



429-002/A

**BHARAT HEAVY ELECTRICALS LIMITED**

( A Government of India Undertaking )  
HIGH PRESSURE BOILER PLANT  
PURCHASE DEPARTMENT - FOSSIL BOILERS  
THIRUCHIRAPALLI - 620014  
TAMILNADU (INDIA)

Page  
1/1

PHONE :2577419  
GRAMS : BHARATELEC  
FAX NO: 2520719  
E-mail: cmuthuvel@bheltry.co.in  
Web:

Enquiry No	Enquiry Date	Due Date for Quotation
1901400153 - 27	02.07.2014	16.07.2014

Please quote Enquiry No, Date and due date in all correspondences.  
This is only a request for quotation and not an order

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	220744620000 TUBE END COVER INT DIA 24 BPS:6119-012-026	NO	20000.000	20,000.00	30.08.14
20	220744630000 TUBE END COVER INT DIA 27- BPS 6119-0120	NO	10000.000	10,000.00	30.08.14
30	220744640000 TUBE END COVER INT DIA 30 BPS:6119-012-028	NO	10000.000	10,000.00	30.08.14
40	220744650000 TUBE END COVER INT DIA 33 BPS:6119-012-029	NO	10000.000	10,000.00	30.08.14
50	220744720000 TUBE END COVER INT DIA 54 BPS:6119-012-036	NO	5000.000	5,000.00	30.08.14
60	220745740000 TUBE END COVER EXT FOR OD 44.5 BPS:6119-012-225	NO	80000.000	80,000.00	30.08.14

**General Note:****Enclosures:**

1. Annexure A - Terms & Conditions
2. Annexure B - Common checklist
3. Annexure C - Checklist for new sources
4. Annexure D - EFT format for new sources
5. Annexure I - CA certificate
6. Drawings, Specification - 6119-0120, 6119-0122, AA 040 11 21 /REV02

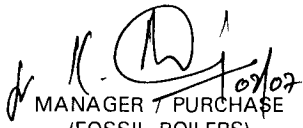
**Enclosures:**

"LD clause has to be confirmed without fail."  
"Payment to vendors will be made only thro E-Payment mode"

The offers should reach us 30 minutes before the time of opening of tenders.  
The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening.Late and delayed offers are liable to be rejected.

MANOJ KOTAKONDA  
Engineer

Yours faithfully,  
For BHARAT HEAVY ELECTRICALS LIMITED

  
MANAGER / PURCHASE  
(FOSSIL BOILERS)  
Yours faithfully,

Annexure - A

01. Bidders should primarily be engaged in manufacturing similar item(s) and should have necessary manufacturing facilities to meet BHEL's quality & delivery requirement. Offers from traders / agents will not be considered.
02. The quotation shall be submitted as two part bids. Techno-commercial bid containing Technical details and all Commercial terms like Duties & Taxes, Delivery schedule, Payment terms (except price details), LD Clause, etc., and Check list for enquiry: Annexure - B shall be put in a cover and super scribed **TECHNO-COMMERCIAL BID AGAINST ENQUIRY NO.1901400153 DT.02.07.14 DUE DT.16.07.14**. Price bid containing price details shall be put in a separate cover and super scribed as **PRICE BID AGAINST ENQUIRY NO. 1901400153 DT.02.07.14 DUE DT.16.07.14**. Both the covers shall be put inside a larger envelope and this envelope shall be super scribed as **TECHNO-COMMERCIAL BID AND PRICE BID AGAINST ENQUIRY NO. 1901400153 DT.02.07.14 DUE DT.16.07.14**.

*Note: Bidders are requested to submit their offers only through sealed bids. As the part II (the price bid) will not be opened before the technical evaluation is completed, bidders are requested not to submit their bids through email/fax etc. The offer should reach this office on or before the due date as mentioned in the enquiry by 14.00 Hrs. Tenders received after 14.00 Hrs will not be considered for evaluation.*

03. Tenders should be free from **CORRECTION AND ERASURES**. Corrections if any must be attested; all amounts shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail. No revision of prices will be entertained after tenders are opened. The quoted prices should remain firm till the execution of the orders.
04. Discrepancy in "Words "&"Figures "
  - a) If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.
  - b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
  - c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (a) and (b) above.
05. The Tender should be addressed to "**Engineer/Purchase, PSS/MM/RM, 4<sup>th</sup> Floor – Bldg. 24, Bharat Heavy Electricals Ltd., Tiruchirapalli-620014, Tamilnadu**". Tender should not be addressed to any individual's name but only by designation.
06. Delivery as per the requirement listed in the enquiry to be strictly adhered to.
07. Bidders, who are not currently on registered list of BHEL – HPBP Tiruchirapalli are supposed to submit the details as listed in the Annexure C. Offers are liable for rejection in case of non-submission of relevant documents requested for.

