ANNEXURE- A

PROCEDURE TO PARTICIPATE IN E-PROCUREMENT

BHEL Trichy has implemented e-Procurement (www.bheleps.buyjunction.in) and it is going to be the way of working in future.

Interested bidders / Suppliers shall submit their offer through e-Procurement mode at https://bheleps.buyjunction.in. Offers in any other mode will not be accepted.

The Requirement:

1. A PC with Internet connectivity &
2. DSC (Digital Signature Certificate) (**Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION**)

The following are the benefits of e-Procurement Process.

1. Ensuring no offer is missed due to last minute submission, postal delays etc.
2. Reduced Tendering & ordering cycle time
3. Economical, smoother & speedy communication
4. Greater Transparency
5. Big step towards paperless procurement process, Minimal human error
6. No geographical barriers
7. Vendor gets alerts regarding issue of new tender enquiry, amendments, clarifications etc
8. Submission of offer from the comforts of their office from any location
9. on line clarifications
10. Direct Cost Savings such as reduced Paper costs, reduced printing costs, reduced mailing costs, reduced telephone costs and reduced fax costs.

BHEL has finalized the e-procurement service Provider

M/s mJunction services Limited, Kolkata

Godrej Water Side, 3rd Floor, Tower-1, Plot-V, Block - DP
Sector - V, Salt Lake, Kolkata-700091, West Bengal, INDIA

Please get in touch with them immediately. The contact details of the service provider is given below:

a. DHANARAJ.P email: panneer.dhanaraj@mjunction.in, Cell 9500199108
b. HELPDESK email: eps.customercare@mjunction.in, Phone No: 033-66106426/6217/6013/6046/6176, 9163348283 / 9163348284 / 9163348285 / 9163348286 / 8584008116

The process of utilizing e-procurement necessitates usage of DSC (Digital Signature Certificate)(**Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION**) and you are requested to procure the same immediately, if not presently available with you. Please note that only with DSC, you will be able to login the e-procurement secured site and take part in the tendering process. The contact details of the DSC Certifying Authority as given below

1	**e-Mudhra**	http://www.e-Mudhra.com	5	**NIC**	www.safescrypt.com
2	**GNFC**	www.ncodesolutions.com	6	**Safescrypt**	www.safescrypt.com
3	**IDRBT**	www.idrbtca.org.in	7	**TCS**	www.tcs-ca.tcs.co.in
4	**MTNLTrustline**	www.mtnltrustline.com			

Vendors are requested to go through seller manual available on www.bheleps.buyjunction.in

Bharat Heavy Electricals Limited
(High Pressure Boiler Plant)
Tiruchirappalli-620 014, Tamil Nadu, India
Dept: MATERIALS MANAGEMENT/BOI

An ISO 9001 Company

ANNEXURE - B (For Foreign vendors)

Note: ***This Annexure has to be mandatorily filled & signed by the manufacturer (or) mill and submitted along with Technical Bid.***

Any deviation to the below mentioned terms shall be stated specifically in the comments column for each term and also in case of acceptance to our terms, it will be construed that the whole term is understood and agreed in totality without any deviation (if otherwise mentioned) .

ACCEPTANCE OF TECHNO - COMMERCIAL TERMS AND CONDITIONS BY THE BIDDERS

Description of the Equipment:	**FLOW NOZZLE ASSEMBLY**	
BHEL Tender No. & Date		
Sl. No.	**Terms and conditions**	**Vendor's confirmation**
1	This requirement is for **NTPC Telangana 800MW – 1, 2 (1819, 1820)** Project. **Technical :** Supply of Flow Elements as per specification: CI/1819/SHRH/ECO/FNA. PACKING PROCEDURE: QA:CI:STD:PR:04, REV02, NTPC APPROVED QUALITY PLAN: 0000-999-QOI-S-022	
2	**Firm Price:** The quoted / finalised rates shall be Firm till execution of the supplies. Offer with PVC clause will not be considered.	
3	The quotes shall be on **FOB/Nearest GATE WAY Airport** basis. **(Schedule – F is attached)**	
4 (a)	BHEL Payment term is 100% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account.	
4 (b)	**1.Loading Criteria for Payment Terms:** Any deviation in the above payment term will attract loading as mentioned below. "Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.	
4 (c)	1. In the case of Usage LCs the loading will be considered @ 1.5% on the offered Value. 2. For LC at sight the loading will be considered @ 3.5% on the offered Value. 3. Normally CAD at sight and Confirmed LCs are liable for rejection.	
5 (a)	**Liquidated damages:** Delivery of the goods specified in the purchase order should be made within the time prescribed. Failure to dispatch the materials in the time as per the delivery quoted in our Purchase Order would make the supplier liable to an un-conditional LD at the rate of ½% of the total order value per week or part	

	thereof subject of maximum of 10% of the total order value. For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part thereof, subject to a maximum of 10% of the total order value.	
5 (b)	**Loading Criteria** **LD / Penalty:** Any deviation of the above LD/Penalty clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).	
6 (a)	**Guarantee / Warranty Period** Guarantee clause 18months from the date of supply or 12 months from the date of actual put in use, whichever is earlier.	
6 (b)	**Loading Criteria** **Guarantee / Warranty Period:** No Deviation is permitted. If still vendor offered any deviation on the Guarantee / warranty period it may leads to rejection of offer.	
7	**Taxes & Duties:** All Taxes, Duties, Service Taxes etc. payable as extra to the quoted price should be specifically stated in offers, failing which the purchaser will not be liable for payment of such Taxes and Duties.	
8	**Risk purchase:** If the supplier fails to deliver the goods within the delivery specified in the Purchase Order, BHEL will be entitled to terminate the contract and to Purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch within the delivery period mentioned in the Purchase Order.	
9	**Delivery Period:** Our delivery term shall be 8 weeks from the date of Data Sheet approval.	
10	**Validity:** 120 days from Technical Bid opening. Non-compliance of the same will result in offer being liable for rejection.	
11	**General Condition:** Kindly submit the 'No deviation format' with clear indication of Data Sheet No / Specification ref, Drawing, and Quality plan.	
12	**Reverse Auction:** Reverse Auction is not applicable for this tender.	
13	BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed.	
14	**DOCUMENT SUBMISSION** In case of PO, documents (drawings, data sheets and quality plan in triplicate) shall be submitted within 15 days from the date of receipt of po and the revised documents shall be submitted within 1 week from the date of receipt of engineering / quality comments	

15	**QUANTITY OF TENDERED QTY** BHEL reserves the right to increase or decrease the tendered quantity	
16	**MSE Clause:** All vendors are requested to note the Annexure X –Special clauses for Micro and Small Enterprises (MSE) suppliers. If L1 vendor is an MSE vendor entire project package will be ordered on L1 vendor. If a Non MSE vendor is coming as L1, then L1 prices will be counteroffered on MSE vendor who is quoting price within the price band L1+15% and if they are agreeing purchase order will be awarded for full/complete supply of total tendered value to MSE. If more than one MSE vendors are available in the L1+15% price band then lowest of the MSE vendor will be selected for counteroffering. If lowest MSE vendor is not accepting it will be counteroffered to the next MSE vendor in the price band and so on. Finally, if any of the MSE vendor in the price band is not accepting it will be ordered on L1 non MSE vendor. MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of documents as mentioned in the Annexure X. Vendor to confirm. The MSE clause will only be applicable to the Indian vendors who are quoting for the complete NIT requirement on their own in INR. Quotations should not be in collaboration with any foreign vendor i.e. part quotation in INR and part quotation in foreign currency if the vendor want to avail MSE clause.	
17	**Calibration Charges (If any):** Calibration charges with applicable with applicable extra Taxes and Duties etc. in detail should be quoted separately. **(Mandatory to quote the same value in Annexure – B/EPS)** ***Kindly Note: If the Calibration Charges is not available HERE/EPS/ANNEXURE-B, then it will be considered as inclusive of your quoted basic prices and no more further communication will be entertained regarding this.***	
18	**Weight of the components:** a) Component Net Weight b) Component weight with packing	
19	**ANNEXURE – B** Vendor shall submit unpriced bid in the Annexure - B along with techno-commercial offer. if not, their offer is liable for rejection. Also the filled Annexure - B shall be attached with PRICE BID with duly signed and stamped.	

