

**NUMALIGARH
REFINERY
LIMITED**



A GOVERNMENT OF INDIA UNDERTAKING

TENDER DOCUMENT

FOR

**“DESIGN, ENGINEERING, FABRICATION, SUPPLY AND
COMMISSIONING SUPERVISION OF PLATE TYPE HEAT EXCHANGER
IN HCU”**

Tender No. OC01000298/ASH

PART – I: UN-PRICED BID

PREPARED & ISSUED BY

NUMALIGARH REFINERY LIMITED

(A Govt. of India Enterprise)



**NUMALIGARH REFINERY LIMITED
NOTICE INVITING TENDER (NIT)**

1. Numaligarh Refinery Limited (NRL) invites ONLINE bid (E-tender) from competent and experienced Indian Bidders under two bid system (Part-I: Techno-commercial part and Part-II: Price Part) with sound technical and financial capabilities fulfilling the Pre- Qualification Criteria (PQC) of the tender document for the following item:

DESIGN, ENGINEERING, FABRICATION, SUPPLY AND COMMISSIONING SUPERVISION OF PLATE TYPE HEAT EXCHANGER IN HCU	
(Tender No : OC01000298/ASH)	
Tender Publish Date	24-06-2019 at 16-00 Hrs.
Tender document download end date & time	15-07-2019 at 11-00 Hrs.
Pre-bid Meeting	Not applicable
Bid Submission end date & time	15-07-2019 at 11-00 Hrs.
Bid opening date & time (Technical Bid):	16-07-2019 after 11-00 Hrs.
Tender Withdrawal Time End Date :	15-07-2019 at 10-00 Hrs.

- All amendment, corrigendum, addendum, extension of due date, etc. shall be uploaded in website (<http://eprocure.gov.in/eprocure/app>) only.

2. **SUBMISSION OF E-BID:**

The E-Bid should be prepared in Two Parts as per the following details.

- PART – I : Techno-commercial / Un-priced Bid
- PART - II : Price Bid

Note:

- Only online offer shall be considered against the subject enquiry. For details please go to our e-tendering portal <http://eprocure.gov.in/eprocure/app>
- This Tender is being conducted in e-tendering mode and the Bid documents can be downloaded for ONLINE bidding by the bidders, who has the Digital Signature Certificates.
- For any assistance you may please contact our service provider personnel at Phone No 03776 – 265774, email: z_tender@nrl.co.in
- Bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The Toll free contact number for the helpdesk is 1800 3070 2232.
- Bids received by way of Post, Courier, Fax, Telex or Telegram or email or in open condition shall not be considered.**

3. **PRE-QUALIFICATION CRITERIA (PQC) :** Please refer ‘**TECHNICAL COMPLIANCE SHEET**’ (TCS) along with all requisite technical documents/ information shall be enclosed with bidder’s un-priced quotation.

Failure on the part of bidder in not submitting the same may lead to rejection of bidder’s offer..

4. **EVALUATION OF THE TENDER:** Tender shall be evaluated on 'OVERALL LOWEST BASIS'. Comparison shall be made against the final total cost (Supply+ Service) at NRL Site.
5. **DELIVERY PERIOD:** Materials shall be delivered within 06 months at FOR NRL site basis from the date of PO placement.
6. **DOCUMENTS TO BE UPLOADED AS A PART OF PART – I: TECHNO-COMMERCIAL / UNPRICED E-BID:**
- a) Documents in support of PQC.
 - b) PAN No., GST registration number allocation certificate, Registration certificate /Trade license certificate/ Enlistment certificate / Incorporation certificate in any Govt. deptt. / Statutory body / PSU shall be submitted
Such other certificates if any as defined in the ITB
Copy of partnership deed in case of partnership firm, Memorandum and Article of Association in case of limited company, ownership certificate in case of sole of proprietary 9 firm and Power of Attorney in favour of authorized signatory in case the firm is not a proprietary firm.
 - c) Tender document and copies of all techno-commercial amendments/addendums/corrigendum issued(if any), duly signed and stamped on each page as a token of having received and read all parts of the tender document and having accepted and considered the same in preparing their bid along with Agreed Terms & Conditions (ATC) & SPECIAL INSTRUCTIONS TO BIDDERS (SIB).The commercial terms & conditions should not be repeated in the offer.
 - d) In case bidder is Micro & Small Enterprise (MSE), MSE certificate & Indemnity Bond as per clause no. 7 of this NIT.
 - e) Duly signed & stamped copy of (i) Technical Compliance Sheet, (ii) Deviations (if any) etc.
 - f) OEM Authorization letter (if Applicable).
 - g) List of deviations from NRL technical specification, if any. Bidder should also provide nil deviation statement in the offer in case no technical deviation.

DOCUMENTS TO BE SUBMITTED AS A PART OF PART – II: PRICED E-BID:

- (a) BoQ/Priced Bid "in "XLS" format as per instructions provided.

IMPORTANT NOTE:

- (i) ***Bidder to quote Unit Price (FOR NRL Site), Taxes, Duties, all other charges (i.e. P&F, Freight, TPI/ IBR Charges) in online BoQ/Priced Bid in "XLS" format strictly as per instructions provided. Charges quoted elsewhere shall be ignored and will not be taken into consideration.***
- (ii) *In case of availing benefits under Purchase Preference Policy (Linked with Local Content) (PP-LC Policy) (as explained per Special Conditions of Contract enclosed), bidder shall provide break up of "Local component" and "Imported Component" along with their price bid (in PDF) as per format in 'Table 1: Calculation Of Local Content – Supply Contracts (Goods)'; refer page 5 of 7 of Special Conditions of Contract (SCC).*
- (iii) *Bidders are strictly advised not to submit any additional offer documents mentioning commercial terms and conditions beyond the documents and forms published along with this tender. No subsequent revision in the BoQ is possible*

after final submission. Any services, charges, taxes and duties left blank or =0 (zero) in the online priced bid (BoQ) shall be deemed to be inclusive in the quoted price.

- (iv) *Ambiguity/contradiction/lack of clarity may lead to rejection at any stage of the tender without further notice.*

7. TENDERS FROM MICRO AND SMALL ENTERPRISES (MSEs): Refer Annexure X

8. *NRL adopts a practice to verify documents submitted by L1 (successful) bidder in support of bidder's credential against PQC. Authentication may be verified with the issuing authorities, by way of direct communication to NRL over official e-mail IDs / Original letter of authentication by post. Bidders may also follow up with the issuing authority for eliciting early response. If documents remain unauthenticated till given time line, NRL reserves the right to reject the bid.*

Proper address for communication, including e-mail ID of the issuing authority should be provided along the tender document.

NOTE TO BIDDERS:

The relaxation Past Track Record (PTR) norm in case of MSE / Start-up will not be applicable for this tender.

9. GENERAL:

- i) Bidder should not be under liquidation, court receivership or similar proceedings. Bidder to submit the self certificate in this regard.
- ii) Agencies submitting their bids shall not be on Holiday list of NRL.
- iii) Consortium/Joint venture bids shall not be accepted.
- iv) Canvassing in any other form by the bidder or by any other agency on their behalf may lead to disqualification of their bid.
- v) In case any of the document/information(s) furnished by a bidder are found to be false/forged, such bidder shall be kept in holiday list/ black list apart from other penal actions as deemed fit by NRL.
- vi) NRL reserves the right to defer the date/time of opening of the offer; to make changes in the terms & conditions of tender document and to reject any or all bids without assigning any reason thereof.

Date: 24-06-2019

Contact Person: Ashrukana Gogoi

Phone : 03776-265485

Email ID: ashrukanag@nrl.co.in

**GM (Commercial) i/c
Numaligarh Refinery Limited.
Commercial Dept, Pankagrang,
PO- NR Project, Dist – Golaghat
PIN 785699, Assam**

TECHNICAL COMPLIANCE SHEET

Tender No: OC01000298/ASH

Subject: DESIGN, ENGINEERING, FABRICATION, SUPPLY AND COMMISSIONING SUPERVISION OF PLATE TYPE HEAT EXCHANGER IN HCU.

Duly signed & stamped copy of this pre-filled 'Technical Compliance Sheet' (TCS) along with all requisite technical documents/ drawings / information shall be enclosed with bidder's un-priced quotation. Failure on the part of bidder in not submitting the same may lead to rejection of bidder's quotation.

SN	TECHNICAL REQUIREMENT	BIDDER'S CONFIRMATION
01.	PRE-QUALIFYING CRITERIA: i. Bidder shall be ISO 9001 certified. Copy of valid certificate shall be submitted as proof of the same. ii. Bidder shall have supplied Welded Plate heat exchangers for hydrocarbon services as per API 662 to crude-oil refineries within 10 years of date of tender floatation. Copies of purchase orders/ Inspection release notes/relevant supporting documents to be submitted as proof of having supplied the same.	Noted & confirmed.
02.	Please refer to ANNEXURE - I for detailed specification & Technical terms & conditions and quote accordingly.	Noted

(SIGNATURE OF BIDDER)

TECHNICAL TERMS & CONDITIONS

1. INTRODUCTION

- i. NRL proposes to install welded plate heat exchangers (PHE) 04-EE-23(C) at Down-stream of the existing shell and tube type exchanger 04-EE-23A/B in diesel/cooling water service.

2. SCOPE:

The scope covers design, engineering, preparation of drawings, procurement of materials and bought out components, fabrication, assembly, inspection and testing at manufacturer's works, painting, proper packing & delivery , commissioning supervision of the Welded Plate Heat Exchangers complete with all accessories, commissioning spares (if any), counter flanges with nuts, bolts, gaskets , including special tools & tackles (if any) as per Data sheet requirements, documents attached, specifications, latest codes and standards.

Welded Plate Heat Exchangers to be supplied shall be as under:

<u>Sl. No.</u>	<u>PO item Code</u>	<u>Equipment Tag no.</u>	<u>Plant</u>
1	M-HTEX-108-02	04-EE-23C (N)	HCU

3. GENERAL INSTRUCTIONS

It is not the intent to specify herein all the details of design and manufacture. However the equipment shall conform in all respects to high standards of design, engineering and workmanship, and shall be capable of performing the required duties in a manner acceptable to NRL, who will interpret the meaning of drawing and specifications, and shall be entitled to reject any component or material, which in his judgment is not in full accordance herewith.

The omission of specific reference to any component/ accessories necessary for the proper performance of Plate Heat Exchangers shall not relieve the bidder of the responsibility of providing such facilities to complete the supply of heat exchangers at quoted prices.

