



TRICHY, BHEL, TRICHY, POSTAL CODE :620014, TIRUCHIRAPALLI, TAMIL NADU, INDIA

RFQ/NIT HEADER DETAIL

ORGANIZATION NAME TRICHY, BHEL RFQ FLOATED UNDER THE PURCHASE POLICY
POLICY
RFQ/NIT REFERENCE 1901600208 (OPEN TENDER) RFQ OWNER/NIT MR RAJA PRAKASH K(ENGR/PUR)
OFFICER/ENQUIRY OWNER
CODE/ENQUIRY NO
NUMBER OF ITEMS ALREADY 10
ATTACHED
CURRENCY ANY
DESCRIPTION SUPPLY OF HSFG BOLTS & NUTS
DETAILED DESCRIPTION SUPPLY OF HSFG BOLTS & NUTS AS PER TDC5211 Rev 02
NUMBER OF BID PART(S) 2 PUBLISHED DATE 17 Aug , 2016 5:23:13 PM

ATTRIBUTE(S)

ATTRIBUTE NAME	ATTRIBUTE VALUE
Delivery at	BHEL TRICHY
Inspection By	ENGINEER IN CHARGE BHEL TRICHY
Validity of the Offer	PRICE SHOULD BE FIXED AND VALID FOR 3 MONTHS FROM THE DATE OF TECHNICAL BID OPENING
Inspection	AT BHEL TRICHY
Pre-Bid meeting date	--

DATE-TIME DETAIL(S)

BID START DATE 17 Aug , 2016 6:30:00 PM BID DUE DATE 15 Sep , 2016 2:00:00 PM
BID OPEN DATE 15 Sep , 2016 2:30:00 PM
(SCHEDULED)

PRE-BID DISCUSSION DETAILS

PRE-BID DISCUSSION TYPE NOT REQUIRED

ALTERNATE BID DECRYPTOR(S)

USER DETAILS
MR B. SANJEEVI (DGM/PUR)
MR ABRAHAM VICTOR P G(SM/PUR)
MR NARAYANAN R(DGM/PUR)
MR RAJA PRAKASH K(ENGR/PUR)

SELLER DETAIL(S)

CODE	ORGANIZATION NAME
023505	TEST (Mr test ot test)

OBSERVER DETAIL(S)

OBSERVER USER NAME
Pravin Tripathi -

TERM AND CONDITION DETAIL(S) - SPECIAL TERM(S)

SL. NO.	CATEGORY	DESCRIPTION
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1	SPECIAL TERM(S)	SPECIAL TERM(S) 1. The Enquiry is a Two part E procurement Enquiry. It is intended to enter into Frame work Agreement with the successful bidders through this Enquiry. 2. Any techno commercial clarifications/request for tender due date extensions with valid acceptable reasons to be addressed to BHEL prior to 48 hours of tender due date. BHEL reserves the rights to extend the due date as per their discretion. 3. Corrigendum if any, with respect to this tender will be hosted only in the following websites ie. https://bheleps.buyjunction.in, http://www.bhel.com, http://tenders.gov.in & http://eprocure.gov.in/. You are requested to visit the website regularly for updates. 4. Delivery terms will be, 50% of quantity within 5 weeks form the date of purchase order & Balance 50% within 8 weeks form the date of Purchase Order which will be released time to time as per BHEL Requirement. 5. Quantity tolerance of (+/-2%) will be maintained in this Enquiry. 6. MSE vendors should submit Attested copies of valid NSIC certificate or EM II certificate along with attested copy of a CA certificate. "Integrity Pact (IP) (a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. A panel of Independent External Monitors (IEMs) have been appointed to oversee implementation of IP in BHEL. The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno-commercial bid. Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification. Details of IEM for this tender is furnished below: Name: Mrs. Pravin Tripathi, IA and AS (Retd.) Address: D-243, Anupam Gardens, Lane IB, Neb Sarai, Sainik Farms, New Delhi # 110 068 Email: pravin.tripathi@gmail.com (b) Please refer Section-8 of the IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to the IEM mentioned in the tender. No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department."
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		ENCLOSURES : 1. ANNEXURE-A 2. ANNEXURE-B 3. ANNEXURE-PQC 4. ANNEXURE-N 5. ANNEXURE-I 6. TECHNICAL DELIVERY CONDITION TDC: 5/211 REV.02 7. INTEGRITY PACT (IP) The bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ serviceproviders 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.
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RFQ/NIT ITEM DETAILS

SL. NO.	CODE	DESCRIPTION	QUANTITY	RFQ/NIT U.O.M	OFFER U.O.M
10	000000412402406000	HSFG BOLTS AND NUTS M24X60 8.8 GRADE - TDC:5/211/ Rev02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.	143,000.00	NUMBER	NUMBER
	ATTRIBUTE DETAILS	ATTRIBUTE NAME	ATTRIBUTE VALUE		
		MATERIAL CODE:	000000412402406000		
		MATERIAL GROUP:	PFHSB		
		KILOGRAM PER UNIT:	1.0		
		Cenvatable (Yes / No)	Yes		
		Delivery Location	TAMIL NADU		
		Vatable (Yes / No)	Yes		
		Delivery Date (i) :	31-MAR-2017		
		Delivery Qty (i) :	143000		
20	000000412402407000	HSFG BOLTS AND NUTS M24X70 8.8 GRADE - TDC:5/211/ Rev02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.HSS BOLT and NUT M24x70MM-TDC 5/211/ Rev 00/18.10.2011	114,000.00	NUMBER	NUMBER
	ATTRIBUTE DETAILS	ATTRIBUTE NAME	ATTRIBUTE VALUE		
		MATERIAL CODE:	000000412402407000		
		MATERIAL GROUP:	PFHSB		
		KILOGRAM PER UNIT:	0.531		
		Cenvatable (Yes / No)	Yes		
		Delivery Location	TAMIL NADU		
		Vatable (Yes / No)	Yes		
		Delivery Date (i) :	31-MAR-2017		
		Delivery Qty (i) :	114000		