<table>
<tr><td>20</td><td>Fraud prevention policy
The bidder along with its associate / collaborators / sub-contractors / sub-vendors / consultants / service providers shall strictly adhere to BHEL fraud prevention policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.</td><td></td></tr>
<tr><td>21</td><td>COST EVALUATION
Evaluation shall be on the basis of delivered cost (i.e. “total cost to BHEL”).
For evaluation, the exchange rate (TT selling rate of SBI) shall be taken as under:
<table>
<tr><td>Single part bids</td><td>Date of tender opening</td></tr>
<tr><td>Two/three part bids</td><td>Date of Part-I bid opening</td></tr>
<tr><td>Reverse Auction</td><td>Date of Part-I bid opening</td></tr>
</table>
If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken.</td><td></td></tr>
<tr><td>22</td><td>Vendor should quote same unit prices, freight & insurance charges etc., in EPS/ANNEXURE – B/PRICED OFFER if applicable,

If any difference of prices found, lowest price shall be taken into account. Also in such cases BHEL decision is final to consider such type of offer for further proceedings.

Also kindly note that Commercial terms and conditions as agreed in Annexure – A by vendor is final. Commercial terms and conditions available in vendor’s technical offer will not be considered.</td><td></td></tr>
</table>

ANNEXURE-B (For Indigenous vendor)

ACCEPTANCE OF TECHNO - COMMERCIAL TERMS AND CONDITIONS BY THE BIDDERS

Note: ***This Annexure has to be mandatorily filled & signed by the manufacturer (or) mill and submitted along with Technical Bid.***

Any deviation to the below mentioned terms shall be stated specifically in the comments column for each term and also in case of acceptance to our terms, it will be construed that the whole term is understood and agreed in totality without any deviation (if otherwise mentioned) .

Description of the Equipment:	**FLOW NOZZLE ASSEMBLY**	
BHEL Tender No. & Date		
Sl No.	**Terms and conditions**	**Vendor's confirmation**
1	This requirement is for **NTPC Telangana 800MW – 1, 2 (1819, 1820)** Project. **Technical :** Supply of Flow Elements as per specification: CI/1819/SHRH/ECO/FNA. PACKING PROCEDURE: QA:CI:STD:PR:04, REV02, NTPC APPROVED QUALITY PLAN: 0000-999-QOI-S-022	
2	**Firm Price:** The quoted / finalised rates shall be Firm till execution of the supplies. Offer with PVC clause will not be considered.	
3	**FOR Basis:** The quote shall be on respective FOR/**NTPC Telangana 800MW – 1, 2 project** basis as indicated in enquiry, inclusive of Packing and forwarding charges.	
3 (a)	**Freight charges:** (Freight charges shall be vendor's scope). To be quoted as extra and not inclusive in the basic price **(Mandatory to quote the same value here, EPS & in Annexure - B)** ***Kindly Note: If the Freight charges is not available HERE/EPS/ANNEXURE-B, then it will be considered as inclusive of your quoted basic prices and no more further communication will be entertained regarding this.***	
3 (b)	**Insurance charges: BHEL SCOPE** (Offer will be loaded 0.13% of (basic material value + Freight + forwarding & packing).	

4 (a)	**Payment terms:** Option-1: 100% direct payment after 45 days from the date of dispatch against site acknowledgement. Option 2: 90% direct payment after 45 days from the date of dispatch against submission of dispatch documents and balance 10% against site acknowledgement.	
4 (b)	**1.Loading Criteria for Payment Terms:** Any deviation in the above BHEL payment terms as indicated in 4.a will attract loading as per below. "Base rate of SBI (As applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders". 2. Payment through bank is not preferred. In this case, loading will be 3% on the offered value. In case of Direct to site, only 90% through bank will be considered. LC/advance payment will not be operated for Indigenous vendors. Offers with payment terms as LC from indigenous vendors will be rejected.	
5 (a)	**Liquidated damages:** Delivery of the goods specified in the purchase order should be made within the time prescribed. Failure to dispatch the materials in the time as per the delivery quoted in our Purchase Order would make the supplier liable to an un-conditional LD at the rate of **½% of the total order value per week or part thereof subject to maximum of 10% of the total order value.** For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part thereof, subject to a maximum of 10% of the total order value.	
5 (b)	**Loading Criteria** **LD / Penalty:** Any deviation of the above LD/Penalty clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).	

6 (a)	**Guarantee / Warranty Period** Guarantee clause 18months from the date of supply or 12 months from the date of actual put in use, whichever is earlier.	
6 (b)	**Loading Criteria** **Guarantee / Warranty Period:** No Deviation is permitted. If still vendor offered any deviation on the Guarantee / warranty period, it may leads to rejection of offer.	
7 (a)	**Please mention your GSTIN Number and HSN Code** **GSTIN Number:** **HSN Code:**	
7 (b)	**Applicable GST percentage:**	
7 (c)	**<u>Implementation of GST</u>** For supplies after implementation of GST i.e. after 30.06.2017, the following conditions will apply and supplier shall fully comply to the below points. **<u>Indigenous suppliers:</u>** 1. Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration no which should clearly mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer. 2. Supplier shall mention their GSTN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc. 3. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code). 4. A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules	

	and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL. 5. All documents like Mill Test Certificate, LR copy, Guarantee/Warrantee certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so. 6. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL. 7. For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty if any will be deducted for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.	
8	**Risk purchase:** If the supplier fails to deliver the goods within the delivery specified in the Purchase Order, BHEL will be entitled to terminate the contract and to Purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch within the delivery period mentioned in the Purchase Order.	
9	**DELIVERY PERIOD:** Our delivery term shall be 8 weeks from the date of data sheet approval.	
10	**Validity:** 120 days from Technical Bid opening. Non-compliance of the same will result in offer being liable for rejection.	