08. Special Provisions for Micro and Small Enterprises (MSE):

- 20% of the tendered quantity is earmarked for MSE suppliers in this tender. If L1 offer is from a Micro / Small enterprise, this provision is not applicable.
- 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.
- 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.
- 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.
- 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.
- 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.
- If L1 is from a Micro / Small enterprise, the 20% earmarking provision is not applicable and 100% quantity will be ordered on respective L1 source.
- In the event of more than one vendor becoming L1 for any of the item, the enquiry quantity for the item will be shared equally among all the L1 vendors. In such case, splitting will be done among L1 vendors alone and not as mentioned above.

09. On the due date of tender opening, only the technical bids will be opened. Technical bids and samples will be evaluated by us and clarifications required, if any, will be called for from the bidders on technical and commercial points. Test reports by BHEL plant lab shall be final. The price bids of technically suitable bidders will be opened on a later date with prior intimation to techno-commercially suitable bidders. Evaluation of offers shall be on "Net Cash Outflow to BHEL basis" per item.

10. For verification of data submitted towards evaluation of bidder's capability, BHEL may decide to visit the bidder(s) works. Any fact found deviating from submitted data shall make the bidder liable to be disqualified.

11. Indigenous Vendors:
  - Delivery: Prices should be quoted on **FOR / BHEL Stores, Tiruchirapalli basis only** (inclusive of freight and transit insurance). Ex-works offers will be rejected.
  - Payment: Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials. Offers with Advance payment / LC / thro bank payment will be rejected.  
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.
  - Packing Conditions: Materials (only one size) shall be packed in bituminous coated polythene lined hessian double layered gunny bag with identification tag on the bag with details of Purchase Order No & Date; Name of supplier; Material Code; Description; Quantity & Wt; The materials shall be securely packed for avoiding damages during transit.
12. Test certificate to be submitted along with the supply.
13. Guarantee Certificate to be given for 18 months from the date of acceptance of materials. No deviation permitted and the deviated offers are liable for rejection.
14. Conditional offers are likely to be rejected.
15. BHEL reserves the right to increase or decrease the tendered quantity and split the tender quantity among more than one tenderer and place order accordingly in any proportion, based on commitment, requirement and supplier's capability in terms of delivery and quality.
16. Inspection at BHEL Tiruchirapalli on receipt.
17. Liquidated Damages (LD): If the supplier fails to deliver the material within the period specified in the contract the purchaser shall deduct liquidated damages a sum equivalent to
  - a. 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 for single delivery schedule offered by BHEL.
  - b. In case of staggered delivery schedule offered by BHEL, LD shall be 0.5% of the undelivered portion per week of the delay or part thereof subject to maximum of 10% of the total order value.

Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).
18. 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 clause 18 above.
19. Offers should have a validity of minimum 90 days from the date of techno-commercial bid opening.
20. BHEL reserves the right to negotiate with L1 vendor or refloat the tender if L1 price is not the lowest acceptable price to BHEL.

21. Bidders not confirming to the enquiry specification mentioned will be disqualified.
22. The correspondence between the bidder and BHEL through email are considered as valid document Legally though 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.
23. 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.
24. Any corrigendum related to the enquiry will be hosted in the BHEL website [www.bhel.com](http://www.bhel.com) only; Bidders should visit the website(s) to keep themselves updated.
25. If any sales tax is payable as extra to the quoted price it should be specifically stated in quotations along with CST & VAT Number failing which the purchaser will not be liable for payment of sales tax. Our TIN 33243560005 dt.01.01.2007 & CST no 239383 DT, 11.06.1991.
26. 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.

Annexure -B

*Checklist for the Enquiry*

*(To be Filled and submitted for evaluation and to consider for Price-Bid opening)*

Description of the Item:	Plastic end caps as per DWG	
Enquiry Ref:	1901400153 DT.02.07.14 – DUE DT.17.06.14	
Sl No.	Description	Vendor's confirmation
1	Technical: Supply shall be as per BHEL's specification.	
2	Firm Price: The quoted/Finalized rates shall be Firm till execution of the supplies.	
3	Delivery and Price Basis: (Indigenous Vendor) Price should be quoted on FOR / BHEL Stores, Tiruchirapalli basis only (inclusive of freight and transit insurance). Ex-works offers will be rejected.	
4	Payment terms: Indigenous vendor: As per Clause 11 Annexure - A of Enquiry Terms & Conditions.	
5	Delivery: Bidder shall indicate the firm delivery period required for the delivery of the materials from the date of Purchase Order.	
6	Validity: Price Validity of your offer shall be minimum 90 days from the date of techno-commercial bid opening.	
7	Liquidated damages: As per Clause 17 Annexure - A of Enquiry Terms & Conditions	
8	Acceptance to Risk Purchase clause 18 Annexure - A of Enquiry Terms & Conditions	
9	Guarantee: Guarantee Certificate to be given for 18 months from the date of acceptance of materials.	
10	Contact Person details Name: Mobile No: E-mail ID :	
10	Bidders have to confirm that 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 (With reference to Cl. No .23 of Annexure – A).	