Exchangers shall be offered for stage wise inspection to Third party inspection (TPI) agency approved by NRL.

CODES AND STANDARDS:

Design, materials, fabrication, inspection, testing and acceptance of documents of the welded plate heat exchanger shall generally confirm to the latest editions of following appropriate standards or others as necessary

CODE/STANDARDS CODE /STANDARDS TITLE

ASME Sec.VIII Div.1 ASME Boiler and Pressure Vessel Code
 API 662 Plate heat exchanger for General Refinery services
 ASME B16.5 Pipe Flanges and Flanged Fittings

ASME Sec.IX Welding & Brazing Qualification

ASME Sec.V Non Destructive Examination

ASME Sec.II Part A,B,C,D Ferrous material specifications, Non Ferrous material specifications ,Welding rod, electrodes and filler material, Material Properties

PESO Code/Requirements, IS codes etc.

4. SCOPE OF SUPPLY:

- i. Vendor shall submit design data, design calculations, detail equipment drawings and QAP for approval from NRL. Vetting from TPI in approved drawing/QAP is required.
- ii. Each Plate Heat Exchanger shall be comprised of
 - a. Heat transfer plate pack
 - b. Supporting arrangement shall contain foundation plate/channels, anchor bolts,nuts, etc.
 - c. Lifting arrangement i.e., lifting lugs, eye bolts etc.
 - d. Insulation holding lugs
 - e. Commissioning spares
 - f. Matching flanges for each nozzle.

Any special tools & tackles, if required for operation and maintenance of equipment.

Other accessories as required to make Plate heat exchangers complete in all respects.

iii. As built drawings, datasheets, test reports/ certificates, instruction manuals for erection, operation and maintenance to be supplied along with equipment

iv. **Vendor shall provide supervisory services for commissioning of the heat exchangers.**

5. TECHNICAL

5.1 GENERAL CONDITIONS.

5.1.1. All material required for fabrication, testing, inspection shall be in vendor scope.

5.1.2. Based on the layout requirement, the nozzle orientation shall be for countercurrent flow.

5.1.3. Vendor has to ensure that all aspects covered in the Specifications and data sheets attached with the enquiry are complied with.

5.1.4. All drawings shall be thoroughly checked and duly signed by the vendor. Unchecked drawings and drawings without revisions clearly marked shall be returned without review. Successive review of the same drawing shall apply only to NRL's latest data sheet/ comments on the previous revision. Drawings and documents returned to the vendor for revision shall be resubmitted at the earliest.

5.1.5. General arrangement drawings (GADs) indicating design data, fabricated equipment's weight, general notes, nozzle schedule, detail of plate pack and body/frame, supporting arrangement, main weld seams, nozzle orientation plan etc.

Detail of all nozzles, accessories etc.

Detail of internals, gaskets etc.

Detail of external clips for ladder, platform, insulation, lifting lugs, etc.

Shell development drawings incorporating all attachments and weld seams.

Bill of material for each item showing part size, quantity, material specification, scope of supply and weight etc.

Drawings for civil foundation design and construction to be submitted.

5.1.6. The vendor shall be deemed to have visited the site & familiarized themselves with the existing conditions with respect to space availability for the erection and operation, withdrawal space required for maintenance before submitting the offer. Non familiarity with site conditions shall not be considered a reason either for extra claims or for not carrying out the work conforming to the Specifications / Drawings.

5.1.7 The manufacturer should be able to provide the support of the maintenance at site or within India on any type of failure including welding.

6. DESIGN AND MATERIAL

- 6.1. Equipment shall be capable of safe, proper and continuous operation at all heat loads and operating conditions in Data sheet.
- 6.2. Pressure drop across plate heat exchanger from inlet to outlet in fouled conditions for primary and secondary sides shall not be more than those specified in data sheet.
- 6.3. Heat transfer plates shall be provided with sufficient thickness in order to impart sufficient rigidity to plates and shall be adequate to withstand all operating conditions.
- 6.4. Material of the heat transfer plates and gaskets shall be consistent with the fluid handled.
- 6.5. Suitable corrosion allowance shall be provided whenever necessary.
- 6.6. Provision for Back wash arrangement to be considered while designing the PHEs
- 6.7. MOC for plate material: SS 316L
- 6.8. Panel material to be provided with SS 316 cladding
- 6.9. The plate heat exchangers shall consist of welded plates supported in frame capable of being opened for mechanical cleaning on all four sides and hence for both streams.
- 6.10. PHEs should be designed for full pressure in each stream with no pressure on other stream.
- 6.11. The gasket utilization should be limited to panel only. No gasket utilization in the internal arrangement of the exchanger is acceptable. The gasket material shall be spiral wound with SS316 + graf. filled.
- 6.12. The welded plate heat exchanger shall be designed with 20% extra area for fouling margin.
- 6.13. Nozzles should be flanged and projected type.
- 6.14. Design should be such as to provide venting and draining of each stream through main Nozzles. Otherwise, separate vent or drain (size 2" NB flanged with blind flange and spiral wound gaskets) nozzles shall be provided on each side.

- 6.15. Lifting lugs shall be provided for each panel.
- 6.16 To eliminate fouling buildup at the corner and allow complete accessibility to heat transfer plate for full cleaning there should not be any stagnant zone. Channel gap should not be less than 5mm.
- 6.17 Flanges size shall conform to ANSI/ ASME B16.5.
- 6.18 Exchanger shall be designed for 110% of flow and duty specified in the datasheet
- 6.19 The nozzle for both Hot fluid (Diesel) and Cold Fluid (**Water**) **should be 6 “(inch)** **with EIL line spec A1A**. All flanges (inlet /outlet) shall be 150#.

7. **PAINTING** (Relevant to CS materials only)

Equipment shall be painted externally shot blasted and painted as per the following

Surface Preparation: Shot Blast to SA 2 1/2.

Generic name of the paint: Two component high solid High temperature (up to 200 Deg C dry heat) phenolic epoxy coating.

Total DFT: 200 Micron

Method of Application: 2 x 100 Manual/spray

8. **THIRD PARTY INSPECTION:**

The heat exchanger shall be inspected by NRL approved third party inspection agency as per NRL approved QAP. Fabrication shall not commence before QAP approval. Vendor shall make all arrangements for carrying out all tests. All materials and accessories required for carrying out the tests shall be in vendor's scope.

Third party inspection (TPI) release note (in original) from Lloyds/EIL/BV/DNV shall be acceptable to NRL. However, if the above agencies are not available, TPI agencies authorized and recognized by NABCB (National Accreditation Board for Certification Bodies) may also be accepted.

9. **NAME PLATE:**

The exchanger shall be supplied with SS emblem showing

- Tag no
- Hot side & cold side product & Temperature details
- Design codes
- Vendor codes
- Operating, design and test pressures
- Weight of exchanger

10. PACKAGING/DELIVERY

Shipment, transport of the complete package units shall be VENDOR's responsibility.

The following requirements shall be implemented as a minimum:

- a. On completion of inspection and tests, materials shall be thoroughly cleaned and dried internally and externally and prepared for shipment.
- b. All flanges shall be covered with metal covers and soft rubber gaskets and held by at least 4 bolts. Other openings shall be taped closed. Threaded connections shall be capped or plugged for thread protection. Plastic Cap / Plug shall not be used.
Materials and components supplied loose shall be identifiable in accordance with a marking and tagging list. A system allowing easy identification shall be used.
- c. All openings shall be closed to avoid entrance of debris and foreign matter.
- d. Vendor's manual shall list all the conservation applied and all measures required to be taken if the commissioning period would be longer as expected. Vendor's manual shall also describe measurements to be taken for removal of conservation if necessary.
- e. Vendor shall ensure the equipment is ready for commissioning.

11. SUPERVISION OF PERFORMANCE TESTING & COMMISSIONING

- a. Erection of exchanger including all accessories shall be carried out by NRL. The supervision of performance testing and commissioning at site of all systems supplied to shall be done by the vendor.
- b. The Supervisory cost of 10 man days has been estimated for the purpose proposal. The Vendor shall indicate in his proposal cost of providing the above services on per diem basis.
- c. Vendor may propose separate rates for foreign specialist and Indian specialist, in such case proposed break up ratio for the same shall be provided
- d. To & Fro travelling cost for commissioning & installation from vendors works to NRL site, shall be in vendor's scope and same shall be reimbursed by NRL at actual subject to submission of travel documents viz. Boarding pass/Air tickets/train tickets etc.
- e. NRL may provide local conveyance, food & on chargeable basis and Guest house accommodation shall be provided subject to availability and on chargeable basis.
- f. The Billing period for supervision of installation & commissioning shall be considered from the day OEM's engineers arrives at NRL site up to the day he/she leaves NRL.

12. GUARANTEE

Vendor shall furnish a written performance guarantee stating that the equipment supplied will meet the performance stated on the data-sheets.

Mechanical:

Mechanical guarantee shall be for proper design, workmanship and material of construction for all fabricated items, bought out items and complete equipment / package to be supplied by Vendor.

Vendor shall repair and replace parts of the equipment supplied at his own cost, if found defective or unsuitable for the duty conditions during the guarantee period

13. DATA REQUIREMENTS

A. DOCUMENTS TO BE SUBMITTED ALONG WITH OFFER:

Complete filled and stamped data sheet.

Schedule of Deviations if any.

Plate area of the offered model.

GA Drawing of PHE indicating all-important details for Layout purpose, withdrawal space required for plates, weight of assembly, nozzle & matching piece details etc.

Any other document bidder considers it absolutely necessary. Other Drawings/ documents etc. shall be submitted by successful bidder after the award of contract.

B. DOCUMENTS TO BE SUBMITTED ALONG WITH THE SUPPLY OF EXCHANGERS

06 sets of hard copy of final document folder (one copy should contain all original documents) and one soft copy (Pen drive format only) contains the following:

Data Sheet with process parameters

Design basis including heat load calculations

Material Data sheet

Construction details like welding, hydro test report

100% NDT record with TPI certificates

As Built GADs of the Heat Exchangers showing each component and MOC.

Gasket drawings shall be given separately

Quality Plan / Record

All data and drawings necessary for civil foundation design and construction.