11	**GENERAL CONDITION:** Kindly submit the 'no deviation format' with clear indication of data sheet no / specification ref, drawing, and quality plan.	
12	**Reverse Auction:** Reverse Auction is not applicable for this tender.	
13	**DOCUMENT SUBMISSION** In case of PO, documents (drawings, data sheets and quality plan in triplicate) shall be submitted within 14 days from the date of receipt of PO and the revised documents shall be submitted within 1 week from the date of receipt of engineering / quality comments	
14	**QUANTITY OF TENDERED QTY** BHEL reserves the right to increase or decrease the tendered quantity	
15	BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed.	
16 (a)	**MSE VENDOR:** ***i. If L1 vendor is an MSE vendor entire project package will be ordered on L1 vendor.*** ***ii. If a Non MSE vendor is coming as L1,then L1 prices will be counteroffered on MSE vendor who is quoting price within the price band L1+15% and if they are agreeing purchase order will be awarded for full/complete supply of total tendered value to MSE.*** ***iii. If more than one MSE vendors are available in the L1+15% price band then lowest of the MSE vendor will be selected for counteroffering. If lowest MSE vendor is not accepting it will be counteroffered to the next MSE vendor in the price band and so on.*** ***iv. Finally if none of the MSE vendor in the price band is not accepting it will be ordered on L1 non MSE vendor. These condition will be incorporated in the enquiry terms and condition.*** MSE suppliers can avail the intended benefits only if they submit along with the offer, attested/notarized copies of either 1. EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) **or**	Confirm MSE Vendo NON-MSE Vendor 1. MSE 2. NON-MSE

	2. Valid NSIC certificate or EM II certificate along with original of CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limits as per the act for relevant status (MICRO or SMALL) where the deemed validity of EM II is over. *Date to be reckoned for determining the deemed validity will be the last date of technical bid submission (Part 1 in case of two part bid).* **Non submission of such documents will lead to consideration of their bid at par with other bidders and MSE status of such suppliers shall be shifted to NON MSE suppliers till the supplier submit this documents**. Documents should be notarized or attested by a Gazetted officer. ***Definitions of MSEs owned by SC/ST is under:*** • ***In case of proprietorship firm, proprietor must be SC/ST.*** • ***In case of partnership firm, the SC/ST partners must be holding at least 51% shares in the unit.*** • ***In case of private limited companies, at least 51% share must be held by SC/ST promoters.*** Authorised Offices to Issue SC/ST certificate. The caste/Tribe/Community certificate issued by the following authorities in the prescribed form for SCs/STs can be considered. • District Magistrate / Additional District Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / 1st class stipendiary magistrate / Sub divisional Magistrate / Taulka Magistrate / Executive magistrate / Extra Assistant commissioner. • Chief Presidency magistrate / Additional chief presidency magistrate/Presidency magistrate. • Revenue Officer not below the rank of thasildar. • Sub-Divisional officer of the area where the individual and / or his family normally resides. ***To avail the benefits of MSE under SC/ST category, the related documents as stated above should be submitted along with tender documents.***	
16 (b)	**IF MSE VENDOR** MSME CERTIFICATE	Attached/ Not Attached

16 (c)	MSE- VALIDITY DATE	From: To:
16 (d)	CA CERTIFICATE	Attached/ Not Attached
16 (e)	CA - VALIDITY DATE	From: To:
17	**Calibration Charges** Calibration charges with applicable extra GST percentage in detail should be quoted separately. **(Mandatory to quote this value in EPS in the column provided & Annexure - B)** ***Kindly Note: If the calibration charges is not available HERE/EPS/ANNEXURE-B, then it will be considered as inclusive of your quoted basic prices and no more further communication will be entertained regarding this.***	
18	Applicable GST percentage against calibration Charges	
19	**Fraud prevention policy:** The bidder along with its associate / collaborators / sub-contractors / sub-vendors / consultants / service providers shall strictly adhere to BHEL fraud prevention policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.	
20	**ANNEXURE – B** Vendor shall submit unpriced bid in this format along with techno-commercial offer against each packages. Also the filled annexure - B shall be attached with price bid part with duly signed and stamped. If not, their offer is liable for rejection	
21	**Vendor should quote same unit prices, freight & insurance charges etc., in EPS/ANNEXURE – B/PRICED OFFER if applicable,** **If any difference of prices found, lowest price shall be taken into account. Also in such cases BHEL decision is final to consider such type of offer for further proceedings.** **Also kindly note that Commercial terms and conditions as agreed in Annexure – A by vendor is final. Commercial terms and conditions available in vendor's technical offer will not be considered.**	

Annexure – C

MM/BOI/BHEL TRICHY
SPECIAL TERMS AND CONDITIONS

1. This tender is for the supply of **Flow Nozzle Assembly** as per specs, size and quantities mentioned in the attached enquiry.

2. The vendor shall have adequate experience in manufacturing and supply similar type of item.

3. The tender shall be floated through e-Procurement system. The tender is in two parts. One-part consisting of techno-commercial details and other with price details:

A) Part – I Techno-commercial bid:

Technical Bid (Consisting of Technical Specifications viz. Product Specification Sheets/Brochures, OEM Certificate etc.) Bidders may name the files indicating the nature of content in pdf/zip format which would be required to be attached in e-tender.

All Technical details (eg. Eligibility Criteria requested (as mentioned below)) should be attached in e-tendering module, failing which the tender stands invalid & may be REJECTED. Bidders shall furnish the following information along with technical tender (preferably in pdf format):

(i) Technical Bid (without indicating any prices).
(ii) Tenderer/Agent who quotes for goods manufactured by other manufacturer shall furnish Manufacturer's Authorization Form. While giving authorization to agent, to quote on their behalf, manufacturer has to give the reasons for not quoting directly against this tender.

The techno-commercial bids will be opened on a suitable date with due intimation. Based on the acceptance of techno-commercial bid and vendor evaluation, the price bid of the qualified vendors will be opened on a suitable date with due intimation.

Offers found suitable on technical and commercial grounds only, will be considered for further processing.

B) Part - II – Price Bid:

Prices to be quoted through e Procurement system only

Import Vendor shall submit offer on FOB/Nearest GATE WAY Airport basis and we will add further the inland freight charges over and above the FOB charges.

Indigenous Vendors shall submit offer on FOR/site basis.

The price should be quoted for the accounting unit indicated in the e-tender document.

Note: It is the responsibility of tenderer to go through the Tender document to ensure furnishing all required documents in addition to above, if any. Any deviation may result in REJECTION of offer.

Annexure – C

4. The vendor who are not registered in BHEL PMD as permanent vendors shall be submitted SRF (supplier registration form) to register as permanent vendor in parallel to procurement activity

Vendor should submit the following documents along with offer:

i. Duly filled-in Supplier Registration Forms.

ii. Availability of minimum manufacturing, handling, testing and measuring facilities as detailed in the Supplier Registration Form.

iii. BHEL will have the right for spot assessment of the facilities for assessment.

iv. Qualifying to our techno commercial requirements of the Enquiry.

Supplier Registration Form (SRF) has to be duly filled up online and send one copy with all the documents as mentioned in SRF & if vendors have already submitted SRF & hard copy is sent to BHEL, can mention SRF Number (Application Number).

URL for online Registration form is as below

http://vis.bheltry.co.in/olsa/

For any help regarding filling of SRF, you may contact following

Mrs. Nalini Subramanian (Purchase Officer- Supplier Development Cell)
Ph:0431/2577301
Email ID: nalini@bhel.in

Mr. P. L. Pramila (DGM/MM/Services)
Ph:0431/2577448
Email ID: pramila@bhel.in

Systems / BHEL /TRICHY
Ph:System SDC:0431/2577121,ljp@bhel.in

Ph:System ERP:0431/2577522,erpsubcon@bhel.in

For any queries regarding tender you may contact

1) Mr. G. MURUGESAN,
Sr. Engineer/MM/BOI
BHEL Trichy
0431-2577072
gmuru@bhel.in

2) Mr. S. Senthil Kumar
Manager/MM/BOI
BHEL Trichy
0431-2578201
senthilk@bhel.in

Annexure – C

5. BHEL reserves the right to increase or decrease the tendered quantity and split the tendered quantity among more than one tenderer and place orders accordingly in any proportion based on commitment, requirement and supplier's capability in terms of delivery and quality as assessed by BHEL.

