yes, as applicable as per tender condition specified in ITB of tender document.
5	Is there any guideline / instructions how to prepare EMD and Security Deposit?	Yes, Please refer instructions for participation in E-Tender & ITB Section of Tender Document.
6	In case of e-tender, whether EMD in original are to be forwarded to concerned department of BCPL after uploading a copy of same in e-tender portal by the bidder?	Yes, original EMD, copy of which has been uploaded, are to be forwarded and must be received in BCPL within 7 days from the date of unpriced bid opening, failing which the bid will be rejected irrespective of their status in tender and not-with-standing the fact that a copy of EMD was earlier uploaded by the bidder.
7	If in e-tendering, a bidder has not uploaded the scanned copy of EMD, however, he has submitted the EMD in hard copy within 7days of bid opening, whether bid will be accepted or not?	No
8	Is there any exemption in submission of EMD and Security Deposit?	(i) Yes, there is exemption in submission of EMD. As per Government of India, Gazette No. 503 dated 26.03.2012 for PPP (Public Procurement Policy), Micro and Small Enterprises (MSEs) registered with District Industries Centres or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of MSME (Micro, Small and Medium Enterprises) are exempted on submission of EMD only for procurement of goods & services against submission of Valid NSIC Certificate/DIC EM PART-II. The above documents submitted by the bidder shall be duly certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) and Notary Public with Legible stamp. MSEs those having Udyog Aadhaar Memorandum are also eligible for availing the benefits under the Public Procurement Policy . (ii) There is no exemption in submission of SD (Security Deposit).



SN.	QUESTIONS	ANSWER
9	Whether PSU (Public Sector Undertaking) are exempted from submission of EMD	Yes
10	Whether Late bid can be considered?	No
11	Whether Pre-bid Meeting (PBC) is a part of all tenders to clarify the doubts, queries, comments, etc. (if any) pertaining to that tender?	Yes, after floating of tender, bidders are open to participate as per the Date, Time and Venue specified in Section-I, IFB of Tender Document to clarify their doubts, queries, comments, etc (if any) pertaining to that particular tender.
12	Is BEC (Bid Evaluation Criteria / Bidder's Eligibility Criteria) a part of any tender and a prerequisite of qualification of bidder in any tender?	Yes, Bid Evaluation Criteria/Bidder's Eligibility Criteria is a part of tender and a prerequisite of qualification of bidder in any tender.
13	In which mode of bidding/tendering, BEC (Bid Evaluation Criteria / Bidder's Eligibility Criteria) a part of tender and a prerequisite of qualification of bidder in any tender?	BEC is included in tenders floated on Open Tender/Limited Tender basis.
14	Is there any Criteria for formulation of BEC (Bid Evaluation Criteria / Bidder's Eligibility Criteria) which is incorporated in Tender?	Yes, suitable BEC-technical is formulated which is usually incorporated in tender to ascertain the experience & BEC-Financial is also incorporated in tender to ascertain the financial capability of bidder which is a qualifying criteria of tender depending upon the job requirement.
15	Whether BEC can be relaxed for any bidder after opening of Bids?	No relaxation is permitted for inclusion of any bidder (s) who do not meet the criteria in entirety for reason only to increase the competition.
16	Whether BEC can be modified after opening of Bids?	Amendment/ modification/ relaxation of BEC is not permitted after opening of the bids.
17	In which case mobilization advance is given and incorporated in payment term of tender document?	Mobilization advance invariably not allowed in any tender. Only in exceptional cases (like high value tender with specific reason and specific job requirement) are allowed but with interest bearing as per PLR Rate of SBI interest rate of base rate of SBI plus 6.25%.
18	Which Operating System, bidder to opt for uploading of E-bid in e-Tender portal of BCPL?	Bidder must possess a PC / Laptop with Windows7 professional operating system and Internet Explorer 9 or above for hassle free bidding. PC Security System to be changed /adjusted as per Ready reckoner available in home page of e-tender portal

PS: The following documents in addition to uploading in the bid on BCPL's E-Tendering website (NIC e-Portal) shall also be submitted in Original (in physical form) within 7 (seven) days from the bid due date provided the scanned copies of the same have been uploaded in E-Tender by the bidder along with e-bid within the due date and time to the address mentioned in Bid Data Sheet (BDS):-

- i) EMD/Bid Security (including MSE Certificate if applicable for exemption)**
- ii) Power of Attorney**



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SECTION - I

INVITATION FOR BIDS [IFB]



SECTION - I

INVITATION FOR BID [IFB]

To,

Dt. 19.03.2019

PROSPECTIVE BIDDERS

SUB: HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, LAKWA & DULIAJAN.

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Dear Sir/Madam,

1.0 Brahmaputra Cracker and Polymer Limited, Lepetkata (A Government of India Enterprise) invites e-bids from eligible bidders for the subject procurement, in complete accordance with the following details and enclosed Tender Documents.

2.0 The brief details of the tender are as under:

I	PERIOD OF CONTRACT/ DELIVERY SCHEDULE/PERIOD	:	The contract shall be valid for a period of two (02) years i.e. 24 months from the date of issuance of LOI / LOA and same may be extended for 06 months on same rate, terms & conditions.
II	TENDER FEE	:	Not Applicable
III	EARNEST MONEY DEPOSIT (EMD)	:	Rs. 3,00,000/-
IV	BID DUE DATE & TIME	:	05.04.2019 upto 1430 Hrs
V	OPENING OF UNPRICED BID	:	06.04.2019 at 1500 Hrs.
VI	VALIDITY OF OFFER UPTO	:	90 days from the date of UNPRICED BID opening
VII	VENUE FOR OPENING OF UNPRICED BIDS	:	Brahmaputra Cracker and Polymer Limited (A Government of India Enterprise), C&P Department, Administrative Building, PO: Lepetkata, Dist.: Dibrugarh, Assam, Pin Code: 786006, Phone no. 0373 2914636.
VIII	MODE OF TENDERING	:	Limited Domestic Competitive e-Bidding (Under Two Bid System) basis with uploading in GAIL's/BCPL's Website: https://www.gailtenders.in ; http://www.bcplonline.co.in ; Govt. Website: https://www.eprocure.gov.in ; NIC Portal
IX	DATE AND TIME OF PRE- BID CONFERENCE VENUE	:	25.03.2019 at 15.00 hrs. Brahmaputra Cracker and Polymer Limited, C&P Department, Administrative Building, PO: Lepetkata, Dist.: DIBRUGARH, Assam, Pin Code: 786006, Phone no. 0373 2914636.

In case of the days specified above happens to be a holiday in BCPL, the next working day shall be implied.



- 3.0 Bids must be submitted strictly in accordance with Clause No. 11 of ITB depending upon Type of Tender as mentioned at Clause no. 2.0 (VIII) of IFB. The IFB is an integral and inseparable part of the bidding document.
- 4.0 The following documents in addition to uploading in the bid on BCPL's e-tendering website (NIC portal) shall also be submitted in Original (in physical form) within 7 (seven) days from the bid due date provided the scanned copies of the same have been uploaded in e-tender by the bidder along with e-bid within the due date and time to the address mentioned in Bid Data Sheet(BDS):-
 - i) Demand Draft towards Tender fee (if applicable)
 - ii) EMD/Bid Security (if applicable)
 - iii) Power of Attorney
- 5.0 Bidder(s) are advised to quote strictly as per terms and conditions of the tender documents and not to stipulate any deviations/exceptions.
- 6.0 Any bidder, who meets the Bid Evaluation Criteria (BEC)/Bidder's Eligibility Criteria(BEC) and wishes to quote against this tender, may download the complete bidding document along with its amendment(s) if any from GAIL's website/BCPL's website (<http://gailtenders.in>; <http://www.bcplonline.co.in> or <http://tenders.gov.in>) and submit their Bid complete in all respect as per terms & conditions of Tender Document on or before the due date of bid submission.
- 7.0 Offer(s) received from bidders to whom tender/information regarding tender has been issued as well as offers received from the bidder(s) by downloading tender document from GAIL's web site/BCPL's website shall be taken into consideration for evaluation & award provided that the bidders are found responsive.
- 8.0 Clarification(s)/Corrigendum(s) if any shall also be available on above referred websites.
- 9.0 All the bidders including those who are not willing to submit their bid are required to submit F-11 (Acknowledgement cum Consent letter) duly filled within 7 days from receipt of tender information.
- 10.0 SAP generated RFQ (if any) shall also form an integral part of the Tender Document.
- 11.0 BCPL reserves the right to reject any or all the bids received at its discretion without assigning any reason whatsoever.

A Pre-Bid conference (PBC) is scheduled on **25.03.2019 at 15.00 HOURS** in **Conference Room of C&P Department, Administrative Building, PO: Lepetkata, Dist.: DIBRUGARH, Assam, Pin Code: 786006, Phone no. 0373 2914636.**, to discuss Scope of Work, Terms and Conditions of tender document. For participation contact Sr. Manager (C&P) / Dy. Manager (C&P), Phone No. 0265 2914636; Email ID: neeta.dutta@bcplindia.co.in / chandrajyoti.gogoi@bcplindia.co.in

This is not an Order.

For & on behalf of

Brahmaputra Cracker and Polymer limited

[Neeta Dutta]
Sr. Manager [C&P]
Contact +91-0373-2914636; Extn: 1383
8011117266
E-mail: neeta.dutta@bcplindia.co.in



SECTION-II

BID EVALUATION CRITERIA [BEC] AND PRICE BID EVALUATION METHODOLOGY



SECTION-II

1. BID EVALUATION CRITERIA [BEC]

1.1 **BEC- Technical: (as a single bidder)**

1.1.1 The bidder must have **executed & completed** at least one (01) single order/contract of “**similar nature of work**” in **Petrochemical Plant/ Fertilizer Plant / Petroleum Refinery/ Chemical Plant / Power Plant/ Gas Processing Complex/ LPG Plant/ Hydrocarbon Industries / Steel Plant** having minimum value not less than Rs 37.54 Lakh in previous seven (07) years to be reckoned from the due date of unpriced bid opening.

Note 1:

- a) Bidder(s) shall be required to submit the documents in respect of above experience criteria as per details at sl. no. 1.3 below.
- b) Definition of “**similar nature of work**”:
 - (a) Supply and Installations of Insulation for Piping, Equipment, Vessels, Exchangers.
 - And/ or
 - (b) Repair & Maintenance of Insulation including supply of Insulation material for piping, equipment, vessels, exchangers.
- c) If the work order(s)/contract(s) submitted by the bidder along with the bid to comply BEC clause no.1.1.1 & 1.1.2 is of composite nature in such case, the executed value other than the ‘**similar nature of work**’ as mentioned above at sl. no. (b) shall not be considered for qualification of bidder.
- d) The experience acquired by a bidder for Project Management Consultancy (PMC) job cannot be considered for qualifying the experience of BEC.

1.1.2 In case of running contract for ‘similar nature of works’ as mentioned at sl. no. 1.1.1 above, the contract **VALUE** executed till one day prior to due date of bid submission is equal to or more than the minimum prescribed **VALUE** mentioned above at BEC clause no. 1.1.1, such experience will also be taken into consideration provided that the bidder has submitted satisfactory work execution certificate issued by the end user / owner / authorized consultant.

Note 2:

- a) **Original work/service order/contract/ agreement and its**



completion/execution certificate or equivalent should be available with the bidder for verification of the same, if so desired by BCPL.

1.1.3 Relaxed Norms for Startups in prior experience criteria:

Prior experience (i.e. sl. no. 1.1.1 & 1.1.2 above) for 'Startup' company [whether Micro & Small Enterprises (MSEs) or otherwise] as a bidder, shall not be required subject to meeting the quality and technical specifications (scope of work) as specified in the tender document.

For availing the above relaxation, bidder is required to submit / upload the requisite certificate towards Startup Enterprise Registration issued by Department of Industrial Policy and Promotion, Ministry of Commerce & Industry, Govt. of India and the certificate should be certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company / firm) and notary public with legible stamp.

If a Startup company [whether Micro & Small Enterprises (MSEs) or otherwise] as a bidder gets qualified without any prior experience & turnover criteria as mentioned above and emerges as lowest evaluated bidder (L1), the LOA / Order on such Startup bidder shall be placed for the part for which the bidder is L1

[However, EIC's of that contract shall draw monthly milestones / check points during the Kickoff Meeting and shall review the performance more carefully and take action as per provision of contract in case of failure / poor performance.]

1.2 BEC- Financial: (as a single bidder)

1.2.1 TURN OVER:

*The **annual turnover** of the bidder must have **minimum value** of **Rs 37.54 Lakh** as per the audited financial result (Balance sheet and profit & Loss account statement) of any of the preceding three (03) financial years ending on 31st March '2018, i.e. **FY: 2017-18, 2016-17 & 2015-16.***

1.2.2 NET WORTH:

*Net Worth of the bidder should be **positive** as per the **last audited financial statement**, i.e. **FY: 2017-18.***

1.2.3 WORKING CAPITAL:



The bidder should have **minimum working capital** of value **Rs 7.51 Lakh** as per the last audited financial statement, **i.e FY: 2017-18**.

Note:

- i) If the bidder's working capital is negative or inadequate as per BEC clause no. 1.2.3, the bidder shall submit/upload a letter from the bidder's bank as per **Format, F-15** having net worth not less than **Rs.100 crores**, confirming the availability of line of credit to cover the inadequacy of working capital to meet the working capital requirement as mentioned above at **BEC clause no. 1.2.3** (Format specified in tender document).
- ii) Bidder has to compulsorily upload / submit the audited financial results for the immediate 3 preceding financial years **as per BEC clause no. 1.2.1 i.e FY: 2017-18, 2016-17 & 2015-16**.

1.2.4 Relaxed Norms for Startups in financial criteria:

Prior turnover (i.e. sl. no. 1.2.1 above) for 'Startup' company [whether Micro & Small Enterprises (MSEs) or otherwise] as a bidder, shall not be required subject to meeting the quality and technical specifications (scope of work) as specified in the tender document.

If a Startup company [whether Micro & Small Enterprises (MSEs) or otherwise] as a bidder gets qualified without **any prior experience & turnover criteria** as mentioned above and emerges as lowest evaluated bidder, the LOA / Order on such Startup bidder shall be placed.

However, net worth & working capital requirement as specified in BEC clause no. 1.2.2 & 1.2.3 shall be applicable.

[However, EIC's of that contract shall draw monthly milestones / check points during the Kickoff Meeting and shall review the performance more carefully and take action as per provision of contract in case of failure / poor performance.]

1.3 Documents/Documentary Evidence required to be uploaded (submitted) in e-tender portal of BCPL by bidder along with the other bid documents for qualifying the BEC mentioned at sl. no. 1.1 & 1.2:



Sr. No.	BEC Clause no.	Description	Documents required along with Unpriced bid for qualifying BEC (Bid Evaluation Criterion) [All documents must be duly authenticated/ attested]
	1.1	Technical Experience Criteria – Document	[All documents to be uploaded(submitted) must be <u>Certified/attested by both Chartered Engineer and Notarized by Notary Public with legible stamp</u>]
1.	1.1.1	Experience against execution & completion of order	a) Bidder must submit/upload the Copy of Order/LOA/Contract/Agreement along with its detail SOR items & scope of work which has been executed towards similar nature of jobs as mentioned at clause no. 1.1.1 of BEC in previous seven (07) years to be reckoned from the due date of unpriced bid opening. b) Copy of Completion Certificate or equivalent against the Order/LOA/Contract/Agreement submitted as mentioned at point “a” above, must be submitted. The <u>Completion Certificate or equivalent</u> must contain the detailed information like Order/ LOA/ Contract/Agreement No. with date, Brief Scope of work / Name of work, Order value, Total executed value, Scheduled date of Work completion and date of Actual work completion etc. The <u>Completion Certificate or equivalent</u> should have been issued by the end-user/owner/authorized consultant.
2	1.1.2	Experience against execution of running AMC (Annual Maintenance Contract) / ARC (Annual Rate Contract)	a) Bidder must submit/upload the Copy of Order/LOA/Agreement /Contract along with its detail SOR items & scope of work which is still running for similar nature of jobs as mentioned at clause no.1.1.1 of BEC in previous seven (07) years to be reckoned from the due date of unpriced bid opening. b) Copy of Execution Certificate or equivalent against Order/LOA/Agreement /Contract for the running contract as mentioned at point “a” above must be submitted / uploaded clearly mentioning the executed VALUE till one day prior to unpriced bid opening, which must be equal to or more than the minimum prescribed value mentioned at clause no. 1.1.1 of BEC.



Sr. No.	BEC Clause no.	Description	Documents required along with Unpriced bid for qualifying BEC (Bid Evaluation Criterion) [All documents must be duly authenticated/ attested]
			The execution certificate or equivalent must contain the detailed information like Order/LOA/Contract/Agreement No. with date, Brief Scope of work / Name of work, Order value, Total executed value, etc. The <u>Execution Certificate or equivalent</u> should have been issued by the end-user/owner/authorized consultant.
3	1.1.3	Experience against Startup Company	a) Bidder to upload / submit the valid 'Certificate of Recognition' issued by Dept. of Industrial Policy and Promotion, Ministry of Commerce & Industry, Govt. of India duly certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company / firm) and notary public with legible stamp.
	1.2	Financial Experience Criteria- Document [All audited financial statements/documents {balance sheet and profit & loss account statement under 1.2.1(Not applicable for startup as mentioned in BEC clause no. 1.2.4), 1.2.2 & 1.2.3 of above BEC } to be uploaded / submitted must be <u>duly Certified/attested by Notary public with legible stamp</u>]	
4	1.2.1	Annual Turn-over	Bidder(s) shall submit/upload copy(s) of audited financial result (Balance sheet and profit & Loss account statement) of the preceding three (03) Financial Year(s), i.e. FY: 2017-18, 2016-17 & 2015-16.
5	1.2.2	Net worth	Bidder(s) shall submit/upload copy of audited financial result (Balance sheet and Profit & Loss account statement) of last audited Financial Year, i.e. FY: 2017-18.



Sr. No.	BEC Clause no.	Description	Documents required along with Unpriced bid for qualifying BEC (Bid Evaluation Criterion) [All documents must be duly authenticated/ attested]
6	1.2.3	Working Capital	Bidder(s) shall submit/upload copy of audited financial statement Balance sheet and Profit & Loss account statement for the last audited Financial Year, i.e. FY: 2017-18 . If the bidder's <u>working capital</u> is negative or inadequate as per BEC clause no. 1.2.3 , the bidder shall submit/upload a letter from the bidder's bank as per Format, F-15 having net worth not less than Rs.100 crores , confirming the availability of line of credit to cover the inadequacy of working capital to meet the working capital requirement as mentioned above at BEC clause no. 1.2.3 (Format specified in tender document).
7		Format, F-16	"Details of financial capability of bidder" shall be submitted in the prescribed Format, F-16 enclosed duly signed and stamped by a Chartered Accountant only .

Note to above Bid Evaluation Criteria (point no. 1.0):

- A job executed by a bidder for its own plant/projects cannot be considered as experience for the purpose of meeting requirement of BEC of the tender. However jobs executed for a subsidiary / Fellow Subsidiary / Holding company will be considered as experience for the purpose of meeting BEC subject to submission of Tax paid invoice (s) duly certified by Statutory Auditor of the bidder towards payment of Statutory tax in support of the job executed for subsidiary/Fellow subsidiary/Holding company. Such bidders to upload (submit) these documents in addition to the documents specified in the bidding documents to meet BEC.
- Bids of Joint Venture/ Consortium and sub-contractors are not acceptable.

The cut-off date for meeting the criteria of BEC of the tender shall be the due date for unpriced bid opening.

2.0 Methodology for Evaluation of Bids & Award:



- 2.1 BCPL will evaluate and compare the Price bids of the techno-commercially qualified bidders whose bids are previously determined to be substantially responsive pursuant to “ITB: Clause-29”.
 - 2.2 The evaluation of bid(s) shall be done on overall L1 basis excluding GST.
 - 2.3 In case of **a tie** at the lowest bid (L1) position between two or more Startup / non-Startup bidders, then LOA / Order shall be placed on the bidder who has higher / highest turnover in last audited financial year, **2017-18**.
 - 2.4 In case, there is **a tie** at the lowest bid (L1) position between only Startup bidders and none of them has past turnover, the LOA / Order shall be placed on the Startup who is having highest working capital as compared to other(s).
 - 2.5 In case, there is **a tie** at the lowest bid (L1) position between Startups bidders and non-Startups bidders; then LOA / Order shall be given on the bidder having highest working capital in last financial year, **2017-18 duly certified by Chartered accountant**.
 - 2.6 Startups are exempted from submission of **EMD**.
 - 2.7 **CPBG: The following CPBG clause shall be incorporated in tender document,**
 - 2.7.1 The contract performance security shall be 10% of annualized Basic Contract Value (without GST therein) towards faithful performance of the contractual obligations and must be valid for 3 months beyond the contract period. For the purpose of Contract Performance Security, Contract/order value shall be exclusive of GST. Details as per ITB of Tender document.
- OR
- 2.7.2 The contract performance security shall be with Initial security deposit (ISD) @ 2.5% of Annualized basic Contract value and deduction @ 7.5% of the RA bill subsequently from RA bills till the total amount of security deposit (including ISD and deducted amount) reaches 10% of Annualized basic Contract value of Annualized basic Contract value (without GST therein) towards faithful performance of the contractual obligations and must be valid for 3 months beyond the contract period.
- 2.8 **PPP Policy 2012:**

Considering the nature of job, splitting of quantities will not be possible in this case and hence the clause for award of 25 % of ordered quantity to MSE as per PPP 2012 is not possible. Therefore, MSE quoting price within price band of L1 (other than



MSE) + 15%, may be awarded for full/ complete services of tendered value subject to matching of L1 price as per ITB of tender document. In case two or more MSE bidders comes within the price band of L1 + 15%, the preference to match the L1 rate shall be given in sequence of their inter-se position (L2, L3... and so on).

NOTE TO "BID EVALUATION CRITERIA [BEC]"

[FOR STRICT COMPLIANCE]

- [I] BIDDERS MUST FURNISH ALL RELEVANT CERTIFICATES/DOCUMENTS/INFORMATION IN SUPPORT OF THEIR CREDENTIALS TO THE ABOVE "ELIGIBILITY CRITERIA" ALONGWITH THE 'OFFER', FAILING WHICH THE 'OFFER' MAY BE REJECTED SUMMARILY.
- [II] BIDDERS NOT MEETING ANY OF THE ABOVE- MENTIONED CRITERIA SHALL BE REJECTED WITHOUT ASSIGNING ANY REASON.

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SECTION-III

INSTRUCTION TO BIDDERS [ITB] (TO BE READ IN CONJUNCTION WITH BIDDING DATA SHEET (BDS))



SECTION-III INSTRUCTION TO BIDDERS INDEX

[A] GENERAL:

1. SCOPE OF BID
2. ELIGIBLE BIDDERS
3. BIDS FROM JOINT VENTURE / CONSORTIUM
4. ONE BID PER BIDDER
5. COST OF BIDDING & TENDER FEE
6. SITE-VISIT

[B] BIDDING DOCUMENTS:

7. CONTENTS OF BIDDING DOCUMENTS
8. CLARIFICATION OF BIDDING DOCUMENTS
9. AMENDMENT OF BIDDING DOCUMENTS

[C] PREPARATION OF BIDS:

10. LANGUAGE OF BID
11. DOCUMENTS COMPRISING THE BID
12. SCHEDULE OF RATES / BID PRICES
13. TAXES & DUTIES
14. BID CURRENCIES
15. BID VALIDITY
16. EARNEST MONEY / BID SECURITY
17. PRE-BID MEETING
18. FORMAT AND SIGNING OF BID
19. ZERO DEVIATION & REJECTION CRITERIA
20. E-PAYMENT

[D] SUBMISSION OF BIDS:

21. SUBMISSION, SEALING AND MARKING OF BIDS
22. DEADLINE FOR SUBMISSION OF BIDS
23. LATE BIDS
24. MODIFICATION AND WITHDRAWAL OF BIDS
25. EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

[E] BID OPENING AND EVALUATION:

26. BID OPENING
27. CONFIDENTIALITY
28. CONTACTING THE EMPLOYER
29. EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS



30. CORRECTION OF ERRORS
31. CONVERSION TO SINGLE CURRENCY FOR COMPARISON OF BIDS
32. EVALUATION AND COMPARISON OF BIDS
33. [PRICE BID EVALUATION METHODOLOGY]
34. COMPENSATION FOR EXTENDED STAY
35. PURCHASE PREFERENCE

[F] AWARD OF CONTRACT:

36. AWARD
37. NOTIFICATION OF AWARD / FAX OF ACCEPTANCE [FOA]
38. SIGNING OF AGREEMENT
39. CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT
40. PROCEDURE FOR ACTION IN CASE
CORRUPT/FRAUDULENT/COLLUSIVE/COERCIVE PRACTICES
41. PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL
ENTERPRISE
42. AHR ITEMS
43. VENDOR PERFORMANCE EVALUATION PROCEDURE
44. INCOME TAX & CORPORATE TAX
45. SETTLEMENT OF DISPUTES BETWEEN GOVERNMENT DEPARTMENT
AND ANOTHER AND ONE GOVERNMENT DEPARTMENT AND
PUBLIC ENTERPRISE AND ONE PUBLIC ENTERPRISE AND ANOTHER
46. DISPUTE RESOLUTION
47. BILLING SYSTEM
48. TRANSPARENCY
49. SALE OF BID DOCUMENTS
50. SUBLETTING & ASSIGNMENT
51. DIRECT PAYMENTS TO SUB-VENDORS / SUPPORTING
AGENCIES OF MAIN CONTRACTOR
52. CHECK MEASUREMENT

[G] ANNEXURES:

1. ANNEXURE-I: PROCEDURE FOR ACTION IN CASE
CORRUPT/FRAUDULENT/COLLUSIVE/COERCIVE PRACTICES
2. ANNEXURE-II: VENDOR PERFORMANCE EVALUATION
PROCEDURE
3. ANNEXURE-III: ADDENDUM TO INSTRUCTIONS TO BIDDERS
(INSTRUCTION FOR PARTICIPATION IN E-TENDER)
4. ANNEXURE-IV: **BIDDING DATA SHEET (BDS)**

[H] FORMS & FORMATS



SECTION-III

INSTRUCTIONS TO BIDDERS [ITB] **[TO BE READ IN CONJUNCTION WITH BIDDING DATA SHEET (BDS)]**

[A] – GENERAL

1. SCOPE OF BID

- 1.1. The Employer/ Owner/ BCPL as defined in the "General Conditions of Contract [GCC]", wishes to receive Bids as described in the Bidding Document/Tender document issued by Employer/Owner/BCPL.
- 1.2. SCOPE OF BID: The scope of Supply shall be as defined in the Bidding documents.
- 1.3. The successful bidder will be expected to complete the scope of Bid within the period stated in Special Conditions of Contract.
- 1.4. Throughout the Bidding Documents, the terms 'Bid', 'Tender' & 'Offer' and their derivatives [Bidder/Tenderer, Bid/Tender/Offer etc.] are synonymous. Further, 'Day' means 'Calendar Day' and 'Singular' also means 'Plural'.

2. ELIGIBLE BIDDERS

- 2.1. The Bidder shall not be under a declaration of ineligibility by Employer for Corrupt/ Fraudulent/ Collusive/ Coercive practices, as defined in "Instructions to Bidders [ITB], Clause No. 39" (Action in case Corrupt/ Fraudulent/ Collusive/ Coercive Practices).
- 2.2. The Bidder is not put on 'Holiday' by GAIL/BCPL or Public Sector Project Management Consultant (like EIL, Mecon only due to "poor performance" or "corrupt and fraudulent practices") or banned/blacklisted by Government department/ Public Sector on due date of submission of bid. Further, neither bidder nor their allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of GAIL/BCPL or the Ministry of Petroleum and Natural Gas.

If the bidding documents were issued inadvertently/ downloaded from website, offers submitted by such bidders shall not be considered for opening/ evaluation/Award and will be returned immediately to such bidders.

In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to BCPL by the bidder.

It shall be the sole responsibility of the bidder to inform BCPL in case the bidder is put on 'Holiday' by GAIL/BCPL or Public Sector Project Management Consultant (like EIL, Mecon. only due to "poor performance" or "corrupt and fraudulent practices") or banned/blacklisted by Government department/ Public Sector on due date of submission of bid and during the course of finalization of the tender.



Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause 39 of ITB.

- 2.3. The Bidder should not be under any liquidation court receivership or similar proceedings on due date of submission of bid.

In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to BCPL by the bidder.

- 2.4. It shall be the sole responsibility of the bidder to inform BCPL in case the bidder is under any liquidation, court receivership or similar proceedings on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause no.39 of ITB.

- 2.5. Bidder shall not be affiliated with a firm or entity:

- (i) that has provided consulting services related to the Procurement to the Employer during the preparatory stages of the Procurement or of the project of which the Supply forms a part of or
- (ii) that has been hired (proposed to be hired) by the Employer as an Engineer/ Consultant for the contract.

- 2.6. Neither the firm/entity appointed as the Project Management Consultant (PMC) for a contract nor its affiliates/ JV'S/ Subsidiaries shall be allowed to participate in the tendering process unless it is the sole Licensor/Licensor nominated agent/ vendor.

- 2.7. Pursuant to qualification criteria set forth in the bidding document, the Bidder shall furnish all necessary supporting documentary evidence to establish Bidder's claim of meeting qualification criteria.

- 2.8. **SUB-VENDOR/CONTRACTOR: Regarding consideration of experience acquired by a bidder as a sub-contractor** for meeting the experience criteria of BEC in tender: **NOT ACCEPTABLE.**

- 2.9. No firm can be a **sub-Contractor** while submitting a bid individually in the same bidding process.

3. **BIDS FROM "JOINT VENTURE"/"CONSORTIUM"**- [FOR APPLICABILITY OF THIS CLAUSE REFER BIDDING DATA SHEET (BDS)]- **NOT APPLICABLE FOR THIS TENDER**

4. **ONE BID PER BIDDER**

- 4.1. A Firm/Bidder shall submit only 'one [01] Bid' in the same Bidding Process individually as a Bidder. A Bidder who submits or participates in more than 'one [01] Bid' will cause all the proposals in which the Bidder has participated to be disqualified.



4.2. Alternative Bids shall not be considered.

5. **COST OF BIDDING & TENDER FEE**

5.1. **COST OF BIDDING**

The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Bank charges all courier charges including taxes & duties etc. incurred thereof. Further, BCPL will in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.

5.2. **TENDER FEE- Not Applicable**

5.2.1. Tender Fee, if applicable, will be acceptable in the form of 'crossed payee accounts only' Demand Draft/ Banker's Cheque payable to BCPL. The Tender Fee is to be submitted along with the bid. Offers sent without payment of requisite Tender Fee will be ignored straightaway.

5.3. SMEs (Small & Micro Enterprises) are exempted from submission of Tender Fee in accordance with the provisions of Public Procurement Policy for MSE-2012 and Clause 40 of ITB. The Government Departments/PSUs are also exempted from the payment of tender fee.

5.4. In the event of a particular tender being cancelled, the tender fee will be refunded to the concerned bidders without any interest charges. No plea in this regard shall be entertained by the Owner.

6. **SITE VISIT**

6.1. The Bidder is advised to visit and examine the site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a Contract for the required job. The costs of visiting the site shall be borne by the Bidder.

6.2. The Bidder or any of its personnel or agents shall be granted permission by the Employer to enter upon its premises and land for the purpose of such visits, but only upon the express conditions that the Bidder, its personnel and agents will release and indemnify the Employer and its personnel, agents from and against all liabilities in respect thereof, and will be responsible for death or injury, loss or damage to property, and any other loss, damage, costs, and expenses incurred as a result of inspection.

6.3. The Bidder shall not be entitled to hold any claim against BCPL for noncompliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the bid.



[B] – BIDDING DOCUMENTS

7. CONTENTS OF BIDDING DOCUMENTS

7.1. The contents of Bidding Documents / Tender Documents are those stated below, and should be read in conjunction with any 'Addendum / Corrigendum' issued in accordance with "ITB: Clause-9":

- Section-I : Invitation for Bid [IFB]
- Section-II : BID EVALUATION CRITERIA [BEC] & Price Evaluation Methodology
- Section-III : Instructions to Bidders [ITB]
Annexure
Forms & Format
- Section-IV : General Conditions of Contract [GCC]
- Section-V : Special Conditions of Contract [SCC]
- Section-VI : Scope of Work [SOW]
- Section-VII : Health, Safety and Environment [HSE] Specifications
- Section-VIII : Schedule of Rates

*Request for Quotation', wherever applicable, shall also form part of the Bidding Document.

7.2. The Bidder is expected to examine all instructions, forms, terms & conditions in the Bidding Documents. The "Request for Quotation [RFQ] & Invitation for Bid (IFB)" together with all its attachments thereto, shall be considered to be read, understood and accepted by the Bidders. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will be at Bidder's risk and may result in the rejection of his Bid.

8. CLARIFICATION OF BIDDING DOCUMENTS

8.1. A prospective Bidder requiring any clarification(s) of the Bidding Documents may notify BCPL in writing or by fax or email at BCPL's mailing address indicated in the **BDS no later than 02 (two) days prior to pre-bid meeting (in cases where pre-bid meeting is scheduled) or 05 (five) days prior to the bid closing date in cases where pre-bid meeting is not held.** BCPL reserves the right to ignore the bidders request for clarification if received after the aforesaid period. BCPL may respond in writing to the request for clarification. BCPL's response including an explanation of the query, but without identifying the source of the query will be uploaded on GAIL's/BCPL's tendering web site [<http://gailtenders.in>; <http://www.bcplonline.co.in> and Government Website] / communicated to prospective bidders by e-mail/ fax.



- 8.2. Any clarification or information required by the Bidder but same not received by the Employer at clause 8.1 (refer BDS for address) above is liable to be considered as "no clarification / information required".

9. AMENDMENT OF BIDDING DOCUMENTS

- 9.1. At any time prior to the 'Bid Due Date', Owner may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by addenda/ corrigendum.
- 9.2. Any addendum/ corrigendum thus issued shall be part of the Bidding Documents and may be hosted on GAIL's/BCPL's website [<http://gailtenders.in>; <http://www.bcplonline.co.in> and Government Website] /communicated to prospective bidders by e-mail/ fax. Bidders have to take into account all such addendum/ corrigendum before submitting their bid.
- 9.3. The Employer, if consider necessary, may extend the date of submissions of Bid in order to allow the Bidders a reasonable time to furnish their most competitive bid taking into account the amendment issued thereof.

[C] – PREPARATION OF BIDS

10. LANGUAGE OF BID:

The bid prepared by the bidder and all correspondence/drawings and documents relating to the bid exchanged by the Bidder and BCPL shall be written in English language alone.

11. DOCUMENTS COMPRISING THE BID

- 11.1. **Bids are invited under e-tendering Two Bid system.** Bidders are requested to refer instructions for participating in E-Tendering enclosed herewith as Annexure-III and the ready reckoner for bidders available in <https://bcplonline.co.in>. **Bids submitted manually shall be rejected, the bids must be submitted on BCPL's E-tendering website as follows:-**

The Bid prepared by the Bidder shall comprise the following components in 2 different folders:

- 11.1.1. **FOLDER-I: "TECHNO-COMMERCIAL / UN-PRICED BID"** shall contain the following:
- (a) 'Covering Letter' on Bidder's 'Letterhead' clearly specifying the enclosed contents and Earnest Money Deposit (EMD).
 - (b) 'Bidder's General Information', as per 'Form F-1'.
 - (c) 'Bid Form', as per 'Form F-2'
 - (d) Copies of documents, as required in 'Form F-3'
 - (e) As a confirmation that the prices are quoted in requisite format complying with the requirements copy of Schedule of Rate (SOR: Part – I) with prices



blanked out mentioning **quoted / not quoted** (as applicable) written against each item.

- (f) 'Letter of Authority' on the Letter Head, as per 'Form F-5'
- (g) 'No Deviation Confirmation', as per 'Form F-6'
- (h) 'Bidder's Declaration regarding Bankruptcy', in 'Form F-7'
- (i) 'Certificate for Non-Involvement of Government of India ' from Bidder, as per 'Form F-8'
- (j) 'Agreed Terms and Conditions', as per 'Form F-10'
- (k) 'ACKNOWLEDGEMENT CUM CONSENT LETTER', as per 'Form F-11'
- (l) Duly attested documents in accordance with the "BID EVALUATION CRITERIA [BEC]" establishing the qualification.
- (m) Undertaking on the Letter head, as per the Form F-12.
- (n) Power of Attorney for authorized signatory in non-judicial stamp paper/copy of Board Resolution, the authorized signatory shall be signing the bid and any consequence resulting due to such signing shall be binding on the bidder.
- (o) Any other information/details required as per Bidding Document
- (p) All forms and Formats including Annexures.
- (q) Tender Document duly signed/ digitally signed by the Authorized Signatory.
- (r) Additional document specified in Bidding Data Sheet (BDS).
- (s) Copy of EMD/Bid Bond *
- (t) Tender fee (wherever applicable)and
- (u) Copy of Power of Attorney

Note: All the pages of the Bid must be signed by the "Authorized Signatory" of the Bidder.

PS: The following documents in addition to uploading in the bid on BCPL's E-Tendering website (NIC Portal) shall also be submitted in Original (in physical form) within 7 (seven) days from the bid due date provided the scanned copies of the same have been uploaded in E-Tender by the bidder along with e-bid within the due date and time to the address mentioned in Bid Data Sheet (BDS):-

- i) **EMD/Bid Security (including MSE Certificate if applicable for exemption)**
- ii) **Power of Attorney**

***The Original Bid Security/ EMD& Tender Fee (if any), copy of which have been uploaded, must be received within 7 days from the date of un-priced bid opening, failing which the bid will be rejected notwithstanding the fact that a copy of EMD/ Bid Security& Tender Fee (if any)were earlier uploaded by the bidder.In the event bidder fails to upload a copy of the same EMD/ Bid Security & Tender Fee (if any), in his e-bid and hard copy of same has also not been received as on the date & time of bid submission, the bid shall be summarily rejected.All pages of the Bid must be digitally signed by the "authorized signatory" of the Bidder. Refer**



Annexure-III for E-tendering. In e-tenders, bids need to be digitally signed by the person holding power of attorney.