Date:

Signature with Seal of Bidder

Annexure C:

Vendors who are not currently registered with BHEL Trichy are requested to submit the following set of details mandatorily. Offers are liable for rejection for non-submission / incomplete submission of documents. Tags shall be put on the enclosures.

<b>SI No</b>	<b>Details</b>	<b>Document submission</b>
1	Nature of ownership & relevant documents. <i>(Proprietorship-Professional Tax Regn. &amp; Municipal Regn.; Partnership firm – Partnership Deed; Co-operative society – Society rules &amp; bye laws; Private/Limited Company – memorandum &amp; Articles of Association)</i>	Yes / No
2	Manufacturing range & facilities: <ul style="list-style-type: none"> <li>• List down the product range &amp; specification details.</li> <li>• List of Manufacturing facilities/equipment's (including material handling facility)</li> <li>• If In-house manufacturing facilities are not available, inform process outsourced with full details of the company &amp; details at their end as requested in point 'b' above. Ratio of outsourced cost to total production value to be recorded.</li> </ul>	Yes / No Yes / No Yes / No
3	Inspection & Testing Facilities: <ul style="list-style-type: none"> <li>• List of Inspection &amp; Testing facilities / equipment – Make &amp; year of manufacturing with current calibration status.</li> <li>• If In-house testing facilities are not available, indicate source of testing along with their facilities &amp; experience.</li> </ul>	Yes / No Yes / No
4	<ul style="list-style-type: none"> <li>• Permanent Account No</li> <li>• Central Sales Tax registration number</li> <li>• State sales Tax / TIN number</li> <li>• Excise duty registration number</li> <li>• Excise control code number</li> <li>• Service tax registration number</li> <li>• Regn number of category as per MSMED Act</li> </ul>	Yes / No Yes / No Yes / No Yes / No Yes / No Yes / No Yes / No
5	If registered with any other BHEL unit <ul style="list-style-type: none"> <li>• Letter of registration with BHEL unit</li> <li>• Proof of successful execution of one or more purchase orders</li> </ul>	Yes / No Yes / No
6	Letter of approval from ASME / NTPC / NPC / EIL / DGS&D / RAILWAYS etc.,	Yes / No
7	Accreditation certificate for ISO:9001 / TOC of Quality System manual / ISO:14000 / OHSAS ISO 18000	Yes / No
8	Experience list / Performance certificates	Yes / No
9	Balance Sheet for the last four years along with the audit report	Yes / No
10	EFT bank certificate as per Annexure D	Yes / No

To  
THE PURCHASE/CONTRACT EXECUTING AGENCY/BHEL  
ACCEPTANCE FOR ELECTRONIC FUND TRANSFER / RTGS TRANSFER

01	Name & Address of the Supplier / Sub-contractor																					
02	VENDOR CODE assigned by BHEL																					
Details of Bank Account:																						
03	NAME & ADDRESS OF THE BANK																					
04	NAME OF THE BRANCH																					
05	BRANCH CODE																					
06	MICR CODE	<table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																				
07	ACCOUNT NUMBER																					
08	TYPE OF ACCOUNT	CURRENT A/C / OD / CASH CREDIT																				
09	BENEFICIERY'S NAME																					
10	IFSC CODE OF THE BRANCH	<table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																				
11	EMAIL ID																					
12	TELEPHONE/ MOBILE NO.																					

**CERTIFICATE**

I / We hereby agree to receive the payments due from BHARAT HEAVY ELECTRICALS LIMITED by the National Electronic Funds Transfer and/or RTGS Transfer mode by credit to my / our above mentioned Bank Account. I / We also agree that payments made to the above mentioned Account is a valid discharge of the liability of Bharat Heavy Electricals Limited. I / We also agree to bear the applicable Bank Charges for the above mode of transfer. **A copy of the cheque leaf/ cancelled cheque leaf of the above account is sent herewith.**

AUTHORISED SIGNATORY WITH NAME SEAL

**Banker's Certification**

We confirm that we are enabled for receiving RTGS and NEFT credits and we further confirm that the account number of \_\_\_\_\_ (name of account holder), the signature of the authorized signatory and the MICR and IFSC codes of our Branch mentioned above are correct.