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30	000000412402408 000	HSPG BOLTS AND NUTS M24X80 8.8 GRADE - TDC:5/211/ Rev02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.HSS BOLT and NUT M24x80MM-TDC 5/211/Rev 00/18.10.2011	65,000.00	NUMBER	NUMBER
	ATTRIBUTE DETAILS	ATTRIBUTE NAME MATERIAL CODE: 000000412402408000 MATERIAL GROUP: PFHSE KILOGRAM PER UNIT: 0.567 Cenvatable (Yes / No) Yes Delivery Location TAMIL NADU Vatable (Yes / No) Yes Delivery Date (i) : 31-MAR-2017 Delivery Qty (i) : 65000		ATTRIBUTE VALUE	
40	000000412402409 000	HSPG BOLTS AND NUTS M24X90 8.8 GRADE - TDC:5/211/ Rev02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.HSS BOLT and NUT M24x90MM-TDC 5/211/Rev 00/18.10.2011	335,000.00	NUMBER	NUMBER
	ATTRIBUTE DETAILS	ATTRIBUTE NAME MATERIAL CODE: 000000412402409000 MATERIAL GROUP: PFHSE KILOGRAM PER UNIT: 0.602 Cenvatable (Yes / No) Yes Delivery Location TAMIL NADU Vatable (Yes / No) Yes Delivery Date (i) : 31-MAR-2017 Delivery Qty (i) : 335000		ATTRIBUTE VALUE	
50	000000412402410 000	HSS BOLT and NUT M24x100MM-Gr 8.8 TDC: 5/ 211/Rev 02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.HSS BOLT and NUT M24x100MM-TDC 5/ 211/Rev 00/18.10.2011	245,000.00	NUMBER	NUMBER
	ATTRIBUTE DETAILS	ATTRIBUTE NAME MATERIAL CODE: 000000412402410000 MATERIAL GROUP: PFHSE KILOGRAM PER UNIT: 0.638 Cenvatable (Yes / No) Yes Delivery Location TAMIL NADU Vatable (Yes / No) Yes Delivery Date (i) : 31-MAR-2017 Delivery Qty (i) : 245000		ATTRIBUTE VALUE	
60	000000412402411 000	HSPG BOLTS AND NUTS M24X110 8.8 GRADE - TDC:5/211/ Rev02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.HSS BOLT and NUT M24x110MM-TDC 5/211/Rev 00/18.10.2011	111,000.00	NUMBER	NUMBER
	ATTRIBUTE DETAILS	ATTRIBUTE NAME MATERIAL CODE: 000000412402411000 MATERIAL GROUP: PFHSE KILOGRAM PER UNIT: 0.673 Cenvatable (Yes / No) Yes Delivery Location TAMIL NADU Vatable (Yes / No) Yes Delivery Date (i) : 31-MAR-2017 Delivery Qty (i) : 111000		ATTRIBUTE VALUE	
70	000000412402412 000	HSS BOLT and NUT M24x120MM-Gr 8.8 TDC: 5/211/Rev 02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.HSS BOLT and NUT M24x120MM-TDC 5/211/Rev 00/18.10.2011	259,000.00	NUMBER	NUMBER





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	ATTRIBUTE DETAILS	ATTRIBUTE NAME		ATTRIBUTE VALUE	
		MATERIAL CODE:		000000412402412000	
		MATERIAL GROUP:		PFHSB	
		KILOGRAM PER UNIT:		0.709	
		Cenvatable (Yes / No)		Yes	
		Delivery Location		TAMIL NADU	
		Vatable (Yes / No)		Yes	
		Delivery Date (i) :		31-MAR-2017	
		Delivery Qty (i) :		259000	
80	000000412402413000	HSFG BOLTS AND NUTS M24X130 8.8 GRADE - TDC:5/211/ Rev02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.HSS BOLT and NUT M24x130MM-TDC 5/211/Rev 00/18.10.2011		69,000.00	NUMBER
	ATTRIBUTE DETAILS	ATTRIBUTE NAME		ATTRIBUTE VALUE	
		MATERIAL CODE:		000000412402413000	
		MATERIAL GROUP:		PFHSB	
		KILOGRAM PER UNIT:		0.746	
		Cenvatable (Yes / No)		Yes	
		Delivery Location		TAMIL NADU	
		Vatable (Yes / No)		Yes	
		Delivery Date (i) :		31-MAR-2017	
		Delivery Qty (i) :		69000	
90	000000412402414000	HSS BOLT and NUT M24x140MM-Gr 8.8 TDC: 5/211/Rev 02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.HSS BOLT and NUT M24x140MM-TDC 5/211/Rev 00/18.10.2011		117,000.00	NUMBER
	ATTRIBUTE DETAILS	ATTRIBUTE NAME		ATTRIBUTE VALUE	
		MATERIAL CODE:		000000412402414000	
		MATERIAL GROUP:		PFHSB	
		KILOGRAM PER UNIT:		0.78	
		Cenvatable (Yes / No)		Yes	
		Delivery Location		TAMIL NADU	
		Vatable (Yes / No)		Yes	
		Delivery Date (i) :		31-MAR-2017	
		Delivery Qty (i) :		117000	
100	000000412402415000	HSS BOLT and NUT M24x150MM-Gr 8.8 TDC: 5/211/Rev 02 INSPECTION BY BHEL/TPI.DELIVERY SHALL BE AS AND WHEN REQUIRED BY BHEL.HSS BOLT and NUT M24x150MM-TDC 5/211/Rev 00/18.10.2011		118,000.00	NUMBER
	ATTRIBUTE DETAILS	ATTRIBUTE NAME		ATTRIBUTE VALUE	
		MATERIAL CODE:		000000412402415000	
		MATERIAL GROUP:		PFHSB	
		KILOGRAM PER UNIT:		0.815	
		Cenvatable (Yes / No)		Yes	
		Delivery Location		TAMIL NADU	
		Vatable (Yes / No)		Yes	
		Delivery Date (i) :		31-MAR-2017	
		Delivery Qty (i) :		118000	





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IMPORTANT NOTICE

PLEASE READ THE FOLLOWING ATTACHMENT(S) [SEPARATELY DOWNLOADABLE] ALONG WITH THIS RFQ/NIT/ENQUIRY .

RFQ/NIT/ENQUIRY - ATTACHMENTS

LABEL	FILE NAME
ANNEXURE A	ANNEXURE A.pdf
ANNEXURE B	ANNEXURE B.pdf
ANNEXURE N	ANNEXURE N.pdf
ANNEXURE -PQC	ANNEXURE -PQC.PDF
ANNEXURE-I	ANNEXURE-I.PDF
INTEGRITY PACT	INTEGRITY PACT.PDF
TDC5211 Rev 02 HSFG BOLTS	TDC5211 Rev 02 HSFG BOLTS.pdf



Annexure A

QUOTATIONS:

1.

a. 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.**

For Enterprise Procurement System (EPS) Bidders/Suppliers are requested to follow these steps.