11.1.2. FOLDER-II: Price Bid

- i) The Prices are to be filled strictly in the Schedule of Rate (SOR: Part – II) of the bidding documents. BCPL shall not be responsible for any failure on the part of the bidder to follow the instructions.
- ii) Bidders are advised NOT to mention Rebate/Discount separately, either in the SOR format or anywhere else in the offer. In case Bidder(s) intend to offer any Rebate/Discount, they should include the same in the item rate(s) itself under the “Schedule of Rates (SOR)” and indicate the discounted unit rate(s) only.



- iii) If any unconditional rebate has been offered in the quoted rate the same shall be considered in arriving at evaluated price. However no cognizance shall be taken for any conditional discount for the purpose of evaluation of the bids.
- iv) In case, it is observed that any of the bidder(s) has/have offered suo-moto Discount/Rebate after opening of unpriced bid but before opening of price bids such discount /rebate(s) shall not be considered for evaluation. However, in the event of the bidder emerging as the lowest evaluated bidder without considering the discount/rebate(s), then such discount/rebate(s) offered by the bidder shall be considered for Award of Work and the same will be conclusive and binding on the bidder.
- v) In the event as a result of techno-commercial discussions or pursuant to seeking clarifications / confirmations from bidders, while evaluating the unpriced part of the bid, any of the bidders submits a sealed envelope stating that it contains revised prices; such bidder(s) will be requested to withdraw the revised prices failing which the bid will not be considered for further evaluation.
- vi) In case any bidder does not quote for any item(s) of "Schedule of Rates" and the estimated price impact is more than 10% of the quoted price, then the bid will be rejected. If such price impact of unquoted items is 10% or less of his quoted price, then the unquoted item(s) shall be loaded highest of the price quoted by the other bidders. If such bidder happens to be lowest evaluated bidder, price of unquoted items shall be considered as included in the quoted bid price.

Note: Provision mentioned at para 11.1.2 hereinabove and to be uploaded in SOR attachment/Conditions of E-tendering portal.

12 SCHEDULE OF RATES / BID PRICES

- 12.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole works as described in Bidding Documents, based on the rates and prices submitted by the Bidder and accepted by the Employer. The prices quoted by the Bidders will be inclusive of all taxes except **GST (CGST & SGST/UTGST or IGST)**.
- 12.2 Prices must be filled in format for "Schedule of Rates [SOR]" enclosed as part of Tender document. If quoted in separate typed sheets and any variation in item description, unit or quantity is noticed; the Bid is liable to be rejected.
- 12.3 Bidder shall quote for all the items of "SOR" after careful analysis of cost involved for the performance of the completed item considering all parts of the Bidding Document. In case any activity though specifically not covered in description of item under "SOR" but is required to complete the works as per



Specifications, Scope of Work / Service, Standards, General Conditions of Contract ("GCC"), Special Conditions of Contract ("SCC") or any other part of Bidding Document, the prices quoted shall be deemed to be inclusive of cost incurred for such activity.

- 12.4 All duties, taxes and other levies [if any] payable by the Contractor under the Contract, or for any other cause except final **GST (CGST & SGST/UTGST or IGST)** shall be included in the rates / prices and the total bid-price submitted by the Bidder. Applicable rate of **GST (CGST & SGST/ UTGST or IGST)** on the contract value shall be indicated in Agreed Terms & Conditions (Format-F10) and SOR.
- 12.5 Prices quoted by the Bidder, shall remain firm and fixed and valid until completion of the Contract and will not be subject to variation on any account. Any new taxes & Duties, if imposed by the State/ Govt. of India after due date of bid submission but before the Contractual Delivery Date, shall be reimbursed to the contractor on submission of documentary evidence for proof of payment to State/ Govt. Authorities and after ascertaining its applicability with respect to the contract.
- 12.6 The Bidder shall quote the prices in 'figures' & words. There should not be any discrepancy between the prices indicated in figures and the price indicated in words. In case of any discrepancy, the same shall be dealt as per clause no. 30 of ITB.
- 12.7 Further, Bidder shall also mention the **Service Accounting Codes (SAC)** at the designated place in SOR.

13.0 GST (CGST & SGST/UTGST or IGST)

- 13.1 Bidders are required to submit copy of the GST Registration Certificate while submitting the bids wherever **GST (CGST & SGST/UTGST or IGST)** is applicable.
- 13.2 Quoted prices should be inclusive of all taxes and duties, except **GST (CGST & SGST or IGST or UTGST)**. Please note that the responsibility of payment of **GST (CGST & SGST or IGST or UTGST)** lies with the Supplier of Goods / Services only. Supplier of Goods / Services (Service Provider) providing taxable service shall issue an Invoice/ Bill, as the case may be as per rules/ regulation of GST. Further, returns and details required to be filled under GST laws & rules should be timely filed by Supplier of Goods / Services (Service Provider) with requisite details.



Payments to Service Provider for claiming **GST (CGST & SGST/UTGST or IGST)** amount will be made provided the above formalities are fulfilled. Further, BCPL may seek copies of challan and certificate from Chartered Accountant for deposit of **GST (CGST & SGST/UTGST or IGST)** collected from Owner.

- 13.3 In case CBEC (Central Board of Excise and Customs)/ any equivalent government agency brings to the notice of BCPL that the Supplier of Goods / Services (Service Provider) has not remitted the amount towards **GST (CGST & SGST/UTGST or IGST)** collected from BCPL to the government exchequer, then, that Supplier of Goods / Services (Service Provider) shall be put under Holiday list of BCPL for period of six months as mentioned in Procedure for Evaluation of Performance of Vendors/ Suppliers/Contractors/ Consultants.

- 13.4 In case of statutory variation in **GST (CGST & SGST/UTGST or IGST)**, other than due to change in turnover, payable on the contract value during contract period, the Supplier of Goods / Services (Service Provider) shall submit a copy of the 'Government Notification' to evidence the rate as applicable on the Bid due date and on the date of revision.

Beyond the contract period, in case BCPL is not entitled for input tax credit of **GST (CGST & SGST/UTGST or IGST)**, then any increase in the rate of **GST (CGST & SGST/UTGST or IGST)** beyond the contractual delivery period shall be to Service Provider's account whereas any decrease in the rate **GST (CGST & SGST/UTGST or IGST)** shall be passed on to the Owner.

Beyond the contract period, in case BCPL is entitled for input tax credit of **GST (CGST & SGST/UTGST or IGST)**, then statutory variation in applicable **GST (CGST & SGST/UTGST or IGST)** on supply and on incidental services, shall be to BCPL's account.

Claim for payment of **GST (CGST & SGST/UTGST or IGST)**/ Statutory variation, should be raised within two [02] months from the date of issue of 'Government Notification' for payment of differential (in %) **GST (CGST & SGST/UTGST or IGST)**, otherwise claim in respect of above shall not be entertained for payment of arrears.

The base date for the purpose of applying statutory variation shall be the Bid Due Date.

- 13.5 Where the BCPL is entitled to avail the input tax credit of **GST (CGST & SGST/UTGST or IGST)**:-



- 13.5.1 Owner/BCPL will reimburse the **GST (CGST & SGST/UTGST or IGST)** to the Supplier of Goods / Services (Service Provider) at actuals against submission of Invoices as per format specified in rules/ regulation of GST to enable Owner/BCPL to claim input tax credit of **GST (CGST & SGST/UTGST or IGST)** paid. In case of any variation in the executed quantities, the amount on which the **GST (CGST & SGST/UTGST or IGST)** is applicable shall be modified in same proportion. Returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.
- 13.5.2 The input tax credit of **GST (CGST & SGST/UTGST or IGST)** quoted shall be considered for evaluation of bids, as per evaluation criteria of tender document.
- 13.6 Where the BCPL is not entitled to avail/take the full input tax credit of **GST (CGST & SGST/UTGST or IGST)**:-
- 13.6.1 Owner/BCPL will reimburse **GST (CGST & SGST/UTGST or IGST)** to the Supplier of Goods / Services (Service Provider) at actuals against submission of Invoices as per format specified in rules/ regulation of GST subject to the ceiling amount of **GST (CGST & SGST/UTGST or IGST)** as quoted by the bidder, subject to any statutory variations, except variations arising due to change in turnover. In case of any variation in the executed quantities (If directed and/or certified by the Engineer-In-Charge) the ceiling amount on which **GST (CGST & SGST/UTGST or IGST)** is applicable will be modified on pro-rata basis.
- 13.6.2 The bids will be evaluated based on total price including applicable **GST (CGST & SGST/UTGST or IGST)**.
- 13.7 BCPL will prefer to deal with registered supplier of goods/ services under GST. Therefore, bidders are requested to get themselves registered under GST, if not registered yet.
- However, in case any unregistered bidder is submitting their bid, their prices will be loaded with applicable **GST (CGST & SGST/UTGST or IGST)** while evaluation of bid. Where BCPL is entitled for input credit of **GST (CGST & SGST/UTGST or IGST)**, the same will be considered for evaluation of bid as per evaluation methodology of tender document.
- 13.8 In case BCPL is required to pay entire/certain portion of applicable **GST (CGST & SGST/UTGST or IGST)** and remaining portion, if any, is to be deposited by Bidder directly as per **GST (CGST & SGST/UTGST or IGST)**



laws, entire applicable rate/amount of **GST (CGST & SGST/UTGST or IGST)** to be indicated by bidder in the SOR.

Where BCPL has the obligation to discharge **GST (CGST & SGST/UTGST or IGST)** liability under reverse charge mechanism and BCPL has paid or is /liable to pay **GST (CGST & SGST/UTGST or IGST)** to the Government on which interest or penalties becomes payable as per GST laws for any reason which is not attributable to BCPL or ITC with respect to such payments is not available to BCPL for any reason which is not attributable to BCPL, then BCPL shall be entitled to deduct/ setoff / recover such amounts against any amounts paid or payable by BCPL to Contractor / Supplier.

- 13.9 Contractor shall ensure timely submission of invoice(s) as per rules/ regulations of GST with all required supporting document(s) within a period specified in Contracts/ LOA to enable BCPL to avail inputtax credit. Further, returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.

If input tax credit with respect to **GST (CGST & SGST/UTGST or IGST)** is not available to BCPL for any reason which is not attributable to BCPL, then BCPL shall not be obligated or liable to pay or reimburse **GST (CGST & SGST/UTGST or IGST)** charged in the invoice(s) and shall be entitled to / deduct/ setoff /recover the such **GST (CGST & SGST/UTGST or IGST)** thereupon together with all penalties and interest if any, against any amounts paid or payable by BCPL to Supplier of Goods / Services.

13.10 **Anti-profiteering clause**

As per Clause 171 of GST Act it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices. The Supplier of Goods / Services may note the above and quote their prices accordingly.

- 13.11 In case the GST rating of vendor on the GST portal / Govt. official website is negative / black listed, then the bids may be rejected by BCPL. Further, in case rating of bidder is negative / black listed after award of work for supply of goods / services, then BCPL shall not be obligated or liable to pay or reimburse GST to such vendor and shall also be entitled to deduct / recover such GST along with all penalties / interest, if any, incurred by BCPL.

14. **BID CURRENCIES:**

Bidders must submit bid in Indian Rupees only.



15. **BID VALIDITY**

- 15.1. Bids shall be kept valid for period specified in BDS from the final 'Bid Due Date'. A Bid valid for a shorter period may be rejected by BCPL as 'non-responsive'.
- 15.2. In exceptional circumstances, prior to expiry of the original 'Bid Validity Period', the Employer may request the Bidders to extend the 'Period of Bid Validity' for a specified additional period. The request and the responses thereto shall be made in writing or by fax/email. A Bidder may refuse the request without forfeiture of his 'Bid Security'. A Bidder agreeing to the request will not be required or permitted to modify his Bid, but will be required to extend the validity of its 'Bid Security' for the period of the extension and in accordance with "ITB: Clause-16" in all respects.

16. **EARNEST MONEY/BID SECURITY:** Rs. 3,00,000/-

[THE ORIGINAL DEMAND DRAFT OR BANK GUARANTEE OR VALID MSE CERTIFICATE (IF APPLICABLE FOR EXEMPTION) SHALL BE FORWARDED TO BCPL. THE ORIGINAL HARDCOPY OF DEMAND DRAFT OR BANK GUARANTEE OF EMD OR VALID MSE CERTIFICATE(IF APPLICABLE FOR EXEMPTION) HAS TO BE REACHED BCPL ON OR BEFORE 7 DAYS AFTER OPENING OF UN PRICED BID. OTHERWISE THE BID SHALL BE REJECTED]

- 16.1. Bids must be accompanied with 'Earnest Money / Bid Security' in the form of 'Demand Draft' or 'Banker's Cheque'[in favor of Brahma Putra Cracker & Polymer Ltd., payable at Dibrugarh, Assam] or 'Bank Guarantee' as per the format given in Form -4 of the bidding documents. Bidders shall ensure that 'Bid Security', having a validity of at least 'two [02] months' beyond the validity of the bid, must accompany the Bid in the format(s) made available in the Bidding Document. Bid not accompanied with 'Bid Security', or 'Bid Security' not in requisite form shall be liable for rejection. The Bid Security shall be submitted in Indian Rupees only.
- 16.2. The 'Bid Security' is required to protect BCPL against the risk of Bidder's conduct, which would warrant the 'Bid Security's' forfeiture, pursuant to "ITB: Clause-16.7"
- 16.3. BCPL shall not be liable to pay any Bank charges, commission or interest etc. on the amount of 'Bid Security'. In case 'Bid Security' is in the form of a 'Bank Guarantee', the same shall be from any Indian scheduled Bank or a branch of an International Bank situated in India and registered with 'Reserve Bank of India' as Scheduled Foreign Bank. However, in case of 'Bank Guarantee' from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect should be made by such commercial Bank either in the 'Bank Guarantee' itself or separately on its letterhead. 'Earnest Money / Bid Security' shall be valid for 'two [02] months' beyond the 'Bid Validity Period'



- 16.4. Any Bid not secured in accordance with "ITB: Clause-16.1 & Clause-16.3" may be rejected by BCPL as non-responsive.
- 16.5. **Unsuccessful Bidder's 'Earnest Money / Bid Security' will be discharged/ returned as promptly as possible, but not later than 'thirty [30] days' after finalization of tender.**
- 16.6. The successful Bidder's 'Bid Security' will be discharged upon the Bidder's acknowledging the 'Award' and signing the 'Agreement' and furnishing the 'Contract Performance Security / Security Deposit' pursuant to clause 37 & 38 of ITB.
- 16.7. Notwithstanding anything contained herein, the 'Bid Security' may also be forfeited in any of the following cases:
- (a) If a Bidder withdraws his Bid during the 'Period of Bid Validity'
 - (b) If a Bidder has indulged in corrupt/fraudulent /collusive/coercive practice
 - (c) If the Bidder modifies bids during the period of bid validity (after submission date).
 - (d) Violates any other condition, mentioned elsewhere in the tender document, which may lead to forfeiture of EMD.
 - (e) In the case of a successful Bidder, if the Bidder fails to:
 - (i) to acknowledge receipt the "Notification of Award" / "Fax of Intent [FOI]/ Fax of Acceptance[FOA]",
 - (ii) to furnish "Contract Performance Security / Security Deposit", in accordance with "ITB: Clause-38",
 - (iii) to accept 'arithmetical corrections' as per provision of the clause 30 of ITB.
- 16.8. In case Bid Security is in the form of 'Bank Guarantee', the same must indicate the Bid Document No. and the Work for which the Bidder is quoting. This is essential to have proper correlation at a later date. The 'Bid Security' should be in the form provided at 'Form F-4'.
- 16.9. **MSEs (Micro & Small Enterprises) are exempted from submission of EMD/Bid Security** in accordance with the provisions of PPP-2012 and Clause 40 of ITB. The Government Departments/PSUs are also exempted from the payment of Bid Security.
- 17. PRE-BID MEETING (IF APPLICABLE)**
- 17.1. The Bidder(s) or his designated representative are invited to attend a "Pre-Bid Meeting" which will be held at address specified in IFB. It is expected that a bidder shall not depute more than 02 representatives for the meeting.



- 17.2. Purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage and give hands-on e-tendering.
- 17.3. Text of the questions raised and the responses given, together with any responses prepared after the meeting, will be uploaded on GAIL's/BCPL's e-tendering website against the Tender. Any modification of the Contents of Bidding Documents listed in "ITB: Clause-7.1", that may become necessary as a result of the Pre-Bid Meeting shall be made by the Employer exclusively through the issue of an Addendum / Corrigendum pursuant to "ITB: Clause-9", and not through the minutes of the Pre-Bid Meeting.
- 17.4. Non-attendance of the Pre-Bid Meeting will not be a cause for disqualification of Bidder.

18. FORMAT AND SIGNING OF BID

- 18.1. The original and all copies of the Bid shall be typed or written in indelible ink [in the case of copies, photocopies are also acceptable] and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder (as per POA). The name and position held by each person signing, must be typed or printed below the signature. All pages of the Bid except for unamended printed literature where entry(s) or amendment(s) have been made shall be initialed by the person or persons signing the Bid.
- 18.2. The Bid shall contain no alterations, omissions, or additions, unless such corrections are initialed by the person or persons signing the Bid.
- 18.3. **All documents to be digitally signed and to be uploaded as detailed in addendum to ITB.**

19. ZERO DEVIATION AND REJECTION CRITERIA

- 19.1. ZERO DEVIATION: Deviation to terms and conditions of "Bidding Documents" may lead to rejection of bid. BCPL will accept bids based on terms & conditions of "Bidding Documents" only. Bidder may note BCPL will determine the substantial responsiveness of each bid to the Bidding Documents pursuant to provision contained in clause 29 of ITB. For purpose of this, a substantially responsive bid is one which conforms to all terms and conditions of the Bidding Documents without deviations or reservations. BCPL's determination of a bid's responsiveness is based on the content of the bid itself without recourse to extrinsic evidence. BCPL reserves the right to raise technical and/or commercial query(s), if required, may be raised on the bidder(s). The response(s) to the same shall be in writing, and no change in the price(s) or substance of the bids shall be sought, offered or permitted. The substance of the bid includes but not limited to prices, completion, scope, technical specifications, etc. Bidders are requested to not to take any deviation/exception to the



terms and conditions laid down in this "Tender Documents", and submit all requisite documents as mentioned in this "Tender Documents", failing which their offer will be liable for rejection. If a bidder does not reply to the queries in the permitted time frame then its bid shall be evaluated based on the documents available in the bid.

19.2. **REJECTION CRITERIA:** Notwithstanding the above, deviation to the following clauses of Tender document shall lead to summarily rejection of Bid:

- (a) Firm Price
- (b) Earnest Money Deposit / Bid Security / Tender Fee
- (c) Specifications & Scope of Work
- (d) Schedule of Rates / Price Schedule / Price Basis
- (e) Duration / Period of Contract/ Delivery Schedule
- (f) Period of Validity of Bid
- (g) Price Reduction Schedule
- (h) Contract Performance Bank Guarantee / Security Deposit
- (i) Guarantee / Defect Liability Period
- (j) Arbitration / Resolution of Dispute/Jurisdiction of Court
- (k) Force Majeure & Applicable Laws
- (l) Any other condition specifically mentioned in the tender document elsewhere that non-compliance of the clause lead to rejection of bid

Note: Further, it is once again reminded not to mention any condition in the Bid which is contradictory to the terms and conditions of Tender document.

20. **E-PAYMENT**

BCPL has initiated payments to Suppliers and Contractors electronically, and to facilitate the payments electronically through '**e-banking**'. The successful bidder should give the details of his bank account as per the bank mandate form.

[D] – SUBMISSION OF BIDS

21. **SUBMISSION, SEALING AND MARKING OF BIDS**

- 21.1. Bids shall be submitted through e-tender mode in the manner specified elsewhere in tender document. No Manual/ Hard Copy (Original) offer shall be acceptable.
- 21.2. All the bids shall be addressed to the owner at address specified in IFB.
- 21.3. Bids submitted under the name of AGENT/ CONSULTANT/ REPRESENTATIVE /RETAINER/ ASSOCIATE etc. on behalf of a bidder/affiliate shall not be accepted.



22. DEADLINE FOR SUBMISSION OF BIDS

- 22.1. The bids must be submitted through e-tender mode not later than the date and time specified in the tender documents/BDS.
- 22.2. BCPL may, in exceptional circumstances and at its discretion, extend the deadline for submission of Bids (clause 9 of ITB refers). In which case all rights and obligations of BCPL and the Bidders, previously subject to the original deadline will thereafter be subject to the deadline as extended. Notice for extension of bid submission date will be uploaded on GAIL's/BCPL's website/ communicated to the bidders.

23. LATE BIDS

- 23.1. Any bids received after the notified date and time of closing of tenders will be treated as late bids.
- 23.2. In case of e-tendering, e-tendering system of BCPL shall close immediately after the deadline for submission of bid and no bids can be submitted thereafter.

Where the bid bond/physical documents has been received but the bid is not submitted by the bidder in the e-tendering portal, such bid bond/ physical documents shall be returned immediately.

- 23.3. Unsolicited Bids or Bids received to address other than one specifically stipulated in the tender document will not be considered for evaluation/opening/award if not received to the specified destination within stipulated date & time.

24. MODIFICATION AND WITHDRAWAL OF BIDS

- 24.1. Modification and withdrawal of bids shall be as follows:-
- 24.1.1. For E- TENDERING, the bidder may withdraw or modify its bid after bid submission but before the due date and time for submission as per tender document.
- 24.2. **No bid shall be allowed to be withdrawn/modified/substitute in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder on the Bid Form.** Withdrawal/Modification/Substitution of a bid during this interval shall result in the bidder's forfeiture of his bid security pursuant to clause 16 of ITB and rejection of bid.
- 24.3. The latest bid hence submitted shall be considered for evaluation and all other bids shall be considered to be unconditionally withdrawn.
- 24.4. In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, BCPL shall forfeit



EMD paid by the bidder and such bidders shall be debarred from participation in re-tendering of the same job(s)/item(s). Further, such bidder will be put on holiday for a period of six months after following the due procedure.

25. **EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS**

BCPL reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the ground for BCPL's action. However, Bidder if so desire may seek the reason (in writing) for rejection of their Bid to which BCPL shall respond quickly.



[E] – BID OPENING AND EVALUATION

26. BID OPENING

26.1. *Unpriced Bid Opening:*

BCPL will open bids, in the presence of bidders' designated representatives who choose to attend, at date, time and location stipulated in the BDS. The bidders' representatives, who are present shall sign a bid opening register evidencing their attendance.

26.2. *Priced Bid Opening:*

26.2.1. BCPL will open the price bids of those bidders who meet the qualification requirement and whose bids is determined to be technically and commercially responsive. Bidders selected for opening of their price bids shall be informed about the date of price bid opening. Bidders may depute their authorized representative to attend the bid opening. The bidders' representatives, who are present shall sign a register evidencing their attendance and may be required to be present on a short notice.

26.2.2. The price bids of those bidders who were not found to be techno-commercially responsive shall be unopened and returned unopened after opening of the price bids of techno-commercially responsive bidders.

26.3. In case of bids invited under the single bid system, bid shall be opened on the specified due date & time.

27. CONFIDENTIALITY

Information relating to the examination, clarification, evaluation, and comparison of Bids, and recommendations for the award of a Contract, shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of the Bidder's Bid and action shall be initiated as per procedure in this regard.

28. CONTACTING THE EMPLOYER

28.1. From the time of Bid opening to the time of award of Contract, if any Bidder wishes to contact the Employer on any matter related to the Bid, it should do so in writing. Information relating to the examination, clarification, evaluation & recommendation for award shall not be disclosed.

28.2. Any effort by the Bidder to influence the Employer in the Employer's 'Bid Evaluation', 'Bid Comparison', or 'Contract Award' decisions may result in the



rejection of the Bidder's Bid and action shall be initiated as per procedure in this regard.

29. EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

29.1. The owner's determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid:-

- (a) Meets the "Bid Evaluation Criteria" of the Bidding Documents;
- (b) Has been properly signed;
- (c) Is accompanied by the required 'Earnest Money / Bid Security';
- (d) Is substantially responsive to the requirements of the Bidding Documents; and
- (e) Provides any clarification and/or substantiation that the Employer may require to determine responsiveness pursuant to "ITB: Clause-29.2"

29.2. A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bidding Documents without material deviations or reservations or omissions for this purpose employer defines the foregoing terms below:-

- (a) "Deviation" is departure from the requirement specified in the tender documents.
- (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirement in the tender documents.
- (c) "Omission" is the failure to submit part or all of the information or documentation required in the tender document.

29.3. A material deviation, reservation or omission is one that,

- (a) If accepted would,
 - i) Affect in any substantial way the scope, quality, or performance of the job as specified in tender documents.
 - ii) Limit, in any substantial way, inconsistent with the Tender Document, the Employer's rights or the tenderer's obligations under the proposed Contract.
- (b) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

29.4. The employer shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation, reservation or omission.

29.5. If a Bid is not substantially responsive, it may be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the material deviation, reservation or omission.



30. CORRECTION OF ERRORS

30.1. Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

- (i) When there is a difference between the rates in figures and words, the rate which corresponds to the amount worked out by the contractor (by multiplying the quantity and rate) shall be taken as correct.
- (ii) When the rate quoted by the contractor in figures and words tallies but the amount is incorrect, the rate quoted by the contractor shall be taken as correct and not the amount and the amount corrected.
- (iii) When it is not possible to ascertain the correct rate, in the manner prescribed above, the rate as quoted in words shall be adopted and the amount worked out, for comparison purposes

30.2. The amount stated in the bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors. If the bidder does not accept the corrected amount of bid, its bid will be rejected, and the bid security shall be forfeited.

31. CONVERSION TO SINGLE CURRENCY FOR COMPARISON OF BIDS

Not Applicable. All bids submitted must be in the currency specified at clause 14 of ITB.

32. EVALUATION AND COMPARISON OF BIDS

Bids shall be evaluated as per evaluation criteria mentioned in Section-II of bidding documents (refer clause 7.0 of ITB) after considering the effect of cenvatcredit entitled. The employer shall only use the criteria and methodology indicated in Section-II of bidding documents. No other criteria/ methodology shall be permitted.

33. COMPENSATION FOR EXTENDED STAY (FOR APPLICABILITY OF THIS CLAUSE REFER BDS):-NOT APPLICABLE FOR THIS TENDER

34. PURCHASE PREFERENCE

Purchase preference to Central government public sector Undertaking and Micro and Small Enterprises (MSEs) shall be allowed as per Government instructions in vogue.



[F] – AWARD OF CONTRACT

35. AWARD

Subject to "ITB: Clause-29", BCPL will award the Contract to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest provided that bidder, is determined to be qualified to satisfactorily perform the Contract.

NOTIFICATION OF AWARD / FAX OF ACCEPTANCE/LETTER OF INTENT

- 35.1. Prior to the expiry of 'Period of Bid Validity', BCPL will notify the successful Bidder in writing, in the form of "Notification of Award" / "Fax of Intent [FOI]" / "Letter of Intent" through fax/e-mail, that his Bid has been accepted. The notification of award / Fax of Intent/Fax of Acceptance will constitute the formation of the Contract.
- 35.2. Contract period shall commence from the date of "Notification of Award" or as mentioned in the Notification of Award/Fax of Intent [FOI]/Letter of Intent. The "Notification of Award"/"Fax of Intent [FOI]" / "Letter of Intent" will constitute the formation of a Contract, until the Contract has been effected pursuant to signing of Contract as per "ITB: Clause-37".

Upon the successful Bidder's / Contractor's furnishing of 'Contract Performance Security / Security Deposit', pursuant to "ITB: Clause-38", BCPL will promptly discharge his 'Earnest Money / Bid Security', pursuant to "ITB: Clause-16"

36. SIGNING OF AGREEMENT

- 36.1. BCPL will award the Contract to the successful Bidder, who, within 'fifteen [15] days' of receipt of the same, shall sign and return the acknowledged copy to BCPL.
- 36.2. The successful Bidder/Contractor shall be required to execute an 'Agreement' in the proforma given in this Bidding Document on a 'non-judicial stamp paper' of appropriate value [cost of the 'stamp-paper' shall be borne by the successful Bidder/Contractor] and of 'state' specified in Bidding Data Sheet (BDS) only, within 'fifteen [15] days' of receipt of the "Letter of Acceptance [LOA]" of the Tender by the successful Bidder/Contractor failure on the part of the successful Bidder to sign the 'Agreement' within the above stipulated period, shall constitute sufficient grounds for forfeiture of EMD/Security Deposit.

37. CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT

- 37.1. Within 30 days of the receipt of the notification of award/ Fax of Acceptance from BCPL, the successful bidder shall furnish the Contract Performance Security/Guarantee in accordance with General Conditions of the Contract/as stipulated in Section-II of tender document. The Contract Performance Security/Guarantee shall be in the form of either Banker's Cheque or Demand Draft or Bank Guarantee and shall be in the currency of the Contract.



- 37.2. **The contract performance security shall be for an amount equal to 7.5% of annualized order value (excluding GST) specified in Bidding Data Sheet (BDS)/as stipulated in Section-II of tender document towards faithful performance of the contractual obligations & performance of equipment and same must be valid for 3 months beyond the contract period.** For the purpose of Contract Performance Security, Contract/order value shall be exclusive of taxes and duties.

Bank Guarantee towards performance security/ security deposit shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank in case of Indian bidder as well as foreign bidder. However, in case of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of **Rs 100 crores** and a declaration to this effect should be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead. This bank guarantee shall be valid for a period of three months beyond the delivery schedule as specified in Bid Data Sheet(BDS).

- 37.3. Failure of the successful bidder to comply with the requirements of this article shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.
- 37.4. The CPBG/Security deposit has to cover the entire contract value including extra works/services also. As long as the CPBG/Security deposit submitted at the time of award take cares the extra works/ services executed and total executed value are within the awarded contract price, there is no need for additional security deposit/ Contract Performance Security. As soon as the total executed value is likely to burst the ceiling of awarded contract price, the contractor should furnish additional security deposit/ CPBG.

38. PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT/COLLUSIVE/ COERCIVE PRACTICES

- 38.1. Procedure for action in case Corrupt/ Fraudulent/Collusive/Coercive Practices is enclosed at Annexure-I.
- 38.2. The Fraud Prevention Policy document is available on GAIL's/BCPL's website (www.gailonline.com /www.bcplonline.com)
- 38.3. **NON-APPLICABILITY OF ARBITRATION CLAUSE IN CASE OF BANNING OF VENDORS/ SUPPLIERS / CONTRACTORS/BIDDERS/ CONSULTANTS INDULGED IN FRAUDULENT/ COERCIVE PRACTICES**

Notwithstanding anything contained contrary in GCC and other "CONTRACT DOCUMENTS", in case it is found that the Vendors/ Suppliers / Contractors/Bidders/ Consultants indulged in fraudulent/ coercive practices at the time of bidding, during execution of the contract etc., and/or on other grounds as



mentioned in GAIL's/BCPL's "Procedure for action in case Corrupt/Fraudulent/Collusive/Coercive Practices" (Annexure-I), the contractor/bidder shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by Brahmaputra Cracker and Polymer Ltd., to such Vendors/ Suppliers / Contractors/Bidders/ Consultants.

The Vendor/ Supplier / Contractor/ Bidder/Consultant understands and agrees that in such cases where Vendor/ Supplier / Contractor/ Bidder/Consultant has been banned (in terms of aforesaid procedure) from the date of issuance of such order by Brahmaputra Cracker and Polymer Ltd, such decision of Brahmaputra Cracker and Polymer Ltd shall be final and binding on such Vendor/ Supplier / Contractor/ Bidder/Consultant and the 'Arbitration clause' in the GCC and other "CONTRACT DOCUMENTS" shall not be applicable for any consequential issue /dispute arising in the matter.

39. PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES

39.1. Following provision has been incorporated in tender for MSEs, in line with notification of Government of India, vide Gazette of India No. 503 dated 26.03.2012 proclaiming the Public Procurement Policy on procurement of goods and services from Micro and Small Enterprises (MSEs)

- i) Issue of tender document to MSEs free of cost.
- ii) Exemption to MSEs from payment of EMD/Bid Security.
- iii) In Tender participating Micro and Small Enterprises quoting price within the price band of L1 + 15% shall also be allowed to supply a portion of requirement by bringing down their prices to L1 price in a situation where L1 price is from someone other than a micro and small enterprise and such micro and small enterprises shall be allowed to supply upto 20% of the tendered value. In case of more than one such Micro and Small Enterprises, the supply shall be shared proportionately (to tendered quantity). Further, out of above 20%, 4% shall be from MSEs owned by SC/ST entrepreneurs. This quota is to be transferred to other MSEs in case of non-availability of MSEs owned by SC/ST entrepreneurs.

The quoted prices against various items shall remain valid in case of splitting of quantities of the items above.

In case tendered item is non-splitable or non- dividable (specified in Bid Data Sheet) , MSE quoting price within price band L1 (other than MSE) + 15% , may be awarded for full/ complete supply of total tendered value subject to matching of L1 price.

39.2. The MSEs owned by SC/ST entrepreneurs shall mean:-

- 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 atleast 51% share in the unit
 - c) In case of private Limited Companies, at least 51%share is held by SC/ST. If the MSE is owned by SC/ST entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.
- 39.3. In case bidder is a Micro or Small Enterprise under the Micro, Small and Medium Enterprises Development Act, 2006, the bidder shall submit the following :
- a) Documentary evidence that the bidder is a Micro or Small Enterprises registered with District Industries Centers or Khadi and Village Industries National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro, Small and Medium Enterprises or UdyogAadhaar Memorandum.
 - b) If the MSE is owned by SC/ST Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.

The above documents submitted by the bidder shall be duly certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) and notary public with legible stamp.

If the bidder does not provide the above confirmation or appropriate document or any evidence, then it will be presumed that they do not qualify for any preference admissible in the Public Procurement Policy (PPP) 2012.

- 39.4. If against an order placed by BCPL, successful bidder(s) (other than Micro/Small Enterprise) is procuring material/services from their sub-vendor who is a Micro or Small Enterprise registered with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro, Small and Medium Enterprises with prior consent in writing of the purchasing authority/Engineer-in-charge, the details like Name, Registration No., Address, Contact No. details of material & value of procurement made, etc. of such Enterprises shall be furnished by the successful bidder at the time of submission of invoice/Bill.

40. AHR ITEMS

In items rate contract where the quoted rates for the items exceed 50% of the owners/estimated Items rates, such items will be considered as Abnormally High Rates Items (AHR) and Payment of AHR items beyond the SOR stipulated quantities shall be made at the least of the following rates:

- (I) Rates as per SOR, quoted by the contractor.
- (II) Rate of the item, which shall be derived as follows:



Based on rates of machine and labor as available from the contract (which includes contractor's supervision, profit, overheads and other expenses).

In case rates are not available in the contract, rates will be calculated based on prevailing market rates of machine, material and labor plus 15% to cover contractor's supervision profit, overhead & other expenses.

41. VENDOR PERFORMANCE EVALUATION PROCEDURE

Shall be as stipulated Annexure II to ITB herewith.

42. INCOME TAX & CORPORATE TAX

42.1. Income tax deduction shall be made from all payments made to the contractor as per the rules and regulations in force and in accordance with the Income Tax Act prevailing from time to time.

42.2. Corporate Tax liability, if any, shall be to the contractor's account.

42.3. TDS GST as may be applicable shall be deducted as per trade tax.

42.4. MENTIONING OF PAN NO. IN INVOICE/BILL

As per CBDT Notification No. 95/2015 dated 30.12.2015, mentioning of PAN no. is mandatory for procurement of goods / services/works/consultancy services exceeding Rs. 2 Lacs per transaction.

Accordingly, supplier/ contractor/ service provider/ consultant should mention their PAN no. in their invoice/ bill for any transaction exceeding Rs. 2 lakhs. As provided in the notification, in case supplier/ contractor/ service provider/ consultant do not have PAN no., they have to submit declaration in Form 60 along with invoice/ bill for each transaction.

Payment of supplier/ contractor / service provider/ consultant shall be processed only after fulfilment of above requirement.

SETTLEMENT OF DISPUTES BETWEEN GOVERNMENT DEPARTMENT AND ANOTHER AND ONE GOVERNMENT DEPARTMENT AND PUBLIC ENTERPRISE AND ONE PUBLIC ENTERPRISE AND ANOTHER

In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitrator under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary / Additional Secretary, when so authorized by the



Law Secretary, whose decision shall bind the Parties finally and conclusively. The parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

43. DISPUTE RESOLUTION(ADDENDUM TO PROVISION REGARDING APPLICABLE LAWS AND SETTLEMENT OF DISPUTES OF GCC)

- 43.1. Brahmaputra Cracker and Polymer Limited has framed the Conciliation Rules 2010 in conformity with supplementary to Part – III of the Indian Arbitration and Conciliation Act 1996 for speedier, cost effective and amicable settlement of disputes through conciliation. A copy of the said rules made available on GAIL's web site/BCPL's website: www.gailonline.com/ www.bcplonline.com for reference. Unless otherwise specified, the matters where decision of the Engineer-in-Charge is deemed to be final and binding as provided in the Agreement and the issues/disputes which cannot be mutually resolved within a reasonable time, all disputes shall be settled in accordance with the Conciliation Rules 2010.
- 43.2. Any dispute(s)/difference(s)/issue(s) of any kind whatsoever between/amongst the Parties arising under/out of/in connection with this contract shall be settled in accordance with the aforesaid rules.
- 43.3. In case of any dispute(s)/difference(s)/issue(s), a Party shall notify the other Party (ies) in writing about such a dispute(s) / difference(s) / issue(s) between / amongst the Parties and that such a Party wishes to refer the dispute(s)/difference(s)/issue(s) to Conciliation. Such Invitation for Conciliation shall contain sufficient information as to the dispute(s)/difference(s)/issue(s) to enable the other Party (ies) to be fully informed as to the nature of the dispute(s)/difference(s)/issue(s), the amount of monetary claim, if any, and apparent cause(s) of action.
- 43.4. Conciliation proceedings commence when the other Party(ies) accept(s) the invitation to conciliate and confirmed in writing. If the other Party (ies) reject(s) the invitation, there will be no conciliation proceedings.
- 43.5. If the Party initiating conciliation does not receive a reply within thirty days from the date on which he/she sends the invitation, or within such other period of time as specified in the invitation, he/she may elect to treat this as a rejection of the invitation to conciliate. If he/she so elects, he/she shall inform the other Party(ies) accordingly.
- 43.6. Where Invitation for Conciliation has been furnished, the Parties shall attempt to settle such dispute(s) amicably under Part-III of the Indian Arbitration and Conciliation Act, 1996 and Brahmaputra Cracker and Polymer Limited Conciliation Rules, 2010. It would be only after exhausting the option of Conciliation as an Alternate Dispute Resolution Mechanism that the Parties hereto shall go for Arbitration. For the purpose of this clause, the option of 'Conciliation' shall be deemed to have been exhausted, even in case of rejection of 'Conciliation' by any of the Parties.