\_\_\_\_\_  
(Manager / Officer's Signature Under Bank stamp and Name Seal with Membership No.)

PLACE:

DATE :

(Tele/Mob no.)

Forwarded to Accounts Dept.

We confirm the above details are verified with the records available with us.

Signature of the BHEL Executive with Name Seal (Operating the Contract/Service):

Annexure - I

**Certificate by Chartered Accountant on letter head**

This is to Certify that M/S .....  
(hereinafter referred to as 'company') having its registered office at  
..... is registered under MSMED Act 2006, (Entrepreneur  
Memorandum No (Part-II) ..... dtd:.....,  
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 MSMED 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)

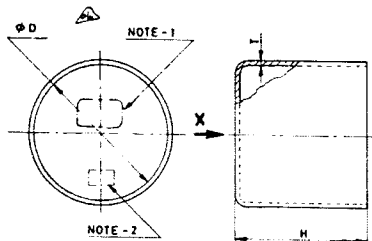
Name -

Membership number -

Seal of Chartered Accountant

2210-6119

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)



**NOTE**

1. STAMP THE EMBLEM ACCORDING TO AA 0401121 IN THE DIRECTION 'X'.
2. STAMP THE APPROPRIATE NOM SIZE IN THE DIRECTION 'X'.
3. MATERIAL: UREA FORMALDEHYDE CONFORMING TO IS: 3389 OR POLYVINYL CHLORIDE (PVC) OR OTHER EQUIVALENT.
4. THE END COVERS SHALL BE FLEXIBLE TO FIT TIGHTLY OVER THE TUBE AND WITHSTAND SHOCK DURING HANDLING & TRANSIT OF THE TUBES.
5. THE END COVERS SHALL PREFERABLY BE OF BLACK OR WHITE IN COLOUR OF VIRGIN QUALITY MATERIAL.

OD	H	T	EMBLEM SIZE	NOM SIZE	DESCRIPTION	QTY	UNIT	DATE	BY	REVISION	REMARKS
42.4	50	1.5	15	14	TUBE END COVER EXT FOR OD 42.4	6119 0122 34	22	07	3	758	01002
88.9	60	2	40	13	TUBE END COVER EXT FOR OD 88.9	6119 0122 33	22	07	4	583	01054
76.1	60	1.5	25	12	TUBE END COVER EXT FOR OD 76.1	6119 0122 32	22	07	4	582	01033
70	60	1.5	25	11	TUBE END COVER EXT FOR OD 70	6119 0122 31	22	07	4	581	01031
63.5	50	1.5	25	10	TUBE END COVER EXT FOR OD 63.5	6119 0122 30	22	07	4	580	01021
57	50	1.5	25	09	TUBE END COVER EXT FOR OD 57	6119 0122 29	22	07	4	578	01019
54	50	1.5	25	08	TUBE END COVER EXT FOR OD 54	6119 0122 28	22	07	4	577	01017
51	50	1.5	25	07	TUBE END COVER EXT FOR OD 51	6119 0122 27	22	07	4	576	01016
47.63	50	1.5	15	06	TUBE END COVER EXT FOR OD 47.63	6119 0122 26	22	07	4	575	01012
44.5	50	1.5	15	05	TUBE END COVER EXT FOR OD 44.5	6119 0122 25	22	07	4	574	01011
38	50	1.5	15	04	TUBE END COVER EXT FOR OD 38	6119 0122 24	22	07	4	573	01008
31.8	40	1	15	03	TUBE END COVER EXT FOR OD 31.8	6119 0122 23	22	07	4	572	01005
21.3	40	1	15	02	TUBE END COVER EXT FOR OD 21.3	6119 0122 22	22	07	4	571	01004
14	30	1	15	01	TUBE END COVER EXT FOR OD 14	6119 0122 21	22	07	4	570	01002
BASIC TOL PIPE H T EMBLEM SIZE											
NDM SIZE OD											

REV	DATE	ALTERED BY	REV	DATE	ALTERED BY	REV	DATE	ALTERED BY	DESCRIPTION
01	11.05.78	CHAKRABARTI	02	01.07.80	CHAKRABARTI	03	02.09.81	CHAKRABARTI	DESCRIPTION CHANGED

TYPE OF PRODUCT OR NAME OF CUSTOMER'S PRODUCT: **2210-6119**

**Sharat Heavy Electricals Ltd.**  
BOKER PLANT UNIT  
TIRUCHIRAPPALLI-620 014

DESIGNER: G.D.N. / T.K. / S.K.  
CHECKER: S.K.