6. BHEL reserves the right to negotiate the L1 rate.

7. BHEL reserves the right to re-float the tender opened, if L1 price is not the lowest acceptable price to BHEL inter-alia other reasons.

8. BHEL reserves the right to order on more than one vendor at the lowest acceptable price to BHEL.

9. Vendors have to confirm to the Commercial Terms and Special Terms & Conditions attached.

10. BHEL standard LD condition is **½% of the total order value per week or part thereof subject to maximum of 10% of the total order value**

12. Please indicate the exact location of WORKS / FACTORY.

13. The vendor who are not registered in BHEL PMD as permanent vendors shall be submitted SRF (supplier registration form) to register as permanent vendor in parallel to procurement activity.

14. Vendor who are approved category – DR with this **Telangana customer** already, they shall get qualified into "cat-A" from "Cat-DR", based on the documents submitted by the vendor before price bid opening. If customer regrets to change the category of approval from "cat-DR" to "cat-A", the offer submitted by the vendor shall not be considered further for this tender and hence their offer is liable for rejection.

15. Vendor who are not approved by **Telangana customer** already, they shall get approved by customer before price bid opening. If customer regrets to approve before price bid opening of this tender, the offer submitted by the vendor shall not be considered further for this tender and hence their offer is liable for rejection.

16. If new vendor is responding to this open tender who is not approved by customer, should get approved by customer before price bid opening. If vendor is not fulfilling the above criteria, offer will be rejected. Also vendor shall submit the filled in "Supplier Registration Forms" (available in www.bhel.com) along with their offer as mentioned in point No 04 this annexure - C.

17. Vendors have to confirm to the Annexure B - Commercial Terms attached.

18. Point wise confirmation to enquiry conditions are to be submitted with technical offer.

19. Inspection by BHEL or BHEL nominated agency shall be carried out at vendor's works prior to despatch.

ANNEXURE - D (FOR IMPORT VENDORS)							
PRICE BID FORMAT							
VENDOR SHALL SUBMIT UNPRICED BID IN THIS FORMAT ALONG WITH TECHNO-COMMERCIAL OFFER. ALSO THE FILLED ANNEXURE - B SHALL BE ATTACHED WITH PRICE BID PART WITH DULY SIGNED AND STAMPED. IF NOT, THEIR OFFER IS LIABLE FOR REJECTION							
ENQUIRY NO.: 1701800215		**EPS ENQUIRY DATE: 14.02.2018**			**PROJECT: NTPC Telangana 800MW – 1, 2 (1819, 1820)**		
ENQ. SL. NO.	MATERIAL CODE	MATERIAL DESCRIPTION	QTY	UNIT	BASIC UNIT PRICE INCLUSIVE OF PACKING & FORWARDING IN FC	TOTAL PRICE IN FC (UNIT PRICE x QTY.)	OTHER COST IF ANY IN %
10	L181919728202001	FLOW NOZZLE-SH SPRAY (SH DESH#1)	4	No			
20	L181919728202002	FLOW NOZZLE-SH SPRAY (SH DESH#2)	4	No			
30	L181919728202003	FLOW NOZZLE-SH SPRAY (SH DESH#3)	4	No			
40	L181919728202004	FLOW NOZZLE-RH SPRAY	4	No			
50	L181919728202005	FLOW NOZZLE-ECO WATER INLET	2	No			
OTHER CHARGES		DESCRIPTION	QTY	UNIT	AMOUNT IN FC.	TOTAL PRICE	OTHER TAXES/DUTIES IF ANY IN %
Calibration Charges with applicable other Taxes/Duties if any in detail, should be quoted separately for the following line size.		SH - SPRAY # 1 - Line Size: D60.3 X 12.5 MM	1	NO			
		SH - SPRAY # 2 - Line Size: D127 X 20 MM	1	NO			
		SH - SPRAY # 3 - Line Size: D88.9 X 17 MM	1	NO			
		RH SPRAY - Line Size: D88.9 X 15.24 MM	1	NO			
		ECO Water inlet - Line Size: D610 X 82 MM	1	NO			
Weight of the components		Component Net Weight in Kgs.(Approx.)					
		Component weight with packing in Kgs. (Approx.)					
VENDOR NAME		**VENDOR WORKS ADDRESS**	**GATE WAY AIRPORT NAME**			**SIGN AND SEAL OF AUTHORIZED**	

ANNEXURE - D (FOR INDIGENOUS VENDORS)								
PRICE BID FORMAT								
VENDOR SHALL SUBMIT UNPRICED BID IN THIS FORMAT ALONG WITH TECHNO-COMMERCIAL OFFER. ALSO THE FILLED ANNEXURE - B SHALL BE ATTACHED WITH PRICE BID PART WITH DULY SIGNED AND STAMPED. IF NOT, THEIR OFFER IS LIABLE FOR REJECTION								
ENQUIRY NO.: 1701800215			EPS ENQUIRY DATE: 14.02.2018			PROJECT: NTPC Telangana 800MW – 1, 2 (1819, 1820)		
ENQ. SL. NO.	MATERIAL CODE	MATERIAL DESCRIPTION	QTY	UNIT	BASIC UNIT PRICE INCLUSIVE OF PACKING & FORWARDING	TOTAL PRICE (UNIT PRICE x QTY.)	GST %	OTHER COST IF ANY IN %
10	L181919728202001	FLOW NOZZLE-SH SPRAY (SH DESH#1)	4	No				
20	L181919728202002	FLOW NOZZLE-SH SPRAY (SH DESH#2)	4	No				
30	L181919728202003	FLOW NOZZLE-SH SPRAY (SH DESH#3)	4	No				
40	L181919728202004	FLOW NOZZLE-RH SPRAY	4	No				
50	L181919728202005	FLOW NOZZLE-ECO WATER INLET	2	No				
OTHER CHARGES		DESCRIPTION	QTY	UNIT	Amount in Rs.		GST % for Calibration Charges	OTHER COST IF ANY IN %
Calibration Charges		SH - SPRAY # 1 - Line Size: D60.3 X 12.5 MM	1	NO				
		SH - SPRAY # 2 - Line Size: D127 X 20 MM	1	NO				
		SH - SPRAY # 3 - Line Size: D88.9 X 17 MM	1	NO				
		RH SPRAY - Line Size: D88.9 X 15.24 MM	1	NO				
		ECO Water inlet - Line Size: D610 X 82 MM	1	NO				
Freight charges in Rs. Up to Telangana site		To be quoted as extra and not inclusive in the basic price in package basis						
Insurance charges		BHEL Scope			BHEL Scope			
VENDOR NAME:		**VENDOR WORKS ADDRESS:**				**SIGN AND SEAL OF AUTHORIZED PERSON**		

ANNEXURE X

Micro Small and Medium Enterprises (MSE) – Clause for NIT

In line with Gazette notification issued by Ministry of Micro Small and medium enterprises on MSE suppliers, the following special provisions shall be applicable.