- 43.7. The cost of Conciliation proceedings including but not limited to fees for Conciliator(s), Airfare, Local Transport, Accommodation, cost towards conference facility etc. shall be borne by the Parties equally.
- 43.8. The Parties shall freeze claim(s) of interest, if any, and shall not claim the same during the pendency of Conciliation proceedings. The Settlement Agreement, as and when reached/agreed upon, shall be signed between the Parties and Conciliation proceedings shall stand terminated on the date of the Settlement Agreement.

44. BILLING SYSTEM

ORIGINAL Bills/Invoices to be forwarded in sealed envelope for release of payment in time and following should be clearly mentioned on “top left corner of the envelope” with “address” as under:

(a) Top left corner of the envelope

Vendor Code:_____

LOA/PO No.: Date

Bill/ Invoice No.: Date

Invoice Value: Rs. Indenting Dept. Job/Supply of.....

(b) Address:

To,

In case of LOA/Contract	In case of PO
HOD/EIC (Indenting/User Department) M/s Brahmaputra Cracker and Polymer Limited (A Government of India Enterprise), Administrative Building, PO: Lepetkata, Dist.: DIBRUGARH, Assam, Pin Code: 786006 Phone no. 0373 2914636.	HOD (C&P) M/s Brahmaputra Cracker and Polymer Limited (A Government of India Enterprise), Administrative Building, PO: Lepetkata, Dist.: DIBRUGARH, Assam, Pin Code: 786006 Phone no. 0373 2914636.

45. TRANSPARENCY

Bidders if so desires, may seek in writing the reason for rejection of their bid, to which BCPL shall respond quickly.



46. SALE OF BID DOCUMENTS

Tender document will be sold on receipt of application. No tender document will, however, be sold / issued to the bidders who are on 'Holiday' by GAIL/BCPL or Public Sector Project Management Consultant (like EIL, Mecon etc. only due to "poor performance" or "corrupt and fraudulent practices") or banned by Government department/ Public Sector on due date of submission of bid. If the document were issued inadvertently/ downloaded from website, offers submitted by such bidder shall not be considered for opening / evaluation / award and will be returned immediately to such bidder. The above is without prejudice to the other rights of BCPL.

47. SUBLETTING & ASSIGNMENT

- 47.1. The contractor shall not, save with previous consent in writing of the Engineer-in-charge, sublet, transfer or assign the contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever. Provided, nevertheless, that any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract.

However, Subletting of WHOLE WORKS is prohibited. An undertaking to this effect will be given by Vendor/Contractor along with each invoice/ bill. In addition to above, clause no. 37.0 of GCC also to be referred.

48. DIRECT PAYMENTS TO SUB-VENDORS / SUPPORTING AGENCIES OF MAIN CONTRACTOR

- 48.1. Normally, the payment is to be made to vendor/contractor only as per provision of contract. During execution, in case of financial constraints, BCPL may make direct payment to their sub-vendor / supporting agencies as an exception from the amounts due to the vendors/contractors from any of their bills under process upon certification by EIC subject to receipt of such request from the vendor/contractor. Further, the request for direct payments to the sub-vendor / sub-contractor shall be considered in performance evaluation of such vendor/ contractor.

49. CHECK MEASUREMENT

Measurement shall be recorded as per the methods of measurement spelt out in SOW/Specifications/SCC of Contract/Tender Document. The responsibility for checking the measurements as recorded in the measurement Books/Bills shall be as under:

- 49.1. Where BCPL Executive is Engineer-In-Charge (EIC) (e.g O&M Contracts)
- a. Site-In-Charge/Site Engineer will check 100% measurements of executed work.
 - b. EIC will further check measurements at least 15% of bill value. In case, Site-in-Charge/Site Engineer is not available, EIC will check 100% measurements of executed work.



- c. An officer one level above EIC but not below level of HOD will check measurements of 5% of bill value. In case, HOD is EIC, then he will check measurements of 20% of bill value.
- 49.2. Where PMC is EIC (e.g Project Construction):
- a. PMC will check 100% measurements of executed work.
- b. BCPL Site Engineer will check measurements of at least 15% of bill value, certified by PMC.
- c. An officer one level above Site Engineer but not below level of DGM will further check measurements of 5% of bill value. However, wherever DGM is not available, an officer of level of CM will check measurements of 5% of bill value.
- 49.3. Where BCPL Executive is EIC and where Third Party Inspector is deployed (e.g ARC type Construction Contracts):
- a. Third Party Inspector will check 100% measurements of executed work.
- b. BCPL Site Engineer will check measurements of at least 10% of bill value, certified by Third Party Inspector.
- c. EIC will further check measurements of 5% of bill value. In case, there is no Site Engineer, EIC himself will check measurements of 15% of bill value.
- d. An officer one level above EIC but not below level of HOD (for O&M Cases) and DGM (for Project Cases) will check measurements of 5% of bill value. In case, HOD (for O&M Cases) and DGM (for Project Cases) is EIC, then he will check measurements of 10% of bill value or measurement of 20% of bill value, in case there is no Site Engineer.
- 49.4. OIC (or HOD in case of Corporate Office) or an officer of higher level to that of EIC authorized by OIC may carry out random checking of executed items where the executed quantity exceed SOR quantities.
- 49.5. While exercising test check of 5%, 15% level and on random basis as above, it may be ensured that high rate items, AHR items, items exceeding SOR quantity and concealed items have been covered in the items selected for checking.
- 49.6. The Superior officer should preferably check such items/quantities other than those already checked by BCPL executives at lower levels and should also ensure that the subordinate officer/officers have exercised the requisite percentage check as stipulated in the procedure.
- 49.7. All concerned officers should indicate the measurements of SOR items checked by them and marked as "Checked and verified."
50. Wherever any portion of the "GCC" is repugnant to or at variance with any provision(s) of the "SCC", unless a different intention appears, the provision(s) of the



"SCC" shall be deemed to override the provision(s) of "GCC", and shall to the extent of such repugnancy or variations prevail.

51. Wherever there is contradiction with respect to terms of 'Integrity pact', GCC and 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice', the provisions of 'Procedure for action in case of Corrupt/Fraudulent/Collusive/Coercive Practice' shall prevail.

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Annexure-I

**PROCEDURE FOR ACTION IN CASE
CORRUPT/FRAUDULENT/COLLUSIVE/COERCIVE PRACTICES**

A. Definitions:

- A.1 “Corrupt Practice” means the offering, giving, receiving or soliciting, directly or indirectly, anything of value to improperly influence the actions in selection process or in contract execution.
- “Corrupt Practice” also includes any omission for misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.
- A.2 “Fraudulent Practice” means and include any act or omission committed by a agency or with his connivance or by his agent by misrepresenting/ submitting false documents and/ or false information or concealment of facts or to deceive in order to influence a selection process or during execution of contract/ order.
- A.3 “Collusive Practice amongst bidders (prior to or after bid submission)” means a scheme or arrangement designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- A.4 “Coercive practice” means impairing or harming or threatening to impair or harm directly or indirectly, any agency or its property to influence the improperly actions of an agency, obstruction of any investigation or auditing of a procurement process.
- A.5 “Vendor/Supplier/Contractor/Consultant/Bidder” is herein after referred as “Agency”
- A.6 ”Appellate Authority” shall mean Committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).
- A.7 “Competent Authority” shall mean the authority, who is competent to take final decision for Suspension of business dealing with an Agency/ ies and Banning of business dealings with Agency/ ies and shall be the “Director” concerned.
- A.8 “Allied Agency” shall mean all the concerns within the sphere of effective influence of banned/ suspended agencies. In determining this, the following factors may be taken into consideration:
- a) Whether the management is common;
 - b) Majority interest in the management is held by the partners or directors of banned/ suspended firm.
 - c) Substantial or majority shares are owned by banned/ suspended agency and by virtue of this it has a controlling voice.
- A.9 “Investigating Agency” shall mean any department or unit of BCPL investigating into the conduct of Agency/ party and shall include the Vigilance Department of the



BCPL, Central Bureau of Investigation, State Police or any other agency set up by the Central or state government having power to investigate.

B. Actions against bidder(s) indulging in corrupt /fraudulent/ collusive/ coercive practice

B.1 Irregularities noticed during the evaluation of the bids:

If it is observed during bidding process/ bids evaluation stage that a bidder has indulged in corrupt/fraudulent /collusive/coercive practice, the bid of such Bidder (s) shall be rejected and its Earnest Money Deposit (EMD) shall be forfeited.

Further, such agency shall be banned for future business with BCPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2 Irregularities noticed after award of contract

(i) During execution of contract:

If an agency, is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, during execution of contract, the agency shall be banned for future business with BCPL for a period specified in para B 2.2 below from the date of issue of banning order.

The concerned order (s)/ contract(s) where corrupt/fraudulent/collusive practices is observed, shall be suspended with immediate effect by Engineer-in-Charge (EIC)/ Employer whereby the supply/ work/ service and payment etc. will be suspended. The action shall be initiated for putting the agency on banning.

After conclusion of process, the order (s)/ contract (s) where it is concluded that such irregularities have been committed shall be terminated and Contract cum Performance Bank Guarantee (CPBG) submitted by agency against such order (s)/ contract (s) shall also be forfeited. The amount that may have become due to the contractor on account of work already executed by him shall be payable to the contractor and this amount shall be subject to adjustment against any amounts due from the contractor under the terms of the contract.

No risk and cost provision will be enforced in such cases.

(ii) After execution of contract and during Defect liability period (DLP)/ Warranty/Guarantee Period:

If an agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after execution of contract and during DLP/ Warranty/Guarantee Period, the agency shall be banned for future business with BCPL for a period specified in para B 2.2 below from the date of issue of banning order.



Further, the Contract cum Performance Bank Guarantee (CPBG) submitted by agency against such order (s)/ contract (s) shall be forfeited.

(iii) After expiry of Defect liability period (DLP)/ Warranty/Guarantee Period

If an agency is found to have indulged in corrupt/fraudulent/collusive/coercive practices, after expiry of Defect liability period (DLP)/ Warranty/Guarantee Period, the agency shall be banned for future business with BCPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2.2 Period of Banning

Banning period shall be reckoned from the date of banning order and shall be 3 years.

In exceptional cases where the act of vendor/ contractor is a threat to the National Security, the banning shall be for indefinite period.

C. Effect of banning on other ongoing contracts/ tenders

- C.1 If an agency is put on Banning, such agency should not be considered in ongoing tenders/future tenders.
- C.2 However, if such an agency is already executing other order (s)/ contract (s) where no corrupt/fraudulent/ collusive/coercive practice is found, the agency should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract.
- C.3 If an agency is put on the Banning List during tendering and no irregularity is found in the case under process:
- C.3.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the agency shall be ignored.
- C.3.2 After opening Technical bid but before opening the Price bid, the Price bid of the agency shall not be opened and BG/EMD submitted by the agency shall be returned to the agency.
- C.3.3 After opening of price, BG/EMD made by the agency shall be returned; the offer of the agency shall be ignored & will not be further evaluated. If the agency is put on banning list for fraud/ mis-appropriation of facts committed in the sametender/other tender where errant agency emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.

D. Procedure for Suspension of Bidder

D.1 Initiation of Suspension

Action for suspension business dealing with any agency/(ies) shall be initiated by Corporate C&P Department when



- (i) Corporate Vigilance Department based on the fact of the case gathered during investigation by them recommend for specific immediate action against the agency.
- (ii) Corporate Vigilance Department based on the input from Investigating agency, forward for specific immediate action against the agency.
- (iii) Non-performance of Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order.

D.2 Suspension Procedure:

- D.2.1 The order of suspension would operate initially for a period not more than six months and is to be communicated to the agency and also to Corporate Vigilance Department. Period of suspension can be extended with the approval of the Competent Authority by one month at a time with a ceiling of six months pending a conclusive decision to put the agency on banning list.
- D.2.2 During the period of suspension, no new business dealing may be held with the agency.
- D.2.3 Period of suspension shall be accounted for in the final order passed for banning of business with the agency.
- D.2.4 The decision regarding suspension of business dealings should also be communicated to the agency.
- D.2.5 If a prima-facie, case is made out that the agency is guilty on the grounds which can result in banning of business dealings, proposal for issuance of suspension order and show cause notice shall be put up to the Competent Authority. The suspension order and show cause notice must include that (i) the agency is put on suspension list and (ii) why action should not be taken for banning the agency for future business from BCPL.

The competent authority to approve the suspension will be same as that for according approval for banning.

D.3 Effect of Suspension of business:

Effect of suspension on other on-going/future tenders will be as under:

- D.3.1 No enquiry/bid/tender shall be entertained from an agency as long as the name of agency appears in the Suspension List.
- D.3.2 If an agency is put on the Suspension List during tendering:
 - D.3.2.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the agency shall be ignored.
 - D.3.2.2 After opening Technical bid but before opening the Price bid, the Price bid of the agency shall not be opened and BG/EMD submitted by the agency shall be returned to the agency.



D.3.2.3 After opening of price, BG/EMD made by the agency shall be returned; the offer of the agency shall be ignored & will not be further evaluated. If the agency is put on Suspension list for fraud/ mis-appropriation of facts conducted in the sametender/other tender where errant agency emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.

D.3.3 The existing contract (s)/ order (s) under execution shall continue.

D.3.4 Tenders invited for procurement of goods, works and services shall have provision that the bidder shall submit a undertaking to the effect that (i) neither the bidder themselves nor their allied agency/(ies) are on banning list of GAIL/BCPL or the Ministry of Petroleum and Natural Gas and (ii) bidder is not banned by any Government department/ Public Sector.

E. Appeal against the Decision of the Competent Authority:

E.1 The agency may file an appeal against the order of the Competent Authority for putting the agency on banning list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the receipt of banning order.

E.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.

E.3 Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.

F. Wherever there is contradiction with respect to terms of ‘Integrity pact’, GCC and ‘Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice’, the provisions of ‘Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice’ shall prevail.

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Annexure-II

PROCEDURE FOR EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS

1.0 OBJECTIVE

The objective of Evaluation of Performance aims to recognize, and develop reliable Vendors/ Suppliers/Contractors/ Consultants so that they consistently meet or exceed expectations and requirements.

The purpose of this procedure is to put in place a system to monitor performance of Vendors/ Suppliers/Contractors/ Consultants associated with BCPL in Projects and in O&M so as to ensure timely completion of various projects, timely receipt of supplies including completion of works & services for operation and maintenance of operating plants and quality standards in all respects.

2.0 METHODOLOGY

i) Preparation of Performance Rating Data Sheet

Performance rating data Sheet for each and every Vendor/ Supplier/Contractor/ Consultant for all orders/Contracts with a value of Rs. 7 Lakhs and above is recommended to be drawn up. These data sheets are to be separately prepared for orders/ contracts related to Projects and O&M. Format, Parameters, Process, responsibility for preparation of Performance Rating Data Sheet are separately mentioned.

ii) Measurement of Performance

Based on the parameters defined in Data Sheet, Performance of concerned Vendor/ Supplier/Contractor/ Consultant would be computed and graded accordingly. The measurement of the performance of the Party would be its ability to achieve the minimum scoring of 60% points in the given parameters.

iii) Initiation of Measures:

Depending upon the Grading of Performance, corrective measures would be initiated by taking up the matter with concerned Vendor/ Supplier/Contractor/ Consultant. Response of Vendor/ Supplier/Contractor/ Consultant would be considered before deciding further course of action.

iv) Implementation of Corrective Measures:

Based on the response of Vendor/ Supplier/Contractor/ Consultant, concerned Engineer-in-Charge for the Projects and/or OIC in case of O&M would recommend for continuation or discontinuation of such party from the business of BCPL.

v) Orders/contracts placed on Proprietary/OEM basis for O&M will be evaluated and, if required, corrective action will be taken for improvement in future.



3.0 PROCESS OF EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS

3.1. FOR PROJECTS

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of PROJECTS shall be done immediately with commissioning of any Project.
- ii) On commissioning of any Project, EIC (Engineer-in-charge)/ Project-in-charge shall prepare a Performance Rating Data Sheet (Format at Annexure-1) for all Orders and Contracts.
- iii) Depending upon the Performance Rating, following action need to be initiated by Engineer-in-charge/Project-in-charge:

Sl.No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future
4	VERY GOOD	No further action

- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

(A) Where Performance rating is “POOR”:

Recommend such defaulting Vendor/ Supplier/Contractor/ Consultant for putting on Holiday for a period from one to three years as given below:

- (i) Poor Performance due to reasons other than Quality : **One Year**
- (ii) Poor Performance on account of Quality (if any mark obtained against Quality parameter is less than 30): **Two Years**
- (iii) Poor Performance leading to termination of contract or Offloading of contract due to poor performance solely attributable to Vendor/ Supplier/Contractor/ Consultant or Repeated Offence: **Three Years**



Non-performance of a Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order, such Vendor/ Supplier/ Contractor/Consultant are also to be considered for Suspension.

In all such cases, concerned site will put up recommendation for issuance of SCN and putting the party on suspension list as per process defined for suspension in “Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices”

(B) Where Performance rating is “FAIR”:

Recommend for issuance of warning to such defaulting Vendor/ Supplier/Contractor/ Consultant to improve their performance.

3.2. FOR CONSULTANCY JOBS

Monitoring and Evaluation of consultancy jobs will be carried out in the same way as described in para 3.1 for Projects.

3.3. FOR OPERATION & MAINTENANCE

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of Operation and Maintenance shall be done immediately after execution of order/ contract.
- ii) After execution of orders a Performance Rating Data Sheet (Format at Annexure-2) shall be prepared for Orders by Site C&P and for Contracts/Services by respective Engineer-In-Charge.
- iii) Depending upon Performance Rating, following action need to be initiated by Site C&P:

Sl. No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2.	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future.
4	VERY GOOD	No further action

- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where performance rating is “POOR”



Recommend such defaulting Vendor/Supplier/Contractor/ Consultant for putting on Holiday for a period from one to three years as given below:

- (i) Poor Performance due to reasons other than Quality : **One Year**
- (ii) Poor Performance on account of Quality (if any mark obtained against Quality parameter is less than 30): **Two Years**
- (iii) Poor Performance leading to termination of contract or Offloading of contract due to poor performance solely attributable to Vendor/Supplier/Contractor/Consultant or Repeated Offence: **Three Years**

Non-performance of a Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order such Vendor/ Supplier/ Contractor/Consultant are also to be considered for Suspension.

In all such cases, concerned site will put up recommendation for issuance of SCN and putting the party on suspension list as per process defined for suspension in “Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices”

(B) Where Performance rating is “FAIR”

Recommend for issuance of warning to such defaulting Vendors/Contractors/Consultants to improve their performance.

4.0 EXCLUSIONS:

The following would be excluded from the scope of evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants:

- i) Orders/Contracts below the value of Rs. 7 Lakhs.
- ii) One time Vendor/ Supplier/Contractor/ Consultant.
- iii) Orders for Misc./Administrative items/ Non stock Non valued items.

However, concerned Engineer-in-Charge /OICs will continue to monitor such cases so as to minimize the impact on Projects/O&M plants due to non-performance of Vendors/ Suppliers/Contractors/ Consultants in all such cases.



5.0 REVIEW & RESTORATION OF PARITES PUT ON HOLIDAY

- 5.1 An order for Holiday passed for a certain specified period shall deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.

Further, in case Vendor/ Supplier/Contractor/ Consultant is put on holiday due to quality, and new order is placed on bidder after restoration of Vendor/ Supplier/Contractor/ Consultant, such order will be properly monitored during execution stage by the concerned site.

6.0 EFFECT OF HOLIDAY

- 6.1 If a Vendor/ Supplier/Contractor/ Consultant is put on Holiday, such Vendor/ Supplier/Contractor/ Consultant should not be considered in ongoing tenders/future tenders.

- 6.2 However, if such Vendor/ Supplier/Contractor/ Consultant is already executing any other order/ contract and their performance is satisfactory in terms of the relevant contract, should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract. In such a case CPBG will not be forfeited and payment will be made as per provisions of concerned contract. However, this would be without prejudice to other terms and conditions of the contract.

- 6.3. Effect on other ongoing tendering:

- 6.3.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the party shall be ignored.

- 6.3.2 After opening Technical bid but before opening the Price bid, the Price bid of the party shall not be opened and BG/EMD submitted by the party shall be returned to the party.

- 6.3.3 After opening of price, BG/EMD made by the party shall be returned; the offer of the party shall be ignored & will not be further evaluated. If errant party emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.

- 7.0 While putting the Vendor/ Supplier/Contractor/ Consultant on holiday as per the procedure, the holding company, subsidiary, joint venture, sister concerns, group division of the errant Vendor/ Supplier/Contractor/ Consultant shall not be considered for putting on holiday list.

Any bidder, put on holiday, will not be allowed to bid through consortium route also in new tender during the period of holiday.

- 8.0 If an unsuccessful bidder makes any vexatious, frivolous or malicious complaint against the tender process with the intention of delaying or defeating any procurement or causing loss to BCPL or any other bidder, such bidder will be put on holiday for a



period of six months, if such complaint is proved to be vexatious, frivolous or malicious, after following the due procedure.

9.0 APPEAL AGAINST THE DECISION OF THE COMPETENT AUTHORITY:

- (a) The party may file an appeal against the order of the Competent Authority for putting the party on Holiday list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the receipt of Holiday order.
- (b) Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- (c) Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- (d) “Appellate Authority” shall mean Committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).

10.0 ERRANT BIDDER

In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, BCPL shall forfeit EMD paid by the bidder and such bidders shall be debarred from participation in re-tendering of the same job(s)/item(s).

Further, such bidder will be put on ‘**holiday**’ for a period of six months after following the due procedure.

- 11.0** In case Service Tax department brings to the notice of BCPL that a Party has not paid to the credit of the Government the Service Tax collected from BCPL, then party will be put on holiday for a period of six months after following the due procedure.



**BRAHMAPUTRA CRACKER AND POLYMER LIMITED
PERFORMANCE RATING DATA SHEET
(FOR PROJECTS/ CONSULTANCY JOBS)**

- i) Project/Work Centre :
ii) Order/ Contract No. & date :
iii) Brief description of Items :
Works/Assignment
iv) Order/Contract value (Rs.) :
v) Name of Vendor/Supplier/ :
Contractor/ Consultant
vi) Contracted delivery/ :
Completion Schedule
vii) Actual delivery/ :
Completion date

Performance Parameter	Delivery/ Completion Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allocated				

Note:

Remarks (if any)

PERFORMANCE RATING (**)

Note:

(#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub-vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance.

(*) Allocation of marks should be as per enclosed instructions

(**) Performance rating shall be classified as under:

Sl.No.	Range (Marks)	Rating
1	60 & below	POOR
2	61-75	FAIR
3	76-90	GOOD
4	More than 90	VERY GOOD

Signature of
Authorised Signatory:

Name:

Designation:



Instructions for allocation of marks

1. Marks are to be allocated as under:

1.1 DELIVERY/ COMPLETION PERFORMANCE 40 Marks

Delivery Period/ Completion Schedule	Delay in Weeks	Marks
a) Up to 3 months	Before CDD	40
	Delay up to 4 weeks	35
	Delay up to 8 weeks	30
	Delay up to 10 weeks	25
	Delay up to 12 weeks	20
	Delay up to 16 weeks	15
	More than 16 weeks	0
b) Above 3 months	Before CDD	40
	Delay up to 4 weeks	35
	Delay up to 8 weeks	30
	Delay up to 10 weeks	25
	Delay up to 16 weeks	20
	Delay up to 20 weeks	15
	Delay up to 24 weeks	10
	More than 24 weeks	0

1.1 QUALITY PERFORMANCE 40 Marks

For Normal Cases: No Defects/ No Deviation/ No failure: 40 marks

i) Rejection/Defects	Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases	10 marks
ii) When quality failure endanger system integration and safety of the system	Failure of severe nature - Moderate nature - low severe nature	0 marks 5 marks 10-25 marks
iii) Number of deviations	1. No deviation 2. No. of deviations ≤ 2 3. No. of deviations > 2	5 marks 2 marks 0 marks



1.3 RELIABILITY PERFORMANCE

20 Marks

A.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	4 marks
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
B.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks



**BRAHMAPUTRA CRACKER AND POLYMER LIMITED
PERFORMANCE RATING DATA SHEET
(FOR O&M)**

- i) Location :
- ii) Order/ Contract No. & date :
- iii) Brief description of Items :
Works/Assignment
- iv) Order/Contract value (Rs.) :
- v) Name of Vendor/Supplier/ :
Contractor/ Consultant
- vi) Contracted delivery/ :
Completion Schedule
- vii) Actual delivery/ :
Completion date

Performance Parameter	Delivery/ Completion Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allocated				

Note:

Remarks (if any)

PERFORMANCE RATING (**)

Note:

(#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub-vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance.

(*) Allocation of marks should be as per enclosed instructions

(**) Performance rating shall be classified as under:

Sl.No.	Range (Marks)	Rating
1	60 & below	POOR
2	61-75	FAIR
3	76-90	GOOD
4	More than 90	VERY GOOD

Signature of

Authorised Signatory:

Name:

Designation:



Instructions for allocation of marks (For O&M)

1. Marks are to be allocated as under:

1.1 DELIVERY/ COMPLETION PERFORMANCE 40 Marks

Delivery Period/ Completion Schedule	Delay in Weeks	Marks
a) Up to 3 months	Before CDD	40
	Delay up to 4 weeks	35
	Delay up to 8 weeks	30
	Delay up to 10 weeks	25
	Delay up to 12 weeks	20
	Delay up to 16 weeks	15
	More than 16 weeks	0
b) Above 3 months	Before CDD	40
	Delay up to 4 weeks	35
	Delay up to 8 weeks	30
	Delay up to 10 weeks	25
	Delay up to 16 weeks	20
	Delay up to 20 weeks	15
	Delay up to 24 weeks	10
	More than 24 weeks	0

1.1 QUALITY PERFORMANCE 40 Marks

For Normal Cases: No Defects/ No Deviation/ No failure: 40 marks

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iii) Number of deviations	1. No deviation 2. No. of deviations ≤ 2 3. No. of deviations > 2	5 marks 2 marks 0 marks



1.3 RELIABILITY PERFORMANCE

20 Marks

A.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	4 marks
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
B.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks



ANNEXURE-III

(INSTRUCTIONS FOR PARTICIPATION IN E-TENDER)

(Ready Reckoner to Participate in BCPL e-tender through CPP Portal of NIC)

1. General:

This section contains detailed instructions regarding bid submission procedure under BCPL's e-tender under NIC CPP Portal system. Bidders are required to read the following instructions in addition to various instructions mentioned elsewhere in the bid document for e-tendering, Ready Reckoner and FAQs etc. The instructions mentioned herein related to bid submission procedure shall supersede and shall prevail over the conditions enumerated elsewhere in the bid/tender document.

Bidders who wish to participate in e-tenders must go through the following in BCPL website in tender section:-

- 1) "Guideline for Bidder enrolment process to Participate in BCPL e-tender through CPP Portal of NIC".
- 2) "Ready Reckoner to Participate in BCPL e-tender through CPP Portal of NIC.
- 3) "Bidder Manual Kit"

which contains instructions in respect of e-Tendering essentially covering security settings required for bidder's PC / Laptop, uploading and checking the status of digital signature in the bidder's PC / Laptop, obtaining unique login ID and password, re-setting the password, downloading of Tender document and uploading of Offer/Bid etc. Further, the troubleshooting issues are also available in the form of FAQs (link given in website) which can be downloaded from E-Tender Portal (<https://eprocure.gov.in/eprocure/app>).

2. About E-Tender Portal (Web):

BCPL's e-tender under NIC CPP Portal system enabling bidders to Search, View, Download tender document(s) directly from the portal <https://eprocure.gov.in/cppp/> (referred hereunder as "E-Tender Portal") and also enables the bidders to participate and submit online prices directly in the e-tender portal or uploading of SOR/Price Schedule (Price Bid) in note and attachment folder, as applicable and technical bids in secured and transparent manner maintaining absolute confidentiality and security throughout the tender evaluation process and award.

3. Pre-requisite for participation in bidding process:

The following are the pre-requisite for participation in e-Tendering Process:

3.1 PC/Laptop with Windows OS, Internet Explorer:



Bidder must possess a PC / Laptop with Windows 7 professional operating system and Internet Explorer 9 or above for hassle free bidding. Bidder must go through the system setting as mentioned in Resources required (go to <https://eprocure.gov.in/eprocure/app> → click downloads → click resources) and also refer Trouble Shooting (go to <https://eprocure.gov.in/eprocure/app> → click bidder Manual kit → click Trouble shooting).

3.2 Internet Broadband Connectivity:

The Bidder must have a high speed internet connectivity (preferably Broadband) to access NIC Portal for downloading the Tender document and uploading/submitted the Bids.

3.3 A valid e-mail Id of the Organization/Firm:

Bidder must possess an e-mail ID, preferably of the Organisation (in case of a company)/Individual (in case of proprietorship concern)/Partner having Power of Attorney (in case of a partnership firm) to create login ID. The e-mail ID should not be changed frequently. All communication related to e-tendering including system generated mails shall be sent on this e-mail Id only. The communication to bidder is fully automated through the system and hence email-ID of bidder is very important for online communication with bidder during various stages of tendering process and should be preferably common e-mail Id of the Organisation.

3.4 User ID and Password for new Bidder(s):

To participate in the bidding process, it is mandatory on the part of bidder(s) to have user ID and password. Without user ID (Login ID) and password, bidders cannot participate in e-tender. There will be single login ID for a bidder/vendor code. To obtain User ID and Password Vendor/Bidder must visit <https://eprocure.gov.in/eprocure/app> site and perform the following steps:

- i) Click on Online bidder enrolment (For new Bidders)
- ii) Fill the on line self-registration form and submit. Ensure that the e-mail address given in the form is valid and active.
- iii) Ensure that all the mandatory fields (identified with a * mark) are filled in the self-registration form for User Id creation.

Steps for creating user id & Password is available in file name “steps by steps guide for online Bidder enrolment process” in BCPL website.

3.5 Procedure for change of E-mail ID of the Bidder:

Login E-Mail ID cannot be changed.

3.6 About Digital Signature:



(I) What is a Digital Signature?

This is a unique digital code which can be transmitted electronically and primarily identifies a unique sender. The objective of digital signature is to guarantee that the individual sending the message is who he or she really claims to be just like the written signature. The Controller of Certifying Authorities of India (CCA) has authorized certain Certifying Authorities (CA) to issue Digital Certificates. Digitally signed documents are legally valid as per the Indian IT Act 2000. One Digital Certificate is valid for a specified period and can be used for digitally signing any number of documents. For details go to <https://eprocure.gov.in/eprocure/app> → click Information about DSC.

Only Class 3b Digital Signature is acceptable where individual are using their digital signature on behalf of the organization and digital signature should be in the name of authorized signatory who has signed the bid on behalf of bidder.

(II) Why Digital Signature is required?

In order to bid for NIC e-tenders, bidders are required to obtain a legally valid Digital Certificate as per Indian IT Act 2000 from the licensed Certifying Authorities (CA) operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India.

(III) How to obtain Digital Signatures from Certifying Authority (CA)?

Valid Digital Certificate (class 3b) can be obtained from Certifying Agency (C.A).

Information about CA's can be obtained through CCA India website

(<http://www.cca.gov.in>).

Digital Signatures can be obtained using following steps:

- a) Visit the site of the licensed CA* using internet browser.
- b) Follow the instructions on the CA's website for submission of requisite documents for issue of the Digital Certificate and making payment.

***Links to some of the licensed CA's are provided below:**

1. <http://www.ncodesolutions.com>
2. <http://www.sifycorp.com>
3. <http://www.tcs-ca.tcs.co.in>
4. <http://www.e-mudhra.com>
5. <http://www.nicca.nic.in>
6. www.idrbtca.org.in



For foreign bidder please refer:- <https://eprocure.gov.in/eprocure/app> then click on download – where procedure for obtaining DSC for Foreign Bidders is given.

4. How to submit On-line Bids/Offers electronically against E-tenders?

Bidders who wish to participate against e-tenders uploaded on BCPL's e-tender under NIC CPP Portal website (<https://eprocure.gov.in/cppp/>) (e-tender portal) should follow the steps Mentioned in the “**Bidders Manual Kit**” available on BCPL website / (go to <https://eprocure.gov.in/eprocure/app> → click Bidder manual kit) which shall guide them to Search, Display/View, Download and Submit electronic Bids/Offers online in a secured manner ensuring confidentiality. Bidder can also download the tender documents from BCPL websites, but they must have to quote through e-mode only (CPP Portal).

5. How to search, view and download e-tender?

Explained in **Bidders Manual Kit** which is available in BCPL website.

8.0 Content of Bid:

8.1 Un-Priced Bid:

The Un-priced Bid - “SOR” (i.e. Part I – Technical Bid, refer ITB of tender for details) to be uploaded using Link “TECHNICAL DOCUMENT”. Bidders are advised to not upload duly filled Schedule of Rates/Price Schedule (Price Bid) at this link. For detailed instructions, **Bidders Manual Kit** which is available in BCPL website for bidders may be referred.

Before the bid is uploaded, the bid comprising of all relevant documents mentioned in the tender document should be digitally signed in accordance with the Indian IT Act 2000. If any modifications are required to be made to a document thereafter the modified documents shall be again digitally signed before uploading.

Bidders are required to upload all Tender forms and supporting documents which form part of the bid/tender under tender document of e-tender portal.

Uploading the documents relevant to bid before the bid submission date and time is the sole responsibility of the bidder. **No Manual/Hard copy** of bid is acceptable. **Bids submitted manually shall be rejected.**

Bidders are required to submit the Earnest Money Deposit (EMD)/Bid Bond in original in the prescribed formats and in the manner prescribed in the tender document at the time of bid submission in sealed envelope.

However, if the bidder is unable to submit EMD/Bid Bond in original on the due date, he may upload scanned copy of the EMD/Bid Bond while submitting the bid electronically, provided the original EMD/Bid Bond, copy of which has been uploaded, is received within 7



(seven) days from the date of unpriced bid opening, failing which the bid will be rejected irrespective of their status / ranking in tender and notwithstanding the fact that a copy.

The complete bid (each page) shall be continuously numbered in sequence, from start till end i.e. 1, 2, 3... n. The bid shall be uploaded along with proper index and indicating page numbers against each category of documents.

Note:

- i) Bidder may save/store the bid documents in the PC/Laptop before submitting the bid into in e-tender portal.
- ii) Bidder is required to fill up the price(s)/rate(s) strictly in the Schedule of Rate (SOR)/Price Schedule attached with the tender.

Inadvertently, if a document is uploaded in by the bidders, such document can be deleted by the bidder and can be replaced by a digitally signed new/modified document prior to due date & time.

Un-priced techno-commercial bid document should be placed in the private area earmarked in the C-folder of Tender Document in e-tender portal.

8.2 Priced Bid:

The Priced Bid (i.e. Part II – Price Bid, refer ITB for details) to be uploaded using “FINANCE ATTACHMENTS” and NOT using link “TECHNICAL DOCUMENT”. Bidders are advised not to upload any other documents and same shall be ignored. For detailed instructions, refer tender document and Ready Reckoner.

BCPL shall not be responsible for any failure on the part of the bidder in submission of Priced Bid and the manner prescribed elsewhere in this instruction sheet in tender documents.

9. E-Tender demo during pre-bid conference:

During the Pre-Bid Conference, BCPL shall also arrange demonstration for submission of bids in e-tender portal for interested bidders.

10. Submission of documents:

Bidders are requested to upload small sized documents preferably (up to 25 MB) at a time to facilitate easy uploading into e-tender portal. BCPL shall not be responsible in case of failure of the bidder to upload documents/bids within specified time of tender submission.

11. Last date for submission of bids:



System does not allow for submission or modification of bids beyond the deadline for bid submission. However, if the bidder for some reason intends to change the bid already entered, he may change/revise the same on or before the last date and time of submission. The system time displayed on NIC's e-tender webpage shall be final and binding on the bidders for all purposes pertaining to various events of the subject tender and no other time shall be taken into cognizance.

Bidders are advised in their own interest to ensure that bids are uploaded in e-tender system well before the closing date and time of bid.

12. Internet connectivity:

If bidders are unable to access BCPL's e-tender under NIC CPP Portal system or Bid Documents, the bidders may please check whether they are using proxy to connect to internet or their PC is behind any firewall and may contact their system administrator to enable connectivity. Please note that Port SSL/443 should be enabled on proxy/firewall for HTTPS connectivity. Dial-up/Broad band internet connectivity without Proxy settings is another option.

13. Help to Contractors:

For special instructions to bidders / contractors Please visit <https://eprocure.gov.in/eprocure/app> → click Help to contractors.

14. FAQ:

For various frequently asked question Please visit <https://eprocure.gov.in/eprocure/app> → click FAQ.

15. e-Brochure:

For e-brochure Please visit <https://eprocure.gov.in/eprocure/app> → click Downloads → click e brochure (details & general).

16. DSC for Foreign Bidders:

For DSC for foreign bidders Please visit - <https://eprocure.gov.in/eprocure/app> → click Downloads → click DSC for foreign bidders.

17. System Malfunction Procedure:

For system malfunction procedure Please visit - <https://eprocure.gov.in/eprocure/app> → click Downloads → system malfunction procedure.