REQUIREMENTS

1. A PC with Internet connectivity.
2. DSC (Digital Signature Certificate)(Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION)
3. The site is best viewed in Internet Explorer 9.0. If you are using Internet Explorer 10 or above then enable compatibility view available under Tools menu
4. Install Java 1.8 Update 67/72/79 (Both 32 & 64 Bit

MANDATORY REQUIREMENT:

Suppliers interested for registration for BHEL Open Tenders should have a valid DSC (Digital Signature Certificate) before Proceeding forward for Registration. Herein a Valid DSC refers to an Active and unexpired Signing and Encryption Certificate, with specification Class III SHA 2 2048 bit.

UNREGISTERED SUPPLIER IN EPS:

Procedure for Online Registration in EPS for Open Tender Suppliers for BHEL

Please follow the below steps for registration

1. Click Register Button (Top of the Screen)
2. Please input your organization PAN No (in case of Indian supplier) or click "Foreign" in case you are an overseas Supplier.
3. Click on INTERESTED Button against the respective BHEL Unit
4. Key in your desired login id (Login Code should be 8 - 24 characters in length and can only use numeric values) If you have registered by keying in PAN No. then your desired login id will be prefixed by "OTI", In case of overseas suppliers it will be prefixed with "OTF"
5. Fill in the other details.
6. Fill in the Captcha code and click next
7. Register your Signing certificate and click next
8. Select atleast one procurement category you may be dealing in.

Once the above steps are completed, your profile will be activated by mjunction within 2 business hours. After registering follow the steps provided in "For Registered Supplier" to view RFQ.

In case of any assistance, please call the following nos for support:

033-6601 1717 (From 9:30am to 5:30pm)

NB:-

1 -- BHEL Administrator or user will have no role for approving Registration and Open Tenders and DSC for Any supplier who has registered himself from the front END which is in case of OT.

FOR REGISTERED SUPPLIER IN EPS:

- a. Supplier visits EPS home page
- b. Supplier signs in with their user id and password
- c. Selects the RFQ Code and views it.
- d. Attaches themselves to the RFQ by clicking the interested button
- e. Supplier fills the bid template and makes necessary attachments
- f. Supplier submits their bid by clicking CONFIRM.

In case of any assistance, please call the following Nos for support:

033-6601 1717 (From 9:30am to 5:30pm)

b. Bidders are requested to quote their offer price on F.O.R Destination (BHEL/Stores) basis only (The basic price of the material quoted in the bid should be inclusive of Packing, Forwarding, freight and transit insurance, etc.,). Ex-works offers will be summarily rejected without further clarification.

c. No charges shall be indicated as "Lumpsum" or "Approximate" in absolute value. All charges like taxes and duties should be clearly specified as "percentage" of the quoted rates.

d. If any sales tax is payable as extra to the quoted price should be specifically stated in quotations along with CST & TIN no failing which the purchaser will not be liable for payment of sales tax. Our TIN No. 33243560005 Dated. 01.01.2007, CST No.239383 Dtd.11.06.1991.

e. Manufacturer's name, trademark or patent no. if any should be specified. Illustrative leaflets giving technical particulars are required along with quotation wherever necessary.

f. Products with I.S.I. certification marks will be preferred.

g. The Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept in Part or full without assigning any reason whatsoever.

h. The bidder has to keep track of any changes by viewing the addendum / Corrigendum's issued by the Purchaser on time-to- time basis in the E-Procurement platform. The Company calling for tenders shall not be responsible for any claims/problems arising out of this.

i. The user should complete all the processes and steps required for bid submission. The successful bid submission can be ascertained once acknowledgement is given by the system through bid submission number after completing all the processes and steps. BHEL and mjunction Services Ltd. will not be responsible for incomplete bid submission by users. Users may also note that the incomplete bids will not be saved by the system and are not available for the Purchaser for processing.

j. Before uploading scanned documents if any, the bidders shall sign on all the statements, documents, certificates uploaded by him, owning responsibility for their correctness / authenticity.

2. Offers should have a validity of minimum 90 days from the date of price bid opening. The quoted/Finalized rates shall be Firm till completion of the supplies including amendment / deviation / extension if any in quantity / date.

3. On the due date of tender opening, only technical bids will be opened. The opened technical bids will be evaluated by us and clarifications required, if any, will be called for from the bidders on technical and commercial points. If no reply is received from the vendor for the clarification raised by BHEL with in the final cut-off date those vendors offer will be processed with the documents available / submitted against this tender. Offers not meeting the required specification and technical condition will be summarily rejected. The price bids of technically suitable bidders will be opened on a later date with prior intimation to techno-commercially suitable bidders. If any difference is found in the terms in the Techno-commercial bid and price bid, the terms mentioned in the Techno-Commercial Bid will be considered.

4. Ranking L-1, L-2 etc. shall be done for individual items for the techno-commercially acceptable offers on landed cost to BHEL, Trichy basis and BHEL reserves the right to place order for individual items with different vendors. In the event of more than one vendor becoming L1 for the item, the enquiry quantity will be shared equally among all the L1 vendors. For such item / items splitting will be done among L1 vendors and as mentioned in the Clause 10 & 10.1 f below.

5. BHEL reserves the right to negotiate with L1 vendor or re-float the tender for items where, L1 price is not the lowest acceptable price; BHEL reserves the right to increase or decrease the tender quantity.

6. TERMS OF PAYMENT: Payment will be made after 45 days from the date of receipt and acceptance of materials at BHEL Trichy. Offers quoting for Advance payment / LC / thro bank payment will be rejected. Any deviation in the payment terms below 45 days shall attract loading as below.

Base rate of SBI (as applicable on the date of bid opening; Techno-commercial bid opening in case of two part bids) +6%' will be considered for the loading for the period of relaxation sought by the bidder.

7. LD clause & Risk purchase clause are applicable.

Single delivery schedule:

If the Supplier fails to deliver the P.O quantity within the period specified in the contract, then the Purchaser shall deduct liquidated damages, 0.5% of the total order value per week of delay or part thereof subject to a maximum of 10% of the total order value.

Staggered delivery schedule

In case of staggered delivery schedule, if the Supplier fails to deliver the quantity of any line item of the P.O within the period specified in that line item, Purchaser shall deduct Liquidated Damages, 0.5% of the undelivered portion per week delay or part thereof subject to maximum of 10% of the total order value

Liquidated Damages (LD): (Any deviations shall attract loading to the extent of relaxation sought to which it is not agreed by the bidder at offered value).