20% of the tendered quantity is earmarked for MSE suppliers in this tender.

Out of the 20% tendered quantity reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC / ST entrepreneurs.

In case MSE vendor participating in the tender quotes within the price band of Ll + 15%, they will be allowed to supply the portion of the requirement subject to acceptance of LI price by MSE vendor. In case of more than one such MSE, the supply shall be shared proportionately.

> ***In case of tender items is not-splitable or non-dividable etc., MSE quoting price within the price band L1+15% may be awarded for full/complete supply of total tendered value to MSE***

MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either

1. EM II certificate having deemed validity (two years from the date of issue of acknowledgement in EM II) **or**
2. Valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limits as per the act for relevant status (MICRO or SMALL) where the deemed validity of EM II is over.

Date to be reckoned for determining the deemed validity will be the last date of technical bid submission (Part 1 in case of two part bid).

Non submission of such documents will lead to consideration of their bid at par with other bidders and MSE status of such suppliers shall be shifted to NON MSE suppliers till the supplier submit this documents.

Documents should be notarized or attested by a Gazetted officer.

Definitions of MSEs owned by SC/ST is under:

- ***In case of proprietorship firm, proprietor must be SC/ST.***
- ***In case of partnership firm, the SC/ST partners must be holding at least 51% shares in the unit.***
- ***In case of private limited companies, at least 51% share must be held by SC/ST promoters.***

Authorised Offices to Issue SC/ST certificate.

The caste/Tribe/Community certificate issued by the following authorities in the prescribed form for SCs/STs can be considered.

- District Magistrate/Additional District Magistrate/Collector/Deputy commissioner/Additional Deputy commissioner/Deputy collector/1st class stipendary magistrate/Sub divisional Magistrate/Taulka Magistrate/Executive magistrate/Extra Assistant commissioner.
- Chief Presidency magistrate/Additional chief presidency magistrate/Presidency magistrate.
- Revenue Officer not below the rank of thasildar.
- Sub-Divisional officer of the area where the individual and / or his family normally resides.

To avail the benefits of MSE under SC/ST category, the related documents as stated above should be submitted along with tender documents.

429-024

PURCHASE / MM / FB
SUB DELIVERY - ENQUIRY - DEVIATION

Page ____ OF ____

SCHEDULE OF DEVIATION TO SUB - DELIVERY ENQUIRY No.		DATE	

DESCRIPTION			
SPECIFICATION		DRG. No.	
QUALITY PLAN			

DOCUMENT REFERENCE	BHEL ENQ. CALLED FOR	FIRM'S ALTERNATE OFFER

CERTIFIED THAT OTHER THAN THE ABOVE DEVIATIONS, WE ARE ACCEPTING ALL THE OTHER SPECIFICATIONS AND REQUIREMENTS IN FULL TO YOUR ENQUIRY

STATION :

DATE : SIGNATURE OF FIRM'S REPRESENTETIVE FIRM SEAL

NOTE :
1. Deviations should be taken only in the extreme case.
2. If necessary, use additional sheets with page control number.

BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI

CONTROLS AND INSTRUMENTATION / FB
QUALITY ASSURANCE

STANDARD PACKING PROCEDURE
FOR
ALL INSTRUMENTS AND MISCELLEANEOUS ITEMS
(ELECTRICAL, ELECTRONIC AND PNEUMATIC)

Rev	Date	Prepared	Checked	Approved	Revision History
00	01.01.96	Sd/-	Sd/-	Sd/-	Initial History
01	28.03.02	A.J.OMPRAKASH Sd/-	R.VARADARAJAN Sd/-	G.MATHIYALAGAN Sd/-	Department name changed
02	26.02.07	RM.VAIRAVAN	N.SRIDHAR	S.SOMASUNDARAM	Revised after discussion with Shipping Dept.

1.0 SCOPE

1.1 This procedure gives minimum guidelines to be complied with for packing of Electrical, Electronics and Instrumentation panels. This packing shall be suitable for different handling operations and for the adverse conditions during transportation and during indoor / outdoor storage for periods more than one year.

2.0 WOOD SPECIFICATION FOR PACKING

2.1 Rubber wood as per manufacturer standard.
2.2 Silver Oak as per procedure PR:CHEM:017 or as per relevant International Standards.

3.0 PACKING

3.1 For Inland packing, rubber wood and export packing Silver Oak wood shall be used. The wood used shall be seasoned and treated. It shall be free from knots, etc. and any kind of decay caused by insects and fungus.

3.2 The required wood case for the equipment to be packed shall be made out of individual planks of single length and no joint is permissible. Using such planks, the required wood case for the panel shall be made,

3.3 Sufficient number horizontal, vertical and diagonal planks (dimension depending upon case size) shall be used for binding and strengthening. Runners have to be provided with metallic sling plates for handling.

3.4 The instrument or the items has to be individually packed with a polythene cover and shall be kept inside a moulded thermo coal or carton box. The box shall be filled with suitable material like jute, coir, thermo coal, etc.

3.5 The original packing material shall be used for the following items, wherever required.
Personal computer (PC), Monitor, Keyboard, Transmitter, Switches, Gauges, Analyzers, CCTV system, Electronic items.

3.6 On all sides of the inner case, black polythene sheet shall be nailed.

3.7 The gap between job and the box shall be filled with suitable material like jute, coir, thermo coal, etc.

3.8 The packing of the cable by vendors shall be relevant Indian Standards.

3.9 Each case must have sufficient quantity of silica gel, packed in cotton cloth bags, shall be kept at different places as required.
The bags used shall have the following information marked on it.
Silica Gel activator type:
Blue: Active
Rose: Reduced active
White: No activity. To be replaced with fresh Silica gel.

4.0 MARKING

4.1 After completing the packing, Stencil marking, as per dispatch instructions and symbol marking as per Annexure – I shall be made. Please ensure the box is stenciled with “FRAGILE ITEM”, “HANDLE WITH CARE”

5.0 PACKING SLIP

5.1 A copy of the packing slip, kept in a polythene cover shall be kept inside the box. Another copy of the packing slip, kept in a polythene cover shall be kept out side the box and covered with a metallic plate to the case.

6.0 CAUTION

Do not pack any other Mechanical items with this case.

7.0 GENERAL

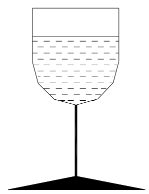
7.1 These packing procedures are the minimum requirements in addition to the standard instructions mentioned in the Purchase Order and Specification.

7.2 Deviation to meet the packing procedure requirements / non-clarity in packing approach in any quotation will be liable for rejection of offer.

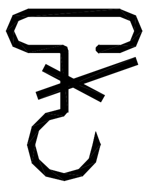
ANNEXURE – 1

TO

PROCEDURE NO:CI:QAC:PR:02/00 ; PR:03/00 ; PR:04/00

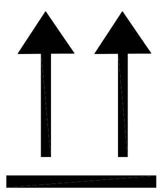


FRAGILE, HANDLE WITH CARE



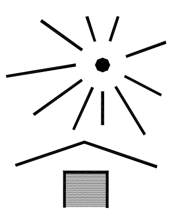
USE NO HOOKS

NOTE: The design of heavy goods packages cannot always resist top lifting by grabhooks.