18. IT Resources:



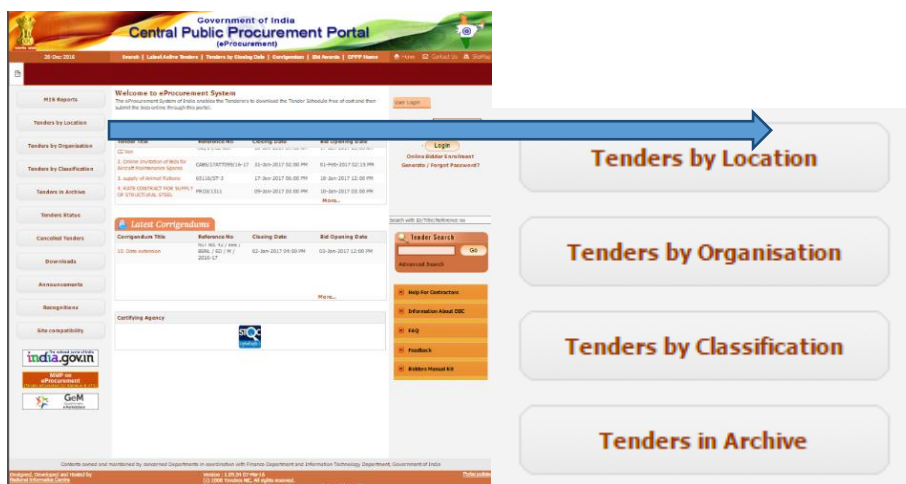
For various IT resources Please visit → <https://eprocure.gov.in/eprocure/app> → click Downloads --- Resources required. (Download Java for system compatibility).

19. Form for DSC Deactivation for bidders:

For DSC deactivation Please visit - <https://eprocure.gov.in/eprocure/app> → click Downloads → Form for DSC deactivation for bidders.

20. Search Tender for Guest Users:

For tender search Please visit - <https://eprocure.gov.in/eprocure/app> → click on Tenders by Location / Tenders by Organization / Tenders by classifications / Tenders by Archive.



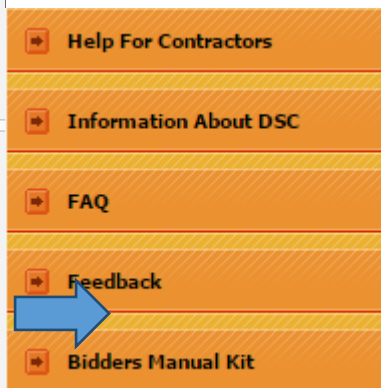
[contd.]



21. Check list / Quick View Summary:

one time activity	1	GET THE DIGITAL SIGNATURE CERTIFICATE	plz. Refer	Please refer clause 3.6 of Ready reckoner to participate in e-tender available in BCPL website	also refe	ROUTE:- https://eprocure.gov.in/topp/pl --- click e-procure --- click Information about DSC.	
	2	GET THE HARDWARE / IT RESOURCES:- Computer/laptop, Internet etc	plz. Refer	Refer clause 3.1, 3.2, 12 of Ready reckoner to participate in e-tender available in BCPL website	also refe	ROUTE:- https://eprocure.gov.in/topp/pl --- click e-procure --- click downloads --- click resources required	ROUTE:- https://eprocure.gov.in/topp/pl --- click e-procure --- click bidder manual kit --- click trouble shooting
	3	GET ENROLLED WITH BCPL e-tender THROUGH CPP PORTAL OF NIC AND TO GET USERID & PASSWORD FOR NEW VENDORS	plz. Refer	Refer Guideline for Bidder enrolment process available in BCPL website	also refe	ROUTE:- https://eprocure.gov.in/topp/pl --- click e-procure --- click bidder manual kit --- click Registration of Bidders	
	4	UPLOADING OF MY DOCUMENTS	plz. Refer	Bidder can upload their regular documents like PAN, BALANCE SHEET, VAT/CAT and other certificate	also refe	ROUTE:- https://eprocure.gov.in/topp/pl --- click e-procure --- click bidder manual kit --- click Uploading of my documents	
	5	SEARCH BIDS	plz. Refer	ROUTE:- https://eprocure.gov.in/topp/pl --- click e-procure --- click tender by location / by organization / by classification	also refe	ROUTE:- https://eprocure.gov.in/topp/pl --- click e-procure --- click bidder manual kit --- click Clarifications (Tender Status, My Archive...)	
	6	ON LINE e-BID SUBMISSION involved EMD/FEE, technical bid (part I) & finance bid (part II)	plz. Refer	ROUTE:- https://eprocure.gov.in/topp/pl --- click e-procure --- click bidder manual kit --- go through online e-bid submission	also refe	ROUTE:- https://eprocure.gov.in/topp/pl --- click e-procure --- click bidder manual kit --- Online e-Bid Submission	
	7	FINANCE BID/PRICE BID/PART II Preparation guidelines	plz. Refer	ROUTE:- https://eprocure.gov.in/cppp/ --- click e-procure --- click bidder manual kit --- go BoQ Preparation Guidelines			
	8	ON LINE e-BID WITHDRAWAL	plz. Refer	ROUTE:- https://eprocure.gov.in/cppp/ --- click e-procure --- click bidder manual kit --- go Online Bid Withdrawal			
	9	ON LINE e-BID Re-SUBMISSION	plz. Refer	ROUTE:- https://eprocure.gov.in/cppp/ --- click e-procure --- click bidder manual kit --- go Online Bid Re-submission			

For various queries, manual, FAQs and information may please refer the link
<https://eprocure.gov.in/eprocure/app>



In Help to contractor's users will get: **Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this eProcurement Portal.**

In Information about DSC user will get: **Frequently Asked Questions on Digital Signature Certificate.**

In FAQ user will get various FAQ related to:

- a) **GENERAL Q&A about e-procurement.**
- b) **On line enrolment Q&A**
- c) **Password related Q&A**
- d) **DSC related Q&A**
- e) **Tender related Q&A**
- f) **Security related Q&A**
- g) **Foreign bidder related Q&A**
- h) **User account related Q&A**

Feedback: **Users to give their feedback to NIC.**

Bidder manual kit: **Bidder will get various manuals for the following:**

1	Notice to Bidders	notice to bidders.pdf
2	Registration of Bidders	bidder registration.pdf
3	Uploading of My Documents	my documents.pdf



4	Online e-Bid Submission	two cover bid submission.pdf
		three cover bid submission.pdf
		four cover bid submission.pdf
		single cover bid submission.pdf
5	Online Bid Withdrawal	bid withdrawal.pdf
6	Online Bid Re-submission	bid resubmission.pdf
7	Clarifications (Tender Status, My Archive...)	enquiry.pdf
8	Trouble Shooting	troubleshoot document.pdf
9	BoQ Preparation Guidelines	BoQ Help Bidder ItemRate.pdf
		BoQ Help Bidder ItemWise Tax.pdf
		BoQ Help Bidder Percentage.pdf

HELP DESK (BCPL)

Phone : 0373-2914582 (only for e-tender queries)

Mobile : 8811017320

Email : etender@bcplindia.co.in

HELP DESK (NIC)

Phone : 1800-233-7315, 0120-4200462, 0120-4001002 (only for e-tender queries)

Mobile : 8826246593

Email : cppp-nic@nic.in

-----X-----



ANNEXURE-IV

BIDDING DATA SHEET (BDS)

ITB TO BE READ IN CONJUNCTION WITH THE FOLLOWING:

A. GENERAL					
ITB clause	Description				
1.2	The Invitation for Bids/ Tender no is : TENDER NO.: BCPL/C&P/LE18W219ND/0983				
1.1	The Employer/Owner is: M/s Brahmaputra Cracker & Polymer Limited				
2.1	Name of the Contract: HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, .				
3	BIDS FROM CONSORTIUM/ JOINT VENTURE <table border="1"><tr><td>APPLICABLE</td><td>☐</td></tr><tr><td>NOT APPLICABLE</td><td>☐</td></tr></table>	APPLICABLE	☐	NOT APPLICABLE	☐
APPLICABLE	☐				
NOT APPLICABLE	☐				
5.2.1	Demand Draft/ Banker's Cheque towards Tender fee (if applicable) shall be in favour of Brahmaputra Cracker & Polymer Ltd. payable at _____				
B. BIDDING DOCUMENT					
ITB clause	Description				
8.1	For <u>clarification purposes</u> only, the communication address is: Attention: Ms. Neeta Dutta, Sr. Manager (C&P) / Street Address: Brahmaputra Cracker and Polymer Limited (A Government of India Enterprise), C&P Department, Administrative Building, PO: Lepetkata, Distt.: DIBRUGARH, Assam, Pin Code:786006, Phone no. 0373 2914636.Email id: neeta.dutta@bcplindia.co.in;				



C. PREPARATION OF BIDS

ITB clause	Description
11.1.1 (u)	The Bidder shall submit with its Techno-commercial/ Unpriced bid the following additional documents (SCC Refers): NIL
12	Additional Provision for Schedule of Rate/ Bid Price are as under:
14	The currency of the Bid shall be INR
15	The bid validity period shall be three months from final 'Bid Due Date'.
16	In case 'Earnest Money / Bid Security' is in the form of 'Demand Draft' or 'Banker's Cheque', the same should be favor of Brahmaputra Cracker & Polymer Ltd. , payable at _____

D. SUBMISSION AND OPENING OF BIDS

ITB clause	Description
18	In addition to the original of the Bid, the number of copies required is one. Not applicable in case of e-tendering.
22	The E-Tender No. of this bidding process is: BCPL/C&P/LE18W219ND/0983
22.3	For submission of EMD only, the Owner's address is : Attention: Ms. Neeta Dutta, Sr. Manager (C&P) / Street Address: Brahmaputra Cracker and Polymer Limited (A Government of India Enterprise), C&P Department, Administrative Building, PO: Lepetkata, Distt.: DIBRUGARH, Assam, Pin Code: 786006, Phone no. 0373 2914636. Email id: neeta.dutta@bcplindia.co.in;
26	The bid opening shall take place at: Street Address: Brahmaputra Cracker and Polymer Limited (A Government of India Enterprise), C&P Department, Administrative Building, PO: Lepetkata, Distt. DIBRUGARH, Assam, Pin Code: 786006, Phone no. 0373



	2914636.Email id: neeta.dutta@bcplindia.co.in; Date: 06.04.2019 Time: 15:00 Hrs.								
E. EVALUATION, AND COMPARISON OF BIDS									
ITB clause	Description								
32	Evaluation Methodology is mentioned in Annexure-II.								
33	Compensation for Extended Stay: <table><tr><td>APPLICABLE</td><td>NO</td></tr><tr><td>NOT APPLICABLE</td><td>YES</td></tr></table>	APPLICABLE	NO	NOT APPLICABLE	YES				
APPLICABLE	NO								
NOT APPLICABLE	YES								
F. AWARD OF CONTRACT									
ITB clause	Description								
37	State of which stamp paper is required for Contract Agreement: State: Assam								
38	Contract Performance Security/ Security Deposit <table><tr><td>APPLICABLE</td><td>YES</td></tr><tr><td>NOT APPLICABLE</td><td>NO</td></tr></table> Applicable: As specified in Section –II (ITB) of tender document.	APPLICABLE	YES	NOT APPLICABLE	NO				
APPLICABLE	YES								
NOT APPLICABLE	NO								
40	Public Procurement Policy for MSEs : <table><tr><td>APPLICABLE</td><td>YES</td></tr><tr><td>NOT APPLICABLE</td><td>NO</td></tr></table> Whether tendered item is non-split able or not-divisible: <table><tr><td>YES</td><td>YES</td></tr><tr><td>NO</td><td>NO</td></tr></table>	APPLICABLE	YES	NOT APPLICABLE	NO	YES	YES	NO	NO
APPLICABLE	YES								
NOT APPLICABLE	NO								
YES	YES								
NO	NO								
41	Provision of AHR Item : <table><tr><td>APPLICABLE</td><td>YES</td></tr></table>	APPLICABLE	YES						
APPLICABLE	YES								



	NOT APPLICABLE	NO	
Clause no. 27.3 of GCC	Bonus for Early Completion:		
	APPLICABLE	NO	
	NOT APPLICABLE	YES	

=====



FORMS & FORMAT



LIST OF FORMS & FORMAT

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BIDDER'S GENERAL INFORMATION

To,
M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, .

E-Tender No.: BCPL/C&P/LE18W219ND/0983

1	Bidder Name (With Contact Person Name & Details)	
2	Status of Firm	Proprietorship Firm/Partnership firm/ Limited/Others If Others Specify: _____ [Enclose certificate of Registration]
3	Name of Proprietor/Partners/Directors of the firm/company	
4	Number of Years in Operation	
5	Address of Registered Office: *In case of Partnership firm, enclose letter mentioning current address of the firm and the full names and current addresses of all the partners of the firm.	City: District: State: PIN/ZIP:
6	Operation Address (if different from above)	City: District: State: PIN/ZIP:
8	Telephone Number [Mobile & Landline]	_____ (Country Code) (Area Code) (Telephone No.)
9	E-mail address	
10	Website	



11	Fax Number:	(Country Code) (Area Code) (Telephone No.)
12	ISO Certification, if any	{ If yes, please furnish details }
13	Bid Currency	
14	Banker's Name	
15	Branch	
17	Bank account number	
18	PAN No.	[Enclose copy of PAN Card]
19	GST Registration No.	[Enclose copy of GST Registration Certificate]
20	EPF Registration No.	[Enclose copy of EPF Registration Certificate]
21	We (Bidder) are cover under the definition of section 2 (n) of the MSMED Act	Yes / No (If the response to the above is 'Yes", Bidder to provide Purchaser a copy of the Entrepreneurs Memorandum (EM) filled with the authority specified by the respective State Government.)
22	Whether Micro/Small Enterprise	(Bidder to submit documents as specified it ITB)
23	Type of Entity	Corporate/ Non-Corporate (As per Service tax Act). (In case of Non-Corporate Entity, bidder will submit documentary evidence for same).

Place:
Bidder]
Date:

[Signature of Authorized Signatory of

Name:
Designation:
Seal:



BID FORM

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: "HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA,."

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Dear Sir,

After examining / reviewing the Bidding Documents for the tender of "_____" including "Specifications & Scope of Work", "General Conditions of Contract [GCC]", "Special Conditions of Contract [SCC]" and "Schedule of Rates [SOR]", etc. the receipt of which is hereby duly acknowledged, we, the undersigned, are pleased to offer to execute the whole part of the job and in conformity with the said Bid Documents, including Addenda / Corrigenda Nos. _____.

We confirm that this Bid is valid for a period of "three [03] months" from the date of opening of "Techno-Commercial / Un-priced Bid", and it shall remain binding upon us and may be accepted by any time before the expiry of that period.

If our Bid is accepted, we will provide the "Contract Performance Security / Security Deposit" as specified in Section-II of tender document.

Until a final Agreement/Letter of Award is prepared and executed, the tender document (including addenda/ corrigenda) together with the "Notification of Award" shall constitute a binding Agreement between us.

We understand that Bidding Document is not exhaustive and any action and activity not mentioned in Bidding Documents but may be inferred to be included to meet the intend of the Bidding Documents shall be deemed to be mentioned in Bidding Documents unless otherwise specifically excluded and we confirm to perform for fulfillment of Agreement and completeness of the Work in all respects within the time frame and agreed price.

We understand that you are not bound to accept the lowest priced or any Bid that you may receive.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:

Duly authorized to sign Bid for and on behalf of _____

[Signature of Witness]

Name of Witness:

Address:



LIST OF ENCLOSURES

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: “HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, .”

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Dear Sir,

We are enclosing the following documents as part of the bid:

1. Power of Attorney of the signatory to the Bidding Document.
2. Document showing annual turnover for the last three years such as annual reports, profit and loss account, net worth etc. along with information as sought in enclosed format F-16
3. Document showing Financial Situation Information as sought in enclosed format F-16
4. Copy of Bidding Documents along with addendum/corrigendum duly signed and sealed on each page, in token of confirmation that Bid Documents are considered in full while preparing the bid and in case of award, work will be executed in accordance with the provisions detailed in Bid Documents.
5. Documentary Evidences showing the Bidder's claim of meeting Technical Criteria as mentioned in Clause 4 of ITB.
6. EMD / Bid Bond*
7. Power of Attorney*
8. Duly certified document from chartered engineer and or chartered accountant.

Note:

* In case of e-bidding the bidder has the option to submit specified documents in physical form on/before the bid due date or within seven days from the bid opening date.

However, scanned copy of these (same) documents must be submitted on-line as part of e-bid before the bid due date/time.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:



**PROFORMA FOR BANK GUARANTEE FOR EARNEST MONEY DEPOSIT
(To be stamped in accordance with the Stamp Act)**

Ref.:-----

Bank Guarantee No.:-----

Date-----

To

BRAHMAPUTRA CRACKER & POLYMER LTD.
“ADMINISTRATIVE BUILDING” LEPETKATA,
NH-37, P.O. LEPETKATA, DIBRUGARH,
ASSAM, PIN – 786 006

**SUB: “HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE
WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, .”**

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Dear Sir (s),

In accordance with Letter inviting Tender under your reference No.-----

M/s-----having their Registered/Head
Office at----- (hereinafter called the Tenderer) wish to
participate in the said tender for-----

As an irrevocable Bank Guarantee against Earnest Money Deposit for an amount of -----is required to be
submitted by the Tenderer as a condition precedent for participation in the said Tender which amount in
liable to be for forfeited on the happening of any contingencies mentioned in the Tender Document.

We, the -----Bank at-----having our Head Office -
------(Local Address) guarantee and undertake
to pay immediately on demand without any recourse to the tenderers by Brahma Putra Cracker & Polymer
Limited., the amount -----without any
reservation, protest, demur and recourse. Any such demand made by BCPL, shall be conclusive and binding
on us irrespective of any dispute or difference raised by the Tenderer.

This guarantee shall be irrevocable and shall remain, valid up to-----.[this date should be
two (02) months beyond the validity of the bid] If any further extension of this guarantee is required the same
shall be extended to such required period on receiving instructions from M/s-----
-----on whose behalf this guarantee is issued.

In Witness whereof the Bank, through its authorized officer, has set its hand and stamp on this -----
-----day of -----201 ---- at -----

WITNESS:

(SIGNATURE)
(NAME):

(OFFICIAL ADDRESS):

(SIGNATURE)
(NAME)

Designation with Bank Stamp

Attorney as per

Power of Attorney No. _____

Date: _____



**INSTRUCTIONS FOR FURNISHING "BID SECURITY / EARNEST MONEY" BY
"BANK GUARANTEE"**

1. The Bank Guarantee by Bidders will be given on non-judicial stamp paper as per "Stamp Duty" applicable. The non-judicial stamp paper should be in the name of the issuing Bank. In case of foreign Bank, the said Bank's Guarantee to be issued by its correspondent Bank in India on requisite non-judicial stamp paper
2. The expiry date should be arrived at in accordance with "ITB: Clause-15.1".
3. The Bank Guarantee by bidders will be given from Bank as specified in "ITB".
4. A letter from the issuing Bank of the requisite Bank Guarantee confirming that said Bank Guarantee / all future communication relating to the Bank Guarantee shall be forwarded to the Employer at its address as mentioned at "ITB".
5. Bidders must indicate the full postal address of the Bank along with the Bank's E-mail / Fax / Phone from where the Earnest Money Bond has been issued.
6. If a Bank Guarantee is issued by a commercial Bank, then a letter to Employer confirming its net worth is more than Rs.1,000,000,000.00 [Rupees One Hundred Crores] or equivalent alongwith documentary evidence.

.....



F-5

LETTER OF AUTHORITY

[Pro forma for Letter of Authority for Attending Subsequent 'Negotiations' / 'Pre-Bid Meetings' / 'Un-priced Bid Opening' / 'Price Bid Opening']

Ref:

Date:

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: "HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA,."

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Dear Sir,

I/We, _____ hereby authorize the following representative(s) for attending any 'Negotiations' / 'Meetings [Pre-Bid Meeting]', 'Un-priced Bid Opening', 'Price Bid Opening' and for any subsequent correspondence / communication against the above Bidding Documents:

[1] Name & Designation _____ Signature _____

Phone/Cell:

Fax:

E-mail: @

[2] Name & Designation _____ Signature _____

Phone/Cell:

Fax:

E-mail: @

We confirm that we shall be bound by all commitments made by aforementioned authorised representative(s).

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

Note: This "**Letter of Authority**" should be on the "**letterhead**" of the Firm / Bidder and should be signed by a person competent and having the '**Power of Attorney**' to bind the Bidder. Not more than 'two [02] persons per Bidder' are permitted to attend "Techno-commercial / Un-priced" & "Price Bid" Openings. Bidders authorized representative is required to carry a copy of this authority letter while attending the un-priced and priced bid opening, the same shall be submitted to BCPL.



F-6

"NO DEVIATION" CONFIRMATION

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: "HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, ."

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Dear Sir,

We understand that any 'deviation / exception' in any form may result in rejection of Bid. We, therefore, certify that we have not taken any 'exception / deviation' anywhere in the Bid and we agree that if any 'deviation / exception' is mentioned or noticed, our Bid may be rejected.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:



DECLARATION REGARDING HOLIDAY/BANNING AND LIQUIDATION, COURT RECEIVERSHIP

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: “HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, .”

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Dear Sir,

We hereby confirm that we are not on ‘Holiday’ by GAIL/BCPL or Public Sector Project Management Consultant (like EIL, Mecon only due to “poor performance” or “corrupt and fraudulent practices”) or banned by Government department/ Public Sector on due date of submission of bid.

Further, we confirm that neither we nor our allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of BCPL/GAIL or the Ministry of Petroleum and Natural Gas.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'.

In case it comes to the notice of BCPL that the bidder has given wrong declaration in this regard, the same shall be dealt as ‘fraudulent practices’ and action shall be initiated as per the Procedure for action in case of Corrupt/Fraudulent/Collusive/Coercive Practices.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to BCPL by us.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:



CERTIFICATE FOR NON-INVOLVMENT OF GOVT. OF INDIA

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: “HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, .”

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Dear Sir,

If we become a successful Bidder and pursuant to the provisions of the Bidding Documents, award is given to us for the tender for “ _____ ”, the following Certificate shall be automatically enforceable:

"We agree and acknowledge that the Employer is entering into the Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood & agreed that the Government of India is not a party to the Agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the Employer is authorized to enter into Agreement, solely on its own behalf under the applicable laws of India. We expressly agree, acknowledge and understand that the Employer is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Agreement. Accordingly, we hereby expressly waive, release and forego any and all actions or claims, including cross claims, VIP claims or counter claims against the Government of India arising out of the Agreement and covenants not to sue to Government of India as to any manner, claim, cause of action or things whatsoever arising of or under the Agreement."

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:



**PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE
SECURITY / SECURITY DEPOSIT"**

(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Dear Sir(s),

M/s. _____ having registered office at _____ (herein after called the “contractor” which expression shall wherever the context so require include its successors and assignees) have been awarded the work of _____ vide PO /FOA/LOI No. _____ dated _____ for M/s Brahmaputra Cracker and Polymer Limited (A Government of India Enterprise), PO: Lepetkata, Dist.: Dibrugarh, Assam.

The Contract conditions provide that the CONTRACTOR shall pay a sum of Rs. _____ (Rupees _____) as full Contract Performance Guarantee in the form therein mentioned. The form of payment of Contract Performance Guarantee includes guarantee executed by Nationalized Bank, undertaking full responsibility to indemnify M/s Brahmaputra Cracker and Polymer Limited, in case of default.

The said _____ has approached us and at their request and in consideration of the premises we having our office at _____ have agreed to give such guarantee as hereinafter mentioned.

1. We _____ hereby undertake to give the irrevocable & unconditional guarantee to you that if default shall be made by M/s. _____ in performing any of the terms and conditions of the tender/order/contract or in payment of any money payable to M/s Brahmaputra Cracker and Polymer Limited we shall on first demand pay without demur, contest, protest and/ or without any recourse to the contractor to BCPL in such



- manner as you may direct the said amount of Rupees _____ only or such portion thereof not exceeding the said sum as you may require from time to time.
2. You will have the full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said _____ and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said _____ and such postponement forbearance would not have the effect of releasing the bank from its obligation under this debt.
3. Your right to recover the said sum of Rs. _____ (Rupees _____) from us in manner aforesaid will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. _____ and/or that any dispute or disputes are pending before any officer, tribunal or court and any demand made by you in the bank shall be conclusive and binding. The bank shall not be released of its obligations under these presents by any exercise by you of its liberty with reference to matter aforesaid or any of their or by reason or any other act of omission or commission on your part or any other indulgence shown by you or by any other matter or changed what so ever which under law would, but for this provision, have the effect of releasing the bank.
4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5. This guarantee shall be irrevocable and shall remain valid upto _____ (this date should be 90 days after the expiry of defect liability period) _____. The bank undertakes not to revoke this guarantee during its currency without your previous consent and further agrees that the guarantee. However, if for any reason, the contractor is unable to complete the work within the period stipulated in the contract and in case of extension of the date of completion resulting extension of defect liability period of the contractor fails to perform the work fully, the bank hereby agrees to further extend this guarantee at the instance of the contractor till such time as may be determined by the owner. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instruction from M/s. _____
- of the Bank(contractor) on whose behalf this guarantee is issued.



6. Bank also agrees that BCPL at its option shall be entitled to enforce this Guarantee against the bank (as principal debtor) in the first instant, without proceeding against the supplier / contractor and not withstanding any security or other guarantee that BCPL may have in relation to the supplier's / contractor's liabilities.
7. The amount under the Bank Guarantee is payable forthwith without any delay by Bank upon the written demand raised by BCPL. Any dispute arising out of or in relation to the said Bank Guarantee shall be subject to the jurisdiction of **Guwahati Courts**.
8. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the Contractor up to a total amount of _____ (amount of guarantees in words and figures) and we undertake to pay you, upon your first written demand declaring the Contractor to be in default under the contract and without caveat or argument, any sum or sums within the limits of (amounts of guarantee) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein.
9. We have power to issue this guarantee in your favor under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney, dated _____ granted to him by the Bank.

Yours faithfully,

Bank by its Constituted Attorney

Signature of a person duly

Authorized to sign on behalf

INSTRUCTIONS FOR FURNISHING

"CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" BY "BANK GUARANTEE"

1. The Bank Guarantee by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing bank. In case of foreign bank, the said Bank Guarantee to be issued by its correspondent bank in India on requisite non-judicial stamp paper and place of Bid to be considered as Delhi.
2. The Bank Guarantee by Bidders will be given from bank as specified in Tender.



3. A letter from the issuing bank of the requisite Bank Guarantee confirming that said Bank Guarantee and all future communication relating to the Bank Guarantee shall be forwarded to Employer.
4. If a Bank Guarantee is issued by a commercial bank, then a letter to Employer and copy to Consultant (if applicable) confirming its net worth is more than Rs. 100,00,00,000.00 [Rupees One Hundred Crores] or its equivalent in foreign currency alongwith documentary evidence.

.....



AGREED TERMS & CONDITIONS

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: “HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, .”

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

This Questionnaire duly filled in, signed & stamped must form part of Bidder's Bid and should be returned along with Un-priced Bid. Clauses confirmed hereunder need not be repeated in the Bid.

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
1	Bidder's name and address	
2.	Please confirm the currency of quoted prices is in Indian Rupees.	
3.	Confirm quoted prices will remain firm and fixed till complete execution of the order.	
4	Rate of applicable Goods & GST	
5.	Confirmation towards acceptance of Anti-profiteering clause : As per Clause 171 of GST Act it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices. The Supplier of Goods / Services may note the above and quote their prices accordingly.	
6.	i) Confirm acceptance of relevant Terms of Payment specified in the Bid Document. ii) In case of delay, the bills shall be submitted after deducting the price reduction due to delay.	
7.	Confirm that Contract Performance Bank Guarantee will be furnished as per Bid Document.	
8.	Confirm that Contract Performance Bank Guarantee shall be from any Indian scheduled bank or a branch of an	



Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of Rs.100 crores and a declaration to this effect shall be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.	
9.	Confirm compliance to Completion Schedule as specified in Bid document. Confirm contract period shall be reckoned from the date of Fax of Intent.	
10.	Confirm acceptance of Price Reduction Schedule for delay in completion schedule specified in Bid document.	
11.	a) Confirm acceptance of all terms and conditions of Bid Document (all sections). b) Confirm that printed terms and conditions of bidder are not applicable.	
12.	Confirm your offer is valid for 3 months from Final/Extended due date of opening of Techno-commercial Bids.	
13.	Please furnish EMD/Bid Security details : a) EMD/ Bid Security No. & date b) Value c) Validity	
14.	Confirm acceptance to all provisions of ITB read in conjunction with Bid Data Sheet (BDS).	
15.	Confirm that Annual Reports for the last three financial years are furnished alongwith the Un-priced Bid.	
16.	Confirm that, in case of contradiction between the confirmations provided in this format and terms & conditions mentioned elsewhere in the offer, the confirmations given in this format shall prevail.	
17.	Confirm that none of Directors of bidder is a relative of any Director of Owner or the bidder is a firm in which any Director of Owner/ BCPL or his relative is a partner.	
18.	All correspondence must be in ENGLISH language only.	
19.	Owner reserves the right to make any change in the terms & conditions of the TENDER/BIDDING DOCUMENT and to reject any or all bids.	
20.	Confirm that all Bank charges associated with Bidder's Bank shall be borne by Bidder.	



Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:



ACKNOWLEDGEMENT CUM CONSENT LETTER

(On receipt of tender document/information regarding the tender, Bidder shall acknowledge the receipt and confirm his intention to bid or reason for non-participation against the enquiry /tender through e-mail/fax to concerned executive in BCPL issued the tender, by filling up the Format)

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: “HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, .”

E-Tender NO.: BCPL/C&P/LE18W219ND/0983



Dear Sir,

We hereby acknowledge receipt of a complete set of bidding document along with enclosures for subject item/job and/or the information regarding the subject tender.

- We intend to bid as requested for the subject item/job and furnish following details with respect to our quoting office:

Postal Address with Pin Code :
Telephone Number :
Fax Number :
Contact Person :
E-mail Address :
Mobile No. :
Date :
Seal/Stamp :

- We are unable to bid for the reason given below:
Reasons for non-submission of bid:

Agency's Name :
Signature :
Name :
Designation :
Date :
Seal/Stamp :



UNDERTAKING ON LETTERHEAD

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: “HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, .”

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Dear Sir

We hereby confirm that “The contents of this Tender Document No. _____ have not been modified or altered by M/s.(Name of the bidder with complete address). In case, it is found that the tender document has been modified / altered by the bidder, the bid submitted by M/s.....(Name of the bidder) shall be liable for rejection”.

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:



BIDDER'S EXPERIENCE

To,
M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: "HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, ."

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

Sl. No	Descripti on of the Services	LOA /WO No. and date	Full Postal Address & phone nos. of Client. <i>Name, designation and address of Engineer/ Officer-in-Charge (for cases other than purchase)</i>	Value of Contract/O rder (Specify Currency Amount)	Date of Commenc ement of Services	Scheduled Completio n Time (Months)	Date of Actual Completi on	Reasons for delay in executio n, if any
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)	(10)

Place:
Date:

[Signature of Authorized Signatory of Bidder]
Name:
Designation:
Seal:



CHECK LIST

Bidders are requested to duly fill in the checklist. This checklist gives only certain important items to facilitate the bidder to make sure that the necessary data/information as called for in the bid document has been submitted by them along with their offer. This, however, does not relieve the bidder of his responsibilities to make sure that his offer is otherwise complete in all respects.

Please ensure compliance and tick (✓) against following points:

S. No.	DESCRIPTION	CHECK BOX	REFERENCE PAGE NO. OF THE BID SUBMITTED
1.0	Digitally Signing (in case of e-bidding) on each sheet of offer, original bidding document including SCC, ITB, GCC ,SOR drawings, addendum (if any)		
2.0	Confirm that the following details have been submitted in the Un-priced part of the bid		
i	Covering Letter, Letter of Submission		
ii	Bid Security/ EMD		
iii	Signed and stamped original copy of bidding document along with drawings and addendum (if any)(Not Applicable in case of e-bidding)		
iv	Power of Attorney in the name of person signing the bid.		
v	Copies of documents defining constitution or legal status, place of registration and principal place of business of the company		
vi	Bidders declaration that regarding, Holiday/ Banning, liquidation court receivership or similar proceedings in Format 7.		
vii	Details and documentary proof required against qualification criteria along with complete documents. (Also fill the documents & certification checklist given below)		
viii	Confirm submission of document alongwith techno-commercial bid as per bid requirement.		
3.0	Confirm that all forms& formats duly filled in are enclosed with the bid duly signed by authorized person(s)		
4.0	Confirm that the price part as per Price Schedule format submitted with Bidding Document/ uploaded in case of e-bid		



7.0	Confirm that annual reports for last three financial years & duly filled in Form 16 are enclosed in the offer for financial assessment (where financial criteria of BEC is applicable).		
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DOCUMENTS & CERTIFICATION CHECKLIST

S NO	DESCRIPTION	CHECK LIST	YES/NA	NO
1.a	EMD Value	Rs. 3,00,000/-		
A	DD	DD No. _____ dated For Rs. _____	YES/NA	NO
B	BG	BG VALIDITY BEYOND 3 THREE MONTHS FROM BID VALIDITY PERIOD OF 90 DAYS	YES/NA	NO
C	NSIC/DIC CERTIFICATE, EM PART-II/ UDYOG ADHAR	Duly certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) AND Notary Public with Legible stamp as MENTIONED IN CLAUSE NO.40 OF ITB	YES/NA	NO
2.	TENDER FEE	Not Applicable	YES	NO
3.	BID VALIDITY UPTO THREE MONTHS	ACCEPTED	YES	NO
4 (i)	Experience against execution of order (As Stipulated in BEC)	a) Bidder must submit the Copy of Order/LOA/Contract/ Agreement which has been executed as mentioned in 1.1.1 above (BEC) along with the details of SOR items & scope of work. b) Completion Certificate or equivalent against the Work Order/ LOA submitted as mentioned at point "a" above. The <u>Completion Certificate or equivalent</u> must contain the detailed information like LOA/Order No. with date, Brief Scope of work / Name of work, Order value, Total executed value, Scheduled date of Work completion and date of Actual work completion etc. The <u>Completion certificate or equivalent</u> should have been issued by the by end-user/owner (or their consultant who has been duly authorized by them to issue such certificate).	YES	NO



S NO	DESCRIPTION	CHECK LIST	YES/NA	NO
4 (iii)	Experience against execution of running Contract (As Stipulated in BEC)	a) Bidder must submit the Copy of detailed Work Order/LOA for executing Rate / Maintenance Contract as mentioned in 1.1.2 above (BEC) which is still running along with the details of SOR items & scope of work. b) Execution Certificate against the Copy of detailed Work Order/LOA for executing Rate / Maintenance Contract as mentioned at point "a" above clearly mentioning the executed VALUE till one day prior to due date of bid submission which must be equal to or more than the minimum prescribed value mentioned in the BEC at sl. no. 1.1.1 above. The execution certificate must contain the detailed information like LOA/Order No. with date, Brief Scope of work / Name of work, Order value, Total executed value, etc. The <u>Execution certificate</u> should have been issued by the end-user/owner (or their consultant who has been duly authorized by them to issue such certificate).	YES	NO
A	ORDER COPY	Duly CERTIFIED by CHARTERED ENGINEER with LEGIBLE stamp	YES	NO
		Duly NOTARISED by Notary Public with legible stamp	YES	NO
B	COMPLETION/EXECUTION CERTIFICATE	Has been issued by the End User / Owner / Authorized Consultant of Owner.	YES	NO
		Duly CERTIFIED by CHARTERED ENGINEER with LEGIBLE stamp	YES	NO
		Duly NOTARISED by Notary Public with legible stamp	YES	NO
5.	FINANCIAL CRITERIA AS STIPULATED IN BEC			
5(i)	Financial Documents – Turn Over	Uploaded audited financial statement Balance sheet and Profit & Loss account statement of the preceding three (3) Financial Year(s), i.e. FY: 2017-2018, 2016-2017 & 2015-2016.	YES	NO
5(ii)	Financial Documents – Net Worth & Working Capital	Uploaded AUDITED Balance Sheet and Profit & Loss Statement of FY: 2017-2018 meeting the NET WORTH & Working Capital Financial Criteria as stipulated in BEC.	YES	NO
A	Balance Sheet/s & Profit & Loss Statements as in 5(i), & 5(ii) above	Duly attested by Notary Public with legible stamp	YES	NO
B	Details of financial capability of bidder prescribed Format, F-16 as stipulated in BEC	Duly signed and stamped by a Chartered Accountant with Membership Number	YES	NO
C	In Case Bidder's Working Capital is inadequate as stipulated in BEC	Letter (as per Format, F-15) from the Bidder's bank having net worth not less than INR 1(one) Billion confirming the availability of the line of credit covering the inadequacy to meet the working capital requirement duly certified/attested by Notary Public with legible stamp.	YES/NA	NO
6.	Tender Document uploaded	Uploaded Unedited & Digitally signed ALONGWITH UNPRICED BID.	YES	NO



S NO	DESCRIPTION	CHECK LIST	YES/ NA	NO
7.	SOR (BLANK without price) MENTIONING WORD “QUOTED/NOT QUOTED” IN EACH ITEM RATE COLUMN	Uploaded Digitally signed scanned copy of EACH SOR (all 2 Parts) filled QUOTED/NOT QUOTED, ALONGWITH UNPRICED BID.	YES	NO
8.	POWER OF ATTORNEY	Power of Attorney in the name of person signing the bid.	YES	NO
9.	Other relevant documents	Copy of PAN Card, GST Registration Certificate, etc.	YES	NO
10.	FORM 1 TO 18 ATTACHED TO TENDER	FILLED AS APPLICABLE, SIGNED, STAMPED &UPLOADED ALL	YES	NO
Non-submission of the attested copies of the requisite certificates/ documents as specified above and/or in tender document shall render the bid non-responsive and shall be liable for rejection.				