RISK PURCHASE: Alternatively the purchaser at his option 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 dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitutes therefor. The supplier shall be liable for any loss, which the purchaser may sustain by reason of such risk purchases in addition to penalty at the rate mentioned in LD clause above.

8. CENVAT CREDIT: If any Excise Duty is payable, the Chapter Head / Sub -head reference and the rate of the duty should be quoted. If the tenderer is availing CENVAT credit for this input material, the effect of Proforma credit should be passed on to the purchaser. Tenderer under "CENVAT" shall be preferred. In case of ordering vendor should issue CENVAT invoice along with the material.

9. PACKING AND MARKING: The supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit. Bags of Bolts & Nuts shall be 20Kgs only. Bags should be sturdy enough to hold the weight of the contents without getting damaged. Tags should be attached outside the bag giving all the details of the contents inside the bag.

10. SPECIAL PROVISIONS FOR MICRO AND SMALL ENTERPRISES (MSE) BIDDERS:

- i. 20% of the tendered quantity is earmarked for MSE suppliers in this tender. (Applicable only for items whose Quantity is 3000 Nos or more than 3000 Nos)
- ii. Out of the 20% tendered quantity reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC / ST entrepreneurs. In event of failure of such Micro and Small enterprises to participate in the tender process or meet the tender requirements and the L1 price, the 4% sub-target for procurement ear-marked MSE owned by SC / ST entrepreneurs shall be met with other MSE enterprise/s.
- iii. In case MSE vendor participating in the tender quotes within the price band of L1 + 15%, they will be allowed to supply the portion of the requirement subject to acceptance of L1 price by MSE vendor. In case of more than one such MSE, the supply shall be shared proportionately.
- iv. MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue in acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate (Format enclosed as per **Annexure I** where deemed validity of EM II certificate of five years have expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for the enquiry if any deficiency in the above required documents is not submitted before the price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer. This provision for MSE will apply subject to the condition that the participating MSE meets the tender requirements.
- v. In case of any change in the MSE status of the bidder, it shall be the responsibility of the bidder to notify the change as a part of the bid document. If at a later date it comes to the knowledge of BHEL, that the change in the status has not been intimated by the bidder and the order is obtained under the premise of an MSE then BHEL would cancel the pending order against this tender and take necessary steps for suspension of the business dealing with the bidder as per the procurement policy of BHEL.

- vi. In case after the bid opening it is seen that no MSE has become L1, then depending on the nature of the item, if it is not possible to split the tendered items / quantities on account of reasons like customer contract requirements of supplying one make for a given project or technical reasons like tendered items being a system, tendered quantity being low etc., then BHEL would not counter offer the L1 prices even though there may be MSE bidders within the +15% band of L1.

10.1

- Minimum 20% of the tendered quantity is earmarked for MSE suppliers in this tender. The earmarked quantity will be counter offered to the MSE vendors whose rate is within L1+15% band & up to H1 of MSE. In case of non-acceptance of the counter offering of 20% reservation to MSE vendors, the total tender quantity will be ordered as mentioned in 10.1 (d). For the balance 80% of the tendered quantity, BHEL reserves the right to order in the ratio of 70:30 i.e. 70% on L1 and 30% on other vendors (at matched L1 F.O.R rate in the order of commercial ranking) except H1 Vendor. Counter offering of L1 rate will not be made with any H1 vendor of Non-MSE
- If both L1 & L2 are from Micro / Small enterprise, the order will be split in the ratio of 70:30 (70% for L1 & 30% equally for MSE Vendors whose rate falls within L1+15% price band including L2 at matched L1 F.O.R rate). Counter offering of L1 rate will not be made with any vendor of Non-MSE.
- If L1 is from Micro / Small enterprise (MSE) & L2 is from Non-MSE enterprise, the order will be split in the ratio of 70:30 (70% for MSE Vendors & 30% for Non MSE L2 Vendor at matched L1 F.O.R rate). If L2 Non-MSE vendor not agreeing to matched L1 FOR rate, the 30% quantity will also be allocated to L1 MSE vendor. For the allocated 70% quantity to MSE vendors, BHEL reserves the right to order in the ratio of 70:30 (70% for L1 MSE vendors & 30% equally for MSE Vendors whose rate falls within L1+15% price band)
- If there is no response form MSE vendors the above split up of 10.1 (a, b & c) will not be applicable and the total tender quantity will be split and ordered in the ratio of 70:30 i.e 70% on L1 and 30% on other vendors (at matched L1 F.O.R rate in the order of commercial ranking) except H1 Vendor
- In case of counter offering rate has not been accepted by the L2 as well as L3 vendor, such counter offer quantity also will be ordered on L1 vendor.
- If two or more vendors becomes L1, 80% of Enquired qty shall be shared equally among all L1 Vendors. The balance 20% of Enquired qty will be counter offered to the MSE vendors whose rate is within L1+15% band & up to H1 of MSE

All combinations on how Enquired Qty will be shared is given in the following table.

VENDOR CATEGORY	MSE			NON MSE			REMARKS
	L1	L2	L3	L1	L2	L3	
MSE	70	30					The 30% qty will be shared equally among MSE vendors whose rate falls within L1+15% price band
MSE	49	21			30		30% of qty is allocated for L2 Vendor. 21% qty will be shared equally among MSE vendors whose rate falls within L1+15% price band
NON MSE			20	56	24		The 20% Qty will be shared equally among MSE vendors whose rate falls within L1+15% price band.
NON MSE		30		70			The 30% Qty will be shared equally among MSE vendors whose rate falls within L1+15% price band.

TABLE.1

11. FRAME WORK AGREEMENT:

- The Enquiry is intended for finalisation of "Frame work agreement" for the HSFG BOLTS & NUTS (grade 8.8 & 10.9) requirement of BHEL Trichy. Purchase orders will be released by BHEL Trichy from time to time, as per the requirement, during the validity of the Frame work agreement.
- The contract shall be in force for a period up to one year from the date of this agreement and may be extended for further period on mutual acceptance.