Vendor shall ensure that all data folder documents including the "AS BUILT DRAWING" are updated & complete in all respects and shall incorporate all suggestions/correction informed by NRL or the authorized inspector while obtaining certificate of completeness from the Inspection Agency. In the event of the fabricator's failure to meet the above requirements, the supply of equipment shall be considered as incomplete

14. SPARES

Mandatory Spares:

Set of gaskets (400%)

Fasteners (25%)

2 YEARS MAINTENANCE SPARES:

Vendor to quote item wise separate prices for 2 years maintenance spares and special tools and tackles, if any. A list of the same to be included in the vendor's offer (Separate Quote) with price validity till guarantee/ warranty period.

15. DELIVERY PERIOD:

6 months from date of placement of PO

Attachments:

1. Process datasheet of 04-EE-23C(N)

BIDDER'S SIGNATURE, SEAL:

UN-PRICED SCHEDULE FORMAT

FORMAT 2-A

Name of Bidder :
Tender No : OC01000298/ASH
Item : DESIGN, ENGINEERING, FABRICATION, SUPPLY AND COMMISSIONING SUPERVISION OF PLATE TYPE HEAT EXCHANGER IN HCU

Sl. No.	Item description	Qty.	UoM	BASIC UNIT Price to be quoted by the Bidder	Packing, Forwarding charges	Freight Charges	Third Party Inspection Charges	GST Rate
				Rate(Rs.)	Rate(Rs.)	Rate(Rs.)	Rate(Rs.)	in (%)
10.00	Plate type heat exchanger 04-EE-023 (N) with all accessories (to be used as r/d DIESEL trim cooler in HCU)	1	NOS					
20	Supervision service for erection ,testing & commissioning of Plate type heat exchanger at HCU, 04-EE-023C (N). The job must be completed in all respect to the satisfaction of EIC. (Qty: Per-Diem basis)	[To be submitted in Document Terms & Conditions for Supervision of Erection, Testing & Commissioning (Indian Bidders) enclosed in FORMAT 2-B]						
30.00	Mandatory Spare Parts(Refer Annexure I:TECHNICAL TERMS & CONDITIONS, clause no. 14)	1	AU					
40.00	Supply of 02 (Two) Years Operation and Maintenance (O&M) Spares as per Technical Specifications Doc.	[To be submitted in the enclosed Priced Schedule FORMAT 2-C]						

(Bidder's Signature & Seal)

Note to Price schedule:

1. Evaluation of Tender shall be on 'Overall lowest offer" basis i.e. (Supply + Service)
2. Quoted Prices shall be firm and fixed till complete execution of the entire order.
3. Un-priced copy of the price schedules indicating 'Quoted/ Not Quoted' against each item need to be furnished along with un-priced bid. Bidder must quote price in price schedule format only. The format shall not be changed or retyped. For any deviation to the formats, offer may be rejected.
6. No. of man days to be considered for evaluation for supervision and commissioning is 10 (Ten) man-days .
6. Quoted Price for 02 years operation & maintenance spares shall not be considered for evaluation.

Supplier's confirmation: We have noted as above and quoted accordingly.

(Bidder's Signature)

(Seal)

NUMALIGARH REFINERY LIMITED
AGREED TERMS & CONDITIONS (ATC)

Bidder M/s _____ Tender No : **OC01000298 /ASH**

Offer Ref & Date: _____ Signature : _____

Tel. No/ Mob: _____ Name : _____

E-mail id _____ Official Seal : _____

DULY FILLED, SIGNED & STAMPED COPIES OF THIS PRE-FILLED "QUESTIONNAIRE" SHALL BE ENCLOSED WITH BIDDER'S UNPRICED QUOTATION. FAILURE ON THE PART OF BIDDER IN NOT RETURNING THIS DULY FILLED-UP "QUESTIONNAIRE WITH UNPRICED QUOTATION AND/OR SUBMITTING INCOMPLETE REPLIES MAY LEAD TO REJECTION OF BIDDER'S QUOTATION".

SN	DESCRIPTION	BIDDER'S CONFIRMATION
01.	<u>EVALUATION OF TENDER:</u> Evaluation of this tender shall be on – ' OVERALL LOWEST BASIS '. Comparison shall be made against the final total cost (Supply+ Service) at NRL Site.	Noted & Confirmed.
02.	Quoted price shall be on FOR NRL Stores basis. Please indicate the following: (a) Despatch Point of the goods: (b) Mode of despatch of goods:	(a) _____ (b) _____
03.	Please confirm that you have quoted price on FOR NRL Site basis; Separately indicating Basic Price (on Ex-works), P&F (in % of basic), Freight Charge (in % of basic), Third Party Inspection charges (in % of basic), GST (in % of basic) in the " BoQ/Priced Bid " in "XLS" format as per instructions provided <u>Note:</u> Please quote the above in BOQ as per requirement of Tender conditions.	Confirmed.
	<u>NOTE:</u> Where any field in the online priced bid (BoQ) is left blank or =0, the charge, tax or duty shall be considered as either inclusive, nil or not applicable. Charges quoted elsewhere may be ignored in priced bid evaluation and shall not be borne by NRL. Bidders are strictly advised not to submit any additional offer documents mentioning commercial terms and conditions beyond the documents and forms published along with this tender. No subsequent revision in the BoQ is possible after final submission. Any services, charges, taxes and duties left unquoted shall be	Noted

	deemed to be inclusive in the quoted price. Ambiguity/contradiction/lack of clarity may lead to rejection at any stage of the tender without further notice.	
04.	<u>PACKING & FORWARDING (P&F) CHARGES:</u> Seller to indicate applicability of P&F charges as per the respective quoted rates in BOQ or it is inclusive.	Confirmed.
05.	<u>THIRD PARTY INSPECTION CHARGE:</u> Seller to indicate the charge for Third Party Inspection Charge as per the respective quoted rates in BOQ or it is inclusive. Third party inspection (TPI) release note (in original) from Lloyds/EIL/BV/DNV shall be acceptable to NRL. However, if the above agencies are not available, TPI agencies authorized and recognized by NABCB (National Accreditation Board for Certification Bodies) may also be accepted.	Confirmed.
06.	<u>FREIGHT CHARGES:</u> Please note that Transportation up to NRL Site is in the scope of Seller. Seller to indicate firm freight charge as per the respective quoted rates in BOQ or it is inclusive.	Confirmed.
07.	<u>GST DETAILS:</u> Please furnish following information as per the respective quoted rates in BOQ. 1. HSN CODE 2. APPLICABLE GST TYPE-IGST/CGST+SGST/UTGST 3. APPLICABLE GST %	Confirmed.
08.	<u>PAYMENT TERM:</u> <u>(A) Supply Part (i.e. Supply of Plate Type Heat Exchangers):</u> - 90% within 30 days of receipt & acceptance of complete Plate Type Heat Exchanger with all accessories (as per scope of supply of the tender) at NRL Site, Numaligarh and against submission of 10% PBG. - 10% within 30 days of successful completion of Supervision of Erection, Testing & Commissioning of Plate Type Heat Exchanger (s) supplied at NRL Site, Numaligarh or within 06 (Six) months of receipt of the material whichever is earlier. In case supervision of Erection, Testing & Commissioning is delayed beyond 06 (six) months of receipt & acceptance of complete Plate Type Heat Exchanger at NRL Site (for reasons not attributable to supplier), this balance 10% shall be released against submission of Bank Guarantee (BG) of equivalent amount valid up to successful completion of supervision activities at NRL Site subject to maximum	Confirmed.

	BG validity period of 01 year from the date of receipt & acceptance of Plate Type Heat Exchanger at NRL Site. <u>(B) Service Part (i.e. Supervision of Erection, Testing & Commissioning):</u> - 100% within 30 days of successful completion of Supervision of Erection, Testing & Commissioning of Plate Type Heat Exchanger (s) at NRL site against submission of invoice duly certified by Engineer-In-Charge (E-I-C) of NRL.	
09.	<u>DELIVERY PERIOD:</u> Materials shall be delivered within 06 months from the date of confirmed PO.	Confirmed.
10.	<u>SUPERVISORY SERVICE FOR ERECTION INSTALLATION & COMMISSIONING:</u> - Per Diem rate shall apply from the day the supervisory personnel reaches site and up to the day they leaves site. No payment shall be made for travel days / period. - Working hours prevailing at site – normally eight hours a day, Monday to Saturday and holidays as applicable to site personnel shall apply. - Supplier's supervisory personnel to observe/abide by site working conditions prevailing in the existing refinery, safety codes & Indian laws. - Site Mobilization: Vendor shall depute all required supervisory service personal at NRL Site within 02 weeks' notice from Owner.	Noted & confirmed
11.	<u>OFFER VALIDITY:</u> Bid shall remain valid for a period of 120 days from the bid due date/extended due date. <i>Note: In case any bidder quotes shorter bid validity, his offer shall be liable for rejection.</i>	Confirmed.
12.	<u>PRICE REDUCTION CLAUSE FOR DELAYED DELIVERY:</u> In case of delay in execution of the order, NRL may at its option, recover from the bidder price reduction of 0.5% of the value of delayed goods per week of delay or part thereof subject to a maximum of 5% of the total order value of goods.	Confirmed
13.	<u>REPEAT ORDER:</u> Acceptance of repeat order within 12 (Twelve) Months from the date of Purchase Order at same prices, terms and conditions.	Confirmed.