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:
Designation:
Seal:

Bidder is requested to fill this check list and ensure that all detail/ documents have been uploaded/submitted including this Checklist duly filled in, signed & stamped alongwith the “Un-priced bid (Part-I)”. **Non submission of any document/ submission without proper attestation may lead to rejection of the Bid.**



THIS FORMAT TO BE FILLED BY THE BIDDER

TECHNICAL CRITERIA AS STIPULATED IN BEC

[PLEASE READ, SECTION –II OF BEC OF TENDER DOCUMENT AND GIVE BRIEF DETAILS AGAINST INDIVIDUAL DOCUMENTS SUBMITTED TO QUALIFY BEC-TECHNICAL]

NB:

- 1. All documents [to be submitted] are required to be Certified/Attested by both Chartered Engineer and Notarized by Notary Public with legible stamp.**
- 2. If the bidder is submitting only one order & its completion/execution Certificate (as applicable), then sl no. A to be filled in.**
- 3. Likewise, If the bidder is submitting more number of orders and their completion/execution Certificates (as applicable), then sl no. A, B, C, D etc shall be applicable. [In below table, upto sl no. 'D' is mentioned. Bidder to increase rows if intend to submit more documents]**

Sl. No.	List of Order Details	Description	Details [to be mentioned by the bidder]
A	1 st Order/LOI/Contract		
A1		Name of Order issuing Agency/Client/Owner/Company	:
A2		Order No. & Date	:
A3		Brief Details/Name (Nature) of Supply	:
A4		Contract/Order Value (in Rs.)	:
A5		Period of Contract/ Order	:
A6		Completion /Execution Certificate (as applicable) to contain the following: i. Date of issue ii. Brief Details/Name (Nature) of Supply iii. Contract/Order Value (in Rs.) iv. Period of Contract/ Order v. Actual Date of Completion/Execution vi. Executed Value(in Rs.)	



ब्रह्मपुत्रक्रेकरऔरपालीमेरलिमिटेड
(भारतसरकारउपक्रम)
Brahmaputra Cracker and Polymer Ltd.
(A Government of India Enterprise)



ब्रह्मपुत्रक्रेकरऔरपालीमेरलिमिटेड
(भारतसरकारकाउपक्रम)
Brahmaputra Cracker and Polymer Ltd.
(A Government of India Enterprise)

B	2 nd Order/ LOI/Contract	Description	Details [to be mentioned by the bidder]
B1		Name of Order issuing Agency/Client/Owner/Company	
B2		Order No. & Date	
B3		Brief Details/Name (Nature) of Supply	
B4		Contract/Order Value (in Rs.)	
B5		Period of Contract/ Order	
B6		Completion /Execution Certificate (as applicable) to contain the following: i. Date of issue ii. Brief Details/Name (Nature) of Supply iii. Contract/Order Value (in Rs.) iv. Period of Contract/ Order v. Actual Date of Completion/Execution vi. Executed value (in Rs.)	
C	3 RD Order/ LOI/Contract	Description	Details [to be mentioned by the bidder]
C1		Name of Order issuing Agency/Client/Owner/Company	
C2		Order No. & Date	
C3		Brief Details/Name (Nature) of Supply	
C4		Contract/Order Value(in Rs.)	
C5		Period of Contract/ Order	
C6		Completion /Execution Certificate (as applicable) to contain the following: i. Date of issue ii. Brief Details/Name (Nature) of Supply iii. Contract/Order Value (in Rs.) iv. Period of Contract/ Order v. Actual Date of Completion/Execution vi. Executed value(in Rs.)	



ब्रह्मपुत्रक्रेकरऔरपालीमेरलिमिटेड
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D	4 th Order/ LOI/Contract	Description	Details [to be mentioned by the bidder]
D1		Name of Order issuing Agency/Client/Owner/Company	
D2		Order No. & Date	
D3		Brief Details/Name (Nature) of Supply	
D4		Contract/Order Value(in Rs.)	
D5		Period of Contract/ Order	
D6		Completion /Execution Certificate (as applicable) to contain the following: i. Date of issue ii. Brief Details/Name (Nature) of Supply iii. Contract/Order Value (in Rs.) iv. Period of Contract/ Order v. Actual Date of Completion/Execution vi. Executed value(in Rs.)	



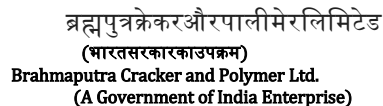
THIS FORMAT TO BE FILLED BY THE BIDDER
FINANCIAL CRITERIA AS STIPULATED IN BEC

[PLEASE READ SECTION-II OF BEC AND GIVE BRIEF DETAILS IN THE BELOW CHECK LIST FORMAT]

NB:

- Format-16 (to be Submitted) is required to be Certified/Attested by Chartered Accountant and to be uploaded/submitted.**
- Audited Balance Sheet and Profit & Loss Statements (Submitted) of FY: FY: 2016-2017, 2015-2016 & 2014-2015 meeting the Turn Over, NET WORTH & Working Capital requirement of BEC-Financial are to be duly signed and stamped (duly certified /attested) by Notary Public with legible stamp and to be submitted.**
- Bidder to Put 'tick mark' only [out of two options (i.e 'Yes' or 'No', one option to be exercised and other one to be deleted in the column given below]**

1.2	FINANCIAL CRITERIA		Document Details submitted for the below Financial Year:	DOCUMENT SUBMITTED/UPLOADED		WHETHER
				Option	Tick Mark	
1.2.1	Financial Documents – Turn Over as per applicability of relevant clause of BEC	:	Uploaded / Submitted Audited financial statements Balance Sheet and Profit & Loss Account statement of any of the three (3) preceding Financial Year(s), i.e. FY: 2017-2018, 2016-2017 & 2015-2016 [to be reckoned from bid due date] along with un-price bid uploaded /submitted. FY: 2017-2018 FY: 2016-2017 FY: 2015-2016	Yes / No Yes / No Yes / No		



1.2.2 & 1.2.3	Financial Documents – Net Worth & Working Capital as per applicability of relevant clause of BEC In Case Bidder's working capital is inadequate as per applicability of relevant clause of BEC In case Bidder's working capital is inadequate, the bidder shall supplement this with a letter (as per Format-15) from the Bidder's bank having net worth not less than Rs.100 Crore, confirming the availability of the line of credit covering the inadequacy to meet the working capital requirement as per applicability of relevant clause of BEC which is to be uploaded /submitted.	: Uploaded AUDITED Financial Statements Balance Sheet and Profit & Loss Statement of FY: 2017-2018. Name of Issuing Bank_____ Branch Code:_____ Location & Address:_____ Tel No._____ Email ID:_____	Yes / No Yes / No	
1.2.4	Details of financial capability of bidder prescribed Format-16 as per applicability of relevant clause of BEC	: Name Of Chartered Accountant:_____ Membership No. of Chartered Accountant_____	Yes / No	



F-15

**FORMAT FOR CERTIFICATE FROM BANK IF BIDDER'S WORKING CAPITAL
IS INADEQUATE**

(To be provided on Bank's letter head)

Date:

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Dear Sir,

This is to certify that M/s (name of the bidder with address)
(hereinafter referred to as Customer) is an existing customer of our Bank.

The Customer has informed that they wish to bid for BCPL's RFQ/Tender no.
..... dated for
.....(Name of the supply/work/services/consultancy) and as
per the terms of the said RFQ/Tender they have to furnish a certificate from their Bank
confirming the availability of line of credit.

Accordingly M/s (name of the Bank with address) confirms
availability of line of credit to M/s (name of the bidder) for at least an
amount of Rs. _____ (Total Working Capital Amount) to meet the inadequacy in
Working Capital.

It is also confirmed that the net worth of the Bank is more than Rs. 100 Crores (or Equivalent
USD) and the undersigned is authorized to issue this certificate.

Yours truly

for (Name & address of Bank)

(Authorized signatory)

Name of the signatory:

Designation :

Stamp



FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE FOR FINANCIAL CAPABILITY OF THE BIDDER

We have verified the Audited Financial Statements and other relevant records of M/s..... (Name of the bidder) and certify the following:

A. AUDITED ANNUAL TURNOVER* OF LAST 3 YEARS:

Year	Amount (Currency)
Year 1:	
Year 2:	
Year 3:	

B. NETWORTH* AS PER LAST AUDITED FINANCIAL STATEMENT:

Description	Year ____
	Amount (Currency)
1. Net Worth	

C. WORKING CAPITAL* AS PER LAST AUDITED FINANCIAL STATEMENT :

Description	Year ____
	Amount (Currency)
1. Current Assets	
2. Current Liabilities	
3. Working Capital (Current Assets-Current liabilities)	

****Refer Instructions***

Note: It is further certified that the above mentioned applicable figures are matching with the returns filed with Registrar of Companies (ROC) [Applicable only in case of Indian Companies]

Name of Audit Firm:
Chartered Accountant/CPA
Date:

[Signature of Authorized Signatory]
Name:
Designation:
Seal:

Membership No.:

Instructions:



1. The Separate Pro-forma shall be used for each member in case of JV/ Consortium.
2. The financial year would be the same as one normally followed by the bidder for its Annual Report.
3. The bidder shall provide the audited annual financial statements as required for this Tender document. Failure to do so would result in the Proposal being considered as non- responsive.
4. For the purpose of this Tender document:
 - (i) **Annual Turnover** shall be “Sale Value/ Operating Income”
 - (ii) **Working Capital** shall be “Current Assets less Current liabilities” and
 - (iii) **Net Worth** shall be Paid up share capital plus Free Reserves & Surplus less accumulated losses, deferred expenditure and miscellaneous expenditure not written off, if any.
5. **Above figures shall be calculated after considering the qualification, if any, made by the statutory auditor on the audited financial statements of the bidder including quantified financial implication.**
6. This certificate is to be submitted on the letter head of Chartered Accountant.



BIDDER'S QUERIES FOR PRE BID MEETING

To,

M/s BRAHMAPUTRA CRACKER AND POLYMER LIMITED

SUB: "HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA,."

E-Tender NO.: BCPL/C&P/LE18W219ND/0983

SL. NO.	REFERENCE OF BIDDING DOCUMENT				BIDDER'S QUERY	BCPL'S REPLY
	SEC. NO.	Page No.	Clause No.	Subject		

NOTE: The Pre-Bid Queries may be sent by fax and also by e-mail before due date for receipt of Bidder's queries.

SIGNATURE OF BIDDER: _____

NAME OF BIDDER : _____



E-Banking Mandate Form

(To be issued on vendors letter head)

1. Vendor/customer Name :
2. Vendor/customer Code:
3. Vendor /customer Address:
4. Vendor/customer e-mail id:
5. Particulars of bank account
 - a) Name of Bank
 - b) Name of branch
 - c) Branch code:
 - d) Address:
 - e) Telephone number:
 - f) Type of account (current/saving etc.)
 - g) Account Number:
 - h) RTGS IFSC code of the bank branch
 - i) NEFT IFSC code of the bank branch
 - j) 9 digit MICR code

I/We hereby authorize Brahmaputra Cracker and Polymer Limited to release any amount due to me/us in the bank account as mentioned above. I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold the Brahmaputra Cracker and Polymer Limited responsible.

(Signature of vendor/customer)

BANK CERTIFICATE

We certify that ----- has an Account no. ----- with us and we confirm that the details given above are correct as per our records.

Bank stamp

Date

(Signature of authorized officer of bank)



SECTION-IV

GENERAL CONDITIONS OF CONTRACT [GCC]



**CONSENT LETTER ON ACCEPATNCE OF GENERAL CONDITIONS OF CONTRACTS
(GCC)/GENERAL PURCHASE CONDITION (GPC)**

NIT/RFQ NUMBER: BCPL/C&P/LE18W219ND/0983

Dated:

Dear Sir,

I/we have read the following Conditions of Contract which is available in the BCPL website.

I/ we further confirm that we have agreed to all the conditions as printed/available in the Documents in BCPL website in entirety and unconditionally.

1. General Conditions of Contract.
([http://www.bcplonline.co.in/content/tender/GCC CONTRACTS.pdf](http://www.bcplonline.co.in/content/tender/GCC_CONTRACTS.pdf))

Thanking you,

(Sign of the authorized signatory with
the Company/ Firm seal)

Name:

Designation:

Company Seal:



SECTION – V

**SPECIAL CONDITIONS OF
CONTRACT [SCC]**

&

SECTION-VI

SCOPE OF WORK



SPECIAL CONDITIONS OF CONTRACT

JOB: ANNUAL RATE CONTRACT FOR HIRING OF SERVICES TOWARDS INSULATION REPAIRING AND MAINTENANCE WORKS FOR OVERALL BCPL LEPETKATA PLANT FOR PERIOD OF TWO YEARS

1.0 GENERAL:

- 1.1 M/s. Brahmputra Cracker and Polymer Limited (BCPL), a Public Sector Undertaking (PSU) Company is a Petrochemical Plant located at Lepetkata, Dibrugarh, Assam. M/s GAIL (India) Limited is the main promoter having 70% of equity participation and the rest 30% is equally shared by Oil India Ltd (OIL), Numaligarh Refinery Limited (NRL) and Government of Assam.
- 1.2 The Special Conditions of Contract shall be read in conjunction with the General Conditions of Contract, Special Conditions of Contract Schedule of rates, Specifications, Drawings and any other documents forming part of the contract, wherever the context so requires.
- 1.3 The intending Contractor shall be deemed to have visited the site. Non-familiarity with site and Process Industry conditions will not be considered a reason either for extra claim or for not carrying out job in strict conformity with drawings, specifications or any other terms and conditions of the tender.
- 1.4 BCPL intends to line-up Annual Rate Contract for hiring of services towards insulation repairing and maintenance works. The contract is inclusive of all the required consumables, tools & tackles etc.
- 1.5 The work is to be carried out in “restricted area”. Contractor shall have to obtain permission in standard format for his employees assigned to the job and work strictly as per instruction of Engineer-In-Charge (EIC).
- 1.6 Insulation jobs shall be done in Gas Sweetening Unit (GSU) / Ethylene Cracker Unit (ECU) / Linear Low Density Poly Ethylene (LLDPE) / High Density Poly Ethylene (HDPE) / Poly Propylene Unit (PPU) / Captive Power Plant (CPP) / DM Plant / N₂ Plants / Cooling Towers / RWTP / ETP / Offsite and Storages / Loading & Unloading area / Pipelines etc. at BCPL- Lepetkata plant, GSU of BCPL- Lakwa plant and GDU of BCPL-Duliajan unit. The contractor shall execute the Insulation jobs in BCPL-Lepetkata, Lakwa & Duliajan plant and other related facilities, auxiliaries as per SOR items and as per instructions of ENGINEER-IN-CHARGE. The scope of work shall include Hot & Cold insulation, Insulation for steam tracing, Ceramic Insulation, Refractory works etc. on rotary equipments, vessels, exchangers, piping, tanks, spheres , HRSGs, Utility Boilers, Steam Turbines, Furnaces etc. as detailed in schedule of rates
- 1.7 Wherever it is mentioned in the specifications that the Contractor shall perform certain work or provide certain facilities, it is understood that that the Contractor shall do so at his own cost and the value of contract shall be deemed to have included all such costs.



- 1.8 The minimum technical details required for bidding has been incorporated in the detail Scope of Work/SOR. However, if required, the bidder may refer further technical details by visiting the site at his own expense.
- 1.9 The personnel to be deputed by the contractor shall observe all security, fire and safety rules of BCPL while at the site. His work will be supervised by BCPL engineers and contractor has to be strictly adhering to the instructions of EIC.
- 1.10 In case during the execution of contract or thereafter at any later stage, including after the completion of contract, it comes into the knowledge of BCPL or any of its employee that the information submitted by the bidder, regarding experience etc., is false, BCPL shall have the right to terminate the contract immediately without assigning any reason thereof and get the remaining jobs executed at the risk and cost of bidder besides blacklisting it for further dealings with BCPL.
- 1.11 Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the contract so far as it may be practicable to do so.
- 1.12 Where any portion of the General Condition of Contract is repugnant, to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears, the provisions of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Condition of Contract and shall to the extent of such repugnancy, or variations, prevail.
- 1.13 Wherever it is mentioned in the specifications that the Contractor shall perform certain work or provide certain facilities, it is understood that the contractor shall do so at his cost and the value of contract shall be deemed to have included cost of such performance and provisions, so mentioned.
- 1.14 In case of an irreconcilable conflict between Indian and other applicable standards, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings or Schedule of Rates, the decision of BCPL/EIC shall be final.
- 1.15 It will be Contractor's responsibility to bring to the notice of Engineer-In-Charge any irreconcilable conflict in the contract documents before starting the work(s) or making the supply with reference which the conflict exists.
- 1.16 In the absence of any specifications covering any, material, design of work(s) the same shall be performed/ supplied/ executed in accordance with Standard Engineering Practice as per the instructions/ directions of the Engineer-In-Charge, which will be binding on the Contractor.

2.0 CONTRACT BASIC CONDITIONS:

SN	DESCRIPTION	:	REMARKS
2.1	Work Site Locations	:	All work shall be carried out at BCPL-Lepetkata, GSU-Lakwa and GDU-Duliajan unit
2.2	Scope Of Work& Technical Specifications/Drawing	:	Scope of work & Technical Specifications/ Drawing Details are given in Scope of Work of bid document



2.3	Time Schedule & Mobilization Period	:	The initial period of the contract shall be two years i.e. 24 months from the date of Fax of Acceptance (FOA)/Letter of Acceptance whichever is earlier which is further extendable to another 06 months based upon the performance of contractor and the job requirement on same rates, terms and conditions. The decision of the "BCPL" regarding extension of the contract shall be final and binding on the contractor. Mobilization period for the contractor will be 15 days from the date of issue of Letter of Intent / Work Order whichever is earlier. The contractor has to mobilize all resources including manpower within the above period.
2.4	Special Conditions of Contract	:	Shall be in accordance with GCC and to be read in conjunction with SCC V(II)&V(III) and SOW /Technical Specification Section-VI of bid document & Preamble to SOR Section-VII of bid document In case of an irreconcilable conflict between Indian and other applicable standards, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings or Schedule of Rates, the decision of BCPL/EIC shall be final. It will be Contractor's responsibility to bring to the notice of Engineer-In-Charge any irreconcilable conflict in the contract documents before starting the work(s) or making the supply with reference which the conflict exists. In the absence of any specifications covering any, material, design of work(s) the same shall be performed/ supplied/ executed in accordance with Standard Engineering Practice as per the instructions/ directions of the Engineer-In-Charge, which will be binding on the Contractor.
2.5	Sub-letting of works	:	Not permissible
2.6	MOBILISATION ADVANCE (M.A.):	:	No Mobilization Advance will be paid. All payments shall be made as per payment terms.



2.7	QUALITY ASSURANCE SYSTEM IF ANY REQUIRED	:	The bidder shall include in his offer the Quality Assurance Program containing the overall quality management and procedures which is required to be adhered to during the execution of contract. After the award of the contract, detailed quality assurance program to be followed for the execution of contract under various divisions of works will be mutually discussed and agreed to. Quality Assurance System plans/procedure of the contractor shall cover details of the personnel responsible for the quality assurance, plans or procedure to be followed for quality control in respect of work. The BCPL or their representative shall reserve the right to inspect/witness, review any or all stages or work at site as deemed necessary for quality assurance.
2.8	ENGINEER-IN-CHARGE [EIC]	:	There shall be an "Engineer-In-Charge" nominated by HOD of Indenting Dept. for the said contract.
2.9	WRONG INFORMATION :	:	If the Bidder deliberately gives wrong information in his Bid to create circumstances for the acceptance of his Bid, BCPL reserves the right to reject his Bid without any reference to the Bidder.
2.10	WORKING HOURS		General working hours shall be 08:30 Hrs to 05:00 Hrs on all days including holiday / Sunday. However, job may continue round the clock in case of urgency which shall be solely decided by Engineer-In-Charge. No extra rate will be considered on jobs round the clock including, General Holidays, National Holidays etc.

3.0 BID PRICES /QUOTED RATES :

- 3.1** The quoted rate shall be firm & fixed and valid during the currency of the contract. No escalation on whatsoever account shall be paid under this contract except statutory variation in GST if applicable. Statutory variation in GST if applicable shall be reimburse/ paid by BCPL at actuals against submission of documentary evidence.
- 3.2** The quoted prices shall be deemed to be inclusive of the following:
- Cost of Supply Materials, Tools & Tackles, Machines & Equipment etc for execution of the job , Contractor overheads, profits & administrative charges including Indian Withholding Tax & WCT etc as applicable except service tax/GST if applicable.
 - Contractors responsibilities towards /for compliance under Labour/Industrial laws for the deployed



manpower w.r.t payment of Minimum wage, Employees' Provident Fund contribution, Employees' State Insurance(ESI) contribution or Insurance policy coverage under Employee's Compensation Act,1923, Bonus, Death Gratuity, Leave Wages, as per the Factories Act as applicable, Safety Kits & Liveries in terms of Safety Provisions under Factories Act 1948, Maternity benefit to women Contract workers under Maternity Benefit Act 1961.

- 3.3 Bidders are advised in their own interest to visit BCPL plant and ascertain the conditions and quantum of work before quoting.
- 3.4 The rates quoted by the bidder shall be all inclusive for provisions of all incidental expenses necessary for proper execution and completion of work in full in accordance with the Terms & Conditions of the Bid Documents.

4.0 LOCATION:

The contractor has to execute the Insulation jobs at BCPL-Lepetkata, GSU-Lakwa and GDU-Duliajan unit and other related facilities/ auxiliaries as per SOR items and as per instructions of site in charge /unit in charge /ENGINEER-IN-CHARGE. However, for urgent requirement (if the existing contractor working in that area fails to deliver or any other emergency determined by BCPL) as per instruction of EIC, the contractor has to execute the jobs covered in / similar to items of this contract in any other area on same rates, terms and conditions.

5.0 CONTRACTOR'S SCOPE:

- a) Contractor shall make his own arrangements for transportation of his men to respective place of work, boarding, lodging and local conveyance etc. and also bear all incidental charges. The company shall have no obligation in this respect.
- b) During annual shutdown, when maximum no. of insulations works are likely to be available for maintenance, the contractor shall deploy additional resources / equipment's, as per direction of engineer-in-charge to ensure timely completion of job.
- c) The contractor shall always keep available the required tools and tackles, consumables and other material as may be considered necessary by EIC as per work exigency for timely and efficient performance of the jobs as spelt out in the scope of work.
- d) The procurement and supply, in sequence and at the appropriate time of all materials and consumables required for completion of work shall be entirely the contractor's responsibility and quoted rates for work shall be inclusive of all such items The contractor's scope of work supply shall include the following major items but not limited to the same
- Basic insulation materials as specified in technical specifications
 - Spacer rings, trays, with ceramic millboard, MS/Aluminium bands, ceramic blanket and Rope, cement etc.
 - Plain Aluminium/GI sheet and/or corrugated sheets for cladding as applicable, GI wire and GI wire mesh, Aluminium foils.



- Anticorrosive paints, heat transfer cement / putty, heat resistant paint, barium chromate Paint /sealant etc., if any.
- GI / S.S. stitching and lacing wires
- GI bolts, nuts, studs, self-tapping screws, washers etc.
- Moisture barrier as per specification.
- Welding equipments, consumables, gases.
- Steel scaffolding wherever required.
- Glass cloth, vapour sealing and filler materials, bituminous felt strips, and bituminous mastic.
- Safety tools and tackles for workmen.
- All other items not mentioned above, but covered in applicable standard/drawings, Schedule of rate and technical specifications.

The scope of work envisaged under this contract is insulation works as per specifications,

Drawings, codes, standard practice etc. It is however explicitly understood that the scope as

described in tender document is not limiting in so far as the responsibilities of the Contractor are concerned and shall include carrying out any and all works and providing any and all facilities those are required in accomplishing an operating system, complying fully with all requirements as are envisaged of it, complete in all respects and satisfying all performance and guarantee requirements stated or implied from the context of the tender document.

6. UTILITY SUPPLY BY BCPL :

- 6.1 Service air, service water shall be provided to the contractor free of cost at one point. The contractor has to make his own arrangement to use the same at work site by extending pipe line, etc. as per requirement.
- 6.2 Electric power shall be provided to the contractor free of cost at a single point. The contractor has to make his own arrangement to use the same at work site by extending cable, etc. as per requirement.
- 6.3 Space for office shall be provided by BCPL, if required and available. However, after expiry of the contract the contractors shall demolish his office & clean the area to the satisfactions of EIC, at his risk and cost.
- 6.4 Intercom telephone facility can be extended to contractor at site office, if required and available.

7.0 WORK PROCEDURES:

- 7.1 The SOR jobs have to be carried out as per standard maintenance/ engineering practices and as per instructions of Site in charge/unit in charge/Engineer in charge. Detailed job description of SOR items is given in" Job Description of SOR. In case of any discrepancies, the decision /interpretation of EIC shall be final.
- 7.2 Contractor shall start the job after getting intimation from site in charge of the respective unit. Once the job is started, it shall be continued till completion and after completion of all the jobs area must be cleaned / cleared up to the satisfaction of site in charge of respective unit. In case of any



unforeseen situation Job can be stopped midway only after getting permission from EIC. Depending upon the criticality of the job EIC can ask contractor to deploy MWF or any other suitable category of manpower as per job requirement.

- 7.3 The Contractor has to generate document and maintain record of executed jobs (SOR item wise) and take signature of the concerned site in charge of respective units for completion of the job on Daily Activity Report/ "Work Intimation slip"/ in the format introduced by BCPL time to time, failing which the same shall not be considered for billing. In normal circumstances contractor has to get certifications of all the jobs done in the previous month by first week of present month.
- 7.4 The execution of the work may continue working during all times and weather conditions and no extra rate will be considered on jobs round the clock including, General Holidays, National Holidays, May day, etc as per the requirement of BCPL to be decided by Engineer-In-Charge and contractor should take this aspect into consideration while quoting his rates. No extra claim will be paid on any account.
- 7.5 Any SOR job shall be deemed completed only after successful trial including leak testing and cleaning of the area up to the satisfaction of site in charge of respective units. Job shall be considered as incomplete if the quality of the job is not up to the satisfaction of site in charge. In case of repetition of the jobs due to poor workmanship/negligence at contractor side the same shall be carried out by the contractor without any additional cost implication to BCPL.
- 7.6 Cleaning of the area/equipment after completion of SOR jobs and shifting of scrap insulation sheet and spent insulation after proper weighment of sheet metal and insulation separately and same returned to designated place in plant premises shall be in the scope of the contractor. Job shall not be certified until unless contractor clean the area up to the satisfaction of site engineer and if contractor fails to clean the area within 7 days from the date of job execution job shall not be considered at all for certification.
- 7.7 If contractor fails to clean the area within 7 days from the date of job execution the job shall not be considered at all for certification. Site in charge of respective unit has to ensure that contractor has cleaned the area before certification of the executed job.
- 7.8 The Contractor shall ensure the quality of the jobs carried out. In case of repetition of jobs due to faulty workmanship/negligence attributable to contractor, same shall be carried out by the contractor without any additional cost implication to BCPL. If such repetitions are frequent, the site in charge of respective unit / "EIC" shall take suitable actions including deduction of cost of damages to the equipment's / plant and cost of production losses etc. in the best interest of the company.
- 7.9 All maintenance jobs are to be carried out under "Permit system". The contractor has to obtain the necessary "Safety work permit" before starting the jobs. The contractor has to comply all the safety requirements for the execution of the jobs as per instructions of Plant Safety Officer/Site in charge of respective unit. The "Safety work permit" has to be returned back to "site in charge of respective unit after completion of the jobs.
- 7.10 The materials, design and workmanship shall satisfy the relevant Indian Standards, the job specifications contained herein and codes referred to, where the job specifications stipulate requirements in addition to those contained in the standard codes and specifications. These



additional requirements shall also be satisfied.

- 7.11 The quantities mentioned in SOR are indicative & may change according to the jobs requirements and as per instructions of Engineer in charge.
- 7.12 All jobs in this contract are to be carried out under proper supervision. Contractor has to ensure effective supervision of all the jobs carried in plant through experienced and adequately qualified personnel. The supervisor should be well qualified and should have adequate knowledge on safety aspects of working in petrochemical plants.
- 7.13 However, depending on job requirement esp. during breakdown / shutdown / turnaround the number of supervisors may have to be increased as per advice of EIC.
- 7.14 For over-all supervision jobs, the contractor shall deploy adequate/ sufficient no of persons as per previous practices for the contract period for effective supervision of the job.
- 7.15 The contractor shall employ such workers who are above 18 years of age.
- 7.16 Transportation of worker to the site and back shall be the responsibility of the contractor. BCPL shall have no obligation in this regard.
- 7.17 The personnel deployed against this contract shall not be used for any other contract except without specific clearance from the EIC of the contract.

8.0 STATUTORY & NON STATUTORY WAGE COMPONENTS AND SCHEDULE OF RATES:

- 8.1 The contractor shall ensure payment of the following wage components / statutory payments/obligation to the persons engaged by him against this contract in BCPL as indicated in Schedule of rates.

SN	Description	Wage Components**
A	Minimum wage	Minimum wages as notified by Central Government or State Government from time to time (whichever is higher).
B	<u>Variable Dearness Allowances</u>	<u>as notified by Central Government or State Government from time to time</u>
C	<u>Paid Annual Leave as per Factories Act 1948</u>	<u>01 day against each 20 working days</u>
D	Paid National Holidays & Festival holidays as per factory Act	03 National Holidays per year & 08 Festival Holidays per year



<u>E</u>	PF Contribution including EDLI & Administrative Charges	13% of wage (Employer contribution)
<u>F</u>	Bonus will be paid as per Payment of Bonus (Amendment) Act, 2015	8.33% of wage (Seven thousand rupees or minimum wages whichever is higher)
<u>G</u>	ESIC as per the provisions of Employee State Insurance Act-1948	4.75% of gross wages (Employer contribution)
<u>H</u>	<u>Non Statutory Allowance @ 8%</u>	<u>As per MOS reached between BCPL contractors worker union & major contractor undertaking various jobs at BCPL</u>
<u>I</u>	<u>Deleted</u>	<u>Deleted</u>
<u>J</u>	Death Gratuity	Gratuity will be payable only in cases of death or permanent disablement during the currency of contract as per the provisions of Payment of Gratuity Act, 1972

9 Additional Responsibilities of the Contractor:

- (i) The contractor shall be solely responsible and indemnify the BCPL against all charges, dues, claim etc. arising out of the disputes relating to the dues and employment of personnel, if any, deployed by him.
- (ii) The contractor shall indemnify BCPL against all losses or damages, if any, caused to it on account of acts of the personnel, if any, deployed by him.
- (iii) All personnel deployed by the contractor should be on the rolls of the contractor.
- (iv) No contract worker below the age of 18 years and above superannuation age of 58 years, as prescribed under EPS, shall be deployed on work.
- (v) The personnel to be deputed by the contractor shall observe all security, fire and safety rules of BCPL while at the site/work. His Work/Services will be supervised by the supervisors of contractor. Contractor has to be strictly adhering to guidance, instruction whenever required. A copy of the work order should be with the Security Department for facilitating the movement of men, machine and materials involved in the contract.
- (vi) Contractor has to deploy the personnel with no past criminal records. Also the contractor has to provide police verification for all the persons deployed by him.
- (vii) While confirming to any of these conditions, the contractor should ensure that no law of state regarding labor, their welfare, conduct etc is violated. The contractor shall indemnify BCPL for any action brought against him for violation, non-compliance of any act, rules & regulation of center /



- state / local statutory authorities.
- (viii) All existing and amended safety / fire rules of BCPL are to be followed at the work site.
 - (ix) Contractor shall ensure payment of wages to the personnel employed and meet all statutory obligations of payment as per Minimum Wages act 1948 and payment of wages Act 1936.
 - (x) In case of accident, injury and death caused to the contract workers while executing the Work under the contract, the contractor shall be solely responsible for payment of adequate compensation, insurance money etc. to the next kith & kin of injured / diseased. Contractor shall indemnify BCPL from such liabilities.
 - (xi) The contractor shall not employ or permit to be employed any person suffering from any contagious, loathsome or infectious disease. The contractor shall get examined the deployed contract workers from a civil Govt. doctor.
 - (xii) No contract workers or person of contractor (including contractor) be allowed to consume alcoholic drinks or any narcotics within the plant premises. If found under the influence of above, BCPL will terminate the contract immediately and may refer the case to police.
 - (xiii) The contractor hereby agrees to indemnify owner / BCPL and harmless from all claims, demands, actions, cost and charges etc. brought by any court, competent authority / statutory authorities against owner/BCPL.
 - (xiv) The Contractor to maintain all Register and other records at an Office or the nearest convenient building within the precincts of the work place or at a place within a radius of three kilometers.
 - (xv) Supervision and control for the contract for service rests on the contractor and as such contractor and its authorized representatives, duly accepted by BCPL, are only allowed to enter the premises for execution of the contract.
 - (xvi) The Engineer In charges is authorized to certify the Wages Register maintained by Contractor and accordingly as and when attendance to be checked EIC can ask for such registers which must be submitted by the contractor or his representative to the EIC.
 - (xvii) While engaging the contractual manpower, Contractor is required to make efforts to provide opportunity of employment to people belonging to Scheduled Castes and Weaker Sections of the Society also, in order to have a fair representation of these sections.
 - (xviii) Notwithstanding anything contrary contained in the contract, the contractor shall bear any upward revision in the rate of Minimum Wages, including revisions of variable dearness allowance from time to time at its own cost throughout the contract period.

10 Documents to be submitted by the Agency/contractor to Engineer In- Charge at various stages during the currency of the contract:

(I) Immediately after issuance/receiving of Letter of Intent (LOI):

- i. Details as required for issuance of **FORM - VII (Notice of Commencement of Work)**
- ii. Application for issuance of **FORM -III (Form of Certificate by Principal Employer)** for obtaining Labour License from Licensing Authority for engaging 20 or more contract workers .
- iii. Copy of **FORM - VI (License)** before commencement of work if 20 or more contract



- workers are engaged.
- iv. Copy of Provident Fund Registration Certificate issued by concerned Regional Provident Fund Commissioner.
 - v. Copy of Employee State Insurance Registration Certificate issued by concerned ESIC. Where ESI Act is not applicable, copy of Insurance Coverage under Employee Compensation Act, 1923 of appropriate value.

(II) At the time of submission of monthly bills:

- i. Copy of **Wage Register in FORM – B** (under The Ease of Compliance to Maintain Registers under various Labour Laws Rules, 2017) duly certified by **authorized representative** of the contractor and **authorized person** in BCPL.
- ii. Copy of bank statement duly certified by bank as proof of **Payment of wages**.
- iii. Copy of Separate ECR for the proof of Provident Fund contribution and ESI contribution deposit along with details of contract workers, PF account No. / ESI No., contributions of contract worker and employer etc. for the previous month, in respect of contract workers deployed by them in BCPL through this contract only.
- iv. Copy of the wage slip issued to the Contract Workers duly signed and sealed.

(III) Evaluation of Bill and Release of Payment:

Bill should be evaluated based on the actual payment released/incurred under various heads of components as stated above. The Contractor to submit a Statement duly signed to the effect and the cost actually incurred as per timeline.

(IV) At the time of closure of contract:

- i. **Indemnity Bond** of Rs. 100/- duly notarized from Notary indemnifying BCPL from all liabilities w.r.t. the persons engaged by the contractor regarding payment of wages, Provident Fund/ESI contributions, Insurance and other payments.
 - ii. Copy of the **Wage Register** in FORM - B for the last month. Copy of **Employment Card** in FORM - XII issued to the Contract workers.
 - iii. Copy of the ECR related to EPF and ESIC Compliance in respect of Contract Workers.
 - iv. Details as required for issuance of **FORM - VII (Notice of Completion of Work)**
- Before making payment of the last bill/invoice of the Contractor, the appropriate authority (i.e. Payment Making Authority etc.) in BCPL, shall verify from the EPF/ESI the detail/status of the payment made by the Contractor. In case the information furnished by the Contractor is found to be incorrect BCPL shall take appropriate action against the Contractor.

11. TERMS OF PAYMENT:

- 11.1** The bill in quadruplicate should be submitted to Engineer- In-Charge before 15th of next calendar month, enclosing therewith requisite documents for the jobs completed during the previous month



and submitted to the Engineer- In-Charge for the job certification and payment. However 100% joint measurement of the executed SOR jobs in measurement sheet shall be checked and certified by site in charge of respective unit and approved by respective unit in charge before forwarding to EIC for further forwarding to F&A for payment.

- 11.2 In case contractor has not enclosed all the specified documents, it will be considered as Non-performance on the part of Contractor and Engineer-In- Charge may take suitable action.
- 11.3 All payments shall be released within 30 days. BCPL will not entertain any claim of interest on billed amount for any delay. BCPL will release the payments after offsetting all dues to the contractor under the contract. Recovery of income tax from the invoice(s)/bill(s) shall be as per the rules & regulations in force in accordance with the income tax act.
- 11.4 The contractor shall submit a certificate along with each running bill that the contractor has obtained the EPF code no. (Code number to be indicated) and EPF contribution in respect of contractual labor up to the previous bill has already been deposited with the PF commissioner. The Engineer- In-Charge while certifying the bills of the contractor shall record the same.
- 11.5 Final bill along with No claim certificate shall be submitted within 30 days of completion of contract period.
- 11.6 Payment of the bills shall not be made if the executed SOR jobs are not certified by the site in engineer and approved by respective unit in charge from time to time.
- 11.7 10% of the billing amount shall be kept reserved with BCPL for observing the performance of insulation & workmanship, which shall be released after completion of three months from the date of job completion.

12.0 DEFECT LIABILITY PERIOD:

12.1 The contractor has to stand guarantee for the insulation jobs done by him against bad workmanship for a period of **twelve months**, from the date of application of the insulation job. If any defect or damages are noticed as a result of poor workmanship during the one year from date of application period, the same has to be rectified and to be made good by the contractor free of cost.

Defect liability period of the contract shall be one year from date of completion of contract.

12.2 The contractor shall guarantee that the insulation materials used are in accordance with the specifications contained herein/to being provided during execution of work.

13.0 SPECIFIC INSTRUCTIONS TO CARRY OUT THE JOB

13.1 Contractor shall deploy staff having suitable qualification and adequate experience in application of Insulation Material over Petrochemical/Refinery/Hydrocarbon processing Units/Power



plants. BCPL reserves the right to reject any of the persons deployed by the contractor found unsuitable for the work.

13.2 Supervisor employed by contractor should have required knowledge and experience of the job. He will assist in the application of insulation over pipelines and equipments. The supervisor will also submit the status of jobs on daily basis to Engineer-In-Charge.