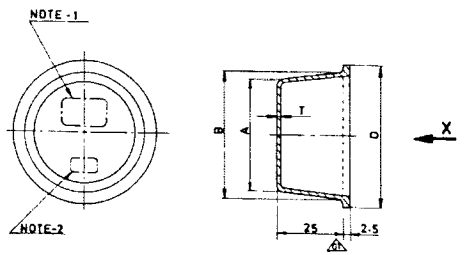
UNIT WEIGHT: **BPS 517503**

UNIT WEIGHT: **6119-0122**

DRAWING NO. 2210-6119  
 SHEET NO. 01  
 TOTAL SHEETS: 01  
 DATE: 11.05.78  
 DRAWN BY: CHAKRABARTI  
 CHECKED BY: CHAKRABARTI  
 APPROVED BY: CHAKRABARTI  
 MATERIAL: UREA FORMALDEHYDE CONFORMING TO IS: 3389 OR POLYVINYL CHLORIDE (PVC) OR OTHER EQUIVALENT.  
 THE END COVERS SHALL BE FLEXIBLE TO FIT TIGHTLY OVER THE TUBE AND WITHSTAND SHOCK DURING HANDLING & TRANSIT OF THE TUBES.  
 THE END COVERS SHALL PREFERABLY BE OF BLACK OR WHITE IN COLOUR OF VIRGIN QUALITY MATERIAL.

0210-6119

FIRST ANGLE PROJECTION ALL DIMENSIONS IN MILLIMETRES



**NOTE**

1. STAMP THE EMBLEM ACCORDING TO AA 040 1121 IN THE DIRECTION 'X'.
2. STAMP THE APPROPRIATE NOM SIZE IN THE DIRECTION 'X'.
3. MATERIAL: UREA FORMALDEHYDE CONFORMING TO IS: 3389 OR POLYVINYL CHLORIDE (PVC) OR OTHER EQUIVALENT.
4. THE TUBE END COVERS SHALL BE FLEXIBLE TO FIT SNUGLY IN TO THE TUBE AND WITHSTAND SHOCK DURING TRANSIT OF THE TUBES.
5. THE TUBE END COVERS SHALL PREFERABLY BE OF DARK BLUE OR WHITE IN COLOUR OF VIRGIN DUALITY MATERIAL.
6. THE CORNERS SHALL BE SUITABLY RADIUSED

EMBLEM SIZE	A	B	D	T	DESCRIPTION	BPS CODE	UNIT WT.		
25	66	72	78	1.5	21	TUBE END COVER INT DIA 69	6119 0120 41	22 073 646	0015
25	63	69	75	1.5	20	TUBE END COVER INT DIA 66	6119 0120 40	22 074 476	0014
15	60	66	72	1.5	19	TUBE END COVER INT DIA 63	6119 0120 39	22 074 475	0014
15	57	63	69	1.5	18	TUBE END COVER INT DIA 60	6119 0120 38	22 074 474	0013
15	54	60	66	1.5	17	TUBE END COVER INT DIA 57	6119 0120 37	22 074 473	0012
15	51	57	63	1.5	16	TUBE END COVER INT DIA 54	6119 0120 36	22 074 472	0012
15	48	54	60	1.5	15	TUBE END COVER INT DIA 51	6119 0120 35	22 074 471	0009
15	45	51	57	1.5	14	TUBE END COVER INT DIA 48	6119 0120 34	22 074 470	0008
15	42	48	54	1.5	13	TUBE END COVER INT DIA 45	6119 0120 33	22 074 469	0008
-	39	45	51	1.5	12	TUBE END COVER INT DIA 42	6119 0120 32	22 074 468	0007
-	36	42	48	1.5	11	TUBE END COVER INT DIA 39	6119 0120 31	22 074 467	0006
-	33	39	45	1.5	10	TUBE END COVER INT DIA 36	6119 0120 30	22 074 466	0006
-	30	36	42	1.5	09	TUBE END COVER INT DIA 33	6119 0120 29	22 074 465	0005
-	27	33	39	1	08	TUBE END COVER INT DIA 30	6119 0120 28	22 074 464	0004
-	24	30	36	1	07	TUBE END COVER INT DIA 27	6119 0120 27	22 074 463	0004
-	21	27	33	1	06	TUBE END COVER INT DIA 24	6119 0120 26	22 074 462	0004
-	18	24	30	1	05	TUBE END COVER INT DIA 21	6119 0120 25	22 074 461	0003
-	15	21	27	1	04	TUBE END COVER INT DIA 18	6119 0120 24	22 074 460	0002
-	12	18	24	1	03	TUBE END COVER INT DIA 15	6119 0120 23	22 074 459	0001
-	9	15	21	1	02	TUBE END COVER INT DIA 12	6119 0120 22	22 074 458	0001
-	6	12	18	1	01	TUBE END COVER INT DIA 9	6119 0120 21	22 074 457	0001