14.	<u>GUARANTEE / WARRANTEE CLAUSE:</u> Vendor shall guarantee NRL against any and all defects in design, workmanship of material and performance for a period of 12 months from the date of commissioning / installation or 24 months from the date of last despatch, whichever expires first. Should any defects develop during the guarantee period, it should be remedied promptly free of cost by the vendor and all expenses for transportation of goods necessitated for such repairs or replacement shall be borne by the vendor. The guarantee period for such repaired/replaced goods shall again be 12 months from the date of commissioning/installation.	Confirmed.
15.	<u>PERFORMANCE BANK GUARANTEE (PBG):</u> Submission of Contract Performance Bank Guarantee(CPBG) for 10% of total order value (Supply+ Service) in NRL's standard format attached with tender document valid till for full guarantee period (indicated in GPC- Indigenous) plus 6(Three) months of claim period	Confirmed.
16.	<u>ACCEPTANCE OF NRL GPC:</u> Acceptance of General Purchase Conditions (GPC) of NRL shall be accepted without deviation. (Refer NRL website).	Confirmed.
17.	<u>NO ESCALATION CLAUSE:</u> (a) No escalation of contract value, in any form whatsoever will be entertained during the contract period. (b) For applicable labour wage at NRL site & other related information regarding labour wages, kindly refer "circular wages for contract workmen". This circular is available at NRL Website www.nrl.co.in/tender (Tender Room under heading "Circular of Wages for contract workmen"). (c) No mobilization advance will be paid to the contractor for execution of this work.	Confirmed.
18.	Lists of deviation stated are limited to exemption & deviation as per ANNEXURE –II.	Confirmed.
19.	Information furnished by the bidder is correct in all respects. In case of submission of any false information/ forged documents, offer shall be summarily rejected and penal action including holiday listing as deemed fit will be done by NRL.	Noted.
20.	Bidders who are on holiday list by NRL or any other Oil sector PSU will not be considered. Accordingly, the bidder shall submit a self-declaration as per format enclosed with Tender Document. It may be noted that if this declaration is found to be false, NRL shall have the right to reject bidder's offer, and if	Noted.

	the bid has resulted in a contract, the contract is liable to be terminated. Non fulfillment of all the above mention Technical & Commercial Qualifying criteria will lead to disqualification of bidder.	
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BIDDER'S SIGNATURE, SEAL:

COMPLIANCE TO BID REQUIREMENTS**Tender No: OC01000298/ASH****Subject: DESIGN, ENGINEERING, FABRICATION, SUPPLY AND COMMISSIONING SUPERVISION OF PLATE TYPE HEAT EXCHANGER IN HCU.****Name of Bidder :**

We confirm that our bid complies to the total techno-commercial requirements of bidding document with the following deviation(s):

Sl No	Page No of this Document	Deviation in brief (Details may be attached in separate sheets and may be mailed prior to pre-bid meeting)

Total Nos of deviations stated above

Deviations stated in other (..... Nos of) pages

(SIGNATURE OF BIDDER)

(To be submitted on bidder's letterhead)

UNDERTAKING

Date: _____

To,
GM (Commercial),
Numaligarh Refinery Limited,
Pankagrath, PO: Numaligarh Refinery Project,
Dist-Golaghat (Assam), India
PIN-785699
Fax No.: 03776-265514 / Phone: 03776-265485
E-mail: ashrukanag@nrl.co.in

Sub: Declaration for not being under liquidation, court receivership or similar proceedings.

Ref: (Tender No: OC01000298/ASH)

Dear Sir,
We herewith declare that we are not under liquidation, court receivership or similar proceedings.

(Authorized Signatory)

Name & Designation:

Company Seal:

Date:

Place:

Tender No: OC01000298/ASH

Subject: DESIGN, ENGINEERING, FABRICATION, SUPPLY AND COMMISSIONING SUPERVISION OF PLATE TYPE HEAT EXCHANGER IN HCU.

Bidders who are on holiday list by NRL or any other Oil sector PSU will not be considered. Accordingly, the bidder shall submit a self-declaration as per format below. It may be noted that if this declaration is found to be false, NRL shall have the right to reject bidder's offer, and if the bid has resulted in a contract, the contract is liable to be terminated.

PRO-FORMA FOR SELF DECLARATION OF BLACK LISTING / HOLIDAY LISTING

We hereby declared that we are not currently serving any holiday listing orders issued by NRL or MOPNG debarring us from carrying on business dealings with NRL/MOPNG or serving a banning order by another Oil PSE.

It is understood that any wrong declaration in this context shall make my agency / company liable for action under the Holiday Listing procedure of NRL.

(SIGNATURE OF BIDDER)

Date:

Place:

PROFORMA OF BANK GUARANTEE FOR INDIGENOUS PURCHASE
(PERFORMANCE)

This deed of Guarantee made thisday of by(Name of the bank) Company registered under and having its registered office at and wherever the context so requires includes its successors and assigns (hereinafter called "The Surety") for the favour of M/s Numaligarh Refinery Limited, a company under Public Sector, registered under Indian Companies Act of 1956 having its registered office at 122A, GS Road, Christian Basti, Guwahati-781005 wherever the context so requires includes its successors and assigns (hereinafter called as "The Company").

WHEREAS

1. The Company has placed an Order No. Dated (hereinafter referred to as "the order") with M/s a company registered under Indian Companies Act 1956 having its registered office at and whereas the context so requires includes its successors and assigns (hereinafter called or referred to as "the Supplier").

2. Under the terms of the order, the Supplier is required to furnish the Company at his own cost a Bank Guarantee for an amount of Rs., being the amount equivalent to percentage of the total value of the order for fulfilling the contract.

3. The Surety at the request of the Suppliers, agreed to issue Bank Guarantee in terms of the said order on behalf of the Supplier and the Company has agreed to accept the same. It is hereby stipulated and agreed that the Supplier shall repair or replace free of cost Equipment, Machinery, its parts and components found defective on account of workmanship or defective material or inferior manufacturer, as mentioned in Warranty and Guarantee Clause of the Order for period of from the date of commissioning/ installation OR _____ from the date of last dispatch.

4. The Surety binds himself to pay to the extent of Rs. in case of failure on the parts of the Supplier to perform this Guarantee provided the Company informs the Surety in writing to this effect.

5. Notwithstanding anything contained hereinafter the liability of the Surety in respect of this Guarantee is restricted to Rs. (Rupees only) and it will remain in force till This Guarantee will remain in force upto in the first instance. However, if the contract for which this Guarantee is given is not completed or fully performed, the Surety (Bank) hereby agrees to further extend the Guarantee till such time as is required to fulfil the contract.

6. The Surety shall not be discharged or released from this Guarantee by any arrangement between the Company and the Supplier with or without the consent of the Surety or by any alteration in the obligation of the parties or by any indulgence, forbearance, whether as to payment, time performance or otherwise.

In witness whereof the said Surety Subscribed and set its name and seal hereupto the day.

VENDOR DETAILS

Bidder is requested to furnish the following information/ details along with their un-priced offer:

- 1. Vendor name (mandatory):

- 2. Complete address (State -mandatory):

- 3. PIN Code (mandatory):

- 4. Telephone, Fax, mobile & e-mail:

- 5. GST No :

- 6. Micro/Small/Medium/ others/ no category (mandatory):

- 7. PAN No (mandatory)

(Bidder’s Signature)

Stamp:

Date:

+++++

ON VENDOR's LETTER HEAD

To,
GM (Commercial)
Commercial Department
Numaligarh Refinery Limited,
Golaghat, Assam, Pin: 785699

Dear Sirs,
The following is a confirmation / updation of my bank account details and I hereby affirm my / our choice to opt for payment of amounts due to me under various contracts through electronic mode. I understand that Numaligarh Refinery Ltd. also reserves the right to send the payments due to me by a cheque / Demand Draft / electronic mode or through a banker.

A. Supplier / Contractor Details

- 1. Supplier / Contractor Name (As per bank records)

- 2. Supplier / Contractor Code

- 3. Address(Including Pin Code)

- 4. P. A N. -.

5. E-mail ID

6. Contact Telephone Number

B. Particulars of Bank Account

1. Bank Name

2. Branch Name /branch code

3. Branch Address (incl Pin code)

4. 9 Digit MICR No. of Bank and Branch as appearing on the cheque

5. Account Type (Savings/Cash credit/Current)

6. Account Number (as appearing on cheque book)

7. IFSC Code of the Branch (For RTGS)

8. IFSC Code of the Branch (For NEFT)

I hereby confirm that the particulars given above are correct and complete and also undertake to promptly advise any changes to the above details to NRL. If the transaction is delayed or not effected for reasons of incomplete or incorrect information or banking delays, I shall not hold Numaligarh Refinery Limited responsible. I also agree for printing of the bank details on the cheque or DD if the payment is effected by cheque / DD.

Name (in Capitals) of supplier / contractor

Authorised Signatory

Official Rubber Stamp

Date:

Note: 1. Bank details to be confirmed by the bankers. Such confirmation shall be duly signed & stamped by the bankers. PLEASE NOTE THAT IF THIS FORMAT IS EXTENDED TO NUMBER OF PAGES THEN SIGNATURE AND STAMP FROM YOUR BANKER IS REQUIRED IN ALL THE PAGES.

2. PLEASE ENCLOSE A PHOTOCOPY OF A CHEQUE (DULY CANCELLED AT YOUR END) FROM YOUR CHEQUE BOOK OF THE BANK WHERE YOUR ACCOUNT IS BEING MAINTAINED.

Instructions for Online Bid Submission:

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL: <https://eprocure.gov.in>). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “**Online Bidder Enrolment**” on the CPP Portal is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument. Bidder has to select the payment mode as offline and the instrument as bank guarantee in CPPP. There will be an URN no. in the receipt which is generated after successful payment of EMD via online payment (axis bank) gateway. Put the URN no. as instrument no., payment date as issue date, and put any date as expiry date in the CPPP and upload the receipt in the technical slot in the CPPP. It is mandatory to upload the receipt in the technical folder.
- 4) Bidder should prepare the EMD as per the instructions specified in the NIT of the tender document. Otherwise the uploaded bid will be rejected.
- 5) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the prices bid have been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
- 6) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done
- 8) The uploaded tender documents become readable only after the tender opening by the authorized bid

openers.

- 9) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 10) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800-3070-2232.

PRICE BID UNDERTAKING

From: (Full name and address of the Bidder) _____

To,

Dear Sir/Madam,

I submit the Price Bid for _____ and related activities as envisaged in the Bid document.

2. I have thoroughly examined and understood all the terms and conditions as contained in the Bid document, and agree to abide by them.
3. I offer to work at the rates as indicated in the price Bid, inclusive of all applicable taxes except Service Tax.

Yours Faithfully,

Signature of authorized Representative:

Schedule of price bid in the form of BOQ_XXXX.xls

The below mentioned Financial Proposal/Commercial bid format is provided as BoQ_XXXX.xls along with this tender document at <http://eprocure.gov.in/eprocure/app> . Bidders are advised to download this BoQ_XXXX.xls as it is and quote their offer/rates in the permitted column and upload the same in the commercial bid. **Bidder shall not tamper/modify downloaded price bid template in any manner.** In case if the same is found to be tampered/modified in any manner, tender will be completely rejected and EMD would be forfeited and tenderer is liable to be banned from doing business with NRL.

TENDER ACCEPTANCE LETTER

Appendix- C

(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: -

Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the _____ web _____ site(s) _____ namely:

as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organization too has also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

SPECIAL CONDITIONS OF CONTRACT

(Applicable for Indian Bidders only)

Tender No: OC01000298/ASH

Subject: DESIGN, ENGINEERING, FABRICATION, SUPPLY AND COMMISSIONING SUPERVISION OF PLATE TYPE HEAT EXCHANGER IN HCU.