13.3 The personal engaged by the contractor should be well qualified and experienced to discharge the contractual obligations effectively.

13.4 The manpower to be deployed should be familiar to work in petrochemical /LPG/Gas Processing/ Chemical Refinery / gas based power plant.

13.5 The insulation material including paint and consumables brought to site by the contractor for execution of the job should be got approved by Engineer-In-Charge and should be procured directly from manufacturer as per specification of the material to be supplied. It should be accompanied by manufacturer's test certificate.

13.6 All the jobs have to be carried out on top priority basis and to be completed in all respect with in the time specified by the Engineer-In-Charge.

13.7 In case the contractor leaves any job incomplete or fails to complete it in stipulated time or not up to the satisfaction of site in charge of respective unit / EIC then that job will be done through any other agency and deduct its cost from contractor's bill.

14.0 PENALTY CLAUSE FOR SAFETY VIOLATION

14.1 Guidelines for imposition of punitive fines against repetitive violation of safety rules & regulations by the contractor during execution of job shall attract penalty as per details below,

14.2 For first time violation of safety rules & regulation by contractor, HOD (F&S) will issue a warning letter to contractor with intimation to OIC of work center and EIC.

14.3 In case of second time violation of safety rules & regulations by same contractor, OIC will call contractor in person and will have a meeting to discuss reason for repetitive violation along with EIC and HOD (F&S). A warning letter will also be issued by EIC to contractor.

14.4 In case of further violation, punitive fines will be imposed on contractor. Amount of fine will be decided as per severity of violation of safety. However, minimum fine would be Rs.5000/- and in multiple of Rs.5000/- thereafter. This will be limited to 5% of contract value, as maximum cumulative penalty.

14.5 In case of consistent violation of safety rules & regulation by contractor, BCPL reserves the right to take suitable action against contractor including forfeiture of security deposit and termination of the



contract and upon such termination the BCPL shall have the right to remove the contractor's materials from site.

15. PENALTY/TERMINATION CLAUSE FOR NON PERFORMANCE, IF ANY:

15.1 In case of failure on the part of the contractor causing safety problem or production loss or mechanical damage to the equipment, contractor shall be penalized at a flat rate of 5% of each case of bill amount in that particular month plus actual cost of equipment damaged as per the discretion of the "ENGINEER-IN- CHARGE".

15.2 In case of non-availability of the services by the contractor on any day, BCPL has the right to get the same done by any other agency at the risk and cost and responsibility of the contractor. In addition 15% of the service charges will be deducted from the contractor's dues.

15.3 If the contractor fails to mobilize the required resources within reasonable time as decided by ENGINEER-IN-CHARGE, BCPL may get the work done through other agency at the risk and cost of the contractor and the security deposit of the contractor may liable to be forfeited.

15.4 In case of delay in execution of job EIC at his discretion may impose a penalty of Rs 1000/-per distinct case of delay. The time taken by contractor for any job shall be considered as the duration from intimation received by the contractor supervisor to the completion of the job in totality. The total of the recoveries shall be limited to maximum 5% of contract value on yearly basis.

15.5 EIC at its discretion may also make recovery from contractor's bill, If the contractor neglects/fails to execute jobs/ his duties included in the Scope of Work up to the satisfaction of EIC during execution of the contract or fails to respond to a notice of neglect within a period of the time set in such notice. The amount of recovery shall be determined by BCPL in consideration of the nature and consequence of the contractor's neglect. The recovery shall be limited to a maximum of Rs 1000/-per distinct case of neglect. The total of the recoveries shall be limited to maximum 5% of contract value on yearly basis.

15.6 In case of consistent non-performance of contractual obligations and violation of terms and conditions of the contract, BCPL reserves the right to get the work done through other agency at the risk and cost of the contractor and to take suitable action against contractor including forfeiture the security deposit and termination of the contract.

15.7 Notwithstanding anything contained elsewhere, the BCPL may at any time its discretion terminate the contract or part of the contract after giving 07days notice in writing to the contractor without assigning any reason and upon such termination the BCPL shall have the right to remove the contractor's materials from site and the contractor shall be paid price of the work satisfactorily completed in accordance with the provisions of this contract. In no case payment of the bills shall be made if the jobs are not certified by the inspector from time to time.

16.0 MEASUREMENT:



Measurement shall be strictly in accordance with measurement of insulation as per Annexure-II enclosed along with the tender.

17.0 INSURANCE & DAMAGE TO PROPERTY:

Contractor will be responsible for insurance coverage of his personnel and BCPL will have no liability what so ever, on this account. Damage, if any caused to roads / building / structures/ machinery, equipment, property either moveable or immovable during execution of work, the same will be made good by the Contractor.

18. SCHEDULE OF RATES & QUANTUM OF JOBS :

- 18.1 The quantities shown in schedule of rates are for a period of two years only.
- 18.2 Payment shall be made only for the actual jobs carried out, duly certified by the EIC. BCPL does not give any guarantee regarding quantum of jobs. The decision of "EIC" regarding operating the schedule of quantities shall be final and binding to the contractor.
- 18.3 The rates quoted by the contractor shall remain firm throughout the period of the contract. Schedule of rates shall be deemed to include and cover all costs, expenses and liabilities of every description and all risks of every kind required to execute the work.
- 18.4 The owner reserves the right to interpolate or extrapolate the rates for any new items of work not covered in schedule of rates, from the similar items already available in schedule of rates. All the works, item wise, shall be measured upon completion and paid for, at the rates quoted and accepted in the SOR. For any activity, which is not specifically covered in the SOR description, but is covered under Special condition of contract Scope of work Specification Drawing etc., no extra claim shall be entertained, since SOR is to be read in conjunction with other documents forming part of the tender.
- 18.5 All temporary and ancillary works including enabling works connected with the works shall be the responsibility of the contractor and the price quoted in the SOR by them shall be deemed to have included the cost of such works.
- 18.6 No payment towards idle time shall be done on account of any reason viz., insufficient front, delay in issue of safety work permit, delay in providing electricity connections, water supply etc.
- 18.7 In case of any dispute in SOR etc. BCPL'S decision will be final and binding to the contractor.

19. Termination OF CONTRACT:

- a) Notwithstanding anything contained elsewhere, the BCPL may, at any time, at its discretion terminate the contract of part of the contract after giving 15 days' notice in writing to the contractor without assigning any reason and upon such termination the BCPL shall have the right to remove your materials from site and the contractor shall be paid price of the work satisfactorily completed in accordance with the provisions of this contract.
 - b) If BCPL considers that the performance of the contractor under the contract is unsatisfactory or not up to the expected standard, then BCPL shall notify the contractor in writing and may specify in details the cause of its dissatisfaction. The BCPL shall have requisition contained in the said written notice issued by the BCPL to the contractor within 10 days of the receipt thereof. The above clause shall be read in conjunction with termination clause in GCC- works
- 20 Local Conditions: Each bidders must have to know all local conditions and factors such as statutory labour enactments/amendments & Memorandum of Settlements (MoS) If any, which



may have effect including financial implication on the execution of the contract in their own interest. Bidders may seek clarifications (if any) regarding such local conditions from BCPL, before participating in the tendering process. However, company shall not entertain /consider any request for clarification from the bidder, once bid is submitted. It is the sole responsibility of the bidder that such factors have properly been evaluated and considered while submitting the bid proposal. No claim whatsoever including financial adjustments arises on account of failure of the bidder to apprise himself about the local conditions/MoS, (if any) will be entertained by the company once bid is submitted.

- 21 **Manpower Engagement:** That the contractor will ensure engagement of 100% Project Affected Persons (PAP) and local persons in un-skilled category of work for which the list of such Persons will be provided by the Authorized Person of BCPL Authorities. The name of the Authorized person will be notified to the contractor by BCPL Authority from time to time.”So far as engagement of Semi-Skilled and Skilled category of manpower in the said work is concerned, the contractor will give preference to PAPs and local persons fulfilling the technical requirement of the job/work>”



ANNEXURE-III

MEASUREMENT OF INSULATION WORK

The mode of measurement shall be as per IS 14164 – 2008 (latest version and amendments if any) or any other relevant standard unless otherwise mentioned in the tender document and the weight of structural steel sections shall be measured as per ISI handbook. All insulation jobs are to be carried out as per Technical specifications and instruction of BCPL. However, the measurement for insulation work is given below

Payment will be made on the basis of joint measurements, taken by contractor and 100% certified by site in charge and respective unit in charge and finally submitted to Engineer In charge for further processing. Measurement shall be based on “physical measurements /Approved for construction drawings, to the extent that the work conforms to the drawings and details are adequate shall be taken by contractor in presence of site in charge.

Measurement of weights shall be in Metric Tones/ Kilogram, metric tons correct to the nearest kilograms; linear measurements shall be in meters, correct to the nearest centimeter. Measurement shall be taken over finished surfaces for all type of insulation.

TANKS, COLUMNS, VESSELS, DRUMS, SPHERES, EXCHANGERS AND ROTARY EQUIPMENTS:

No deduction shall be made for any area required to be left un-insulated, the area of which is equivalent to a circle / projection of 300 mm in diameter or less.

All insulated nozzles/manholes shall be measured as given below:

As piping insulation, if the area of such nozzle is equivalent to a circle / projection of 300 mm in diameter or less. The area covered by such nozzle shall not be deducted from the overall area of tank/column/vessel/exchanger/equipment insulation measurements.

If any nozzle/manhole insulated is equivalent to a circle of over 300 mm in dia., the area of such nozzle/manhole to be considered for measurements shall be taken as twice the actual insulated area and paid for as vessel insulation. The areas of tank/column/vessel/exchangers/equipment, covered by such nozzle manhole shall be excluded from measurements.

The area of standard dished end of vessels, exchangers etc. shall be considered as the square of the diameter of the insulated body of shell for the purpose of measurement. For flat ends actual area shall be considered for payment. For removable boxes on exchangers, if any, no extra payment will be made.

Insulated areas with different specification shall be measured separately, such as:



- 1) Roofs/tops of tanks considering them as flat surfaces.
- 2) Sides of vessels and tanks where corrugated aluminum sheets are to be used, measurements being taken over the crest of corrugated sheets.

However, the quoted rates shall be deemed to be the above consideration i.e. Roofs/Tops of tanks by using flat Aluminum sheet.

No additional payment shall be made for using corrugated Aluminum sheets as per Technical Specification and the quoted rates shall be deemed to be inclusive of it.

For boxes or stiffener rings, area over two sides of boxes perpendicular to the axis of the equipment shall be added to the area of equipment.

For any other connected structure, if insulated, the measurement shall be taken on actual area

basis. PIPING (Pipes, Valves, Flanges, Pipe Fittings, Traps, Expansion Joints, Bellows, Hoses, etc):

Measurements of piping shall be taken/ considered along curvilinear center lines of pipe insulated and through all fittings which are insulated but excluding Valve and Flange assembly.

For all types of valves, including control valves, flange assemblies including orifice plates, flanges, and other piping fittings, measurement shall be based on actual count and then converted into equivalent length of connected piping to arrive at the total equivalent lengths of piping or ducting or various diameters as per applicable IS 14164 – 1994 (latest version) unless otherwise mentioned.

No extra payment shall be made for tees, branch connections and inspection plugs and the rates quoted shall be inclusive of all these items. Branch connections shall be measured from the outer surface of the header.

No extra payment shall be made for vents, drains and instrument connections having nozzles length up to 12". However, if the length of such connections exceeds 300 mm the same will be paid as per piping measurements in respective sizes.

For all fittings measurements along curvature centre line shall be considered.



Steam/refrigerant traced lines and untraced lines shall be normally specified and measured separately, according to the number of tracers.

For steam / refrigerant traced pipelines, which are specified and are measured separately, only the diameter of the main pipeline(s) shall be reckoned for measurement of insulation. No separate measurement shall be made for the insulation of the steam tracer line(s) which shall be deemed to have been covered under the insulation of the main pipeline.

No extra payment shall be made for all types valves of size 1-1/2" and below and these shall be considered as part of the piping insulation work.

No additional payment shall be made ,wherever wrapping with aluminum foil over stainless steel alloy piping and equipment prior to application of insulation are to be applied / provided as per technical specification and the quoted rates shall be deemed to be inclusive of it.

Any mode of measurement other than the above may also be adopted, if agreed to between the purchase and the applicators.

All provisions is respected of piping also applicable to ducting wherever the ducts are having shapes other than circular , they shall be considered equivalent to a pipe of equivalent perimeter.

Where ever Unit of Measurement is in SQM, following shall be applicable:

PIPE & PIPE FITTINGS: Length in Mtr as per measurement mentioned above, OD in Mtr taken over the finished Insulated surface and value of pie should be taken as 3.14.

Measurement of the SOR item 4.16 & 4.17 for application of ceramic fiber rope shall be made on actual length of the ceramic rope used in insulation work in pipeline. Without any addition (IS)

Measurement of SOR item 4.10 , 4.11, 4.12,4.14

Removal of hot insulation/cladding shall be on actual area basis without any addition (IS) .However diameter shall be dia of finished insulation.

Removal of old refractory shall be measured in metric tons correct to the nearest kilograms.



Removal of old PUF insulation on M3 basis $(3.14 \times \text{Dia of finished insulation surface} \times \text{actual Length of insulation removal} \times \text{thickness of insulation without any addition (IS)})$.



DETAIL SCOPE OF WORK

Annexure – IV

The scope of work shall include Hot & Cold insulation, Acoustic Insulation, Ceramic Insulation, Refractory works etc on rotary equipments, vessels, exchangers, piping, tanks, spheres , HRSGs, Utility Boilers, Steam Turbines, Ethylene Cracking Furnaces etc. as detailed in schedule of rates.

The work in brief shall include the following but not limited to this only.

1. The jobs to be carried out as per SOR.
2. Supply of all insulation and ancillary materials like spacer rings, stays, ceramic millboard, lacing and binding wires, screws, bands, roofing felt, studs, flats, support ring clips, sealants and necessary drilling and fixing of bolts/nuts, washers etc. wherever specified and required. All insulation materials shall be new and of approved quality with complete tests certificates and in accordance with the specifications.
3. The contractor has to arrive with all necessary masonry tools and tackles required to execute the job along with mortar. All sorts of consumables like mortar, markin cloth, kerosene / diesel etc. shall be in the scope of contractor.
4. After completion of insulation job where ever required by Site in charge of respective unit /EIC, contractor has to write Date of Insulation with Black paint on Cladding Sheet. Specification like Font size, spacing etc. regarding “The writing job of Date of insulation” on insulation jobs will be specified by the Site in charge of respective unit
5. Application of insulation with weather proofing on vessels, columns, equipment like heat exchangers and piping including valves, flanges etc. as per specifications and instructions of site in charge /Engineer-in-Charge.
6. Providing besides all materials and consumables, sufficient and skilled labour and supervision required for carrying out the insulation work, all safety devices, equipment, instruments etc. necessary and incidental requirements to perform the work in workmanship and efficient manner within the stipulated time period.
7. Proper storage and protection of insulation material and consumables brought to site by the contractor at all stages of work.
8. The contractor shall shift the material from warehouse to working site for use during repairing/work.
9. Contractor shall execute the jobs as per the scope of work defined, without any damage to existing system/ equipment. If any damage found, the cost of damage will be recovered from contractor's bill.
10. Providing inspection plugs and windows at all locations as per drawing, specifications and instructions of site in charge of respective unit.
11. Keeping the work place clean and tidy during course of execution and cleaning the work site including Vacuum cleaning (vacuum cleaner is in BCPL's scope) after attending any inside insulation / refractory repair, if required, to full satisfaction of site in charge of respective unit .
12. Any other incidental/intermediate/ancillary or any enabling work/materials not specifically mentioned in the specifications but necessary for the execution and completion of work as envisaged in the tender document.
13. The contractor shall have to complete the job within the specified time period, as per the instruction and up to the entire satisfaction of site in charge /unit incharge/EIC.



14. If the contractor fails to execute the job in time, same shall be required to carry out by some other third party, at the cost and risk of their own.
15. If any deviation is required from the above specified conditions by the party, the same shall be submitted in writing by the party. The same may be incorporated in the scope of work and related conditions, and a suitable amendment order shall be issued to that effect, if the same is acceptable to BCPL.

2.1 SCOPE OF SUPPLY:

2.2 BCPL'S SCOPE :

- Opening and boxing up of man way and inspection way will be done by BCPL.
- Unless specifically mentioned in the Schedule of rate, BCPL will not supply any material for this work. All material will be in the contractor's scope of supply.
- Heavy equipment like Crane, Tractor Trailer, Hydra, Fork- lifts etc and workshop facilities shall be provided by BCPL on **chargeable basis**, if available, for execution of SOR items smoothly whenever required as per sole discretion of EIC. However contractor has to make his own arrangement in the event of non-availability of above facilities without cost to BCPL.

2.3 CONTRACTOR'S SCOPE OF SUPPLY:

The procurement and supply, in sequence and at the appropriate time of all materials and consumables required for completion of work shall be entirely the contractor's responsibility and quoted rates for work shall be inclusive of all such items.

The contractor's scope of work supply shall include the following major items but not limited to the same:

- Basic insulation materials as specified in **Technical Specifications Nos.: 1, 2, 3 & 4 in attachment.**
- Spacer rings, trays, with ceramic millboard, MS/Aluminum bands, ceramic blanket and rope, cement etc.
- Plain Aluminum/GI sheet and/or corrugated sheets for cladding as applicable.
- GI wire and GI wire mesh.
- Aluminum foils.
- GI/S.S. stitching and lacing wires
- GI bolts, nuts, studs, self-tapping screws, washers etc.
- Moisture barrier as per specification.
- Steel scaffolding wherever required.
- Glass cloth, vapor sealing and filler materials, bituminous felt strips, and bituminous mastic.
- Safety tools and tackles for workmen.
- All other items not mentioned above, but covered in applicable standard/drawings, Schedule of rate and technical specifications.

The scope of work envisaged under this contract is insulation works as per specifications, Drawings, codes, standard practice etc. It is however explicitly understood that the scope as described in tender document is not limiting, in so far as the responsibilities of the Contractor are concerned and shall include, carrying out any and all works and providing any and all



facilities those are required in accomplishing an operating system, complying fully with all requirements as are envisaged of it, complete in all respects and satisfying all performance and guarantee requirements stated or implied from the context of the tender document.

TECHNICAL SPECIFICATION NO: 1



STANDARD SPECIFICATION FOR COLD INSULATION OF VESSELS, PIPING AND EQUIPMENT

1.0 SCOPE

This specification covers technical requirements and produces for the applications of self extinguishing type insulation (rigid polyurethane foam) to vessels, equipments, heat exchangers, pump, piping and instruments.

2.0 GENERAL REQUIREMENTS

2.1 Insulation shall be provided to all vessels, equipments, heat exchangers, columns rotary equipments, piping, etc. containing fluids or vapor, for which it is necessary to:

- a) Maintain low temperature for process control.
- b) Avoid surface condensation.

2.2 Protection of Material during Storage:

Insulation material must be protected against any damage, from delivery to finish cladding; decking and covering with tarpaulins alone are not considered sufficient protection from weather for any length of time and shall not be permitted. Insulation material slabs and sections shall be stored on a flat surfaces in a horizontal position, insulation materials shall never be stocked directly on the ground. The contractor shall provide covered storage for insulation material as directed by the Engineer- in – charge.

2.3 Protection of Partially Completed Jobs:

All precautions shall be taken to ensure that each day's work is vapor sealed and cladded during erection and before being left over night to prevent seepage of water into the materials and getting trapped. The system shall be protected by tarpaulins, water shed and other protective means.

2.4 Hydrostatic Test:

Insulation shall be applied on vessels, heat exchangers, piping and other equipment only after successful completion of hydrostatic test. In case insulation work start before completion of hydrostatic test, all welded and mechanical joints shall be left exposed for testing and subsequently insulated after successful completion of the hydrostatic test.

2.5 Co- Ordination with Other Agencies:

Contractor shall work in close co- ordination with the erection contractor. Wherever temporary supports are provided the contractor shall remove these and provide the necessary insulation wood blocks.

2.6 Extent of Insulation:

2.6.1 Items Requiring Insulation are specified in the piping line schedule and equipment/vessel/heat exchanger data sheet.

2.6.1.1 All attachments and projections such as vessels supports structural steel attached to vessels, piping hanger supports, instrument connections connected directly to cold insulated piping, vessels and equipment, shall be cold insulated upto a distance of 4 times the adjoining



insulation thickness.

2.6.1.2 All flanged joints, manhole covers, etc, shall be cold insulated with removable box insulation.

2.6.2 Items not Requiring Insulation

2.6.2.1 Bonnet of valves above the packing glands.

2.6.2.2 Nameplates, stamping and code inspection plates on vessels & equipments.

3.1 INSULATION MATERIAL:

3.2 General

All material used for insulation , fixing, sealing and portion shall be new and all insulation material whether dry or wet shall be non- corrosive to the surfaces insulated.

3.3 Insulation material for insulation piping, vessels and equipment in cold service shall be given below.

Operating temperature range	Insulation material
-180°C to $+80^{\circ}\text{C}$	polyurethane foam.

3.4 Form of insulation shall be as follows: Preformed Pipe Section / Slabs / Radial Lags/ Cast In Situ (non preferred).

3.5 Dimensions of preformed sections for piping insulation shall be seined by the outside diameter and insulation thickness. Tolerances for preformed sections shall be as under:

Outside parameter	-0%, + 5%
Concentricity	+3% OD
Bore	+2mm
	-0 mm
Length width and thickness slabs.	+2mm

3.6 The material used shall not disintegrated, settle, change it's from composition, in a detrimental way, at the services conditions.

3.7 The insulating material shall be chemically insert, moisture free, rot and vermin proof.

3.8 Preformed half section and slabs shall be provided having their longitudinal and circumferential forces flat and smooth so as to make with the mating sections at the whole ends of the preformed half sections shall be flat and perpendicular to the centre lines.

3.9 Polyurethane Foam:

3.9.1 The insulation material shall be rigid preformed cellular urethane foam of self extinguishing type of accordance with ASTM C 591, Type II, Grade 2 or applicable Indian standards.

3.9.2 Composition



The insulation material shall be produced by reacting poly Isoocyanates with polyhydroxy compounds and expanded with a fluorocarbon blowing agent. The finished foam of slobbs or half sections shall be uniform closed shell structure, free from unrelated materials shrinking and deformation.

3.9.3 Density

The density of finished foam shall be within 35.0 kg/M³ TO 39.9 KG/m³ and shall be determined in accordance with ASTM C-302 or applicable Indian standards.

3.9.4 Thermal Conductivity

Thermal conductivity of the polyurethanes foam slobbs and sections shall not exceed

0.019 K Cal /hr.m degC (0.16 BTU/ft² hr °F/in) at 10 deg c mean temperature after ageing. The thermal conductivity shall be tested by the method prescribed in ASTM C 335 or applicable Indian standards

3.9.5 Closed Cell Contents

The closed cell contents shall be at least 95% by volume. Material test certificate shall be submitted along with supply of material.

4.0 ANCILLARY MATERIALS:

4.1 Wire Netting, Lacing & Binding Wire:

Wire netting shall be galvanized 24 SWGx20mm to secure insulation blocks. Lacing and stitching wires shall be 22 SWG galvanized iron wire respectively.

4.2 Bands:

Bands shall be aluminum, of dimensions 20 mm width x 24 SWG, unless specified otherwise.

4.3 Adhesive:

The adhesive to be used for bonding polyurethane sections shall be of foster / Microplast / Equivalent compatible for -180⁰C to 80⁰C.

4.4 Vapour Seal

The vapour seal for polyurethane insulation shall be foster fire retardant mastic 60-30 or equivalent grade. In case of non-availability of foster's mastic, bitumen emulsion mastic inculcate grade T-12 or equivalent shall be as an alternative.

4.5 Filler Material

Polyurethane foam dust mixed with specified adhesive shall be packed tightly so as to fill irregular voids and at contraction joints.

4.6 Joint Sealer

The joint sealer to be used for sealing polyurethane insulation joints and at flashing of insulation shall be foster foam seal sealer 30-45 or equivalent.

4.7 Glass Cloth:



The glass cloth to be used for vapour barrier reinforcement shall be open weave 10 mesh glass cloth having glass fiber thickness of 5 mils.

4.8 AI sheets for cladding over the insulation:

Application

AI sheet gauge

a) For column, vessels and equipment

24SWG

b) For pipes, valves, flanges and other areas where

22 SWG

Mechanical damage is likely to occur. Slight modification may be done as per the instructions of BCPL.

4.9 Anti Corrosive Paints:

Deleted.

4.10 Bituminized Roofing Felt

Bituminized self finishing roofing felt shall confirm to IS 1322, type 3, grade 1.

5.1 APPLICATION

5.2 General

The following applies to all types of cold insulated equipments and piping.

5.2.1 Surface Preparation

The surfaces of tanks, vessels, piping and valves etc, on which cold insulation is to be applied, shall be free of duct, loose point of any other foreign matter. The surface irregularities shall be filled up with approved filler. One coat of anti corrosive primer shall be applied over the carbon / alloy steel surfaces to be insulated and allowed to dry before application of insulation. Application of Anti corrosive paint/primer is not in the scope of insulation contractor.

5.2.2 Insulation Thickness and Limit

Insulation thickness shall be in accordance with the equipment data sheet and piping line schedule.

5.2.3 Vapor Barrier

A 3.0 mm (wet) thick coating of vapour seal mastic shall be applied to the surface of the insulation as soon as possible after erection, to reduce the time the insulation is exposed to the weather to minimum. Whilst this coat is still wet glass cloth shall be laid over the surface and embedded in the mastic. Care shall be taken to ensure that the glass cloth is laid smooth and free from wrinkles, and that no pockets of air are trapped beneath the surface. At junctions in the glass cloth, the overlap shall not be less than 75mm. a second 3mm thick coat of mastic shall be applied after approximately twelve hours. When dry, this coating shall be minimum of 1.50mm thickness. Care must be taken, however to ensure that the individual coats are not greater than 3mm (especially in corners); otherwise same cracking of dried coat may result. The total dry film thickness of vapour seal shall not be less than 2.05 mm with a tolerance of - 0% to +50%. The mastic shall not be applied over wet insulation or until the adhesive is dry. During this drying time that insulation shall be protected from the weather by alkotheene' film tarpaulin or similar materials approved by the engineer – in – charge.



Where joints have been left un-insulated, a complete vapour seal as specified above shall be applied to the exposed end of the insulation and flashed weather tight on to the metal.

5.1.3 Expansion/Contraction Joints :

When specified on a pipe line or vessel drawing or where deemed necessary to allow movement and contraction of the pipe or vessel without producing random cracking of the insulation, contraction joints shall be provided in the insulation. at contraction joints location , provision shall be made in GI cladding to accommodate contraction of pipe or vessel.

The following steps shall be taken:

- a) Both longitudinal and circumferential joint in insulation shall be staggered.
- b) Contraction joints shall be providing at an interval depending on a pipe or vessel material contraction / expansion co –efficient and temperature. Unless otherwise specified contraction joints shall be provided at an interval of 6.0M a straight run of pipes or vessels operating at temp. - 40deg C & below.
- c) Contraction joints in horizontal vessel insulation shall be close to support point while on vertical pipes & vessels, the same shall be provide of support ring location and at interval of 4.0M straight run.
- d) A contraction joint shall consist of 12mm gap in the insulation, loosely packed with filter material, to a depth of 6mm less than the adjacent insulation thickness. 6mm gap thus left shall be filled up by approved non-setting compound (foster foam seal 30-45 sealer or equivalent) and finished smooth with the surface of insulation. Vapour barrier which shall cover the joint shall be applied only after the compound has dried. Expansion / contraction joints.

5.1.4 Stainless steel piping & equipment :

All pipes vessels and equipment of stainless steel construction shall be wrapped with 0.1 mm thick aluminum foil with an overlap of 50mm having barium chromate sealer interposed in the joint prior to application of insulation. Foil shall be secured in position by aluminum bonds, taking every precaution to avoid formation of pinholes or cracking in the aluminum foil. Cladding shall be done after the insulation and vapour barrier exactly the same way as for other pipes and equipment.

5.1.6 For all pipes , vessels , equipment etc lying in a corrosive environment where sulphur dioxide or other corrosive media are likely to be present stainless steel bonds / clips shall be used to secure aluminum cladding in position.

5.1.7 Field Welding

Deleted.

Any type of the welding related to insulation work is not in the scope of insulation contractor.

5.2 Application Vessels & Equipment

5.2.1 General

Individual vessel and tank drawings indicate the location of insulation supports furnished by the owner. However additional supports are exchangers where ever required, to facilitate application of insulation and securing of insulation shall be provided by the contractor at his own cost. All surfaces shall be prepared before application of insulation.



5.2.2 Single Layer Insulation

Insulation radical lags / performed sections/slabs of handy sizes shall be installed on to the surfaces of vessels adhering to each other with applicable joint sealer and secured in position by G.I wire netting and aluminum bands at an interval of 225mm. There shall be no through joints and the insulation shall not be banded to the vessel.

5.2.3 Multilayer Insulation

The inner layer of insulation shall be bonded to the vessel with the applicable adhesive. Subsequently layers of insulation shall be bonded to the preceding layer, with the applicable adhesive. The joint sealer shall be applied to the ends and edges of all sections, including those in the inner most layer to seal all joints. Core shall be taken to ensure that the adhesive is evenly spread over the entire surface of application and the insulation is closely butted to each other both longitudinally and circumferentially.

All the layer except the final shall be secured in position by metallic bands at an interval of 225 mm while the final; layer shall be first secured with G.I wire net and than with metallic bands at an interval of 225 mm. Bands shall be staggered on successive layers. There shall be no through joints in the insulation.

5.2.4 Filling

All the cracks and voids in the main insulation shall be filled up with applicable fillers material.

5.3 Vertical Vessels

5.3.1 Shell (Cylindrical)

Slabs in handy sizes as given below shall be applied resting onto the supports with joints tightly butted, staggered & adhering to each other with applicable adhesive and secured in position by circumferential metallic bands at a pitch of 225mm.

For vessels upto 2.5M O.D. – radical lags of suitable width. For vessels over 2.5M

O.D. – radical lags, however the procedure given below can be used as an alternative.

Flat insulation slobbs of width not more than 300 mm shall be cut longitudinally to have notch (s) of suitable size spaced at suitable spacing, so as to form a radical segment suitable size spaced at suitable spacing, so as to form a radial segment suitable for the profile of the vessels shell. However extreme care shall be taken to ensure that no air pockets are formed in the finished insulation. All insulation joints shall be sealed with applicable joint sealer.

Where more than one layer is used, each layer shall be banded separately.

5.3.2 Top Heads

Shaped insulation sections shall be installed on top head, bonded and butted tightly to each other. Insulation shall be held in position by making use of galvanized iron floating ring (25mm x 0.6 mm) placed over the insulation and positioned in the centre of the head so as not to touch the nozzle at the vortex. The insulation shall be held in position by use of radial metallic bands, one end of which shall be fastened to the floating ring and the other end shall



be anchored to the bond (s) place around the cylindrical section close to the head. Radial bands shall be spaced on 300 mm centre measured around the circumference of the vessel.

The final layer of insulation shall be held in position also by metallic wire net locked at the nozzle location by 2-3 loops of 10 SWG galvanized wire and to the wire net over insulation on the shell at the cylindrical section close to the head.

When there exists no nozzle at the top of the vortex, the insulation shall be held in position by wire netting and metallic bonds stretched over the head and on chord on the cylindrical section close to the head by circumferential metallic bonds (s) on the shell and near the head.

5.3.3 Bottom Heads:

In all the skirts supported vessels insulation supports are provided inside the skirt. Floating ring and wire loops around the nozzle and bonds shall be used to support downward facing of insulation. Such floating ring shall be positioned centrally around the nozzle but over the insulation by radial bonds on chord to the logging support angle ring fixed inside the skirt at the pitch of 300 mm measured over the support angle ring.

If nozzle does not exist, metallic bonds shall be stretched across the bottom head and on chord with logging support angle ring inside the skirt. All the wire ends of wire netting shall be cut short and turned into the insulation.

5.4 Horizontal Vessels

The insulation radical logs handy sizes shall be installed in close contact with the faces to be insulated and held in position by G.I wire netting and metallic bands at a pitch of 225mm. where more than one layer is required, each layer shall be banded separately. The bands for successive layer shall not coincide with each other. Wire netting on the final layer shall be applied and ends shall be laced together by lacing wire before putting the metallic bands. Insulation sections on the vessel heads shall be secured in position by wire netting and metallic bands stretched across the heads and anchored to circumferential metallic band(s) on the shell near the heads. Anchoring of bands measured on the circumference of shall be at a pitch of 225 mm.

5.5 Tank Insulation

Material and method of application for tanks shall be the same as specified for vessels. Flat GI sheets for weather proofing shall be used exactly in the same manner as specified for other vessels.

5.6 Spherical Vessels

Before commencing the application of insulation, the contractor shall ensure that exterior surfaces have been prepared. Shaped insulation to fit curvature of sphere shall be bonded to the vessel with applicable joint sealer,. The inner layer of insulation shall be held in position by 20mm x 20SWG aluminum bands at 300 mm max. Centers at the equator. These bonds are filed up with the floating rings of 180mm dia made of 15mm dia .S.S rod at top and bottom of the sphere. The bands being staggered on successive layers and the clips of the bonds being recessed into the insulation over the outer layer, galvanized wire netting shall be spread over and laced together.



5.7 Vapour Barrier

Vapour barrier shall be applied on all the vessels as described above.

5.8 Metal Sheet Finishing

5.8.1 Horizontal Vessels

The insulation shall be covered with Aluminium sheeting with all the longitudinal and circumferential joints having an overlap of minimum 50mm. All longitudinal and circumferential joints shall be sealed with suitable approved bituminized mastic sealer. Aluminum sheeting shall be secured in position by metallic bands on the shell at a max. Pitch of 425mm. All the longitudinal joints with overlap of 50mm in the aluminum sheet shall be kept below the horizontal plane passing through the axis of the vessels to prevent water or the spillage from entering into the insulation.

Jacketing for dished heads shall be fabricated from radial segments with the radial overlap of minimum 50mm the sheeting shall be secured in position by radial tensioned metallic band stretched over the heads. One end of each band is anchored to the circumferential band(s) on the shell while the other is fastened (pop rivetted) to 6 mm dia. Floating rod ring which can be replaced by 6mm. thick strip (G.I.) rolled in the form of a ring. Radial metallic bands, measured over the circumference of shell, shall be a pitch of 300mm. all the sheet metal joints shall be properly sealed with approved sealing mastic.

5.8.2 Vertical Vessels

The Aluminum sheeting shall be adequately rolled and installed over the insulation such that all the longitudinal joints are staggered. All the longitudinal and circumferential joints shall have an overlap of 50mm minimum and suitable sealed with approved mastic sealer. Aluminum sheeting shall be secured in position by tensioned metallic bands installed circumferentially at a max. pitch of 425mm.

5.8.2.1 Top Heads

Insulation shall be covered with flat aluminum jacket fabricated in segmental form with lapped joints properly sealed with approved mastic sealer. Over lapping of sheet metal joints shall not be less than 50mm. Aluminium jacket shall be secured in position by radial tensioned metallic band (s) of vessel on one side and fastened to 6mm dia. Floating rod ring, centralized at the vertex of head on the other side. 6mm thick metallic strip rolled into a ring can be the substitute 6mm dia rod. Pitch of radial bands measured over the circumferential bands of shell shall be max. 300mm.

5.8.2.2 Bottom Heads

Aluminum sheeting shall be installed exactly in the same manner as indicated for the top heads.

5.8.3 Spherical Vessels

Cladding of each hemisphere of spherical vessel shall be done with GI sheets placed horizontally and a thick circumferential tensioned band (6mm thick) shall be used at the equator to hold the radial metallic bands.

5.8.4 Others



Opening in metal jackets for nozzles, man ways, brockets etc. shall be cut as close as possible for a snug fit.

5.9 Flashing

All opening through insulation finish shall be flashed weather tight particularly where connections are not insulated. Flashing shall be carried out. Skirt supported vessels shall have the skirt insulation inside and outside for at least 600mm below the tangent line or such that temp. of adjacent non insulated surfaces of the skirt shall not be below dew point . Proper flashing and sealing shall be done on skirt where insulation and subsequent metal finish terminate.

5.10 Exchanger Insulation

Exchanger shells except for channel and channel shall be insulated and weather proofed as specified for vessels. Exchanger channels and channels cover including flange bolting shall be insulated with removable aluminum covers lined with insulation slobbs of required thickness.

5.11 Machinery

In general, removable aluminum boxes lined with slab insulation of required thickness shall be used for insulation of machinery after giving a coat of individual pieces of equipment depending on the nature of items to be insulated to the site – in- charge at site for approval.

5.12 Application-Piping

5.12.1 General

Insulation shall be applied on after ensuring that piping to be insulated is properly installed, supported and tested.

5.12.2 Horizontal Piping

5.12.2.1 Piping surface shall be cleaned of loose rust, mill scale, grease, dust or any other foreign contamination and surfaces preparation shall be done.

5.12.2.2 The insulation shall be applied to pipes in half round sections/slabs in reasonably handy sizes. Where insulation thickness required is greater than 50mm or that the metal temp. is below -40 0c , multilayer construction shall be followed with all the joints staggered in successive layers.

5.12.2.3 The inner layer of insulation shall be bonded to the piping with applicable adhesive. Subsequently layers of the insulation shall be bonded for the preceding layers with the above adhesive. Joint sealer shall be applied to the ends and edges of all sections for sealing all longitudinal and circumferential joints. Adhesive shall be applied evenly and the half sections shall be closely butted to each other both longitudinal and circumferentially.

5.12.2.4 All the insulation layers except the final shall be secured in position by metallic band of an interval of 225 mm, while the final layer shall first be secured with GI wire netting and than metallic bands at an interval of 225mm. Bands shall be staggered on successive layers.

5.12.2.5 Insulation of piping shall be stopped short to flanges to allow for withdrawal of bolts for fitting, the insulation shall be completed by applying cut segments of the same insulation sections/slab used for pipes.

5.12.2.6 Any cracks or irregularities in the external surface of insulation sections shall be filled up by



applicable fillers material.