REV DATE ALTERED BY  
02 01-07-82

EMBLEM SIZE 15 WAS 25 WIDTH SIZES REINTRODUCED.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		SHERAT HEAVY ELECTRICALS LTD.	
BOILER PLANT UNIT		TIRUCHIRAPALLI-620 014	
DESIGNER	G.O.N	CHECKED	T.K
DATE	11.3.82	APPROVED	S.K
SCALE	1:1	PROJECT NO.	BPS 517501
TUBE END COVER (INTERNAL TYPE)		6119-0120 02	



# CORPORATE STANDARD

AA0401121

Rev No.02

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## COMPANY'S MONOGRAM (Without Border)

### 1.0 SCOPE

- 1.1 This Standard stipulates the design, dimensions and sizes of the Company's Monogram, (without border) applicable to entire BHEL Corporation, to be affixed on all our Company products.
- 1.2 For use on black background, Company's monogram as per AA0401120 shall be used.

### 2.0 DESIGNATION

- 2.1 The Monogram shall be designated by the dimension 'A' in Table-1.
- 2.2 A Monogram of size  $A \approx 100$  shall be designated as:

MONOGRAM: 100 - AA0401121

### 3.0 DIMENSIONS:

- 3.1 The dimensions of the Monogram shall be as per Table-1 & Table-2.
- 3.1.1 The dimensions of English letters 'BHEL' shall be as per Table-1.
- 3.1.2 The dimensions of Hindi letters बी. एच. ई. एल shall be as per Table-2.

### 4.0 FINISH:

- 4.1 For general application:
- 4.1.1 The English letters 'BHEL' shall generally be white against black background as shown in figure 1.
- 4.1.2 The Hindi letters बी. एच. ई. एल shall be black against generally white background as shown in figure 2.
- 4.2 For application on anodized rating plate, name plates, etc.
- 4.2.1 The English letters 'BHEL' shall have a satin silver finish against a black background.

Revisions: As per Clause 25.04 of MOM of MRC-SMC+RP

**APPROVED:**  
INTERPLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(SMC+RP)

Rev No.02	Amd No.	Reaffirmed	Prepared Corp. R&D	Issued Corp.R&D	Dt. of 1 <sup>st</sup> Issue FEB 1976
Dt:01-12-1996	Dt:	Year:2013			



4.2.2 The Hindi letters बी. एच. ई. एल shall be black against satin silver background.

4.3 For Press Printing:

4.3.1 The English letters 'BHEL' and background of Hindi letters shall have the same colour as the colour of material on which it is printed.

4.3.2 The background of English letters 'BHEL' and Hindi letters बी. एच. ई. एल shall generally be black.

4.3.3 The boundary line of the monogram in the region of Hindi letters shall generally be black and this line and the background of the 'BHEL' shall have the same colour.

4.3.4 Reversing of the Emblem viz. The BHEL letters in dark colour with the background in white or with background colour being the colour on which the Emblem is printed is strictly forbidden

Note:

- 1) Samples of monogram are shown on Page-6.
- 2) For Neon Signs the Emblem shall have the Hindi Letters बी. एच. ई. एल and background of English Letters 'BHEL' the same colour and English Letters 'BHEL' and background of Hindi Letters बी. एच. ई. एल the same colour.