- c) Basic price, Taxes and Duties as indicated above are applicable. The Price stipulated will be FOR BHEL Trichy stores and FIRM and no revision will be entertained for the complete duration of the Contract i.e. up to one year from the date of this Framework Agreement.
- d) TC's of Raw materials and Final product should be submitted along with the supply.
- e) All techno commercially qualified new suppliers will be given trial order for ensuring Quality & Subsequently register them in BHEL Vendor directory through SRF (Supplier Registration Form).
- f) For all Suppliers, BHEL Trichy will carry out the inspection at vendor works for the First LOT by BHEL Inspection officials (Quantity will be specified by BHEL) and balance bulk Qty will be inspected by TPI at Vendor works.
- g) The quantities indicated in the Enquiry are approximate and tentative. BHEL does not guarantee to place purchase order for the full quantity.
- h) Total requirement of Enquiry will be shared among Suppliers as per Clause 10 & 10.1. PO will be placed as per BHEL's requirement either as part quantity or full quantity without exceeding the allocated Qty for each supplier.
- i) Delivery terms will be 50% of quantity within 5 weeks from the date of PO & Balance 50% within 8 weeks from the date of PO. (PO will be released by BHEL Trichy from time to time, as per the requirement)
- j) There is no minimum quantity for placement of purchase orders under the Frame work agreement.
- k) Original invoice should be submitted to purchase Department immediately after dispatch. A Copy of invoice & Duplicate for transporter should be submitted to stores along with consignment.
- l) Supplied materials if found not meeting the quality requirement as per Enquiry specification, will be rejected by us. The rejected materials should be collected by supplier at his own cost and the same should be replaced free of cost within 25 days from the date of rejection advice issued by BHEL. No payment shall be made against rejected / defective supply.
- m) Materials (only one size) shall be packed in bituminous coated polythene lined gunny bags. Bags of Bolts & Nuts shall be 20Kgs only. Bags should be sturdy enough to hold the weight of the contents without getting damaged. Tags should be attached outside the bag giving all the details of the contents inside the bag.
- n) BHEL Reserves the right to short close or reduce the quantity mentioned in the Enquiry / PO
- o) Any other condition which might have been quoted by the supplier and or in contravention to the terms prescribed in the Enquiry that have not been specifically accepted in writing by the purchaser will not be applicable to this Frame work agreement.
- p) Manufacturer's certificate / Test certificate from any NABL accredited laboratory and Guarantee certificate are to be submitted.
- q) Delivery & Quality performance of Suppliers will be monitored for each supply based on which further quantity will be allocated for the next PO.
- r) Termination clause for "Frame work agreement"
 - a. If the supplied materials are rejected two times.
 - b. If the supplier is not supplying the ordered materials against our PO within the delivery due date.
 - c. In case of failure in supplying the items as per PO terms and conditions within the delivery period, BHEL reserves the right to short close the PO and share the Pending quantity among other vendors who qualified as per the split up ratio mentioned in Cl.10.1. Also such failed vendors will be removed from Frame work agreement of this Enquiry and their share quantity will be distributed equally among other qualified vendors as per the split up ratio.

12. For the enquired items, where the quantity is 3000 Nos and less than 3000 Nos will not be split as mentioned against Clause No 10. Such items will be ordered on L1 vendor alone.

13. Conditional offers are likely to be rejected.

14. Disclaimer Clause: Neither the Organization (Bharat Heavy Electricals Ltd.) nor the service provider (mjunction Services Ltd.) is responsible for any failure of submission of bids due to failure of internet or other connectivity problems or reasons thereof.

15. Bidders participating in the tender should declare in their technical bid whether they have been black-listed / kept on hold / given Business holiday for a specified period by any Public Sector Undertaking or Government Departments. The reasons for such action with details and the current status of such hold shall be clearly furnished to BHEL. If no such details are mentioned in the offer, it will be construed that the bidder is not under any such hold. However, at a later date if it comes to the notice of BHEL about any such hold under enforcement, BHEL reserves the right to reject the offer at any point of time and also under any stage of the finalization of the tender. Such bidders will not be permitted to participate in the further tender proceedings and will be communicated suitably.

16. BHEL reserves the right to negotiate or re-float the enquiry opened if L1 price is not the lowest acceptable price to them inter-alia other reasons.

17. The correspondence between the bidder and BHEL through email is considered as valid document legally though it is not signed. It is treated as valid confirmations made on behalf of the respective company and comes under the legal ambit of the business transaction and hence binding on both the parties.

18. In case of any quality rejection of materials, the supplier has to collect the materials at his own cost within the 10 days of rejection of advice. Otherwise the materials will be scrapped.

19. Unloading at BHEL has to be done by the suppliers and BHEL will not be in a position to provide any handling / unloading facilities.

20. Bidders not confirming to the enquiry specifications will be disqualified.

TECHNO COMMERCIAL BID
TO BE SUBMITTED ALONG WITH PART – I (TECHNO COMMERCIAL BID)

ANNEXURE –B

S. NO	DESCRIPTION	BHEL REQUIREMENTS	SUPPLIER CONFIRMATION / DEVIATION (STRIKEOUT WHICHEVER IS NOT APPLICABLE)
1	VALIDITY	90 DAYS FROM DATE OF TECHNICAL BID OPENING	NON DEVIATABLE
2	PRICE QUOTED	FOR-DESTINATION BHEL STORES / TRICHY	NON DEVIATABLE
3	LD CLAUSE	(For details please read S.No:07 of “Annexure – A”)	NON DEVIATABLE
4	RISK PURCHASE CLAUSE	(For details please read S.No:07 of “Annexure – A”)	NON DEVIATABLE
5	SIGNING OF FRAME WORK AGREEMENT.		NON DEVIATABLE.
6	ACCEPTANCE FOR SUPPLYING HSFG BOLTS & NUTS AS PER STANDARD INDICATED FOR EACH ITEM		CONFIRM / NOT CONFIRM
7	DEIVERY SCHEDULE *	Delivery terms will be 50% of quantity within 5 weeks from the date of PO & Balance 50% within 8 weeks from the date of PO. PO will be released time to time, as per requirement.	CONFIRM / NOT CONFIRM
8	This tender will be monitored by an Independent External Monitor (IEM) by name and address of the IEM is Name:Mrs. Pravin Tripathi, IA and AS (Retd.) Address:D-243, Anupam Gardens, Lane IB, Neb Sarai, Sainik Farms,New Delhi # 110 068 Email:pravin.tripathi@gmail.com Duly filled & signed Integrity Pact (IP) should be furnished along with offer, IP should be signed by the authorized official of the bidder/vendor/contractor. Offer received without signed IP will summarily be rejected.		Attached/ Not Attached
9	Whether the suppliers have been black listed by any PSU / Other units of BHEL.		BLACK LISTED / NOT BLACK LISTED
10	Offers from Manufacturers will be accepted, Offers from traders will summarily be rejected.		MANUFACTURER / TRADER
11	CONTACT PERSON DETAILS	NAME: MOBILE NO: EMAIL :	

* Bidders are requested to adhere to BHEL Delivery schedule strictly.