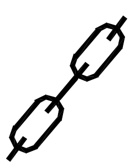


THIS WAY UP

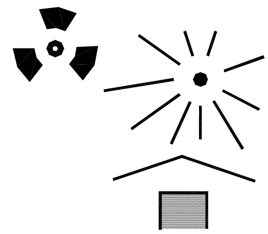
NOTE: Certain designs of small cases make it difficult to distinguish top from bottom.



KEEP AWAY FROM HEAT



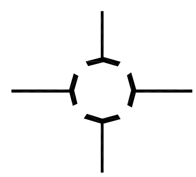
INTERNATIONAL "SLING HERE" SYMBOL



PROTECT FROM HEAT AND RADIOACTIVE SOURCES

KEEP DRY

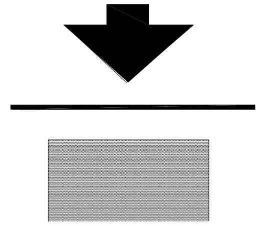
NOTE: Not all cases have waterproof internal linears: plywood used in the construction may not have a waterproof glueline.



CENTRE OF GRAVITY

NOTE: This should be stancilled as a minimum on the two longest case sides (this information will normally be supplied by the manufacturer of the item(s) packed).

... kg max



STACKING LIMITATION

NOTE: The maximum load in kilograms should be marked above the arrow.

Date: 2007.09.14 10:44:01 +05'30'

CORPORATE QUALITY ASSURANCE अनुमोदित APPROVED DT. ______ N.T.P.C. NOIDA

एनटीपीसी NTPC	Item: (Material, Class, Grade, Rating, Size Etc.) Flow Nozzle Assembly	**Standard Quality Plan** Conforming To Code: ASME PTC, BS 1042	To Be Filled In By NTPC: Quality Plan Number : 0000-999-QOI-S-022; Revision. : 0; Date : 14.09.2007; Page : 01 Of 03; Valid Up To : 13.09.2010	Reviewed By: Prateek Srivastav, S. Samanta, O P Niranjan	Approved By: U. R. Khosla

Sl. No.	Component & Operations	Characteristics	Class	Type of Check	Quantum Of Check M	Quantum Of Check C / N	Reference Document	Acceptance Norms	Format of Record	D*	Agency ** M	Agency C	Agency N	Remarks
1	2	3	4	5	6		7	8	9		10			11
1.00	**Raw Materials**													
1.01	Flow Nozzle, Pipe and Adaptor	a) Material Properties	Major	Physical & Chemical Tests	1 / Heat	1 / Heat	Tech. Spec. / Approved Datasheet	Tech. Spec. / Approved Datasheet	TC	√	P	V	V	1) Raw Material of Pipe shall be supplied by main contractor with co related TC & identification. 2) Co relation & identification to be maintained.
		b) Ultrasonic Testing (Internal Defects for Nozzle & adaptor)#	Major	UT Test	100%	100%	ASTM A 388	ANSI B 16.34	"	√	P	V	V	# For Ø > 40 mm
		c) UT / Hydraulic Test on pipe with proper co relation	Major	UT / Hydro Test	100%	100%	ASTM Matl Specn. / ASTM E-213	ASTM Matl Specn. / ASTM E-213	"	√	P	V	V	IBR Certificate for pipe to be provided if the main contractors PO calls for.
		d) Surface defect for Nozzle & Adaptor	Major	LPI Test	100%	100%	ASTM E-165 / ANSI B-16.34	ASTM E-165 / ANSI B-16.34	NDT	-	P	V	V	
2.00	**In Process Inspection**													
2.01	Welding Procedure Specification	a) Correctness	Critical	Review	100%	100%	ASME IX	ASME IX	Format of IS / ASME	-	P	V	V	WPS subject to approval of NTPC prior to start of manufacturing of Flow Nozzle. In case WPS is already approved in earlier project (similar type), it need not to be approved again. Same shall be reviewed.
2.02	Procedure & Welder Qualification	a) Qualification records shall be verified	Critical	Welding Test	Each welder	Each welder	ASME IX	ASME IX	IR	-	P	W	W	In case welder already approved and continuously doing welding. Earlier record can be review and need not be qualified again.
2.03	Weld Edge Preparation / Root Run	a) Surface Flaw	Major	Dye Penetrant Test (DPT)	100%	100%	ASTM E-165 / ASME Sec VIII Div I	ASTM E-165 / ASME Sec VIII Div I	IR	-	P	V	V	
		b) Dimention & Visual	Major	Measure ment	100%	100%	NTPC Approved Drawing / Data Sheet	NTPC Approved Drawing / Data Sheet	IR	-	P	V	V	

LEGEND: * Records, identified with " Tick" (√) shall be essentially included by supplier in QA documentation. ** M: Manufacturer / Sub Supplier, C: Main Supplier, N: NTPC, P: Perform, W: Witness and V: Verification as appropriate, "CHP" NTPC shall identify in column "N" As "W".

3

((

CORPORATE QUALITY ASSURANCE अनुमोदित APPROVED DT. ______ NTPC NOIDA

Date: 2007.09.14 10:44:32 +05'30'

एनटीपीसी NTPC	Item: (Material, Class, Grade, Rating, Size Etc) Flow Nozzle Assembly	Standard Quality Plan Conforming To Code: ASME PTC, BS 1042	To Be Filled In By NTPC Quality Plan Number : 0000-999-QOI-S-022 Revision. : 0 Date : 14.09.2007 Page : 02 Of 03 Valid Up To : 13.09.2010	Reviewed By Prateek Srivastav S. Samanta O P Niranjan	Approved By U. R. Khosla

Sl. No.	Component & Operations	Characteristics	Class	Type of Check	Quantum Of Check M	Quantum Of Check C / N	Reference Document	Acceptance Norms	Format of Record	D*	Agency ** M	Agency C	Agency N	Remarks
1	2	3	4	5	6		7	8	9	D*	** 10			11
2.04	Weld Fit-Ups	a) Dimentions, Alignment, Orientation.	Major	Measurement / Visual	100%	-	NTPC Approved Drawing / WPS	NTPC Approved Drawing / WPS	IR	-	P	-	-	
2.05	Weldments Final Run	a) Surface Defects	Major	Penetrant Test	100%	10%	ASTM E-165 / ASME Sec VIII Div I / IS: 3658	ASTM E-165 / ASME Sec VIII Div I / IS: 3658	IR	-	P	V	V	
		b) Heat Treatment	Major	Review of HT Chart	100%	10%	"	"	HT Chart	√	P	V	V	As applicable. Depending on pipe thickness.
		c) Sub Surface defect (after PWHT)	Major	RT	100%	100%	ASME Sec VIII	ASME Sec VIII	IR	-	P	V	V	Review of RT during final inspection by NTPC.
		d) Hardness on Butt Joint & HAZ	Major	Measurement	100%	10%	ASTM E 10	ASTM E 10 / Less than 300 BHN	Hardness Report	√	P	V	V	
		e) Weld Quality (DP / MPI for Stub Welding)	Major	Visual	100%	100%	ASTM E-165	ASTM E-165 / ASME Sec VIII Div 1.0	IR	-	P	V	V	
2.07	Machining Flow Nozzle (Finish Machined)	a) Dimensions	Major	Measurement	100%	100%	Manufacturers Drawing	Manufacturers Drawing	IR	-	P	V	V	Review of documents during final inspection.
		b) Profile	Major	Visual (With Template)	100%	100%	"	"	-	-	P	V	V	
		c) Surface Finish	Major	Visual	100%	100%	"	"	-	-	P	V	V	
2.08	Pipe adaptor for Stub Welding as per 2.01 to 2.05 above except RT	a) Dimensions	Major	Measurement	100%	-	Manufacturers Drawing	Manufacturers Drawing	-	-	P	-	-	

LEGEND: * Records, identified with " Tick" (√) shall be essentially included by supplier in QA documentation. ** M: Manufacturer / Sub Supplier, C: Main Supplier, N: NTPC, P: Perform, W: Witness and V: Verification as appropriate, "CHP" NTPC shall identify in column "N" As "W".