5.12.2.7 For long run of pipes, the ends of insulation sections shall be seated of at 12M intervals and vapour barrier carried down up to the material surface.

5.12.2.8 Contraction joints shall be provided at an interval of 6.0 M.

5.12.3 Vapour Barrier

Vapour barrier shall be applied over the insulation.

5.12.4 Metal Sheet Finishing

Vapour barrier (after it has dried) shall be protected by cladding in with specified aluminum sheeting. All joints between adjacent aluminum sheets shall be staggered and grooved with a minimum overlap of 25mm, and suitable sealed with approved sealer. The longitudinal joints shall have single grooves while the circumferential joints shall have two grooves. GI bands / clips at an interval of 425mm shall be used to secure the aluminum cladding in position. self trapping screws shall not be used.

For pipes, vessels and equipments lying in a corrosive environment where sulphur dioxide is likely to be present, stainless steel bonds / clips spaced at intervals of 425mm shall be used to secure the aluminum cladding in position.

5.12.5 Vertical Piping

Insulation, vapour barrier and metal sheet finishing shall be performed as specified for horizontal piping. Contraction joints shall be provided.

Insulation support / spacer rings shall be provided at an interval of 4.0M. (If other insulation supports are not ready existing on the pipe).

5.12.6 Pipe Supports & Hangers

In all supporting arrangements of both horizontal and vertical piping, dry hard wood pipe support bearing blocks coated with fire retardant point / mastic shall be used. Metal cradles, metal pipe supporting and hangers shall be attached to outside of the pipe support bearing blocks are not directly to bore pipe.

Provision shall be made to prevent seepage of water into the insulation from pipe hangers.

5.12.7 Flanges & Valves

Removable covers shall be provided over all flanges and valves. Loose fill mineral wool backed up by slab insulation of thickness equal to that on adjacent pipe shall be applied. Aluminum covers over the valves and flanges shall be fitted with quick release clips. This application shall be proposed for each case by the insulation contractor and approved by the BCPL.

6.0 COLD INSULATION OF PIPING LOCATED AT OR BELOW GROUND LEVEL AND WHERE THERE IS A LIKELYHOOD OF FOOT TRAFFIC.

6.1 Material of insulation shall be slab polyurethane.

6.2 Bituminized self finishing roofing felt shall be wrapped over the final layer of vapour



barrier after it has fully dried, with an overlap of minimum 50mm both an longitudinal and circumferential joints.

- 6.2.1 The roofing felt shall be secured with the specified galvanized iron wire netting, laced with 20SWG galvanized iron wire.
- 6.2.2 A 3mm thick bitumen emulsion mastic shall be applied for water and weather proofing.
- 6.2.3 When bitumen emulsion has completely dried, the surfaces shall be painted with two coats of bitumen based aluminium paint.

7.0 SAFETY

The insulation contractor shall provided adequate protective applications like banned gloves , masks , glasses etc, to the workman carrying out the insulation work, to protective them from in holing and touching insulation dust and fibers.

8.0 GUARANTEE

- 8.1 The insulation contractor shall submit along with the work, authentic test certificate confirming that the insulation material offered confirm to the requirements of this specification and the standards mentioned therein. Any deviation shall be clearly stated.
- 8.2 The insulation contractor shall guarantee the following.
 - 8.2.1 The insulation and ancillary material are new and unused and confirm to the standards mentioned in the specification.
 - 8.2.2 The operating thermal conductivity shall be as specified.
 - 8.2.3 The workman ship in execution of the insulation works shall be accordance with sound engineering practice.

NOTE: REFER EIL SPECIFICATION NO: 6-44-03 REV-1 SHT: 27 OF 44 TO SHT 44 OF 44 FOR COLD INSULATION OF VESSELS, PIPING AND EQUIPMENT (EIL SPECIFICATION NO: 6-44-03 REV-1) FOR DRAWINGS / SKETCHES AND TABLES AND ANY OTHER CLARIFICATION IF ANY.





ब्रह्मपुत्रक्रेकरऔरपालीमेरलिमिटेड
(भारतसरकारकाउपक्रम)
Brahmaputra Cracker and Polymer Ltd.
(A Government of India Enterprise)

STANDARD SPECIFICATION FOR HOT INSULATION OF VESSELS, PIPING AND EQUIPMENTS



TECHNICAL SPECIFICATION NO: 2

STANDARD SPECIFICATION FOR HOT INSULATION OF VESSELS, PIPING AND EQUIPMENT

1.1 General

1.2 Scope

1.2.1 This specification covers design and material requirements for above ground , external insulation of piping and equipment operating between ambient temperature and 550⁰c for the purpose of heat conservation , process stabilization , temperature maintenance , personnel protection and fire protection . Where necessary this specification indicates the basis for selecting a criterion.

1.2.2 This specification is suitable for use in outdoor services with normal process plant atmosphere. Alternative designs and materials would be specified by owner if necessary for corrosive atmosphere or potential leaks and spills of chemicals.

1.13 All the codes /standards mentioned in this specification shall be latest issue.

2.1 Design Basis

2.2 Criteria :

2.1.1 Heat conservation insulation is designed for economic thickness and to limit cold surface temperatures below 65⁰c with 20⁰c ambient temperature in still air conditions.

2.1.2 Insulation is not desired for piping and equipment for which heat loss is desired – excepting for personnel protection or to avoid thermal stress problems.

2.1.3 Insulation is required for any of the following purpose , Heat conservation Process stabilization to assist process control Steam tracing Electric tracing Hot water or solvent tracing (liquid) Hot oil tracing Steam jacketing Hot oil jacketing Fire hazard protection to prevent fast boil off the liquid.

2.13 Personnel protection applicable where exposed surface temperatures exceed 65⁰c in normal or short term operating conditions. Over internally insulated piping and equipment, provide open mess metal guards and for surfaces which are not internally insulated provide insulation on that part of surfaces with which operating and maintenance personnel may come in contact while performing routine duties. The actual extent of insulation shall be determined by field construction Personnel and / or operating Personnel using the following criteria: exposed surfaces operating above 65⁰c and located within 600 mm horizontally or 2100mm vertically of a normal access, walkway or work area.

2.1.4 Instruments and associated piping subject to operating flow and / or temperature conditions prevailing in the connected piping or equipment shall be insulated to the same requirements as that of piping equipment.

2.2 Extent of Insulation on Piping Systems.:



2.2.1 Insulated piping systems shall have straight pipe, bends, tees and pipe fittings completely insulated.

2.2.2 All valves and flanged joints shall be completely insulated only in steam, condensate service. Hot oil lines and in lines which are trace heated or jacketed to maintain temperatures.

2.2.3 For bucket and float type traps the inlet piping trap shall be insulated.

2.2.4 Insulation on inlet piping to thermostatic and thermodynamic steam trap shall terminate at approximately 500mm before the trap.

2.2.5 Steam trap outlet piping other than closed condensate recovery system shall not be insulated except for personnel protection reasons.

2.2.6 Instrumentation to be insulated, such as a level gages, level controllers, level switches, dip cells, shall have their fluid containing sections and the associated piping completely insulated, including pipes, valves and fittings.

2.2.7 Insulation shall be designed to provide an absolute minimum clearance of 25mm between the outside surface of any insulation finishing material and adjacent surfaces.

2.2.8 Where insulated horizontal piping is supported on steel shoes, the height of the shoe shall be such that the underside of the insulation finishing material is clear of the supporting structures upon which the shoe rests by 25mm minimum.

2.3 Extent of Insulation on Equipment's:

2.3.1 Support skirts of insulation vertical vessels greater than 1200mm diameter shall be insulated both internally and externally for a minimum distance of 600mm below the bottom tangent line. The insulation shall terminate not less than 300mm above the support concrete or steel work. Support skirt of insulated vertical vessels of 1200 mm and less shall be insulated externally only.

2.3.2 Bottom heads of insulated vertical vessels enclosed by a support skirt shall be insulated only when the vessel outside diameter is greater than 1200mm.

2.3.3 Turbines and steam ends of reciprocating pump shall be insulated for heat conservation.

2.3.4 Liquid ends of pump shall be insulated when heat traced or jacketed.

3.0 Materials :

3.1 General

3.1.1 All material shall be of high quality and good appearance. This specification covers materials – mineral wool, glass wool, rock wool, calcium silicate, ceramic fibre, etc.

3.1.2 Insulations materials shall be of low chloride content , chemically inert , non- sulphurous , rot proof , vermin proof, impervious to hot water and steam , non – injurious to health and non corrosive to steel and aluminum (even if soaked in water at ambient temperatures for extend periods).

3.1.3 The use of insulation or finishing materials containing ASBESTOS in any form is not permitted.

3.1.4 Insulation and jacketing material backed with paper or other flammable material is not acceptable.



3.1.5 Many common flammable liquids such as oil butanol, diethanolamine and hexonal will react and start fires when they leak into inorganic absorbent insulations. Such absorbent insulations can store large quantities of combustible liquids should a leak occur.

3.1.6 Insulation materials have been classified into two categories – water absorbing and non water absorbing. Non water absorbing insulants like polyisocynurate and cellular glass are recommended for services 12 up to 125⁰c. Water absorbing insulants like ferrous insulants and calcium silicate can be used for all temperatures except for electrically traced pipe. But for low temperature (i.e. upto 125⁰ c) services a suitable moisture barrier shall be used since the service is too low temperature evaporate moisture, rain or hose water absorbed.

3.17 No inflammable material shall be attached to the insulation.

3.18 Dimensions and Dimensional tolerances for pipe sections, mattresses & slab shall be generally be as per respective codes unless otherwise mentioned .The number of pieces to be used shall be as less as possible .When installed the insulation shall fit snugly and shall have a tight joint.

3.19 For low operating temperature (up to 125 deg C) services a suitable moisture barrier shall be used.

3.20 For electrically heated application polyurethane foam (PUR) or Polyisocynurate (PIR) blocks shall be used in combination, with Rockwool as inner layer.

3.2 **Insulation Material:**

3.2.1 **Fibrous Material (Rockwool & Glass Wool)**

3.2.1.1 Shall be a performed insulation and shall be of long fibred rock or glass material processed from a molten state into fibrous from bonded with a binder and suitable for the intend operational temperature range from ambient to 550⁰c . Slag wool is not acceptable.

3.2.1.2 Unless otherwise specified herein, insulation material shall strictly conform to all the requirement of quantity standards listed below.

Performed pipe insulations : IS: 9842: latest issue/ASTM C547 TYPE II or
TYPE III.

Metal mesh covered bonded : IS :8183/ ASTM C592 CLASSII for piping &
equipment

Mineral fiber blanket & : Blanket shall be faced on one side with 20mm Blanket type
pipe insulation galvanized no.22 SWG. Wire mesh, stitched through with
22 SWG . galvanized lacing wire Mattress for lined covers shall be faced on one side with 20mm
galvanized 22SWG wire mesh stitched through with 22SWG galvanized lacing wire. Blanket (mattress)

Bonded Mineral fibre slab insulation : IS: 8183 latest issue

Mineral fiber blocks & board thermal insulation. : ASTM C612 TYPE IV/ TYPE V.

3.2.1.3 Insulation shall confirm to following requirement and shall tested and test certificate on representative samples furnished to GIL.as per IS : 8183/IS: 9842 (latest issue) for conformance



to each of the following requirements.

Density 140 to 150kg/m³ (density shall be within this range and density test shall be as per IS: 5688/ IS 3144(latest issue)

Shot content Shot shall not be more than 5mm in any dimension: shot content, (IS 3144) when sieved as follows, shall not exceed as per below:

IS sieve: shot content, percent (IS: 460 by mass (max.) latest issue)

500 micron 5

250 micron 15

Moisture content) & Moisture absorption) not more than 2%.

IS : 3144)

Incombustibility Incombustible loss in weight IS : 3144 not more than 3%

Thermal conductivity (IS : 3346)K

* Mean Temperature °C

Thermal Conductivity mw/Cm °C

50	0.43
100	0.52
150	0.62
200	0.68
250	0.80
300	0.90

* mean temperature is hot face temp. + Cold face temp.

Sulphur content not more than 0.6 percent (IS: 3144)

Linear shrinkage not more than 2 % when subjected to soaking conditions (IS: 3144) of soaking heat at the started maximum temperature of use (550⁰c) for 24 hours

Heat resistance When heated to max .temp. (550⁰ C), sample shall (IS: 3144) maintain its general form and shall not surface visible

deformation of the fibrous structure.

Compressive



Strength 120 kg/m³ for LRB blanket (mattresses) (average)
minimum at 10% deformation

Recovery after compression 'A' after compression to 75% of the original (IS: 8184- Appendix thickness, recovery shall not be less

IS: 9842- Appendix 'A) than 90% of the original thickness.

Alkalinity (IS: 8183 Appendix 'B' pH of the solution of the material shall be IS: 9842 Appendix 'B between 7.0 and 10.0

Chloride content (IS : 3144) not to exceed 20 ppm. Dimension pipe section

Hollow cylinder , split length wise on one or both sides of the cylindrical axis. Tolerance in length & thickness : +/-3mm

When insulated on the pipe of the specified size, sections shall fit snugly and shall have tight longitudinal and circumferential joint .

Blanket (Mattress)

Unless otherwise specifically required, standard width shall be 600 to 1200mm standard length 1500 to 2400mm.

Tolerance in length & thickness : +/- 3mm

Block and boards (IS: 8183) Lengths : 1000 to 1400mm Widths : 500 to 1000mm

Tolerance : width , length & thickness : +/- 3mm

3.2.2 **RIGID MATERIAL (CALCIUM SILICATE)**

3.2.2.1 Calcium Silicate :

Calcium silicate block and pipe thermal insulation shall be composed principally of hydrous calcium silicate reinforced with mineral fibers (except stag wool) in shall be asbestos free , it is suitable for all temperatures . Insulation shall conform to following requirements and shall tested and test certificates on representative samples furnished to GIL as per IS : 8154 (latest issue) for conformance to each of the following requirements:

Bulk density 200 to 280 kg/m³ to be tested as per IS: 5688



Compressive strength only .	Reduction in thickness shall not exceed 10% when (for flat surfaces tested per IS : 5688 dry under load of 415 kN/m ² this test is waived and wet (after 18 hrs immersion in water)								
for curved sections)	under a load of 170 kN/m ² Even though CL.1.6.3.4 of IS: 5688 indicates 5% deformation, test should be conduct for 10% Deformation								
Flexural strength	Average min. shall be 240 kN/m ² when tested per IS : 5688								
Heat resistance 650 ⁰ c.	when tested per IS : 5724, under conditions of soaking at for 24 hrs at max. linear shrinkage : 2% max. loss in weight : 15% compressive strength : reduction in thickness under a load of 345 kN/m ² : 10% max.								
Thermal conductivity	when tested as per IS : 3346 , shall be: <table><tr><th>mean temp. ⁰c</th><th>Thermal conductivity ax. mw/cm deg.</th></tr><tr><td>100</td><td>0.65</td></tr><tr><td>150</td><td>0.75</td></tr><tr><td>200</td><td>0.80</td></tr></table>	mean temp. ⁰ c	Thermal conductivity ax. mw/cm deg.	100	0.65	150	0.75	200	0.80
mean temp. ⁰ c	Thermal conductivity ax. mw/cm deg.								
100	0.65								
150	0.75								
200	0.80								
Moisture content	Not to exceed 7.5% by mass ,when tested as per Annex.A IS 8154								
Alkalinity	pH of the solution of the material shall be between 7.0 and 10.0 when tested for appendix B, IS : 8154								
Chloride content	not to exceed 20PPM when tested as per IS: 3134 . For stainless steels special quality, with inhibitors, with less than 10PPM								
Dimensions	Flat Blocks : shall be free from wrap . all mating faces shall be plane and edge shall be square to the surfaces and to one another Length: 500, 600 or 900mm Width: 150,300 or 600mm, Thickness : 25 , 30,40,50,60& 75 mm Beveled lag : Length: 500, to 900mm width: 150mm Thickness : 25 , 30,40,50,60& 75 mm Curved segment (radius & beveled lags) Length: 500, to 1000 mm								



Thickness : 25 , 30,40,50,60& 75 mm

For curved surface having external radius grater than 110mm

Pipe sections : hollow cylindrical shapes slit in half lengthwise (in a plane including the cylindrical axis) or as curved segements . upto 14” pipe size,only hallow cylindrical shapes silt in half lengthwise shall be used.
Length: 500, to 1000mm

Diameter : to fit standard size of pipe. Thickness : 25 , 30,40,50,60& 75 mm

Dimensional	flat block, beveled	pipe sections
Tolerance	& curved segments	
Length:	+ -3mm	+ -3mm
width:	+ -3mm	-
Thickness	+ -3mm	+ -3mm

3.2.3 High Temperature Insulation Materials (Above 550°C)

Following types of insulations may be used for high temp insulation applications.

Ceramic Fibre :

Ceramic Fibre shall be composed principally of Alumina silica fibre blanket. It should be used in the temperature range of 551°C to 760°C. Ceramic fibre blankets shall be made out of fibres having fibre length of about 10 cm or more. It shall normally be of 610 mm width, 13mm or 25mm thickness. Unless otherwise specified insulation shall conform to the requirements of ASTM C892 Type III, Grade 8 or to the specifications described in the table below. Insulation shall be tested and test certificates on representative samples furnished. Ceramic fibre blankets shall be sampled for the purpose of test in accordance with ASTM C390.

Chemical & Physical characteristics of Ceramic Fibre Blankets	Test Method
• Chemical composition (By volume%)	
Al ₂ O ₃ (Min)	43 IS 1335
ZrO ₂ (Min) -	IS-10085
Fe ₂ O ₂ (Max)	0.1 IS-1527
TiO ₂ (Max)	0.3 IS1527
SiO ₂ (Max)	57 -
• Mean Fibre Dia (Microns)	2.5-3.5 BS-2972



(Upto 3% Standard deviation)

• Dimensional Tolerance Thickness

(-) 0% to (+)40% -

Width (-) 2% (Excess is permitted) -

Length (-)0% (Excess is permitted) –

• Shot Content(% Max) 20 ASTM C-892

• Bulk Density(Kg/m³ Min) 128 ASTM C-167

• *Bulk Density Tolerance (+) 30% & (-)0%

-
• Thermal Conductivity 0.11(600°C) ASTM C-177/IS-3346
(Kcal/M/Hr/°C)**Max
(Mean Temp)

Maxim. Thermal conductivity 0.76 at 200°C for reference
m W / cm °C at 100°C mean

temp. **

• Linear Shrinkage (%) 3(1200°C) ASTM C-356
(at max temp) for
24hrs

• Tensile Strength (Kg/cm²g(min)
Longitudinal 0.6 BS 1902 part 6

Transverse 0.5

* The density shall be calculated on the basis of actual dimensions and actual weight only, as offered by the manufacturer.

**In case of thermal conductivity Please also refer Thermal Conductivity Values at different mean Temperatures

3.2.4 Insulation material for Impulse lines and small dia pipe below 1 ½ Inch



Ceramic Fiber Rope for Insulation of Impulse / Small dia pipelines (1 ½ inch & below) as per IS: 15402 .For impulse lines insulation material shall be Ceramic fiber rope insulation unless otherwise mentioned. Ceramic Fibre rope shall be made up of Ceramic Fiber insulation of min density 250 Kg/m³. It shall comprise of ceramic fibers laid parallel and finally wrapped with stainless steel wire to reinforce the fibers and holding it in position. Other properties of ceramic fibre shall conform to the specifications as described in clause 3.2.3(1).

For Small dia pipes of 1½ inch & below Ceramic Fiber rope may also be used (approximate size of rope 19 mm size rope) and covered with Aluminum tape wherever exposed to open atmosphere.

Note: Ceramic fiber rope insulation for Impulse line:

Size layer (Impulse line)	Temp	No. of Ins layers	approx. indicative thickness of each layer
½”- 1 ½”	up to 250degC	1	19mm

Measurement shall be made in running meter of the actual ceramic fiber ropes use in insulating the pipeline or impulse line and payment for the same shall be done accordingly.

3.2.3 General:

Periodical checks for density, thickness, shape and size as per above requirements shall be repeated at site, as per norms and frequency decided at site, as per the direction of BCPL site- in-charge for the job at different section of the unit. Special attention is required for fibrous material as its installed thickness could be reduced due to compaction affecting performance.

All the codes mentioned shall be the latest issue.

BCPL shall have right to inspect any or all the tests conducted on insulation material by manufacturer at his shop or any laboratory.



3.3 **Weather protection jacket:**

3.3.1 Unless otherwise mentioned, Aluminium jacketing shall be used as weather protection over insulation unless otherwise specified except Fire hazardous area /above 550 degC where it should be stainless steel or Aluminized steel. For grade piping in off sites jacket material shall be galvanized steel. Aluminum shall be ASTM B209 alloy 3003 H16 or IS : 737 designation 31000 (old NS3) condition H3 for flat sheets and designated 31500/51300 condition H4 for corrugated sheets. (or applicable Indian standards shall be followed) . For stainless steel cladding the material shall be in accordance with ASTM A167 or A240 type 304. For aluminized steel cladding, the material shall be in accordance with ASTM A463, type 2, coating designated T2-100. GI shall be as per IS 277 Cladding shall be coated on the side in contact with the insulation with the bitumen anti- corrosive paint. Cladding (other than galvanized steel) shall be coated on the side in contact with the insulation with a polycraft moisture barrier consisting of one layer of one mil high density polyethylene film with a protective layer of 40-pound minimum virgin kraft paper. Polykraft moisture barrier shall be heat laminated and applied in factory. Thickness of the jacketing shall be as follows:

3.3.1.1 Fibrous Material (Mineral wool-Rock & Glass Wool)

For shell of vertical storage tank and vessel, : 22SWG or 0.71 mm corrugated ,The profile of corrugated sheet shall be 32mm,5mm and whereas in Stainless steel/Aluminized steel cladding 0.56 mm (24SWG) corrugated the profile shall be 32mm,5mm

Tank Roof: 1.22mm (18SWG) Flat, and whereas in Stainless steel/Aluminized steel cladding 0.91mm (20 SWG) Flat.

Horizontal vessel shell and heads, vertical vessel heads, exchanger etc. : 22SWG or 0.71 mm Flat Stainless steel/Aluminized steel cladding 0.56 mm (24 SWG) Flat.

For removable covers Thickness for Aluminum cladding (other than grade piping in off sites 1.22mm (18 SWG) Flat Thickness for Stainless steel /Aluminized steel cladding 1.22mm (18 SWG) Flat.

For all pipelines, equipment's ,including valves and flanges steam traps etc : Aluminum cladding 0.71mm (22 SWG) Flat and for Stainless steel/Aluminized steel cladding .56 mm (24 SWG) Flat .

Note for grade pipelines in offsite including valves, flanges etc: Al .71mm (22 SWG) however if required 0.56mm (24 SWG) Galvanized steel (as per discretion of site in charge).

3.3.1.2 Rigid material (calcium silicate)

For pipelines, equipment's, vessels, tanks, spheres, columns, valve, Flanges, exchangers: AL (22 SWG) Flat. for Stainless steel/Aluminized steel cladding .46 mm (26 SWG) Flat .



Vertical vessel shell & vertical portion of storage tank: 0.56 mm (24SWG) corrugated; the circular profile of corrugated sheet shall be 32mm, 5mm. for Stainless steel/Aluminized steel cladding .46 mm (24 SWG) corrugated .

Thickness for Aluminum jacket / cladding Removable covers 1.22mm (18 SWG) Flat **Thickness for Stainless steel / Aluminized steel jacket/cladding** 1.22mm (18 SWG) Flat

3.4 Ancillary Materials

3.4.1 Aluminium Foil to Protect Stainless Steel Surfaces Shall be 0.19mm (36 SWG) thick per ASTM B209 alloy 3003 H16 or IS : 737 designation 31000 (old NS3) condition H3.

3.4.2 Securement Bands / Wires

3.4.2.1 If material is aluminum, then specification shall be ASTM B209 alloy 3003 H16 or IS : 737 designation 31000 (old NS3) condition H3. if stainless steel, it shall be 18/8.

3.4.2.2 For securing aluminum foil on stainless steel surfaces band, 24SWG thick x20mm wide, aluminium.

3.4.2.3 For Securing Fibrous Insulation

On piping: Band 24SWG thick x 12 (min) wide, stainless steel On equipment's: Band 24SWG thick x 20 wide, stainless steel.

On vertical storage tanks: Band, stainless steel 25mm wide Intax 24SWG thick. Horton sphere: Band, stainless steel, 25mm wide x 0.8mm (min) thk.

3.4.2.4 For Securing Rigid Insulation

On piping up to 16" OD, wire, stainless steel , 16SWG

On piping 18" OD and larger vertical and horizontal equipment's Band , stainless steel , 20 wide x 24SWG thick

3.4.2.5 For Securing Cladding On Insulation (Both Fibrous And Rigid) For

piping: Band, stainless steel , 12mm (min) wide x24SWG thick ,

On equipment: Band, stainless steel , 20mm (min) wide x24SWG thick ,

On vertical storage tanks: Band, stainless steel, 25mm wide x 24SWG thick. On

spheres : Band, stainless steel, 25mm wide x 24SWG thick.



Rivets required for metal jacket securement shall be the expanding aluminium “pop” blind eye type , 9.5mm long x 5mm diameter.

Screws required for metal jacket securement shall be stainless steel/cadmium plate steel self- tapping type A No. 8 dia x 12mm long to BS 4176 complete with neoprene washer under the head .

3.4.5 ‘S’ and ‘J’ clips formed from 25mm side stainless steel banding.

3.4.6 To ensure perfect water proofing all the cladding joints shall be packed with sealing materials which may either be in the form of an elastomeric sealing compound or fiber based bituminous felt strips.

4.1 Application

4.2 General

4.2.1 The applications methods, given in this standard is general in nature. The contractor is responsible for applying an insulation system that will give a satisfactory operational performance and the requirements given herein shall be regarded as the acceptable minimum. The contractor shall carryout the work in accordance with the best practices of insulation application with the minimum of waste and derbies and the final job shall have a neat efficient and work like appearance.

4.2.2 All hydrostatic testes on piping and equipment, including steam tracing systems, shall be carried out before insulating material is applied.

The insulation contractor shall only insulated those sections of the plant that has been specifically released for such work by the engineer – in – charge. If insulation must be installed before pressure test, then all welds and flanged joints in the pipe shall be left uncovered till successful competition of pressure test. Then insulation shall be completed

4.2.3 Surface to be insulated shall be thoroughly cleaned, dried and made free from lose scale, oil or grease. It shall be the contractor responsibility to remove loosely adhering scale and dirt before applying insulation.

4.2.4 Corrosion Prevention

4.2.4.1 Carbon steel and alloy piping and equipment with normal operating temperature of 125⁰ C and below shall be protected against corrosion by painting with a 20 microns (min) dry film thickness of heat resistant aluminum paint suitable for the above temperature . While for equipments (vessels, exchangers, tanks and spheres), this coating shall be provided by equipment fabricator, Piping /equipment paint and its application painting is not in the scope of insulation contractor.

4.2.4.2 Insulation cement shall not be used on stainless steel piping or equipment.



4.2.4.3 All insulated austenitic stainless steel piping and equipment insulated with calcium silicate, rock or glass wool shall be protected against chloride attack as follows for operating temperatures upto 450⁰c the surfaces shall be wrapped with 0.19 mm thick aluminium foil with 50mm overlap at longitudinal and circumferential joints before application of insulation . All joints of the aluminum foil shall have barium chromate primer interposed. Aluminum foil shall be firmly secured on the stainless steel surface by aluminum bands at a pitch of 500mm. Care shall be taken while applying aluminum foil ensure that the foil that the foil is not punctured at any place during wrapping and clamping with aluminum bands. For operating temperature above 450⁰c the stainless steel surfaces shall be painted with two coats of heat resistant silicon aluminum paint as follows

Type	: single
Composition	: silicon resin based with aluminum flakes as pigment Dry
film thickness	: 20 microns / coat (min)
Other requirements	: it should be suitable to with stand temperatures up to 600 ⁰ c when the paint becomes dry the painted surfaces shall show no discontinuity.

4.1.5 The insulation contractor shall not carry out any welding or drilling on plant equipment and piping.

4.1.6 Insulation shall be finished, beveled and weather proofed at all terminal points where it is required to remove bolts etc. with out damage to the insulation.

4.1.7 Equipment name plates shall remain visible after insulation has been applied by beveling back the insulating material and carefully sealing the exposed edge to prevent ingress of moisture.

4.1.8 All projections, such as lifting lugs, trunions and stiffeners on piping and equipment (i.e. vacuum rings) shall be insulated with the same thickness of insulation as specified for the equipment item or pipeline.

4.1.9 The removal bosses, pressure tapping and weep hole nipples shall not be insulated in but left accessible.

4.1.10 Double layer insulation shall be required when the insulation thickness is greater than 75mm. insulation installed in two or more layers shall be staggered joint construction and each layer shall be secured in place and details of securement shall be the same for each layer.

4.1.11 Wet or damaged insulation shall not be used under any circumstances.

Insulation material to be applied shall not be kept over bare ground to avoid water absorption. Installed material awaiting its protective cover shall be adequately protected from damage, rain and contamination and shall be covered with cladding at a minimum loss of time.

4.1.12 A minimum clearance of 25mm between outside surface of any insulation finish and adjacent equipment, pip or structural members shall be mentioned.



4.1.13 Insulation supports shall not project out of the insulation outer surface and shall be given sufficient coverage of insulating material to avoid hot spots on the metallic cover at support positions.

4.1.14 The insulation shall be so designed/applied such that ingress of water is prevented, leaked product can drain off and vapors can escape.

4.2 Piping

4.2.1 Material

4.2.1.1 Fibrous material (rock or glass wool)

Can be used for all piping other than electrical traced pipes up to 125⁰c

Can be used for all temperatures. Shall be in performed pipe section / blankets (mattress) are acceptable.

4.2.1.2 Calcium Silicate

Can be used for all piping other than electrical traced pipes upto 1250c Can

be used for all temperatures.

Ceramic Fiber

Shall be supplied in blanket strips in sizes as mentioned in the material spec in clause 3.2.3.

Pieces of insulation with cursed and damaged ends shall not be used.

Pipe sections bored / machined out of blocks shall not be used as skin effect is lost.

4.2.1.3 Corrosion protection before applying insulation :

All (insulation materials) for operating temp. up to 125⁰c, on carbon and alloy steel piping, provide painting. For stainless steel piping, provide a aluminum barrier. Painting shall not be in the scope of the insulation contractor. However aluminum barrier for stainless steel shall be done by insulation contractor.

4.2.3 Application

4.2.3.1 Horizontal Pipe

4.2.3.1.1 General

Insulation material shall be applied to fit snugly against the contours and shaped only where necessary to achieve this requirement. This insulation shall be carried out with the least number of material pieces as possible and all unavoidable gaps, cavities, and voids suitable filled with compatible loose fill material.

4.2.3.1.2 If Pipe Section / Moulded Blocks /Segments



End joints of adjacent blocks shall be staggered one half of the block.

Included angle between segments shall not be less than 30 deg for both single and double layer insulation.

Further, minimum are length of segments should meet following staggering requirements.

When double layer is applied, both longitudinal and circumferential joints shall be staggered. The arc between the longitudinal seam lines of the inside and outside layer of insulation shall have an angle of over 15 deg or the longitudinal joints staggered at least by one layer thickness, whichever is more stringent. Circumferential seams of the inside and outside layers shall be at least 100mm apart.

4.2.3.1.3 If Mattress/Blankets (Fibrous Insulation – Rock or Glass Wool)

Shall be applied over the surface with joints tightly butted and laced together with 1mm dia galvanized lacing wire.

4.2.3.1.4 Insulation Securement (All Insulation Materials)

Each layer of insulation shall be secured firmly in place with at least 3 loops of binding wire / band , one loop to be placed not more than 75 from each and at least one loop be equally spaced between and loops for each section . Binding wire shall be drawn about the insulation with ends tightly twisted together, bent under & pressed into the surface of insulation. Bands or wires in no case be spaced more than 200mm apart.

For calcium silicate, all joints shall be sealed with insulating cement of same composition as the molded block.

Each layer of insulation shall be secured by the same method as below.

4.2.3.1.5 Frame work for supporting cladding: fibrous insulation

This is not necessary for rigid materials. This is required only for horizontal pipe runs provided with fibrous insulation in blanket (mattress)form. Vertical piping provided with fibrous materials need not be provided with this. Piping provided with fibrous resin bonded pipe sections also need not be provided with this framework.

Spacer rings shall be fabricated out of 25x3 M.S. flats. The outside diameter of the insulation spacer rings shall be riveted to 'Z' shaped stays fabricated from the same sized M.S. flats. These rings shall be suitable painted for corrosion protection. Stays shall be provided at intervals of the insulation, subject to a minimum of 3 stays. Spacer rings shall be provided at every approx. 900. To minimize direct heat conduction through the stays, a packing of 2 sheets of 3 thick asbestos mill boards shall be provided at the joints of the stays and pipes. Joint between M.S spacer ring and stays shall be riveted by 6 dia M.S. rivets with 2 sheets of 3 thick asbestos mill board interposed.



4.2.3.2 Vertical pipe (all insulation materials)

Insulation on vertical or near vertical piping (i.e. greater than 45 angle from horizontal) shall be supported by bolted on metal collar shall be 6 thick M.S or alloy bar (to suit piping material)

Outside diameter of collar shall be around 12 less than O.D. of insulation. where multilayer insulation is used , support collar shall be extended to provide for each layer.

Support positions shall be at no greater distance apart than the following:

Pipe operating temp.	Support spacing
Upto 400 ⁰ c	4500mm
400 to 500 ⁰ c	4300mm
500 to 550 ⁰ c	2500mm
551 to 650 ⁰ c	2000mm
651 to 760 ⁰ c	1500mm

4.2.3.3 Expansion joints (both vertical and horizontal piping . all insulation materials)

Expansion joint shall be provided at regulation interval as bellows:

Temp. 0c	spacing (M)
upto 200	not required
200to 300	10
300to 350	8
350 to 400	6
400 to 550	5
551 to 650 ⁰ c	4
651 to 760 ⁰ c	3

Expansion joint shall be formed by a 25mm space between the pipe insulation sections and the space shall be filled by compressed mineral rock fibers. Expansion joints in each layer shall be offset at least 150 each other in case of multilayer insulation. Expansion join for vertical pipe shall preferably just below insulation support collars.

4.2.3.4 Elbows and bends (all insulation materials)

Insulation material shall be mitred and shall be same as that of pipe. Insulation securement bands / wire shall be same as that for equivalent dia pipe. Each mitred section shall be secured with minimum 2 wires / bands. For bands /elbows of nom. Pipe size 6” & below , due to lack of space , for all insulation materials insulation shall be secured by spirally wound 16SWG galvanized steel wire for hard material & 10 SWG galvanized steel wire for soft material. Insulation joints of block material shall be suitable sealed with adhesive for isocyanurate / cellular glass and by insulating cement for calcium silicate. Fittings below 50mm nom. dia, if insulated of calcium silicate shall be insulated with insulting cement build up in 6mm layers to the thickness of insulation of the



adjacent piping. Each layer of insulating cement shall be reinforced with 25mm no. 20 SWG wire netting.

4.2.3.5 Tee (all insulation materials)

Performed pipe sections or segments shall be carefully cut and shaped around 'tee' junctions and the insulation material of the tangential pipe shall be carefully and neatly cut to make upto the material applied to the parent pipe with out the creation of voids or gaps, at the junction. Insulation shall be adequately secured by wire / band of same specification as that of same size pipe.

4.2.3.6 Flanged joints or valves (all insulation material)

Flanged joints or valve, if to be insulated, shall be insulated with prefabricated removable aluminum covers, lined with pipe sections / lags/slabs. Welded valve, if insulated, shall be insulated with over sized pipe sections or lags, cut and shaped to fit around the body of the valve . Insulated valves shall be completely covered, but the insulation shall be cut and shaped around the valve stem and kept clear of the stuffing box gland.

4.2.3.7 Insulation flashing (all insulation materials)

Insulation shall be stopped short of flanged joints and unions by a sufficient distance to permit easy removal of the flange nuts and bolts or breaking of the unions to take without

disturbance or damage to the insulating material . At these positions the insulation shall be beveled and sealed with a metal closure which in turn shall be sealed with water proof sealing material.

4.2.3.8 Pipe supports: (all insulation materials)

Insulation at solid welded or clamped supports shall be cut and shaped to fit around the support and banded securely to enable the insulation to be carried with the pipe movement. when the pipe hangers pass through insulation on piping outdoors, metal hoods packed with a waterproof sealing material shall be furnished and installed . Upper bolts of the hanger clamps are not to be covered with insulation.

4.2.3.9 Steam traced piping: (all insulation materials)

Steam traced piping and fitting shall be installed with oversized sections to allow accommodation of both parent pipe and tracer without damage or deformation of the insulation. Traced instrument line and fittings shall be totally enclosed by the insulation in a similar manner and the designed warm air annulus maintained throughout the tracer pipe length. Insulation supports for vertical pipe shall have suitable clearances for tracer pipe composite box type insulation may be provided on the steam supply lead lines ,in case they are routed together similarly this may be provided for the return lines to manifold after the run of tracers..

4.3 **Horizontal Equipment**

4.3.1 Material

4.3.1.1 Fibrous material (Rock or glass wool)



Can be used for all temperatures.

Shells: Preferably preformed pipe or multi pipe segments or slabs cut and shaped to fit. Alternately, Blanket (mattress) may be accepted.

Heads: Preformed blocks and slab cut and shaped to fit ,blankets may be accepted.

4.3.1.2 Calcium silicate. Can be used on all surfaces.

Temperature limitations for each shall be as mentioned above. Curved segments / blocks, mitre cut and shaped to fit.

4.3.1.2 Ceramic Fibre

Shall be supplied in blanket strips in sizes as mentioned in the material spec in clause 3.2.3.

4.3.2 Corrosion protection before applying insulation:

All insulation materials: For stainless steel surfaces, provide same protection as for piping.