POLICY TO PROVIDE PURCHASE PREFERENCE (LINKED WITH LOCAL CONTENT) (PP-LC)

MOP&NG has notified the purchase preference (linked with local content) for the procurement of goods and services under Oil & Gas Projects in India. Under this Policy, the bidders are allowed to avail the purchase preference linked with attaining the stipulated Local content.

NRL reserves the right to allow Manufacturers or Suppliers or Service providers, purchase preference as admissible under the prevailing policy, subject to their complying with the requirements/conditions defined herein and submitting documents required to support the same.

In order to avail the Purchase preference under this policy, bidder shall achieve minimum Local Content (LC) as specified in the Table below.

Items	Local Content (%)		
	2017-18	2018-19	2020-22
Service Contract	20%	22%	25%
Supply Contracts	20%	22%	25%
EPC Contracts (Others)	30%	35%	40%

The Policy shall be implemented in the following manner:

a) In case the lowest (L1) bidder meets the stipulated LC criteria, the order shall be awarded to such bidder.

b) In case none of the bidders meets the stipulated LC criteria, the order shall be awarded to the lowest bidder.

c) In case the lowest bidder does not meet the stipulated LC criteria, the bidders shall be ranked in the ascending order of evaluated prices and next bidder meeting minimum stipulated LC and with his evaluated price within a price band of (+) 10% of lowest bidder's evaluated price, shall be given opportunity to supply 50% of the requirement by matching the lowest bidder's evaluated price. However, if 50% quantity works out to a fraction of quantity, the bidder shall be considered for next higher quantity. In case the quantity cannot be split, the order shall be placed with the entire quantity.

d) In case there are more than one bidder within the price band of (+) 10% of lowest bidder's evaluated price, they shall be ranked in ascending order of their evaluated prices. The opportunity of matching the price shall be accorded starting from the lowest bidder out of these bidders and in case of his refusal, to the next bidder, and so on.

e) In case none of the bidders who meet the stipulated LC criteria agree to match the lowest price, the natural lowest bidder will be awarded the job.

f) The option in case of MSE bidders qualifying under both Policies, namely, Purchase Preference under the Public Procurement Policy - 2012 (PPP - 2012) from MSE bidders and Purchase Preference Linked with Local Content (PP-LC 2017) shall be exercised as under:

i) The MSE bidder can avail only one out of the two applicable purchase preference policies, i.e. PP-LC 2017 or PPP-2012 and therefore, bidder will be required to furnish the option under which he desires to avail purchase preference. This option must be declared within the offer and in case bidder fails to do so although he is eligible for both the Policies, his offer would be evaluated considering PPP-2012 as the default chosen option.

In case a MSE bidder opts for preference under PPP-2012, he shall not be eligible to claim benefit under PP-LC 2017 (irrespective of the fact whether he furnishes the detail of LC in his offer and this LC meets the stipulated LC criteria).

ii) In case a MSE bidder opts for purchase preference based on PP-LC 2017, he shall not be entitled to claim benefit of purchase preference benefit as applicable for MSE bidders under PPP-2012. However, the exemptions from furnishing Bidding Document fee and Bid security shall continue to be available to such a bidder.

g) In view of the above, the bidder's quoted prices against various items of enquiry shall remain valid even in case of splitting of quantities of the items, except in case of items where the quantity cannot be split since these are to be awarded in a Lot or as a package or Group.

h) While evaluating the bids, for price matching opportunities and distribution of quantities among bidders, the order of precedence shall be as under :

- MSE bidder (PPP-2012)
- PP-LC complied bidder (PP - LC)

Examples of Purchase Preference

Non divisible item:

L1 bidder is non MSE, non PP-LC bidder

L2 bidder is PPC-LC (within 10%)

L3 bidder is MSE bidder (within 15%)

MSE bidder shall be given preference to match the L1 price. If L3 bidder matches the L1 price, order shall be placed on him; otherwise option for matching the L1 price shall be given to L2 bidder (PP-LC)

Divisible Item:

L1 bidder is non MSE, non PP-LC bidder

L2 bidder is PP-LC (within 10%)

L3 bidder is MSE bidder (within 15%)

MSE bidder shall be given preference to match the L1 price. If bidder matches the L1 price, order shall be placed on him for the quantity specified in the bidding document. For the balance quantity (i.e. 50% of tendered quantity/value) option for matching the L1 price shall be given to L2 bidder (PP-LC) Balance quantity shall be awarded to natural lowest bidder.

For further clarification, in case an item has quantity 4 nos. then 1 no. can be given to MSE bidder, 2 to PP-LC bidder and left out 01 no. to natural L1 bidder.

i) In case lowest bidder is a MSE bidder, the entire work shall be awarded to him without resorting to purchase preference to bidders complying with Local Content.

j) In case lowest bidder is a PP-LC bidder purchase preference shall be resorted to MSE bidder as per provisions specified in the enquiry document w.r.t. PPP-2012 only.

k) Certification of Local Content

Manufacturers of goods and/or providers of service, seeking Purchase Preference under the policy, shall be obliged to certify the LC of goods, services or EPC contracts as under:

At bidding stage

Bidder shall furnish the percentage of the local content, taking into account the factors and criteria listed out in the policy. These details shall be required only at aggregate level like supply value, transport value and other heads given in the price schedule.

The bidder claiming the PP-LC benefit shall be required to furnish an undertaking on bidder's letterhead confirming his meeting the Local Content and this undertaking shall be certified as under:

- Where the total quoted value is less than INR 5 Crore –

The LC content shall be self assessed and certified by the authorized signatory of the bidder signing the bid.

- Where the total quoted value is INR 5 Crore or above –

i. The Proprietor and an independent Chartered Accountant, not being an employee of the firm, in case of a proprietorship firm.

ii. Any one of the partners and an independent Chartered Accountant, not being an employee of the firm in case of a partnership firm.

iii. Statutory auditors in case of a company. However, where statutory auditors are not mandatory as per laws of the country, where bidder is registered, an independent chartered accountant, not being an Employee of the bidder's organization.

Note:

1. Sample formats for calculation of LC are given below as Table 1 (for Supply Contracts), Table 2 (for Service Contract), Table 3 [for EPC Contracts (Others)] .

2. LC of goods shall be computed on the basis of the cost of domestic components in goods, compared to the whole cost of product. The whole cost of product shall be constituted of the cost spent for the production of goods, covering: direct component (material) cost; direct manpower cost; factory overhead cost and shall exclude profit, company overhead cost and taxes for the delivery of goods.

The onus of submission of appropriately certified documents lies with the bidder and the purchaser shall not have any liability to verify the contents and will not be responsible for the same. However, in case the procuring company has any reason to doubt the

authenticity of the Local Content, it reserves the right to obtain the complete back up calculations before award of work failing which the bid shall be rejected.

After award of contract:

- Where the estimated value is less than INR 5 Crore:

The LC certificate shall be submitted along with each invoice duly self-certified by the authorized signatory of the bidder

- Estimated value is INR 5 Crore or above:

Supplier shall provide the necessary local content documentation to the statutory auditor, who shall review and determine that local content requirements have been met, and issue a local content certificate to that effect on behalf of procuring company, stating the percentage of local content in the goods or service measured.

However, procuring company shall also have the authority to audit as well as witness production processes to certify the achievement of the requisite local content and/or to obtain the complete back up calculation before award of work failing which the bid shall be rejected and appropriate action may be initiated against the bidder.

Failure of bidder in complying with the local content post award:

In case a bidder, who has specified in his bid that the bid meets the minimum Local Content specified in the enquiry document, fails to achieve the same, the following actions shall be taken by the procuring company:

- a. Pre-determined penalty @ 10% of total contract value
- b. Banning business with the supplier/contractor for a period of one year.

To ensure the recovery of above pre-determined penalty, payment against dispatch/shipping document shall be modified to the extent that the 10% payment out of this milestone payment shall be released after completion of this milestone as well as submission of certification towards achievement of Local Content as per provision of enquiry document. Alternatively, this payment can be released against submission of additional bank guarantee valid till completion schedule, plus 3 months or as required by purchasing company.

Purchase Preference in case where Negotiation is also required:

In case purchase preference is applicable, but negotiation is to be conducted with L1 bidder, negotiation shall be carried out. MSE and/or LC complied bidder shall be offered to match the negotiated prices (even if, post negotiation, they are higher by more than 10% as compared to L1 bidder provided they were within 10% of L1 bidder as per original quoted prices) and left out quantity, if any, as per provisions of enquiry document shall be awarded to that bidder.

Table 1: CALCULATION OF LOCAL CONTENT – SUPPLY CONTRACTS (GOODS)

Name of Manufacturer	Calculation of manufacturer Cost per ne unit of Product			
Cost Component	Cost (Domestic Component)	Cost (Imported Content)	Cost Total Rs./US\$	% Domestic Component
	a	b	c = a+b	d = a/c
I. Direct Material Cost				
II. Direct Labour Cost				
III. Factory Overhead				
IV. Total Production Cost				

Note :

$$\% \text{ LC Goods} = \frac{\text{Total Cost (IV.c)} - \text{Total imported component cost (IV.b)} \times 100}{\text{Total cost (IV.c)}}$$

$$\% \text{ LC Goods} = \frac{\text{Total Domestic component cost (IV.a)} \times 100}{\text{Total cost (IV,c)}}$$

Table 2: CALCULATION OF LOCAL CONTENT – SERVICE CONTRACTS

NAME OF SUPPLIER OF GOODS/PROVIDER OF SERVICE							
			Cost Summary				
			Domestic	Imported Rs./US\$	Total	LC	
						%	Rs./US\$
			b	c	d	e=b/d	f=d X e
A	Cost Component						
	I. Material Used Cost	Rs. US\$					
	II. Personnel & Consultant Cost	Rs. US\$					
	III Other services cost	Rs. US\$					
	IV Total Cost (I to IV)	Rs. US\$					
B	Taxes and Duties	Rs. US\$					
C	Total Quoted Price	Rs. US\$					

$$\% \text{ LC Service} = \frac{\text{Total Cost (A. IV.d)} - \text{Total imported component cost (A. IV.c)}}{\text{Total cost (A. IV.d)}} \times 100$$

$$\% \text{ LC Service} = \frac{\text{Total domestic component cost (A. IV.b)}}{\text{Total cost (A. IV.d)}} \times 100$$

Table 3: CALCULATION OF LOCAL CONTENT – EPC (GOODS & SERVICES)

A	Cost Component (Rs./US\$)	Cost Summary				
		Domestic	Imported Rs./US\$	Total	LC	
					%	Rs./US\$
		b	c	d	e=b/d	f=d X e
I	GOODS					
1	Material used cost					
2	Equipment cost					
3	Sub Total I					
II	SERVICES					
1	Personnel & Consultant Cost					
2	Equipment & Work Facility Cost					
3	Construction/Fabrication Cost					
4	Other Services Cost etc.					
5	Sub Total II					
	TOTAL COST OF GOODS + SERVICES					
B	Non Cost Component					
C	Total Quoted Price					

$$\% \text{ LC Combination} = \frac{\text{Total domestic component cost of goods (A.I.3.b) + Total domestic component cost of service (A.II.5.b)}}{\text{Total Cost (A. III .d)}}$$

SPECIAL INSTRUCTIONS TO BIDDERS (SIB)
(Tender No: OC01000298/ASH)

1.0 COMMERCIAL LOADING/ REJECTION OF OFFERS IN CASE OF DEVIATIONS TO COMERCIAL TERMS & CONDITIONS:

1.1 Performance Bank Guarantee (PBG):

In case a supplier offers to give a PBG for less than 10% of order value, or for a lesser period than what is specified in ATC of the Tender, loading shall be done for the differential amount and/ or the differential period.