Date: 2007.09.14 10:45:10 +05'30'

एनटीपीसी NTPC	Item: (Material, Class, Grade, Rating, Size Etc) Flow Nozzle Assembly	Standard Quality Plan Conforming To Code: ASME PTC, BS 1042	To Be Filled In By NTPC Quality Plan Number : 0000-999-QOI-S-022 Revision. : 0 Date : 14.09.2007 Page : 03 Of 03 Valid Up To : 13.09.2010	Reviewed By Prateek Srivastav S. Samanta O P Niranjan	Approved By U. R. Khosla

Sl. No.	Component & Operations	Characteristics	Class	Type of Check	Quantum Of Check M	Quantum Of Check C / N	Reference Document	Acceptance Norms	Format of Record	D*	Agency M	Agency C	Agency N	Remarks
1	2	3	4	5	6		7	8	9		** 10			11
3.00	**Final Inspection**													
3.01	Complete Assembly	a) Leak Tightness	Critical	Hydraulic Test (1.5 times design pressure)	100%	100%	NTPC Approved Drawing / Data Sheet	No Leakage	QAC	√	P	W	W	CHP
		b) Accuracy (Wet Calibration)	Major	Wet Calibratio n	1 / Type / Size	1 / Type / Size	"	Tech Specification	IR	√	P	V	V	Calibration Reort to be reviewed by NTPC Engg.
		c) Over all Dimension	Major	Measurem ent	100%	10%	NTPC Approved Drawing / Data Sheet	NTPC Approved Drawing / Data Sheet	IR	-	P	W	W	
		d) Surface Flaw on Weld Edge preparation on end of pipe (for site Welding)	Major	Penetratio n Test	100%	100%	ASTM E-165 / ASME Sec VIII	ASTM E-165 / ASME Sec VIII. No crack or linear indication.	IR	√	P	W	W	CHP
		e) IBR Clearance (if required)	Major	Review	100%	100%	IBR Compliance	IBR Compliance	Form 3C	√	V	V	V	
4.00	**Packing & Dispatch**													
		a) Completeness of TC's, COC's, Inspection Reports	Major	Verificatio n	100%	100%	Ord Specn. & QP	Ord Specn. & QP	Documents	-	P	V	-	
		b) Soundness of Packing against Transit Damage	Major	Verificatio n	100%	-	Ord Specn.	Ord Specn.	IR	-	P	-	-	

Note: *1) Manufacturer to maintain calibrated instrument having better accuracy than the item under the test. Inspection Engineer shall check the same.*
2) TC for Material duly correlated with heat no. shall be furnished to Main Contractor / NTPC for verification & acceptance.

LEGEND: * Records, identified with " Tick" (√) shall be essentially included by supplier in QA documentation. ** M: Manufacturer / Sub Supplier, C: Main Supplier, N: NTPC, P: Perform, W: Witness and V: Verification as appropriate, "CHP" NTPC shall identify in column "N" As "W".

Details of Gateway Airport with applicable Foreign Currency and Airlines for FSC payment

Schedule F

Sch. No.	Country	CUR Code	Gateway Airport/s	Airlines with its Code For FSC Payment will be made	
D01	UK	GBP	London (Heathrow)	Air India	AI
D02	UK	GBP	New Castle	British Airways	BA
D03	UK	GBP	Oxford, Chetlam	British Airways	BA
D04	UK	GBP	Bristol, Wellingborough	British Airways	BA
D05	UK	GBP	Birmingham	British Airways	BA
D06	UK	GBP	East Midlands	British Airways	BA
D07	UK	GBP	Manchester	British Airways	BA
D08	UK	GBP	Leeds	British Airways	BA
D09	UK	GBP	Glasgow	British Airways	BA
D10	France	EURO	Paris (Roissy) & Lyon	Air India	AI
D11	Sweden	EURO	Stockholm	Emirates	EK
D12	Sweden	EURO	Gothenberg & Malmo	Emirates	EK
D13	Italy	EURO	Rome, Milan	Carrier Used	Carrier Used
D14	Italy	EURO	Turin, Bologna, Florence	Carrier Used	Carrier Used
D15	Netherlands	EURO	Amsterdam, Rotterdam	Klm Airlines	KLM
D16	Austria	EURO	Vienna, Linz, Graz	Lufthansa	LH
D17	Belgium	EURO	Antwerp, Brussels	Singapore Airlines	SQ
D18	Denmark	DKK	Copenhagen	Cathay Pacific	CX
D19	Japan	JPY	Tokyo, Osaka	Air India	AI
D20	Singapore	SGD	Singapore	Air India	AI
D21	Canada	CAD	Toronto	Carrier Used	Carrier Used
D22	Canada	CAD	Montreal	Carrier Used	Carrier Used
D23	USA	USD	New York, Boston	Air India	AI
D24	USA	USD	Chicago	Carrier Used	Carrier Used
D25	USA	USD	San Francisco, Los Angeles	Carrier Used	Carrier Used
D26	USA	USD	Atlanta, Houston	Carrier Used	Carrier Used
D27	Germany	EURO	Munich, Koln, Dusseldorf, Hannover, Hamburg, Stuttgart, Damstadt, Manihiem, Nurumberg	Lufthansa	LH
D28	Germany	EURO	Frankfurt	Lufthansa	LH
D29	Germany	EURO	Berlin	Lufthansa	LH
D30	Switzerland	SFR	Basle, Zurich, Geneva	Swiss World Cargo	LX
D31	Spain	EURO	Barcelona	Emirates	EK
D32	Australia	AUD	Sydney	Qantas Airlines	QF
D33	Australia	AUD	Melbourne	Qantas Airlines	QF
D34	Australia	AUD	Perth	Qantas Airlines	QF
D35	Czech	EURO	Prague	Lufthansa	LH
D36	Hong Kong	HKD	Hong Kong	Air India	AI
D37	New Zeland	NZD	Auckland	Carrier Used	Carrier Used
D38	Russia	USD	Moscow	Carrier Used	Carrier Used
D39	South Korea	USD	Kimpo International, Incheon	Air India	AI
D40	Finland	EURO	Helsinki	Finnair Cargo	AY
D41	Romania	EURO	Bucharest	Carrier Used	Carrier Used
D42	Norway	EURO	Oslo	Carrier Used	Carrier Used
D43	Ireland	EURO	Dublin	Carrier Used	Carrier Used
D44	Israel	USD	Tel Aviv	El Al Israel	LY
D45	UAE	USD	Dubai	Air India	AI
D46	Oman	USD	Muscat	Air India	AI
D47	Egypt	USD	Cairo	Carrier Used	Carrier Used
D48	Taiwan	USD	Taipei	Carrier Used	Carrier Used
D49	Ukraine	USD	Kiev	Lufthansa	Carrier Used
D50	China	USD	Shanghai, Shenzhen	Carrier Used	Carrier Used
D51	Philipines	USD	Manila	Carrier Used	Carrier Used
D52	Malaysia	USD	Kualalumpur, Pe Nang	Malaysia Airlines	Carrier Used
D53	Cyprus	USD	Larnaca	Carrier Used	Carrier Used
D54	South Africa	USD	Johannesberg, Durban	Carrier Used	Carrier Used
D55	Slovakia	EURO	Bartislova	Lufthansa	LH
D56	Saudi Arabia	SAR	Riyadh	Saudi Arabia Airlines	SV
D57	Turkey	EURO	Istanbul	Turkish Airlines	TK
D58	Thailand	USD	Bangkok	Thai Airways	TG
D59	Brazil	USD	Sao Paulo, Rio De Janeiro	Emirates	EK

BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPALLI – 620 014

CONTROLS & INSTRUMENTATION / FB

TECHNICAL SPECFICATION FOR

SH/RH SPRAY,ECO FLOW NOZZLE ASSEMBLY

SPEC. REF :CI/1819/SHRH/ECO/FNA

REVISION HISTORY

REV.No.	DATE	DESCRIPTION	PREPARED SR	CHECKED MVR	APPROVED AKP
00	20.11.2017	INITIAL RELEASE	S Rajeswari	Ramany	Aparna

TECHNICAL SPECIFICATION

SERVICE		SH-DESH #1 SPRAY	SH-DESH #2 SPRAY	SH-DESH # 3 SPRAY	RH Spray	Economiser
01	Medium	Spray water	Spray water	Spray water	Spray water	Water
02	Data Sheet Reference	CI/1819/SHRH/DS				CI/1819/ECO/DS
03	Type of Tapping	D and D/2 is preferred. Any other type of tapping as per standards to achieve a D.P value at low flow conditions.				
04	Flow Element	**Long radius weld in type Flow nozzle ISO – 5167**				
05	Flow nozzle Material	SS 316 (forged)				
06	Adapter	Same as branch pipe material				
07	Uncertainty in flow measurement	As per standard ISO 5167 & same to be proved in calibration procedure.				
08	Upstream and downstream pipe	Branch pipe will be supplied by BHEL-Trichy.				
09	Internal Diameter Boring	ID boring ΔΔ finish for upstream & downstream pipe by vendor.				
10	Flow nozzle bore calculation sheet as per ISO 5167 along with the offer shall be submitted.					
11	Assembly to be chamfered (Weld neck assy) to match the line size indicated in this specification.					
12	Beta ratio shall be determined by the Vendor, which shall be between 0.4 & 0.70 and as approved by BHEL. The Vendor shall validate suitability for intended application and submit certified flow nozzle calculations and Differential Pressure. vs. Flow curve for flow nozzle assembly for BHEL's approval.					
13	Requirement of Vent and Drain holes as per ISO 5167. If provided, Vent hole shall be located at the top and drain hole shall be located at the bottom of the flow nozzle as required by the service. Drain and vent holes, when required shall be tangential to the inside of the pipes.					
14	**Documents Required along with offer:** Sub Delivery Enquiry Deviation indicating the Description, Specification, Quality Plan, Packing Procedure reference.					
15	**B) After Placement of Purchase Order for Approval:**					
	- Flow nozzle design calculation sheet.					
	- DP vs. flow curve in mm WC & Kg/ Hr.					
	- Detailed fabrication and assembly drawing for Flow nozzle assembly.					
	- NTPC Approved WPS/PQR documents for the material combination used.					
16	**CERTIFICATES:**					
	- IBR certificate in form III- C for complete Assembly.					
	- Calibration test report from NABL approved lab for one Flow nozzle per each service.					
	- Material certificates for all items.					

17	**TESTS & INSPECTION:** 1. As NTPC Quality Plan ref: 0000-999-QOI-S-022
18	**PACKING:** As per applicable packing procedure No QA:CI:STD:PR:04.
19	The entire system and accessories should not contain any asbestos material.

Note:

1. **Refer current valid list for revision status for Quality plan, Drawing No. & Packing procedure.**
2. **In case of any deviation it shall be mentioned in** Sub Delivery Enquiry Deviation.
3. **Unit-1 Cust No: 1819 tag prefix "10" & Unit-2 Cust No: 1820 tag prefix "20".**

DATA SHEET REF:- CI/1819/SHRH/DS

SL.NO	DESCRIPTION	TECHNICAL PARAMETER			
1.	Service	**SH-DESH #1 SPRAY**	**SH-DESH #2 SPRAY**	**SH-DESH #3 SPRAY**	**RH SPRAY**
2.	Tag No	LAE51CF501 & LAE52CF501	LAE71CF501 & LAE72CF501	10LAE91CF501 & 10LAE92CF501	LAE21CF501 & LAE22CF501
3.	Quantity	2 Nos.	2 Nos.	2 Nos.	2 Nos.
4.	Design. Pressure (Kg/cm^2 (g))	359.4	359.4	359.4	250
5.	Operating Pressure (Kg/cm^2 (g))	318.6	298.3	292.6	67.2
6.	Design. Temp (°C)	439	505	555	543
7.	Operating Temp. (°C)	308	308	308	178.0
8.	Operating Flow (t/hr)	12.9	33.1	18.6	12.3
9.	Maximum Flow (t/hr)	12.9	98.7	56.1	78.3
10.	Line size (OD-mm x T-mm)	60.3 X 12.5	127 X 20	88.9 X 17	88.9 X 15.24
11.	Tapping.	3 Pairs of stubs suitable for socket welding of the nipple of line size 26.70 mm X 7.82mm			
12.	Main Pipe-BHEL Trichy supply.	SA 335P22	SA 335P91	SA 335P91	SA 335P91
13.	Free issue length of pipe- mm	1000	1700	1400	1400

Drg No: 0-00-047-49890/01,49892/02 , 49893/02 SH Spray FNA & - Drg No: 00-00-047-49895/052 RH Spray FNA-BHEL's Internal reference.

DATA SHEET REF:CI/1819/ECO/DS

SL.NO	DESCRIPTION	TECHNICAL PARAMETER
1.	Service	**ECONOMIZER INLET**
2.	Tag No	HAC10CF501
3.	Quantity/BLR	1 No.
4.	Design. Pressure (Kg/cm^2 (g))	359.4 Kg/cm2
5.	Design Temp. (^{0}C)	348 ^{0}C
6.	Operating Pressure (Kg/cm^2 (g))	337 Kg/cm^2
7.	Operating Temp. (^{0}C)	308
8.	Maximum Flow (t/hr)	2580
9.	Minimum Flow (t/hr)	125
10.	Operating Flow (t/hr)	2476.8
11.	Line size (OD-mm x T-mm)	610 X 82
12.	Main Pipe material	SA106Gr.C
13.	Free issue length of pipe-BHEL Supply.	2200mm
14.	Tapping	3 Pairs of stubs suitable for socket welding of the nipple of line size 26.70X 7.82mm

Drg No: 0-00-047-49887/01- For BHEL's Internal Use only