5.0 REFERRED STANDARDS (Latest Publications including Amendments):

Nil

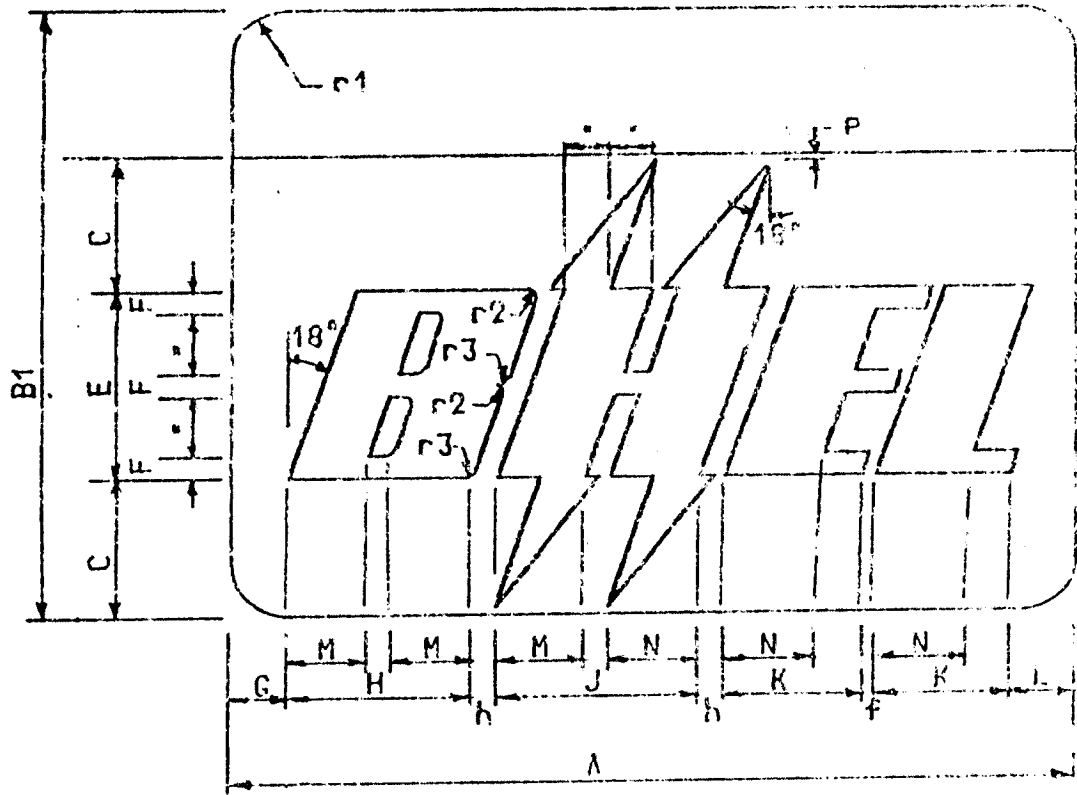


FIG. 1

MONOGRAM SIZE	DIMENSIONS																
	B1	C	E	F	G	H	J	K	L	M	N	P	f	h	r1	r2	r3
A	0.81 A	.183 A	.25 A	.032 A	.067 A	.22 A	.24 A	.16 A	.078 A	.095 A	.105 A	.01 A	.015 A	.03 A	.07 A	.02 A	.025 A
10	8.1	1.8	2.5	0.32	0.67	2.2	2.4	1.6	0.78	0.95	1.05	0.1	0.15	0.3	0.7	0.2	0.25
15	12.2	2.7	3.7	0.48	1	3.3	3.5	2.4	1.2	1.4	1.5	0.15	0.2	0.5	1	0.3	0.4
25	20.6	4.6	6.3	0.8	1.6	5.4	6	4	2	2.3	2.6	0.25	0.4	0.8	1.8	0.5	0.6
40	32.4	7.3	10	1.3	2.8	9	9.6	6.45	3.1	4	4.2	0.4	0.6	1	3	0.8	1
60	49	11	15	2	4	13	14.4	9.5	4.6	5.5	6.3	0.6	1	2	4	1.2	1.5
100	81.4	18	25	3	6.7	22	24	16	7.8	9.5	10.5	1	1.5	3	7	2	2.5
125	102	23	31	4	8.6	27.5	30	20	9.7	12	13	1.25	1.8	3.7	9	2.5	3
160	130.5	29	40	5	11	35	38.4	25.6	12.4	15	16.8	1.5	2.4	4.8	11	3	4
200	162.9	36.6	50	6	13.4	44	48	32	15.6	19	21	2	3	6	14	4	5
250	204	46	62.5	8	16.7	56	60	40	19.5	24.5	26.5	2.5	3.8	7	17.5	5	6
320	260	59	80	10	21	70	77	51	25	30	33.5	3	5	10	23	6.5	8
400	325.8	73	100	13	27	88	96	64	31	38	42	4	6	12	28	8	10
600	480.6	110	150	19	40	132	144	96	47	57	63	6	9	18	42	12	15