For differential period/ amount loading, the following example will amplify the methodology (if Tender specifies 10% PBG for 24+6=30 months):

In case of differential period:

Description	Loading
10% for 27 months	No loading
10% for 24 months	$10\% \times 3/27 = 1.11\%$
10% for 18 months	$10\% \times 9/27 = 3.33\%$
10% for 12 months	$10\% \times 15/27 = 5.56\%$
10% for 6 months	$10\% \times 21/27 = 7.78\%$
No PBG	10 %

In case of Differential Amount:

Description	Loading
Amount Offered by Bidder 10%	No loading
Amount Offered by Bidder Less than 10%	Differential between the offered percentage and 10%

1.2 Price Reduction Clause for Delayed Delivery:

Description	Loading
½% of Delayed Order Value (DOV) up to maximum of 5% of Total Order Value (TOV).	No loading
½% of Delayed Order Value (DOV) up to maximum of 5% of Delayed Order Value (DOV).	2.5%
Other than the above 5%	5%

1.3 **Third Party Inspection (TPI) Inspection**

Arrangement of TPI is in supplier's scope. Bidder to quote for the same in **BOQ**. In case supplier does not accept TPI in their scope, their offer shall be considered as incomplete and will be liable for rejection.

1.4 **TRANSPORTATION**

Arrangement of Transportation up to NRL Site is in supplier's scope. Bidder to quote freight charge Extra in **BOQ**. In case supplier does not accept Transportation up to NRL Site in their scope, their offer shall be considered as incomplete and will be liable for rejection.

1.5 **TRANSIT RISK INSURANCE:**

Arrangement of Transit Insurance up to NRL Site, Numaligarh is in supplier's scope. Bidder to quote for the same in **BOQ**. In case bidder does not accept Transit Risk Insurance in their scope, their offer shall be loaded with maximum transit insurance charge quoted by other Indian bidder.

1.6 **Validity of Offer:**

- 1.6.1 Bid submitted by bidder shall remain firm and valid up to 120 days from the final bid due date.
- 1.6.2 In case bidder offer's shorter validity and seeks to revise prices on being asked to extend the validity to meet validity requirement as per Tender, their offer shall be rejected.
- 1.6.3 In case bidder offers shorter validity and does not extend the validity against CQ, the offer shall be liable for rejection.

2.0 **EVALUATION CRITERIA FOR COMPARISON OF BIDS**

- a) Tender shall be evaluated on '**OVERALL LOWEST BASIS**'. Comparison shall be made against the final Landing Costs at NRL Site.
- b) Bids shall be evaluated on the basis of landed cost at Site including P&F, TPI, Transportation & Transit Insurance Charge & GST
- c) Commercial loading shall be included for evaluation of bids. Loading for commercial deviations shall be done on FOT dispatch Point price.

4.0 **PRICE IMPLICATIONS NOT PERMITTED:**

- 4.1 Any increase/ decrease in price submitted by Supplier after submission of offer without any query will be treated as unsolicited.
- 4.2 No Price implication shall be permitted against technical / commercial queries, which are clarificatory in nature without involving any change in scope / specifications of the Tender. In case any bidder gives Price

increase, the bidder shall be advised to withdraw such price increase, and if the vendor does not accept to withdraw price increase, his bid for corresponding item will be rejected.

- 4.3 In case of unsolicited price decrease, the bidder's offer shall be compared as per originally quoted prices and if the bidder happens to be the successful bidder, the decrease in prices shall be taken into account for ordering.

5.0 DISCREPANCY IN BID PRICING:

- a) Bidder must ensure submission of prices without any Correction / Insertion / Omission with signature in original on the priced sheet(s) of the original bid. Bidder to specify total bid price, wherever applicable, in figure as well as in words.
- b) In case of discrepancy in price entered in figures and in words in BOQ; quoted entered in words shall prevail for evaluation and ordering.

SPECIAL CONDITIONS FOR MICRO AND SMALL ENTERPRISES (MSEs) BIDDERS :

With reference the Public Procurement Policy for Micro and Small Enterprises (MSEs) Order 2012 notified by the Government under the Micro, Small and Medium Enterprise Development Act, 2006; notification S.O. 5670(E), dtd. 9th November, 2018, Ministry of MSME letter D.O. No. 21(8)/2018-MA dated 13th November, 2018 , MoP&NG letter ref. No. J-25011/35/2016-Gen dated 15 November, 2018 and letter F.No. 21(3)/2016-MA dated 7th May,2018 from Office of the Development Commissioner M/o MSME; Micro and Small Enterprises (MSEs) shall be entitled for benefits, subject to terms and conditions as under:

A. Qualifying Criteria for MSE Bidder:

- (i) MSE bidder has to mandatorily submit copy of MSE registration document (i.e. Udyog Adhaar Memorandum (UAM) or Entrepreneurs Memorandum (EM Part-II)) from any of the following body :-
 - National Small Industries Corporation (NSIC)
 - District industries Centers(DICs)
 - Coir Board
 - Khadi and Village Industries Commission(KVIC)
 - Khadi and Village Industries Board(KVIB)
 - Directorate of Handicrafts and Handloom
 - Udyog Adhaar Acknowledgment / Udyog Adhaar Memorandum issued by MoMSME
 - Any other body specified by the Ministry of MSME (MoMSME)
- (ii) If the bidder fails to submit MSE registration certificate mentioned above in the original tender, the bidder shall not be considered for evaluation as MSE.
- (iii) The MSE registration shall be valid as on date of placement of order
- (iv) The registration must be for the items/category of items/services relevant to the tendered items/category of items /services

B. Additional Qualifying Criteria for SC/ST MSE Bidder:

Definition of MSEs owned by SC/ST shall be as stated below:

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

In order for MSE owned by SC/ST Entrepreneurs to qualify for benefits available under Public Procurement Policy for MSEs order 2012 to SC/ST Entrepreneurs, the MSE shall additionally submit the following:-

- In case of a proprietorship firm, the name and address of proprietor, and certified copy of Bank Account Details or Cancelled Cheque.
- In case bidder is a partnership firm, certified copy of the partnership deed.
- In case of company (whether private or public), certified copy of the 'Certificate of Incorporation' together with certified copy of Memorandum/Articles of Association.
- Notarized copy of a relevant SC/ ST certificate in the name of SC/ ST proprietor or partner(s) holding minimum 51% shares in case of partnership or person(s) holding minimum 51% shares in limited companies, issued by any of the following:-
 - District Magistrate/ Additional District Magistrate/ Collector/ Deputy Commissioner/ Deputy Collector/ Ist Class Stipendiary Magistrate/ City Magistrate/ Sub-Divisional Magistrate/ Taluka Magistrate/ Executive Magistrate/ Extra Assistant Commissioner (not below the rank of Ist Class Stipendiary Magistrate).
 - Chief Presidency Magistrate/ Additional Chief Presidency Magistrate/ Presidency Magistrate.
 - Revenue Officers not below the rank of Tehsildar
 - Sub-Divisional Officer of the area where the candidate and/ or his family normally resides.
 - Administrator/ Secretary to Administrator/ Development Officer (Lakshdweep Islands).

C. Additional Qualifying Criteria for MSE Bidders owned by Women Entrepreneurs:

Micro & Small Enterprises shall be considered as owned by Women Entrepreneurs as per the below definition:

- In case of proprietary MSE, proprietor should be Women.
- In case of partnership MSE, the Women partner(s) should be holding at least 51% shares in the unit.
- In case of Limited companies, at least 51% share should be held by Women shareholder(s).

In order for MSE owned by Women Entrepreneurs to qualify for benefits available under Public Procurement Policy for MSEs order 2012 to Women Entrepreneurs, the MSE shall additionally submit notarized copy of the following:

- In case of a proprietorship firm, the name and address of proprietor, and certified copy of Bank Account Details or Cancelled Cheque.
- In case bidder is a partnership firm, certified copy of the partnership deed.
- In case of company (whether private or public), certified copy of the 'Certificate of Incorporation' together with certified copy of Memorandum/Articles of Association.
- Self-certification by the women owner declaring herself as women owner of the MSE

D. Benefits Under The Public Procurement Policy for Micro and Small Enterprises (MSEs) Order 2012

1. Issue of Tender Sets Free of Cost

All Tenders shall be provided free of cost and tender documents are downloadable from the Central Public Procurement Portal (CPPP) <http://eprocure.gov.in/eprocure/app> or can be obtained from the Office of General Manager (Commercial). Tenders are also published in NRL Website www.nrl.co.in.

2. Exemption from payment of EMD (Earnest Money Deposit)

MSE units meeting the qualifying criteria (point A above) shall be exempted from paying EMD if EMD is applicable against the tender.

3. Price preference for MSE Bidder:

- i) In tender, participating Micro and Small Enterprises quoting price within price band of L1+15% per cent shall also be allowed to supply a portion of requirement by bringing down the price to L1 price in a situation where L1 price is from someone other than a Micro and Small Enterprise and such Micro and Small Enterprise shall be allowed to supply up to 25 percent of total tendered value.