SIGN AND SEAL OF AUTHORIZED PERSON

ANNEXURE - PQC

ENQ.NO:

	Material: HSFG BOLTS & NUTS	
Sl.No	PRE QUALIFICATION CRITERIA	Vendor to confirm
01	<i>Acceptance for supplying HSFG BOLTS & NUTS as per standard indicated for Each item</i>	ACCEPTED / NOT ACCEPTED
02	<i>Suppliers should agree to sign Frame Work Agreement. Quarterly or Bi-Monthly PO may be issued to the vendors by BHEL depending on the BHEL Requirement as per Frame Work Agreement.</i>	AGREED / NOT AGREED
03	<i>Supplier should provide a list of their customers for HSFG Bolts & Nuts to BHEL.</i>	ENCLOSED / NOT ENCLOSED
04	<i>Suppliers has to submit proof of Experience from at least two different customers (PO copies & corresponding TC) in supplying HSFG Bolts & Nuts of minimum 8.8 grade and Minimum quantity of 5000 Nos. should have been covered in each of the PO.</i>	ENCLOSED / NOT ENCLOSED
05	<i>All techno-commercially qualified New Suppliers will be given Trial Order for ensuring quality & subsequently register them in BHEL vendor directory through SRF (Supplier Registration Form).</i>	AGREED / NOT AGREED
06	<i>For all Suppliers, BHEL Trichy will carry out the inspection at vendor's works for the First LOT by BHEL Inspection officials (Quantity will be specified by BHEL) and balance bulk Qty will be inspected by TPI at Vendor works.</i>	AGREED / NOT AGREED
07	<i>Delivery & Quality performance of Suppliers will be monitored for each supply based on which further quantity will be allocated for the next PO.</i>	AGREED / NOT AGREED
08	<i>Bidders have to confirm whether they have been black-listed / kept on hold / given Business holiday for a specified period by any Public Sector Undertaking or Government Departments/any other units of BHEL.</i>	BLACK LISTED / NOT BLACK LISTED
09	<i>Offers from Manufacturers will only be accepted. Offers from Traders or agents will summarily be rejected.</i>	MANUFACTURER / TRADER

NOTE:

Offers meeting the above prequalification criteria points only will be evaluated further. Otherwise it will summarily be rejected.

SIGN AND SEAL OF AUTHORIZED PERSON

ANNEXURE -I

Certificate by Chartered accountant on Chartered Accountant's letter head

This is to certify that M/s....., (hereinafter referred to as 'company') having its registered office atis registered under MSMED Act 2006, (Entrepreneur Memorandum No (Part-II) dated: Category: (Micro/Small) (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O 1722 (E) dated October 5, 2006:
Rs..... Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSM ED Act, 2006:
Rs..... Lacs

(Strike off whichever is not applicable)

The above investment of Rs..... Lacs is within permissible limit of Rs..... Lacs for..... Micro/Small (Strike off which is not applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/Small) (Strike off which is not applicable) and the date of graduation of such enterprise from its original category is..... (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide S.O.No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name:

Membership number:

Seal of Chartered Accountant:

ANNEXURE - N (For NEW VENDORS only)

SI No	Details	Document submission
1	Nature of ownership & relevant documents. <i>(Proprietorship-Professional Tax Regn & Municipal Regn; Partnership firm – Partnership Deed; Co-operative society – Society rules & bye laws ; Private/Limited Company – memorandum & Articles of Association)</i>	
2	Manufacturing range & facilities: • List down the product range & specification details. • List of Manufacturing facilities/equipment's (including material handling facility)	
3	Licence details of the factory	
4	• Permanent Account No • Central Sales Tax registration number • State sales Tax / TIN number • Excise duty registration number • Excise control code number • Service tax registration number • Regn number of category as per MSMED Act (If applicable)	
5	If registered with any other BHEL unit • Letter of registration with BHEL unit (If applicable) • Proof of successfully executed or executing purchase orders	
6	Accreditation certificate for ISO:9001 / TOC of Quality System manual / ISO:14000 / OHSAS ISO 18000 (If applicable)	
7	Balance Sheet for the last three years along with the audit report	

INTEGRITY PACT

ANNEXURE-C

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi – 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

ANNEXURE-C

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in

order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

2.1.4 The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidders(s)/ Contractor(s) from the tender process or take action as per the separate “Guidelines on Banning of Business dealings with Suppliers/ Contractors” framed by the Principal.

Section 4 – Compensation for Damages

ANNEXURE-C

- 4.1 If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

Section 5 – Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 – Equal treatment of all Bidders/ Contractors/ Sub-contractors

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to obtain from all sub-contractors a commitment consistent with this Integrity Pact and report Compliance to the Principal. This commitment shall be taken only from those sub-contractors whose contract value is more than 20% of Bidder's/ Contractor's contract value with the Principal. The Bidder(s)/ Contractor(s) shall continue to remain responsible for any default by his Sub-contractor(s).
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 – Criminal Charges against violating Bidders/ Contractors /Sub-contractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 –Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or

take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

- 8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.10 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

- 9.1 This Pact begins and shall be binding on and from the submission of bid(s) by bidder(s). It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.
- 9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 – Other Provisions

ANNEXURE-C

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal
(Office Seal)

For & On behalf of the Bidder/ Contractor
(Office Seal)

Place-----

Date-----

Witness: _____
(Name & Address) _____

Witness: _____
(Name & Address) _____

Revision record:

Rev 00: 18/10/2011 Fresh Issue released and Test Sampling Plan Rev 00

Rev 01: 19/04/2012 Cl 2: Requirement if the Carbon content is below 0.6% - Added for Bolts; Mn for Nuts: limited to 0.25 min instead of 0.25 max. Cl 5: Hardness of Bolt & Nut: Acceptance values changed. Cl 7: Preservation and Packing added and Test Sampling Plan Rev 01

Rev 02: 28/10/2014 Property class Bolt 10.9 and Nut 10 and its requirements added (for Neyveli 2x500MW Tower boiler) in all clauses and Test Sampling Plan Rev 02

1. SCOPE:

This technical delivery condition covers the requirements for the High strength structural steel bolts, Nuts and Washers applicable for boiler structures and shall be procured from the BHEL approved manufacturers only. The mandatory requirements, test methods and procedures from the applicable IS standards to confirm a product to its relevant latest IS standard shall be met with. TDC is in addition to specification.