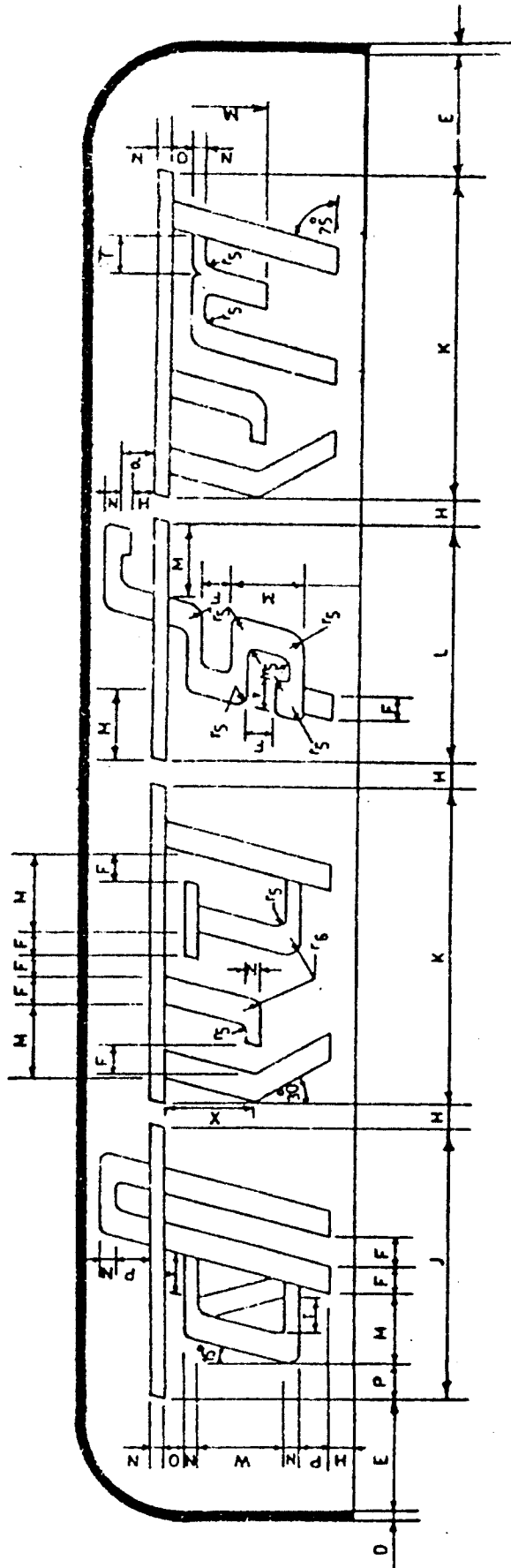


FIG. 2



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TABLE-2

MONOGRAM SIZE A	DIMENSIONS																
	C	D	E	F	H	J	K	L	M	N	O	P	T	W	X	r <sub>5</sub>	r <sub>6</sub>
10	1.84	0.06	0.78	0.18	0.15	1.84	2.18	1.62	0.50	0.09	0.12	0.21	0.25	0.56	0.59	0.06	0.12
15	2.75	0.08	1.17	0.28	0.23	2.76	3.28	2.43	0.75	0.14	0.18	0.32	0.37	0.84	0.89	0.09	0.18
25	4.60	0.14	1.96	0.46	0.39	4.60	5.46	4.06	1.25	0.23	0.31	0.54	0.62	1.40	1.48	0.15	0.31
40	7.37	0.24	3.13	0.75	0.62	7.37	8.75	6.50	2.00	0.37	0.50	0.87	1.00	2.25	2.37	0.25	0.50
60	11.05	0.36	4.69	1.12	0.93	11.00	13.12	9.75	3.00	0.56	0.75	1.31	1.50	3.37	3.56	0.37	0.75
100	18.43	0.62	7.81	1.87	1.56	18.43	21.87	16.25	5.00	0.93	1.25	2.18	2.50	5.62	5.93	0.62	1.25
125	23.04	0.78	9.76	2.34	1.95	23.00	27.34	20.31	6.25	1.17	1.56	2.73	3.12	7.03	7.42	0.78	1.56
160	29.50	1.00	12.50	3.00	2.50	29.50	35.00	26.00	8.00	1.50	2.00	3.50	4.00	9.00	9.50	1.00	2.00
200	36.87	1.24	15.63	3.75	3.12	36.87	43.75	32.50	10.00	1.87	2.50	4.37	5.00	11.25	11.80	1.25	2.50
250	46.08	1.56	19.53	4.68	3.90	46.09	54.68	40.62	12.50	2.34	3.12	5.46	6.25	14.06	14.84	1.56	3.12
320	59.00	2.00	25.00	6.00	5.00	59.00	70.00	52.00	16.00	3.00	4.00	7.00	8.00	18.00	19.00	2.00	4.00
400	73.75	2.50	31.25	7.50	6.25	73.75	87.50	65.00	20.00	3.75	5.00	8.75	10.00	22.50	23.75	2.50	5.00
600	110.62	3.74	46.88	11.25	9.37	110.62	131.25	97.50	30.00	5.62	7.50	13.12	15.00	33.75	35.62	3.75	7.50

NOTE: In Table-2. the base value has been taken as A = 320. The dimensions corresponding to A=320 have been rounded off. All other dimensions given have been calculated. It is feasible to obtain these values by photographic reduction/enlargement from the base size A=320.

In case smaller size emblems are to be drawn, rounding off can be carrier out of dimensions to facilitate drawings.

Usage of Monogram Size 10 should be avoided as far as possible

# CORPORATE STANDARD



SIZE 15 mm



SIZE 25 mm



SIZE 40 mm



SIZE 60 mm