In case of more than one such Micro and Small Enterprise, the supply shall be shared proportionately (to tendered quantity)

- ii) In case of tender item is non-splittable or non-dividable, etc. MSE quoting price within price band L1+15% may be awarded for full/complete supply of total tendered value to MSE, considering spirit of policy for enhancing the Government procurement from MSE, provided they agree to bring down their price to L1 price.
- iii) NRL reserves the right to allow micro and small enterprises as well as MSEs owned by SC/ST entrepreneur and MSEs owned by Women, purchase preference as admissible under the prevailing procurement policy for MSEs.

iv) For Supply of Goods only:

- The quantity against the item(s) of tender may be split to enable ordering of 25% quantity against the item(s) of tender to MSE bidder(s) within the price range of L1 bidder's evaluated price + 15% subject to their matching L1 bidder's price.
- The quoted prices by bidders against various items of tender shall remain valid in case of splitting of quantities to MSE bidder.
- Out of this 25% allocation for MSEs, 4% shall be to MSEs owned by SC/ ST entrepreneurs. However, in event of failure of MSEs owned by SC/ ST entrepreneurs to participate in the bidding process or meet the tender requirements and L1 price, 4% will be met from other MSEs.
- Additionally, out of above 25% allocation to MSEs, 3% shall be to MSEs owned by Women. However, in event of failure of MSEs owned by Women to participate in the bidding process or meet the tender requirements and L1 price, 3% will be met from other MSEs.
- While granting purchase preference as above, procurement of goods may include certain small work, or some services, which are incidental or consequential to

supply of such goods such as transportation, insurance, installation, commissioning, training & maintenance.

Clarification:

- *In case where quantity against a line item cannot be split (i.e., minimum 25% to MSEs) or items with single quantity or in grouped item, the complete line item/ group shall be awarded on MSE bidder within the price range of L1 bidder's evaluated price + 15% subject to their matching L1 bidder's price.*
- *In case, quantity(ies) against an item/ group cannot be split among MSEs, first opportunity shall be given to*
 - *MSEs owned by Women*
 - *then to MSEs owned by SC/ ST entrepreneurs, and*
 - *lastly to other MSEs, within the price range of L1 non-MSE bidder's evaluated price + 15%.*
- *In cases where MSE bidder in order of preference indicated above refuses to accept the L1 price, opportunity shall be provided to the other bidders in order of preference and so on.*

v) For Services only:

- *The complete scope of Services shall be awarded on MSE bidder within the price range of L1 bidder's evaluated price + 15%, subject to their matching L1 bidder's price.*
- *In case, besides general MSEs, MSEs owned by SC/ ST and/ or MSEs owned by Women are within the price range of L1 bidder's evaluated price + 15%, first opportunity shall be given to*
 - *MSEs owned by Women*
 - *then to MSEs owned by SC/ ST entrepreneurs, and*
 - *lastly to other MSEs, within the price range of L1 non-MSE bidder's evaluated price + 15%.*
- *In cases where MSE bidder in order of preference indicated above refuses to accept the L1 price, opportunity shall be provided to the other bidders in order of preference indicated above.*

vi) In case purchase preference is applicable, but negotiation is to be conducted with L1 bidder, negotiation shall be carried out. Price range within 15% shall be considered for MSE bidders based on the original prices of L1 bidder not on the negotiated prices. However, MSE bidder shall be offered to match the negotiated prices (even if, post negotiation, they are higher by more than 15% as compared to L1 bidder provided they were within 15% of L1 bidder as per original quoted prices).

E. Relaxation of Past Tract Record (PTR) for MSEs and Start ups

- The Pre-Qualification Criteria (PQC) related to prior turnover and prior experience of the bidder will be relaxed if the bidder is Micro and Small Enterprises or Startups and meets the quality and technical specifications described in the tender, subject to submission of valid supporting documents by the bidder.

- This waiver of prior turnover and prior experience will not be applicable for items related to public safety, health, critical security operation and equipment's etc.
- If PTR for MSEs is not completely waived off but proposed to relax the same up to certain extent compared to PQC set for other non MSE bidders, in such cases, prior experience may be partially relaxed, however, prior turnover will remain waived off.

F. Applicability of the Policy

- i) For a participating bidder, MSE status shall be considered for purchase preference in respect to procurement of goods and services only, if the vendor is registered as MSE for the tendered category of goods / service
- ii) Policy meant for procurement of only goods produced and service rendered by MSEs. However, traders /resellers /distributors /authorized agents will not be considered for availing benefits under Public Procurement Policy 2012 for MSEs
- iii) Public Procurement Policy is applicable for supply of goods and services. Works contract is not covered under the PP Policy for MSME. Accordingly, the clause D 3 (Price preference for MSE bidder) and clause E (Relaxation of past track record (PTR) for MSEs and Startups) as mentioned above will not be extended to works contracts.
- iv) The provisions for MSE bidders mentioned in this document shall be applicable for limited enquiries as well as NITs.

LIST OF ITEMS RESERVED FOR PURCHASE FROM SMALL SCALE INDUSTRIAL UNITS
INCLUDING HANDICRAFT SECTOR

- | | |
|--|--|
| 1. AAC/and ACSR Conductor up to 19 strands | 2. Agricultural Implements
(a) Hand Operated tools and implements
(b) Animal driven implements |
| 3. Air/Room Coolers | 4. Aluminum builder's hardware |
| 5. Ambulance stretcher | 6. Ammeters/ohm meter/Volt meter (Electro magnetic upto Class I accuracy) |
| 7. Anklets Web Khaki | 8. Augur (Carpenters) |
| 9. Automobile Head lights Assembly | 10. Badges cloth embroidered and metals |
| 11. Bags of all types i.e. made of leather, cotton, canvas and jute etc. including kit bags, mail bags, sleeping bags and water-proof bag. | 12. Bandage cloth |
| 13. Barbed Wire | 14. Basket cane (Procurement can also be made from State Forest Corpn. and State Handicrafts Corporation) |
| 15. Bath tubs | 16. Battery Charger |
| 17. Battery Eliminator | 18. Beam Scales (upto 1.5 tons) |
| 19. Belt leather and straps | 20. Bench Vices |
| 21. Bituminous Paints | 22. Blotting Paper |
| 23. Bolts and Nuts | 24. Bolts Sliding |
| 25. Bone Meal | 26. Boot Polish |
| 27. Boots and Shoes of all types including canvas shoes | 28. Bowls |
| 29. Boxes Leather | 30. Boxes made of metal |
| 31. Braces | 32. Brackets other than those used in Railways |
| 33. Brass Wire | 34. Brief Cases (other than moulded luggage) |
| 35. Brooms | 36. Brushes of all types |
| 37. Buckets of all types | 38. Button of all types |
| 39. Candle Wax Carriage | 40. Cane Valves/stock valves (for water fittings only) |
| 41. Cans metallic (for milk and measuring) | 42. Canvas Products :
(a) Water Proof Deliver, Bags to spec. No. IS - 1422/70
(b) Bonnet Covers and Radiators Muff. to spec. Drg. Lv 7/NSN/IA/130295 |
| 43. Capes Cotton and Woollen | 44. Capes Waterproof |
| 45. Castor Oil | 46. Ceiling roses upto 15 amps |
| 47. Centrifugal steel plate blowers | 48. Centrifugal Pumps suction and delivery 150 mm. x 150 mm |
| 49. Chaff Cutter Blade | 50. Chains lashing |
| 51. Chappals and sandals | 52. Chamois Leather |
| 53. Chokes for light fitting | 54. Chrome Tanned leather (Semi-finished |

55. Circlips	Buffalo and Cow)
57. Cleaning Powder	56. Claw Bars and Wires
59. Cloth Covers	58. Clinical Thermometers
61. Cloth Sponge	60. Cloth Jaconet
63. Coir mattress cushions and matting	62. Coir fibre and Coir yarn
65. Community Radio Receivers	64. Coir Rope hawserlaid
67. Copper nail	66. Conduit pipes
69. Copper sulphate	68. Copper Napthenate
71. Cordage Others	70. Cord Twine Maker
73. Cotton Absorbent	72. Corrugated Paper Board and Boxes
75. Cotton Carriers	74. Cotton Belts
77. Cotton Cord Twine	76. Cotton Cases
79. Cotton Packs	78. Cotton Hosiery
81. Cotton Ropes	80. Cotton Pouches
83. Cotton Sling	82. Cotton Singlets
	84. Cotton Straps
85. Cotton tapes and laces	86. Cotton Wool (Non absorbent)
87. Crates Wooden and plastic	88. (a) Crucibles upto No. 200
	(b) Crucibles Graphite upto No. 500
	(c) Other Crucibles upto 30 kgs.
89. Cumblies and blankets	90. Curtains mosquito
91. Cutters	92. Dibutyl phthalate
93. Diesel engines upto 15 H.P	94. Dimethyl Phthalate
95. Disinfectant Fluids	96. Distribution Board upto 15 amps
97. Domestic Electric appliances as per BIS Specifications:- - Toaster Electric, Elect. Iron, Hot Plates, Elect. Mixer, Grinders, Room heaters and convectors and ovens	98. Domestic (House Wiring) P.V.C. Cables and Wires (Aluminum) Conforming to the prescribed BIS Specifications and upto 10.00 mm sq. nominal cross section
99. Drawing and Mathematical Instruments	100. Drums and Barrels
101. Dust Bins	102. Dust Shield leather
103. Dusters Cotton all types except the items required in Khadi	104. Dyes :
	(a) Azo Dyes (Direct and Acid)
	(b) Basic Dyes
105. Electric Call bells/buzzers/door bells	106. Electric Soldering Iron
107. Electric Transmission Line Hardware items like steel cross bars, cross arms clamps arching horn, brackets, etc	108. Electronic door bell
109. Emergency Light (Rechargeable type)	110. Enamel Wares and Enamel Utensils
111. Equipment camouflage Bamboo support	112. Exhaust Muffler
113. Expanded Metal	114. Eyelets
115. Film Polythene - including wide width film	116. Film spools and cans
117. Fire Extinguishers (wall type)	118. Foot Powder