4.3.3 Application (All Materials)

4.3.3.1 Following, provided by the vessel fabricators for insulator / cladding support / securement, as indicated in enclosed sketch no 7-12-033, shall be verified for their presence by the insulation contractor, before commencing insulation work:

- . For vessels of diameter 2000 mm and above are provided insulation support at horizontal centre line as also vertically at tangent lines. Ring support at tangent lines are provided with 6mm dia meter holes. These are to be used for insulation securement.

- . At vessel heads above 600mm outside dia meter are provided flats having 6mm dia holes . The flats are for insulation support and holes provided in them are to be used for insulation securement. Also provided on either head is a central ring made of 10 dia galvanized steel rod. For vessel fabricator, for such vessels insulations contractor shall provide these rings

- . Boot of vessels, if any is provided with circular support ring with holes with holes .

4.3.3.2 Blanket (mattress) shall be applied over the surface with joints tightly butted and laced together with 1mm dia galvanized lacing wire.

Other block insulation shall be applied with the longer dimension parallel to the axis of the vessel or equipment. When blocks are applied in multiple layers, all joints in successive layers shall be parallel to the long axis , shall be staggered and sealed with insulating cement for calcium silicate or suitable adhesive for others . In all cases , the insulation is to fit the contour of the vessels or



equipment , so that the use of a leveling coat of insulating cement should not be normally necessary to get an acceptable smooth exterior .

4.3.3.3 Special considerations for insulation high temperature vessels (required only if provided with calcium silicate insulation)

This provision is required to take care of the effects of equipment circumferential thermal expansion on insulation.

This provision is required only for vessels and exchangers provided with calcium silicate insulation.

Calcium silicate insulation should be installed in beveled or curved segments only, to avoid voids and provide an efficient insulation system.

For equipment upto 3000mm in diameter and 200⁰c to take care of equipment circumferential expansion , the circumferential block is cut and fitted to be 13mm grater in circumferential than the equipment and secured so that tension of the bands produces compression on the butt edges rather than on the surface towards the vessels. The little annular space and the compressiveness of the blocks would suffice to take care of circumferential expansion of equipment.

If the vessel is above 3000mm in diameter or if the temperature is above 200⁰c or both, 25mm thick rock wool fiber blanket (mattress) insulation shall be applied around the equipment prior to the application of calcium silicate. This acts as an expansion area around the equipment to act as mechanical and some time thermal cushions. The calcium silicate block must be cut and fitted to the outside radius of the equipment plus the thickness of the rockwool spacer insulation. The insulation, when installed, should not compress the fiber blanket.

Above provision to take care of circumferential expansion is required both for shell and head.

4.3.4 Insulation securement (for all insulation materials)

Each layer of insulation on shells of equipment shall be secured by bands at every 225 centers. Each band shall be machine stretched and tensioned to remove slack only.

Each layer of insulation on vessel heads shall be secured as follows:

Band shall be in radial direction connecting the head central floating ring and shell girth ring. The radial bands shall be placed at not more than 150 centres for rigid and 300 for fibrous than 150 centres for rigid and 300 for fibrous insulation, measured at the girth ring. These bands shall be machine stretched and sealed. Outermost layer of insulation shall also be supported by drawing and securing 16SWG annealed steel wire through the 6 diameter holes provided in the shell girth ring as also the flats provided on heads . The wire shall be drawn through every hole and it shall be secured to the ring with a knot.

4.4 Vertical equipment

4.4.1 Material



4.4.1.1 Fibrous material shall be same as specified for horizontal equipment.

4.4.1.2 Calcium silicate shall be same as for horizontal equipment.

4.4.2 Corrosion protection before applying insulation (for all insulation material)

Corrosion prevention before applying insulation for stainless steel surfaces shall be same as specified for horizontal equipment.

4.4.3 Application (all insulation materials)

Application details on shell, top and bottom heads shall be similar to that of horizontal equipment. Insulation shall be similar to that of horizontal equipment. Insulation shall be laid on insulation support ring provided by the fabricator.

4.4.4 Insulation securement (all insulation materials)

Bottom and top head insulation shall be supported by 16 SWG annealed galvanized steel wire drawn through holes in the insulation supports provided by the fabricator.

Top head insulation shall be secured by floating ring / bands provided by vessel fabricator similar to head of horizontal vessels.

Shell insulation shall be supported by bands at every 225 centres on the cylindrical portion and the bands shall be kept horizontal.

Insulation securement for bottom head vessel supported on legs shall be identical to that of top head.

For insulation securement of bottom heads inside skirt n floating rings/ bands need be provided; firm securement should be ensured just by 16 SWG annealed wire drawn over insulation tightly and through the holes on support rings provided by the fabricator.

4.4.5 Expansion joints (all insulation materials)

Expansion joints shall be provided every 4000mm (max.) the joint shall be provided at insulation support rings. It shall be a 25mm space between the top of the insulation and the bottom of the support ring. The space shall be filled up by compressed rockwool fiber.

4.5 Flange, nozzle, channel cover, manway and handhole flanged cover (all insulation Materials)

Where insulation is required, these shall be insulated with lined removable prefabricated covers secured with bands or quick release toggle clips.

Otherwise, insulation shall be stopped short of uninsulated flanges and nozzles etc, a sufficient distance to permit withdrawal of bolts without disturbing the remaining of the insulation. Insulation shall be weather proofed and sealed at these locations.

4.6 Irregular surfaces such as pumps, compressors turbine etc.

4.6.1 Corrosion Protection



For S.S. surfaces at all temperatures, provide same protection as indicated for piping.

4.6.2 Application

4.6.2.1 Fibrous material: material, application and insulation securement

This shall be prefabricated removable aluminium covers, lined with mineral rock / glass wool pipe sections. Lags/ slabs / mattresses.

4.6.2.2 Calcium Silicate

Insulation material shall be insulating cement / block insulation cut and fitted.

Insulation shall be applied in max 25mm thick layers until the scheduled thickness is obtained.

Each layer shall be covered with a layer of 25 mm hex. 20 SWG galvanized iron wire mesh. The final layers shall be trovelled to a smooth finish with 6mm thick finishing cement.

Insulation shall be beveled back at 45⁰ from all casing flanges, shaft seal caps and bearing boxes.

4.7 Vertical Storage Tank: (Carbon Steel)

4.7.1 Material

4.7.1.1 Fibrous material (Rock / Glass wool) shall be in the blanket (mattress) form.

4.7.2 Application

4.7.2.1 Supporting rings / spikes (rods) for supporting insulation / cladding

4.7.2.1.1 Shell

Following insulation provided by tank fabricator.

Water Shed

At the junction of shell and roof , a water shed is provided to act as top covering for the shell insulation .

Insulation support will consist of 5mm dia diamond pitch. Length of these lugs is 3 mm less then insulation thickness.

Cladding support from tank top, horizontal rings shall be provided at every 1175 mm on tank shell.

4.7.2.1.2 Tank Roof

4.7.2.2 Insulation Laying and Securement.

4.7.2.2.1 Shell

Application of fibrous insulation

Insulation shall be applied between rings in horizontal mode. Mattress insulation shall be applied with joints tightly butted and laced together with 1 mm dia galvanized lacing wire Mats shall be impaled to the 5mm rod and speed washers fixed and pressed home for intimate contact of the



insulation . in the case of multiple layers , speed washers are necessary only over the final layers (upto and including 150mm) . Rod and speed washer of spring steel should be selected to suit each other. While rods are provided by tank fabricator, speed washer shall be furnished by insulation contractor . Insulation shall be further secured by bands spaced centrally between insulation supports.

4.7.2.2.2 Roof (for all materials)

Application of both fibrous shall be similar to that as for shell . Insulation support from 5mm dia M.S. lugs shall be exactly same as in shell.

4.8 Horton Spheres:

4.8.1 Material

Shall be only mineral rock / glass wool blanket.(mattress)

4.8.2 Application

4.8.2.1 Structural members provided by sphere fabricator for insulation / cladding securement.

4.8.2.2 Insulation laying and securement

Insulation shall be applied between rings. Mattress insulation shall be applied with joints tightly butted and laced together with 1mm dia galvanized lacing wire.

Insulation shall be secured by drawing and securing tightly 16SWG stainless steel wire through the 6 dia holes, provided every 200 centres, in the horizontal leg of the insulation support angle ring. The wire shall be tightly drawn over the insulation and the insulation firmly secured . the wire shall be drawn through every single individual hole and it shall be secured with angle with a knot at every fourth hole.

5.0 **Insulation finish**

5.1 General

5.1.1 Moisture barrier

On all surfaces except Horton sphere, provided fibrous materials and calcium silicate .

For surfaces upto 125 °C, apply a breathing type moisture barrier as below. A 3 mm thick coating of mastic shall be applied to the surface of the insulation as soon as possible, after erection, to reduce the time of the insulation is exposed to the weather, to a minimum. Whilst this coat is still wet, glass cloth shall be laid over the surface and embedded in the mastic. Care shall be taken to ensure that the glass cloth is laid smooth and free from wrinkles and that no pockets of air are trapped beneath the surface. At junctions in the glass cloth, the overlap shall not be less than 75mm. a second 8mm thick coat of mastic shall be applied after approximately 12 hrs. When dry this coating shall be a minimum of 1.50mm thick. Care must be taken, however, to ensure that the individual coats are not greater than 3mm (especially corners) otherwise some cracking of dried coat may result. The mastic shall not be applied over the wet insulation or until the adhesive is dry. During the drying time, the insulation shall be protected from the weather by “alkathene “film type tarpaulin or similar materials approved by Engineer- in – charge.



5.1.2 Insulation finish

The insulation finish shall provided a weatherproofed the mechanical damage resistant covering over the whole of the insulated areas and be applied and fitted in such a manner as to provided a close fitting assembly without gaps.

5.2 Piping (for all materials)

5.2.1 Straight pipe shall have metal jacketing cut a machine rolled. (Approx. 1 meter long) wrapped around, with 50 mm minimum overlaps on both longitudinal and circumferential overlaps. All laps shall be arranged to shed water.

5.2.2 A single bead shall be made on overlaps to ensure tight metal to metal water tight arrangement. Self-trapping screws, at every 150, shall be provided at all longitudinal overlaps for both horizontal & vertical piping.

5.2.3 At all operating temperatures the seams at overlap positions shall be rendered watertight per clause 3.4.6 to ensure that insulation remains dry and unwetted, whether the possible water impingement is from rain , hose or fire sprinklers.

5.2.4 The metal coverings shall be secured tightly around the around the insulated pipe and held in place with bands on a maximum of 300mm centres . One band shall be located on each circumferential lap and the distance between laps divided at equal band spacing. The band securing seals shall be kept neatly in line and positioned away from viewing angles as much is possible.

5.2.5 Vertical overlaps on vertical or near vertical piping shall be staggered in provided overlaps at 'north' and 'south' positions in alternative sections of covering.

5.2.6 Each sections of metal covering on vertical piping with insulation larger than 250mm shall be supported from the next lower section with two 'S' clips fabricated from banding material . The 'S' clip shall be of sufficient length to allow the minimum overlap of 50mm.

5.2.7 On vertical piping with O.D.'s of 600mm and larger, the securing bands shall be supported by 'J' clips, fabricated from banding material. The 'J' clip spacing shall be minimum of two per band. All 'j' clips shall be screwed into position and secured.

5.2.8 Insulated bands and elbows in piping 80mm and larger , shall be metalled with ' lobster back ' segments using 10mm minimum ball swage to assist shaping . The metal bands shall be screwed with itself tapping screws and metal sealants are to provided to get a completely waterproofed arrangement.



5.2.9 Insulated bends and elbows in piping smaller than 80mm may use complete pressed humped back flat metal elbows or fabricated 'stove pipe' elbows.

5.2.10 The practice of locating all joints in the top portion of elevated horizontal pipes for the sake of good appearance when looking up from grade shall be located to shed water.

5.3 Equipment (for all materials)

5.3.1 The metal jacket over vertical vessel shells shall be constructed of sheet metal panels with the weight of the panel taken on the equipment insulation support rings, via angle brackets bolted to the panel.

5.3.2 The panel shall be applied commencing at the bottom of the vessel. Each circumferential ring of panel shall be tensioned by means of tensioning bands until the final joint is screwed tight. 'S' clips shall be used as sheeting support at unscrewed circumferential overlaps.

5.3.3 The panels shall be held tight over the vessels insulation by means of circumferential Bands and sealed per 3.4.6, the bands shall be positioned on all horizontal overlaps and at 450mm centres. bands shall be held in their relative positions with 'J' clips and be machine stretched and sealed to remove slack only. those bands which are not supported by 'j' clips, shall be held in position on cladding by providing pop rivets at every 2 M centres.

5.3.4 The panels shall have minimum overlap of one corrugation on vertical joints and 80mm on horizontal joints. The overlaps shall be arranged to shed water at all times.

5.3.5 The vertical and horizontal overlaps shall be secured with self trapping screws at 150 mm pitch except the horizontal overlaps pre selected. To act as expansion joints, these shall be constructed with a 150mm overlaps and shall remain unscrewed and left free to permit expansion. All overlaps shall be rendered watertight.

5.3.6 All equipment projections such as nozzles, shall have the jacketing sealed using a metal flashing cut to fit the projection and extending above the jacket at least 80mm. The seal between the flashing and jacket shall be made water tight by use of self tapping screws and sealing mastic.

5.3.7 Horizontal cylindrical equipment shall be furnished with flat metal jacket arranged in circumferential bands with the edge of the sheets, with a longer dimensions applied around the circumferential of the equipment insulation.

5.3.8 The panel shall have a minimum of 80mm overlap on both longitudinal and circumferential edges, both overlaps being finished with a simple ball swage and rendered watertight.

5.3.9 Horizontal overlaps shall be secured with no. 8x12mm long self trapping screws set in the overlap at 150mm intervals, and shall be staggered bands of paneling encircle the equipment. Vertical overlaps shall not be screwed for horizontal equipment.



5.3.10 The metal finish shall be banded and sealed at 450mm centres.

5.3.11 the insulated heads of vertical and horizontal equipment shall be fabricated from flat metal , in an “ orange peel “ construction with all radial seams overlapping a minimum of 50mm and secured with self tapping screws at 150mm centres. All overlaps shall be ball swaged and be rendered water tight per 3.4.6.

5.3.12 Projections from the heads shall be sealed using metal flashings, neatly cut to fit around the projections and extending above the jacket for a minimum of 80mm. The seal between flashing and jacket shall be waterproofed with a self tapping screws and mastics.

5.3.13 Insulation at bottom heads of fully skirts equipment does not require weatherproofing.

5.3.14 Heads of equipments 25” O.D and smaller shall be finished and waterproofed with square ended fabricated covers.

5.4 Vertical storage tanks.

5.4.1 Cladding applications and securement

5.4.1.1 Shell

Cladding is applied over the system of horizontal rings as follows: Overlaps

in the vertical joints will be one corrugation .

Overlaps in the horizontal joints shall be 50mm (min.)

Cladding to cladding fastening , at both horizontal and vertical overlaps shall be alternately by “POP” rivets : self tapping screws at 150mm pitch.

Cladding shall be secured to support ring by bolting . Bolts are provided by tank fabricators at 300mm centres on angles provided at every 1175 centres vertically. Felt washer , aluminium washer and nut shall be supplied by insulation contractor for all bolted connections at shell , roof and curb angle.

Insulation shall be tucked into the skirt position of the curb angle . Shell cladding and extended roof cladding shall be secured to curb angle by bolting .

Horizontal stainless steel bands over cladding to be provided every 800 mm and also to coincide at every horizontal cladding overlaps . Bands shall be tightened , locked and lock fastened featuring stainless steel fastening systems. In order to prevent sliding of the bands downwards , the bands shall be secured to the cladding using pop rivets at horizontal pitch not over 2 meters.

5.4.1.2 Roof

All cladding joints shall be sealed by elastomeric metal sealants. Min.

75mm overlap shall be ensured at all joints.



At all joints , cladding to cladding securement shall be provided by self-tapping screws and pop rivets alternately , every 150 centers.

Cladding shall be secured by bolting at every 300 provided by tank fabricator.

5.5 Horton sphere

5.5.1 Cladding support

Insulation contractor shall provided 25mm x 0.8 mm S.S bands over insulation and install them longitudinal from top to bottom of the sphere in such numbers so as afford a minimum spacing of 1175mm at numbers so as to afford a maximum spacing of 1175 mm at the equator. The S.S bands are spanned between four flattening rings, the one at the top and bottom of the sphere are provided after insulation is applied prior to application of cladding . Floating rings will be constructed of 10mm diameter rods of S.S diameter of ring at the top and bottom , to be around 1.2m. Cladding support bands shall be tightened using mechanical tighteners and fastened to MS/AS angles using two S.S . Rivets or four nos. of aluminium POP rivets per angle cleat.

5.5.2 Cladding Application

While applying cladding , following shall be ensured : Min. overlaps both horizontal and vertical shall be 50mm.

5.5.3 Cladding securement and sealing of joints

All joints to be sealed using elastomeric metal sealant.

Cladding to cladding securement of vertical and horizontal overlaps shall be alternative by POP rivets and self-tapping screws, at every 150mm spacing.

Cladding shall be secured to the insulations angle support by bolting the cladding on the bolts provided at every 300pitch at every angle support . Asbestos mill board washer , aluminium washer and nut shall be supplied by insulation contractor .

Further cladding shall be secured by 25mmx 0.5 mm S.S. bands , applied identical to those for insulation securement . The bands shall be provided between two floating rings , one at the top and one at the bottom and arrangement and details shall be identical to that of insulation securement. Bands shall be secured to cladding every 2M by one S.S. or two aluminium POP rivets .While providing floating rings., for both insulation and cladding securement , following points shall be taken care of :

Floating rings shall clear nozzles / manholes etc.

Exercise extreme care while installing floating rings regarding cut outs in cladding around projections.

Cladding at interface between leg and the body of the sphere to be provided with care and suitably sealed to prevent water ingress.



**PLEASE NOTE FOR FURTHER CLARITY ABOUT HOT INSULATION PL REFER EIL
STANDARD SPECIFICATION FOR HOT INSULATION OF VESSELS, PIPING AND
EQUIPMENT (EIL SPECIFICATION NO: 6-44-02 REV-5) FOR DRAWINGS AND SKETCHES
& OTHER DETAILS.**



SECTION-VII

HEALTH, SAFETY ENVIRONMENT [HSE] SPECIFICATIONS



SECTION - VII

HEALTH, SAFETY AND ENVIRONMENT [HSE] SPECIFICATIONS

1. SCOPE

These specifications establish the 'Health, Safety and Environment [HSE] Management' requirement to be complied with by the Contractors during executing their Job. Requirements stipulated in these specifications shall supplement the requirements of 'HSE Management' given in relevant act(s) / legislation(s).

2. REQUIREMENTS OF 'HEALTH, SAFETY AND ENVIRONMENT [HSE] MANAGEMENT SYSTEM' TO BE COMPLIED BY BIDDERS

- 2.1. Preferably, the Contract should have a documented 'HSE Policy' to cover commitment of their organization to ensure health, safety and environment aspects in their line of operations.
- 2.2. The Contractor shall ensure that the BCPL's 'Health, Safety and Environment [HSE]' requirements are clearly understood and faithfully implemented at all level, at sites.
- 2.3. Contractor shall promote & develop consciousness for health, safety & environment among all personnel working for the Contractor. Regular work-site meetings shall be arranged on 'HSE' activities to cover hazards involved in various operations during executing their jobs, location of First Aid Box, trained personnel to give First Aid, Assembly Points, standby Ambulance or vehicle and fire protection measures such as fire hydrant, water and fire extinguishers, etc.
- 2.4. Non-conformance of 'HSE' by Contractor [including his sub-Contractors] as brought out during review/audit by BCPL / external agency authorized by BCPL, shall be complied by Contractor and its report to be submitted to BCPL.
- 2.5. Contractor shall adhere consistently to all provisions of 'HSE' requirements. In case of non-compliance of continuous failure in implementation of any of the 'HSE' provisions, BCPL may impose stoppage of work and a suitable penalty for non-compliance. The decision of imposing work-stoppage, its extent & monetary penalty shall rest with BCPL.
- 2.6. All fatal accidents and other personnel accidents shall be investigated for root cause by BCPL and Contractor shall extend all necessary help and cooperation in this regard. Recommend corrective and preventive actions of findings will be communicated to Contractor for taking suitable actions should be taken by the Contractors to avoid recurrence of such incidences.
- 2.7. Contractor shall ensure that all their staffs and workers, including their sub-Contractor(s), shall wear 'Personal Protective Equipments [PPEs]' such as safety helmets, safety shoes, safety belts, protective goggles, gloves, etc., as per job requirements. All these gadgets shall conform to relevant IS specifications or equivalent.
- 2.8. Contractor shall assign competent & qualified personnel for carrying out various tasks/jobs as per requirement.
- 2.9. All equipment should be tested and certified for its capacity before use.
- 2.10. Contractor shall ensure storage and utilization methodology of materials that are not detrimental to the environment. Where required, Contractor shall ensure that only the environment-friendly materials are used.



- 2.11. All persons deployed at site shall be knowledgeable of and comply with the environmental laws, rules and regulations relating to the hazardous material substances and waste. Contractor shall not dump release or otherwise discharge or dispose off any such materials without the express authorization of BCPL.
- 2.12. Contractor should obtain all work permits before start of activities [as applicable] like hot work, confined space, work at heights, storage of chemicals/explosive materials and its use & implement all precautions mentioned therein.
- 2.13. Contractor should display at site office and work locations caution boards, provide posters, banners for safe working to promote safety consciousness, etc.
- 2.14. Contractor should carryout audits/inspections/supervisions at the sub-Contractor's works and submit the reports for review by BCPL.

3. RELEVANT CODES FOR 'PERSONAL PROTECTION EQUIPMENTS'

IS: 2925 – 1984	Industrial Safety Helmets
IS: 47701 – 1968	Rubber Gloves for Electrical Purpose
IS: 6994 - 1973 [Part-I]	Industrial Safety Gloves [Leather & Cotton Gloves]
IS: 1989 - 1986 [Part-II]	Leather Safety Boots & Shoes
IS: 5557 - 1969	Industrial & Safety Rubber Knee Boots
IS: 6519 – 1971	Code of Practice for Selections, Care & Repair of Safety Footwear
IS: 11226 – 1985	Leather Safety Footwear Having Direct Molding Sole
IS: 5983 - 1978	Eye Protectors
IS: 9167 - 1979	Ear Protectors
IS: 3521 - 1983	Industrial Safety Belts & Harnesses

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SECTION-VIII

SCHEDULE OF RATES[SOR]

PART-I (UN-PRICED BID)

BIDDER TO MENTION AS "QUOTED" IN UN-PRICED SOR



RFQ Ref. No. BCPL/C&P/LE18W219ND/0983

HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, ..

Un-price Bid SOR

SOR Sl. No.	Description of item	UO M	Quantity	Unit Rate (Rs.)	Total Amount (Rs.)
1	INSULATION FOR PIPE & PIPE FITTINGS				
1.10	IC, PUF, THICKNESS=25 MM. Cold Insulation-IC, Piping Class-CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 25 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	150		



1.20	IC, PUF, THICKNESS=35 MM. Cold Insulation-IC, Piping Class-CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 35 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	100		
1.30	IC, PUF, THICKNESS=50 MM. Cold Insulation-IC, Piping Class-CS/AS/SS, Insulation Material-PUF, Insulation Thickness=50 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as	M2	150		



	per drawings, specifications and instruction of Engineer-In-Charge.)				
1.4	IC, PUF, THICKNESS=75 MM. Cold Insulation-IC, Piping Class-CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 75 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	150		



1.5	IC, PUF, THICKNESS=100 MM. Cold Insulation-IC, Piping Class-CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 100 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	150		
1.6	IC, PUF, THICKNESS=125 MM. Cold Insulation-IC, Piping Class-CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 125 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all	M2	125		



	tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)				
1.7	IC, PUF, THICKNESS=150 MM. Cold Insulation-IC, Piping Class-CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 150 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	125		
1.8	IC, PUF, THICKNESS=200 MM. Cold Insulation-IC, Piping Class-CS/AS/SS, Insulation Material-PUF, Insulation Thickness=200 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying	M2	125		



	insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)				
1.9	IH, ROCKWOOL, THICKNESS=25 MM. Hot Insulation- IH/IT, Piping Class-CS/AS/SS, Insulation Material-Rockwool, Insulation Thickness=25 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	2500		



1.10	IH, ROCKWOOL, THICKNESS=35 MM. Hot Insulation- IH/IT, Piping Class-CS/AS/SS, Insulation Material-Rockwool, Insulation Thickness=35 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	200		
1.11	IH, ROCKWOOL, THICKNESS=50 MM. Hot Insulation- IH/IT, Piping Class-CS/AS/SS, Insulation Material-Rockwool, Insulation Thickness=50 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all	M2	3500		



	tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)				
1.12	IH, ROCKWOOL, THICKNESS=75 MM. Hot Insulation- IH/IT, Piping Class-CS/AS/SS, Insulation Material-Rockwool, Insulation Thickness= 75 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	1200		
1.13	IH, ROCKWOOL, THICKNESS=85 MM. Hot Insulation- IH/IT, Piping Class-CS/AS/SS, Insulation Material-Rockwool, Insulation Thickness= 85 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing,	M2	100		



	stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)				
1.14	IH, ROCKWOOL, THICKNESS=100 MM. Hot Insulation- IH/IT, Piping Class-CS/AS/SS, Insulation Material-Rockwool, Insulation Thickness= 100 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	400		
1.15	IH, ROCKWOOL, THICKNESS=125 MM. Hot Insulation- IH/IT, Piping Class-CS/AS/SS, Insulation Material-Rockwool, Insulation Thickness= 125 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as	M2	250		



	required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)				
1.16	IM, CELLULAR GLASS, THICKNESS=30 MM. Insulation for Dual Temperature lines-IM, Piping Class-CS, Insulation material-Cellular Glass, Insulation Thickness= 30 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	5		



1.17	IM, CELLULAR GLASS, THICKNESS=50 MM. Insulation for Dual Temperature lines-IM, Piping Class-CS, Insulation material-Cellular Glass, Insulation Thickness=50 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	5		
1.18	IM, CELLULAR GLASS, THICKNESS=65 MM. Insulation for Dual Temperature lines-IM, Piping Class-CS, Insulation material-Cellular Glass, Insulation Thickness=65 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets	M2	5		



	and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)				
1.19	IM, CELLULAR GLASS, THICKNESS=75 MM. Insulation for Dual Temperature lines-IM, Piping Class-CS, Insulation material-Cellular Glass, Insulation Thickness=75 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	5		
1.20	IH, ROCKWOOL, THICKNESS=150MM Hot Insulation- IH/IT, Piping Class-CS/AS/SS, Insulation Material-Rockwool, Insulation Thickness= 150 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying	M2	250		



	insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)				
1.21	IH, ROCKWOOL, THICKNESS=200MM Hot Insulation- IH/IT, Piping Class-CS/AS/SS, Insulation Material-Rockwool, Insulation Thickness= 200 mm (FOR PIPING, VAVLE, FLANGES, FITTINGS ETC. AS PER THE INSULATION CLASS MENTIONED IN EACH ROW. Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory works thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	100		
2	INSULATION FOR EQUIPMENTS				
2.1	IC, PUF., THICKNESS=25 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 25 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment:	M2	20		



	Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)				
2.2	IC, PUF., THICKNESS=50 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 50mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	20		



2.3	IC, PUF., THICKNESS=75 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness=75 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	20		
2.4	IC, PUF., THICKNESS=100 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness=100 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as	M2	150		



	per drawings, specifications and instruction of Engineer-In-Charge.)				
2.5	IC, PUF., THICKNESS=120 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 120 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge.)	M2	20		
2.6	IC, PUF., THICKNESS=155 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness=155 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all	M2	20		



	tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)				
2.7	IC, PUF., THICKNESS=175 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 175 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	20		
2.8	IC, PUF., THICKNESS=215 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 215 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets	M2	20		



	and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)				
2.9	IC, PUF., THICKNESS=225 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 225 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	20		
2.10	IC, PUF., THICKNESS=240 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 240 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying	M2	20		



	insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)				
2.11	IC, PUF., THICKNESS=150 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-PUF, Insulation Thickness= 150 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	25		
2.12	IC., CELLULAR GLASS, THICKNESS=115 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-Cellular Glass, Insulation Thickness=115 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as	M2	5		



	required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)				
2.13	IC., CELLULAR GLASS, THICKNESS=225 MM Cold Insulation-IC, Material- CS/AS/SS, Insulation Material-Cellular Glass, Insulation Thickness=225 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	5		
2.14	IC., CELLULAR GLASS, THICKNESS=325 MM Cold Insulation-IC, Material- AL Alloy, Insulation Material-Cellular Glass, Insulation Thickness=325 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier,	M2	5		



	weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)				
2.15	IH., ROCKWOOL, THICKNESS=25 MM Hot Insulation- IH / IT, Material-CS/AS/SS, Insulation Material- Rockwool, Insulation Thickness=25 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	25		
2.16	IH., ROCKWOOL, THICKNESS=45 MM Hot Insulation- IH / IT, Material-CS/AS/SS, Insulation Material- Inhibited Rockwool, Insulation Thickness=45 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment:	M2	25		



	Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)				
2.17	IH., ROCKWOOL, THICKNESS=50 MM Hot Insulation- IH / IT, Material-CS/AS/SS, Insulation Material- Rockwool, Insulation Thickness=50 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	150		
2.18	IH., ROCKWOOL, THICKNESS=75 MM Hot Insulation- IH / IT, Material-CS/AS/SS, Insulation Material- Rockwool, Insulation Thickness=75 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers,	M2	25		



	Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)				
2.19	IH., ROCKWOOL, THICKNESS=100 MM Hot Insulation- IH / IT, Material-CS/AS/SS, Insulation Material- Rockwool, Insulation Thickness=100 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	25		



2.20	IH., ROCKWOOL, THICKNESS=120 MM Hot Insulation- IH, Material-CS/AS/SS, Insulation Material- Glass wool, Insulation Thickness=120 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	25		
2.21	IH., ROCKWOOL, THICKNESS=125 MM Hot Insulation- IH / IT, Material-CS/AS/SS, Insulation Material- Rockwool, Insulation Thickness=125 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as	M2	25		



	per drawings, specifications and instruction of Engineer-In-Charge)				
2.22	IH., ROCKWOOL, THICKNESS=155 MM Hot Insulation- IH / IT, Material-CS/AS/SS, Insulation Material- Rockwool, Insulation Thickness=155 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	25		



2.23	IM., CELLULAR GLASS, THICKNESS=65 MM Insulation for Dual Temperatures-IM, Material-CS/AS, Insulating Material- Cellular Glass, Insulation Thickness=65 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as per drawings, specifications and instruction of Engineer-In-Charge)	M2	5		
2.24	IM., CELLULAR GLASS, THICKNESS=90 MM Insulation for Dual Temperatures-IM, Material-CS/AS, Insulating Material- Cellular Glass, Insulation Thickness= 90 mm (For Static Equipment Shells of vertical & heads of horizontal Vessels, Columns, Exchangers, Reactors, Silencers, heaters, Storage etc. and for Rotary equipment: Providing Thermal Insulation including supply of all insulating and ancillary materials, vapor barrier, weather protective coverings, consumables and other necessary materials, testing of materials as required including transportation of materials to work site, duly inspected by 3rd party (Lloyd/BV/DNV or any other BCPL approved party) inspector at manufacturer's shop, applying insulation on surfaces as specified including all preparatory work thereon, binding, tying, lacing, stitching, and/or otherwise securing, finishing with sheet cladding as per spec, providing bolts, rivets and self-tapping screws wherever specified, end seals for flanges etc. Providing steel scaffolding, all tools, tackles, equipment etc. labor, supervision and completing the work in all respect, at all heights as	M2	5		



	per drawings, specifications and instruction of Engineer-In-Charge)				
3	CLADDING WORKS-SUPPLY & EXECUTION				
3.1	Supply& Fixing-0.71 MM AL CLDNG Corrugtd Supply & Fixing of 0.71 MM Aluminum Cladding 22 SWG Corrugated Sheet of 32 MM 5 MM with self-tapping screw.	M2	50		
3.2	Supply & Fixing- 0.71 MM AL CILDNG Flat. Supply & Fixing of 0.71 MM Aluminum Cladding 22 SWG Flat sheet with self-tapping screw.	M2	4000		
3.3	Supply & Fixing- 1.22 MM AL Cldng Flat. Supply & Fixing of 1.22 MM Aluminum Cladding 18 SWG flat sheet with self-tapping screw	M2	4000		
3.4	Supply & Fixing-0.56 MM Glvnzd steel Cld Supply & Fixing of 0.56 MM Galvanized Steel Cladding 24 SWG with self-tapping screw	M2	25		
3.5	Supply & Fixing-0.56 MM AL Cldng Flat. Supply & Fixing of 0.56 MM Aluminum Cladding/Jacket 24 SWG Flat Conforming to IS: 737 with self-tapping screw	M2	2000		



3.6	Supply & Fixing-0.56 MM AL CIng Corrugtd Supply & Fixing of 0.56 MM Aluminum Cladding/Jacket 24 SWG Corrugated Sheet Size 32 MM 5 MM Conforming to IS:737 with self-tapping screw	M2	25		
3.7	Supply & Fixing-24 SWG SS304 Cldng	M2	100		
4	MISCELLANEOUS WORKS				
4.1	Supply and Fixing Insulating Fire Bricks PROVIDING & FIXING-REFRACTORY WORKS-Supply and Fixing of Insulating Fire Bricks for Castable Refractory- Grade 26 materials for Furnaces (230 mm x 115 mm x 75 mm)	EA	50		
4.2	Supply & instltn of Ceramic Fibre Blankt Supply and installation of Ceramic Fibre Blankets 26 Class - 75 mm Thickness	M2	100		
4.3	Sply & Instltn of Calcium Silicate Block Supply and installation of Calcium Silicate Insulation Blocks (1100 Deg C, 1 m X 0.5 m X 0.05 m)	EA	10		
4.4	Supply & exction-MW Castable CL 26 Supply and execution of MW Insulating Castable CL 26 as per ASTM C 401 Class G	KG	100		
4.5	Execution of Calcium Silicate Board Execution of Calcium Silicate Board 1100 deg C (Supply in the scope of BCPL)	M3	15		



4.6	Execution-Silicon Coated Fibre Glass Execution of Silicon Coated Fibre Glass Cloth (Supply in the scope of BCPL)	M3	15		
4.7	Supply and execution of MORTOR/CASTABLE	KG	100		
4.8	Prvdng & Fxng Inspn Pckt-Sz 100mm x100mm Providing & Fixing of Inspection Pocket-Size 100mm x100mm	NOS	100		
4.9	Prvdng & Fxng Inspn Pckt-Sz 150mm x150mm Providing & Fixing of Inspection Pocket-Size 150mm x150mm	NOS	100		
4.10	Removal of Old RockWool/Glasswool	M3	750		
4.11	Removal of Old PUF/Cellular Glass	M3	750		
4.12	Removal of Refractory from any Height	TO	50		
4.13	Removal of Old Ceramic Blanket	M3	100		
4.14	Removal of Old AL/GI Cladding	M2	1000		
4.15	TURBINE INSULATION:Thickness 70 MM	M2	150		
4.16	Spplly & Fxng Ceramic Rope without cldng Supply and wrapping of Ceramic Rope over SS/CS Impulse Tubing/piping without cladding	IM	100		



4.17	spplly & Fxng Ceramic Rope with AL Cldng Supply and wrapping of Ceramic Rope over SS/CS Impulse Tubing/Piping with Aluminium Cladding 24SWG.	IM	750		
4.18	Spply & Applctn of Heat Transfer Cement Supply and application of Heat Transfer Cement	KG	75		
4.19	Fire Proofing-Isolatek Type M-II Materia Fire Proofing- Supply and Execution of Isolatek Type M-II Material	KG	100		
4.20	Turbine insulation rockwool CAT-9 70MM	M2	50		
4.21	Turbine insulation rockwool CAT-9 85MM	M2	50		
4.22	Turbine insulation rockwool CAT-9 150MM	M2	50		
TOTAL AMOUNT exclusive of GST (Rs.)					
TOTAL AMOUNT exclusive of GST (Word).					
GST @%. Bidder to Compulsorily Quote for applicable GST					
Total Amount Inclusive of GST (Rs.)					
Name of authorized person submitting the tender on behalf of the Bidder (s) Designation of authorized person Name of Firm / Contractor/Owner					



ब्रह्मपुत्रक्रेकरऔरपालीमेरलिमिटेड
(भारतसरकारकाउपक्रम)
Brahmaputra Cracker and Polymer Ltd.
(A Government of India Enterprise)

Address of Firm / Contractor/Owner
Date

NOTE : Evaluation shall be done after considering cenvatable benefit on GST.



PART-II (PRICED BID)



ATTACHED AS A SEPARATE SHEET

(PLEASE GO TO OUR E-TENDER PORTAL,
SOR TO BE QUOTED UNDER E-MODE ONLY.)



CUT-OUT SLIPS

ENVELOPE – (I): "BID SECURITY / EMD, TENDER FEE, POWER OF ATTORNEY AND VALID MSE CERTIFICATE [IF APPLICABLE FOR EMD & TENDER FEE EXEMPTION]" – As per ITB 11.1.1, 5 & 16

DO NOT OPEN

SUB: HIRING OF SERVICES TOWARDS INSULATION, REPAIRING AND MAINTENANCE WORKS FOR A PERIOD OF TWO (02) YEARS FOR BCPL LEPETKATA, LAKWA & DULIAJAN

E-TENDER NO.: BCPL/C&P/LE18W219ND/0983

BID SUBMISSION DUE DATE &
TIME ON E-TENDER PORTAL : 05.04.2019 at 1430Hrs

TO

CONTRACTS & PROCUREMENT DEPT.

M/s Brahmputra Cracker and Polymer
Limited (A Government of India Enterprise),
C&P Department, Administrative Building,
PO: Lepetkata, Dist.: DIBRUGARH, Assam,
Pin Code: 786006,
Phone no. 0373 2914636.

FROM:

TO BE PASTED ON THE OUTER ENVELOPE CONTAINING

**BID SECURITY / EMD & TENDER FEE, POWER OF ATTORNEY
AND VALID MSE CERTIFICATE [IF APPLICABLE FOR EMD &
TENDER FEE EXEMPTION]**