Size, Specification and Qty: As per the BHEL Purchase order (PO) / BHEL Drawing. The bolts, nuts and washers shall be supplied in the dull black heat treated condition with residual coating of light oil.

For Bolts: IS: 3757 (Latest) Property class: 8.8 or 10.9. Product Grade C of IS Specification IS: 1367 Part 2 (Latest).

For Nuts: IS: 6623 (Latest) Property class: 8 or 10, Product Grade B

For Washers: IS: 6649 (Latest) Material: 45C8, Type-A: Plain hole Circular Washers. Grade: Ordinary

2. RAW MATERIAL:

- Bolts and Nuts: Rolled/Forged bar of Carbon steel. Washer: as per IS 1571 Part 2 (Latest)
- Chemical composition:** Shall be checked on receipt of raw material at supplier works for every heat
Bolts: Plain Carbon Steel, Carbon steel with additives (eg Br, Mn or Cr) – As per Table 2 of IS: 1367 Part 3 (Latest)
Nuts: As per Table 4 of IS 1367 Part 6 (Latest)
Washers: As per IS 1570 Part 2 and Sulphur, Phosphorous <0.06% in check analysis

3. DIMENSIONS AND TOLERANCES:

- Process: Cold/Hot Forging with Dies and tools clean of loose scale and sheet particles.
- Threads on the bolts shall be checked with a properly calibrated ring gauge with a tolerance class 6g. Threads on the nuts shall be checked with a properly calibrated plug gauge with tolerance class 6H (in an NABL accredited LAB).
- Dimensions of the Bolts shall be as per the table given in IS 3757 (Latest)
- Dimensions of the Nuts shall be as per the table given in IS: 6623 (Latest)
- Dimensions of the Washers shall be as per the table given in IS 6649 (Latest)

Note: The washers shall be flat with a maximum deviation not exceeding 0.25 mm from the straight edge laid along a line passing through the center of the hole. The hole of the washer shall be concentric with the outside dimensions within 0.50 mm. washers are required to be clipped to provide clearance, the clipped edge shall not be closer to the center of the washer than 0.9 of the bolt diameter.

4. Post Forming Heat Treatment (HT):

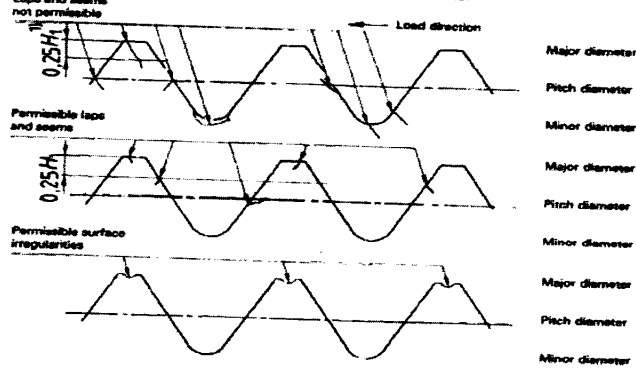
- Bolt: After forming shall be quenched (HT at AC 3 temperature, with soaking time 30minutes per inch followed by quenching) and tempered (at 425°C min, 60 minutes per inch). There should be a sufficient hardenability to ensure a structure consisting of approximately 90 % martensitic in the core of the threaded sections for the fasteners in the as-hardened condition before tempering.
- Nut: Shall be hardened and then tempered (at a temperature of 425°C minimum).
- Washer: Shall be hardened and tempered. Carburized washers are not permitted.

5. CHEMICAL & MECHANICAL & NDE: (on Heat Treated finished product)

Sample Size for Mechanical test: & NDE: As per Sampling Plan

BOLT :

Sl	Test	Test Method - As per Table 3 of IS: 1367 Part 3 (Latest)	Acceptance
1	Chemistry	Spectro / Wet Analysis Method – One sample for every heat Of raw material and One sample/HT batch on product	As per Cl 2.0 of this TDC
2	Hardness Test	Note: Surface hardness shall not be more than 30 Vickers above the measured core Hardness on the product when readings of both surface and core are carried out at HV 0.30. For property class 10.9, any increase in hardness at the surface which indicates that the surface hardness exceeds 390 HV is not acceptable.	8.8 – Min 255 HV Max 335 HV 10.9 – Min 320HV, Max 380HV
3	Minimum Tensile Strength, %Elongation on 5.65√A, % Reduction in Area after fracture	*if wedge load test is satisfactory the axial tensile test is not required	8.8 – 830N/mm ² , 12 min, 52% min 10.9 – 1040 N/mm ² , 9 min, 48% min
4	Proof Load Test	8.8 – Proof Load of M16(91KN), M20 (147KN), M24 (212KN), M30 (337KN), M36 (490KN); 10.9 – Proof Load of M16(130KN), M20 (203KN), M24 (293KN), M30 (466KN), M36 (678KN) shall be applied axially to the bolt in a calibrated tensile testing machine for 15sec.	Length of the bolt after loading shall be the same as before loading within a tolerance of ± 12.5 µm allowed for measurement error.
5	Strength under Wedge load test	IS: 1367 Part 3 (Latest)	8.8 – ≤ 830N/mm ² 10.9 – ≤ 1040 N/mm ²
6	Decarburization Test at 200X min magnification	Determination of the following by MICROSCOPIC Method a) Minimum Height of non decarburized thread zone – E b) Maximum depth of complete decarburization – G	E = 2/3 H1 G = 0.015 mm
7	Hardness after Retempering	IS: 1367 Part 3 (Latest) # test not mandatory, to be applied in case of dispute only	Reduction of hardness 20 HV max.
8	NDE for Surface Integrity	before machining – For bar Diameter ≥ 40 mm: UT as per ASTM A388. For bar Diameter < 40 mm: MPI as per ASTM E 709 After machining – MPI as per ASTM E 709 or as per ISO 6157 Part 3 (Latest)	UT – ASME SEC-VIII. Div-II Part: 3.3.4 (Latest). MPI – Linear indications like cracks, folds & other injurious defects are not acceptable.