119. French polish	120. Funnels
121. Fuse Cut outs	122. Fuse Unit
123. Garments (excluding supply from Indian Ordnance Factories)	124. Gas mantels
125. Gauze cloth	126. Gauze surgical all types
127. Ghamellas (Tasllas)	128. Glass Ampules
129. Glass and Pressed Wares	130. Glue
131. Grease Nipples and Grease guns	132. Gun cases
133. Gun Metal Bushes	134. Gumpape
135. Hand drawn carts of all types	136. Hand gloves of all types
137. Hand Lamps Railways	138. Hand numbering machine
139. Hand pounded Rice (polished and unpolished)	140. Hand presses
141. Hand Pump	142. Hand Tools of all types
143. Handles wooden and bamboo (Procurement can also be made from State Forest Corpn. and State Handicrafts Corporation)	144. Harness Leather
145. Hasps and Staples	146. Haver Sacks
147. Helmet Non-Metallic	148. Hide and country leather of all types
149. Hinges	150. Hob nails
151. Holdall	152. Honey
153. Horse and Mule Shoes	154. Hydraulic Jacks below 30 ton capacity
155. Insecticides Dust and Sprayers (Manual only)	156. Invalid wheeled chairs.
157. Inverter domestic type upto 5 KVA	158. Iron (dhobi)
159. Key board wooden	160. Kit Boxes
161. Kodali	162. Lace leather
163. Lamp holders	164. Lamp signal
165. Lanterns Posts and bodies	166. Lanyard
167. Latex foam sponge	168. Lathies
169. Letter Boxes	170. Lighting Arresters - upto 22 kv
171. Link Clip	172. Linseed Oil
173. Lint Plain	174. Lockers
175. Lubricators	176. L.T. Porcelain KITKAT and Fuse Grips
177. Machine Screws	178. Magnesium Sulphate
179. Mallet Wooden	180. Manhole covers
181. Measuring Tapes and Sticks	182. Metal clad switches (upto 30 Amps)
183. Metal Polish	184. Metallic containers and drums other than N.E.C. (Not elsewhere classified)
185. Metric weights	186. Microscope for normal medical use
187. Miniature bulbs (for torches only)	188. M.S. Tie Bars
189. Nail Cutters	190. Naphthalene Balls
191. Newar	192. Nickel Sulphate
193. Nylon Stocking	194. Nylon Tapes and Laces
195. Oil Bound Distemper	196. Oil Stoves (Wick stoves only)

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|--|--|
| 197. Pad locks of all types | 198. Paint remover |
| 199. Palma Rosa Oil | 200. Palmgur |
| 201. Pans Lavatory Flush | 202. Paper conversion products- paper bags, envelopes, Ice-cream cup, paper cup and saucers and paper Plates |
| 203. Paper Tapes (Gummed) | 204. Pappads |
| 205. Pickles and Chutney | 206. Piles fabric |
| 207. Pillows | 208. Plaster of Paris |
| 209. Plastic Blow Moulded Containers upto 20 litre excluding Poly Ethylene Terphthalate (PET) Containers | 210. Plastic cane |
| 211. Playing Cards | 212. Plugs and Sockets electric upto 15 Amp |
| 213. Polythene bags | 214. Polythene Pipes |
| 215. Post Picket (Wooden) | 216. Postal Lead seals |
| 217. Potassium Nitrate | 218. Pouches |
| 219. Pressure Die Casting upto 0.75 kg | 220. Privy Pans |
| 221. Pulley Wire | 222. PVC footwears |
| 223. PVC pipes upto 110 mm | 224. PVC Insulated Aluminium Cables (upto 120 sq. mm) (ISS:694) |
| 225. Quilts, Razais | 226. Rags |
| 227. Railway Carriage light fittings | 228. Rakes Ballast |
| 229. Razors | 230. RCC Pipes upto 1200 mm. dia |
| 231. RCC Poles Prestressed | 232. Rivets of all types |
| 233. Rolling Shutters | 234. Roof light Fittings |
| 235. Rubber Balloons | 236. Rubber Cord |
| 237. Rubber Hoses (Unbranded) | 238. Rubber Tubing (Excluding braided tubing) |
| 239. Rubberised Garments Cap and Caps etc | 240. Rust/Scale Removing composition |
| 241. Safe meat and milk | 242. Safety matches |
| 243. Safety Pins (and other similar products like paper pins, staples pins etc.) | 244. Sanitary Plumbing fittings |
| 245. Sanitary Towels | 246. Scientific Laboratory glass wares (Barring sophisticated items) |
| 247. Scissors cutting (ordinary) | 248. Screws of all types including High Tensile |
| 249. Sheep skin all types | 250. Shellac |
| 251. Shoe laces | 252. Shovels |
| 253. Sign Boards painted | 254. Silk ribbon |
| 255. Silk Webbing | 256. Skiboots and shoes |
| 257. Sluice Valves | 258. Snapfastner (Excluding 4 pcs. ones) |
| 259. Soap Carbolic | 260. Soap Curd |
| 261. Soap Liquid | 262. Soap Soft |
| 263. Soap washing or laundry soap | 264. Soap Yellow |
| 265. Socket/pipes | 266. Sodium Nitrate |
| 267. Sodium Silicate | 268. Sole leather |
| 269. Spectacle frames | 270. Spiked boot |
| 271. Sports shoes made out of leather (for all | 272. Squirrel Cage Induction Motors upto |

Sports games)	and including 100 KW440 volts 3 phase
273. Stapling machine	274. Steel Almirah
275. Steel bedsstead	276. Steel Chair
277. Steel desks	278. Steel racks/shelf
279. Steel stools	280. Steel trunks
281. Steel wool	282. Steel and aluminium windows and ventilators
283. Stockinet	284. Stone and stone quarry rollers
285. Stoneware jars	286. Stranded Wire
287. Street light fittings	288. Student Microscope
289. Studs (excluding high tensile)	290. Surgical Gloves (Except Plastic)
291. Table knives (Excluding Cutlery)	292. Tack Metallic
293. Taps	294. Tarpaulins
295. Teak fabricated round blocks	296. Tent Poles
297. Tentage Civil/Military and Salitah Jute for Tentage	298. Textiles manufactures other than N.E.C. (not elsewhere classified)
299. Tiles	300. Tin Boxes for postage stamp
301. Tin can unprinted upto 4 gallons capacity (other than can O.T.S.) conforming to IS:1291/75 (upto 600 amps)	302. Tin Mess
303. Tip Boots	304. Toggle Switches
305. Toilet Rolls	306. Transformer type welding sets
307. Transistor Radio upto 3 band	308. Transistorised Insulation - Testers
309. Trays	310. Trays for postal use
311. Trolley	312. Trollies - drinking water
313. Tubular Poles	314. Tyres and Tubes (Cycles)
315. Umbrellas	316. Utensils all types
317. Valves Metallic	318. Varnish Black Japan
319. Voltage Stabilisers including C.V.T's	320. Washers all types
321. Water Proof Covers	322. Water Proof paper
323. Water tanks upto 15,000 litres capacity	324. Wax sealing
325. Waxed paper	326. Weighing Scale
327. Welded Wire mesh	328. Wheel barrows
329. Whistle	330. Wicks cotton
331. Wing Shield Wipers (Arms and Blades only)	332. Wire brushes and Fibre Brushes
333. Wire Fencing and Fittings	334. Wire nails and Horse shoe nails
335. Wire nettings of gauze thicker than 100 mesh size	336. Wood Wool
337. Wooden ammunition boxes	338. Wooden Boards
339. Wooden Box for Stamps	340. Wooden Boxes and Cases N.E.C. (Not elsewhere classified)
341. Wooden Chairs	342. Wooden Flush Door Shutters
343. Wooden packing cases all sizes	344. Wooden pins
345. Wooden plugs	346. Wooden shelves
347. Wooden veneers	348. Woolen hosiery
349. Zinc Sulphate	350. Zip Fasteners

HANDICRAFT ITEMS

Item Description

Source of Supply

351. Cane furniture	North Eastern Handicrafts and Handlooms Development Corporation Assam Govt. Marketing Corpn. Craft Society of Manipur Nagaland Handicrafts and Handlooms Development Corpn.
352. Bamboo file tray, Baskets, Pencil stand, side racks etc.	-do-
353. Artistic Wooden Furniture	Rajasthan Small Industries Corpn., U.P. Export Corporation
354. Wooden paper weight racks etc.	-do-
355. Glass covers made of wood and grass jute	-do-
356. Jute furniture	West Bengal Handicrafts Dev. Corp. Jute Mfg. Development Corporation Orissa State Handicrafts Dev. Corp.
357. Jute bags, file cover	-do-
358. Wooden and silk carpets	U. P. Export Corporation J and K Sale and Export Corporation



Welded Plate Heat Exchanger

PROCESS DATA SHEET

NUMALIGARH REFINERY LTD
TECHNICAL SERVICE
PROCESS TECHNOLOGY

Job No Ref:					
UNIT: HYDROCRACKER UNIT					
UNIT NO. 4					
ITEM NO. 04-EE-023C		SERVICE DIESEL TRIM COOLER			
OPERATING CONDITIONS		HOT SIDE		COLD SIDE	
FLUID HANDLED		DIESEL		COOLING WATER	
MASS FLOW RATE		IN	OUT	IN	OUT
LIQUID	KG/HR	89500	89500		
OPERATING TEMPERATURE DEG C		108.0	40.0	33.0	45.0
OPERATING PRESSURE KG/CM2 G		7.7		4.0	
LIQUID PROPERTIES @ OPERATING T & P					
DENSITY	Kg/m3	777.5	801		
VISCOSITY	CP	1.519	3.023		
SPECIFIC HEAT	KCAL/KG DEG C	0.511			
THERMAL CONDUCTIVITY	KCAL/M HR DEG C	0.12	0.125		
SURFACE TENSION (IF 2 PHASE) DYNES/CM					
ALLOWABLE PRESSURE DROP KG/CM2		0.2		0.9	
FOULING RESISTANCE HR M2 DEG C/KCAL		0.0004		0.0004	
DESIGN PRESSURE KG/CM2		Kg/cm2 g			
DESIGN TEMPERATURE		Deg C			
HEAT DUTY		MM KCAL/HR			
RELATIVE DIRECTION OF THE FLUID		COUNTER CURRENT			
PLATE MATERIAL		SS 316L			
UNIT ORIENTATION		VERTICAL			
APPROX DIMENSION(W X L X H)		CM			
0	04.06.2019	ISSUED FOR CLIENTS COMMENTS		DN	
Rev No	Date	Purpose		Prepared By	Reviewed By
					Approved By

Debabrata Nath

देवब्रत नाथ/DEBABRATA NATH
मुख्य प्रबंध (तकनीकी सेवा-प्रक्रिया)/Chief Manager (Technical Services-Process)
नुमालीगढ़ रिफाइनरी लिमिटेड / Numaligarh Refinery Limited
गोलाघाट, असम - 785 699 / Golaghat, Assam - 785 699