9 Micro Examination for Surface Integrity – Laps at threaded region.	If any defectives found in visual and NDE examinations, the extent of defect can be determined by micro examination. 	Max depth of laps in thread = 0.41 mm Laps of any depth or length are not permitted in the following places: • at the root of the thread • at the loaded flank of screw thread below the pitch diameter, even if they start beyond the pitch diameter. The following laps are permissible: • laps in the crest of the threads of 0.25 H1 max.; • crest of the threads not entirely rolled out, maximum half a turn on one thread; • laps below the pitch diameter, if they run on the non-loaded flank towards the major diameter and not deeper than 0.25 H1 and not longer than half a turn on one thread.
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NUT: (on Heat Treated finished product)

Sl	Test	Test Method	Acceptance Value
1.	Chemistry	Spectro / Wet Analysis Method – For every heat Of raw material and, One sample/HT batch on product	As per CI 2.0 of this TDC
2.	Hardness Test	Hardness of the test mandrel shall be minimum 45 HRC.	8S – Min 188 HV Max 372 HV 10S – Min 272 HV Max 372 HV
3.	Proof Load Test	Proof Load of 8S – M16(168.9KN), M20 (263.4KN), M24 (379.5KN), M30 (603.1KN), M36 (878.3KN) 10S – M16(195.5KN), M20 (305KN), M24 (439.5KN), M30 (698.4KN), M36 (1017.2KN) shall be applied axially to the nut in a tensile testing machine for 15sec.	The nut shall resist the load without failure by stripping or rupture, and shall be removable by the fingers after the load is released.
4.	NDE for Surface Integrity	Before coating, as per IS 1367 Part 10 Cl 4.2 (Latest)	Linear indications like cracks, folds & Other injurious defects are not acceptable.

WASHER: As per IS 5369. The washers shall be free from cracks, burrs, pits and other defects. All sharp edges shall be removed. **(on Heat Treated finished product)**

Sl	Test	Test Method	Acceptance Value
1.	Chemistry	Spectro / Wet Analysis Method – For every heat Of raw material and One sample/HT batch on product.	As per CI 2.0 of this TDC
2.	Hardness Test	IS 1586 (latest)	Min 35 HRC Max 45 HRC

6. MARKING, PRESERVATION AND PACKING:

The following to be hot stamped or embossed on the top surface of the bolt and nut:

Bolt – Manufacturer's Identification Symbol and 8.8S/10.9S

Nut – Manufacturer's Identification Symbol and 8S/ 10S

Washers – Shall be identified by – the provision of 2 nibs and manufacturers identification symbol being placed as near to the outer edge as possible.

The following details shall be clearly indicated in the tags tied to the bundle:

- 1) Customer Name
- 2) Manufacturer's Name
- 3) Vendor Code
- 4) Purchase Order No and Supplier internal W.O No
- 5) Quantum and Weight
- 6) BHEL Material Code
- 7) Item Description with diameter, length

Shall be packed in bituminous coated Polythene lined Hessian Cloth/Bag. Each bag shall contain only the same size of bolts/ nuts/ washers respectively and the same shall be indicated in the tags.

7. INSPECTION AND CERTIFICATION:

All the finished components shall be visually and dimensionally inspected as per sampling plan. All the test results shall be documented and maintained. Products to be inspected at works & test certificates (in English) shall be submitted with the following details counter signed by BHEL/BHEL Authorized Inspection agency as indicated in the PO. Manufacturers Test certificate (MTC) shall contain the following:

- 1) Purchase Order No. (BHEL), TDC No, Specification and Grade.
- 2) Name of raw material bar supplier.
- 3) Forming process
- 4) Dimensional reports for each product.
- 5) Chemistry including incidental elements on the raw material and final product checked in NABL lab/ suppliers own lab.
- 6) HT details of materials temperature, soaking time, ROH/ROC medium etc.
- 7) All Mechanical test result report including hardness.
- 8) MPI, Micro examination and decarburization test report with the reference & acceptance standard.
- 9) TC of raw material, UT/MPI report done on raw material shall accompany the MTC.

8. AUDITS AT BHEL:

BHEL reserve the right to reject any item found to be not meeting the requirements during tests at supplier works or during subsequent processing at BHEL.

Haritha.C QA	Venkanna Rupani QA	Kalyanaraman.V QA	Viswanathan.D Engineering	Sekar.S QC	Balachandran.K.S MM	Revisankaran.U QA
Prepared By			Reviewed By			Approved By

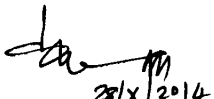
BHEL: TRICHY – 14

TEST SAMPLING PLAN FOR HSFG BOLTS, NUTS & WASHERS AS PER BHEL TDC: 5:211 Rev 02

Lot Size (In nos.)	SAMPLE SIZE										Remarks
	Visual (nos.)	Dimensional (nos.)	MPI (nos.)	Physical Tests							
				Total nos.	Hardness (nos.)	Hardness after Re-tempering (nos.)	Proof Load (nos.)	Wedge Load (nos.)	Min Tensile Strength (nos.)	Decarb (nos.)	
Upto 100	20	8	15	5	5	5	2	2	2	1	
101 to 300	32	13	15	5	5	5	2	2	2	1	
301 to 500	50	20	15	5	5	5	2	2	2	1	
501 to 1000	80	32	15	5	5	5	2	2	2	1	
1001 to 3000	125	50	25	8	8	8	2	4	2	1	Upto 1500 nos. 15 nos. for MPI
3001 to 10000	200	80	50	13	13	13	2	6	2	1	Upto 5000 nos. 25 nos. for MPI
10001 to 35000	315	125	75	20	20	20	4	10	4	2	Upto 15000 nos. 50 nos. for MPI
Above 35000	500	200	100	32	32	32	6	15	6	3	Upto 50000 nos. 75 nos. for MPI
Inspection by BHEL/BHEL AIA	W	W	W		W	W	W	W	W	W	

Remarks:

- Acceptance Number is zero. If the sample is having deviations in Visual, Dimensional and MPI then the entire lot shall be 100% inspected. In case of deviations in Physical tests a second sample of twice the sample size of initial sample shall be taken. The lot will get rejected if the second sample fails.
- Preservation & Packing: The bolts shall be supplied in the dull black heat treated condition with a residual coating of light oil. Finished products shall be packed in a bituminous coated Polythene lined Hessian cloth/bag. Each bag shall contain only the same size of bolts/nuts/washers respectively and the same shall be indicated in the tags.
- Inspection by BHEL / BHEL AIA shown as "W" shall be witnessed for the sample size indicated against the lot size.

				
Haritha.C QA	Venkanna Rupani QA	Kalyanaraman.V QA	Sekar.S QC	Revisankaran.U QA
Prepared By		Reviewed By		Approved By