



General Note:

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PHONE : 91-44-28158821
GRAMS : BHARATELEC
FAX NO:
E-mail :
Web :

OFFICE COPY**Collective No.**

9621700059

Enquiry Date

09.05.2017

**Due Date For
Quotation**

22.05.2017

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	SP5360061049 SKEW BACK - RH 406284 RHF SKEW BACK - RH FOR CHARGING & DISCHARGING DOORS DRG NO :4-7-1101-01-06284/00 MATERIAL: 55-60% AL203 SPECIFICATI ON: AL2O3 :55-60% Fe2 O3 :1%(MAX) P.C.E :36 ORTON CONE RUL ta :1560 degree C APPARANT POROSITY :22-25% C C S :OVER 350kgs/cmsq SERVICE TEMP :1600 deg C	NO	4.000	4.00	08.06.17
20	SP5360061057 SKEW BACK - LH 406285 RHF SKEW BACK - LH FOR CHARGING & DISCHARGING DOORS DRG NO :4-7-1101-01-06285/00 MATERIAL: 55-60% AL203 SPECIFICATION: AL2O3 :55-60% Fe2 O3 :1%(MAX) P.C.E :36 ORTON CONE RUL ta :1560 degree C APPARANT POROSITY :22-25% C C S :OVE R 350KGS/CM.SQ SERVICE TEMP :1600 DEGREE C.	NO	4.000	4.00	08.06.17
30	SP5360010029 HFK BRICK 230X115X75 N&T FUR HOT FACE KINETIC STANDARD BRICK SIZE : 230X115X75mm SPECIFICATION : AL203 % : min = 40 PCE SK : min = 32 AP % : min = 55 BD gm/sq.cm : 1.0 - 1.1 max CCS kg/sq.cm : min = 40 SWT Deg.C min = 1400 THERMAL CONDUCTIVITY VALUE K.cal/ m.hr/deg.c : 0.45 @ 600 deg.c SIZE TOLERANCE : + /-0.2% or + /- 1mm WHICHEVER IS GREATER	NO	7000.000	7,000.00	08.06.17
40	SP5360009012 CFI BRICKS 230X115X75MM GEN STD BRICKS OF COLD FACE INSULATION QUALITY SIZE : 230x115x75mm SPECIFICATION AL203 % min = 30 PCE : OC min = 30 AP % above 70 BD gm/cc max = 0.6 CCS kg/sq.cm min = 10 SWT deg C min = 1200 THERMAL CONDUCTIVITY K.cal/m/hr/ deg C : 0 .25 @ 600 deg C SIZE TOLERANCE :+ /-0.2%	NO	11000.000	11,000.00	08.06.17

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.

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**

MANAGER / PURCHASE
(SSTP)



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	or1mm WHICHEVER IS GREATER.				
50	SP5360061332 FLUE WALL SUPPORT BRICK	NO	150.000	150.00	08.06.17
60	SP5360061340 WALL ANCHOR BRICK 406317RHF WALL ANCHOR BRICK DRG NO :4-7-1101-01-06317/00 MATERIAL : 55%-60% Al2O3 SPECIFICATION : AL2O3 :55-60 % Fe2 O3 :1% MAX P.C.E : 35 ORTON CONE R.U.L ta :1560 deg C APPARENT POROSITY :22-25% CCS :OVER 350Kg/cm.Sq S ERVICE TEMP :1600 deg C	NO	500.000	500.00	08.06.17
70	SP5360061154 VESTIBULE ARCH BRICK-TYPE I 406291	NO	400.000	400.00	08.06.17
80	SP5360010010 H F INSULATION STD BRICK GEN HOT FACE INSULATION STANDARD BRICKS OF SIZE : 230x115x75mm SPECIFICATION : AL203 % : min = 40 PCE SK : min = 32 AP % : min = 65 BD gm/sq.cm : max = 0.9 CCS kg/sq.cm : min = 20 SWT Deg.C min = 1400 THERMAL CONDUCTIVITY VALUE K.c al/m.hr/deg.c : 0.2 @ 600 deg.c SIZE TOLERANCE : + /-0.2% or + /- 1mm WHICHEVER IS GREATER.	NO	14000.000	14,000.00	08.06.17
90	SP5360061162 VESTIBULE ARCH BRICK-TYPE II 406292	NO	200.000	200.00	08.06.17
100	SP5360054298 ROOF SIDE SUPPORT BRICK H31 404451 RHF ROOF SIDE SUPPORT BRICK DRG.NO:4-7-1101-01-04451 specification: Al203 % min = 54 Fe203 % max = 1.7 Pce Sk min = 35 RUL ta Degree centigrade min = 1530-1570 PLC % max = 0.5 @ 1500 degree centigrade for 2hrs AP % max = 21 CCS = Kg/sq.cm = min 350 SIZE OF TOLERANCE= + or - 2% or 1mm (which ever is greater)	NO	600.000	600.00	08.06.17
110	SP5360008687 ABUTMENT.W.28B	NO	60.000	60.00	08.06.17
120	SP5360008105 END ARCH BRICK 230X230X75/65 WBF END ARCH BRICK SIZE :230X230X75/65mm MATERIAL :IS.8	NO	200.000	200.00	08.06.17
130	SP5360008172	NO	200.000	200.00	08.06.17
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140	DOUBLE END ARCH-230X230X75/50 SP5360061103 SIDE BLOCK 304699RHF SIDE BLOCK for RHF Charging & Dis-charging Doors. DRG NO :3-7-1101-01-04699/00 MATERIAL SPECIFICATIONS :- AL2O3 Min. : 70 %. Fe2 O3 Max. : 0.5 % P.C.E. : 36 RUL ta :1720 deg.C APPARANT POROSITY (Min.) : 17 %. C.C.S. (Min.) :600 Kgs/cm.sq. PLC (Max.) : ± 0.20 % at 1550°C/2 Hours. SERVICE TEMP :1700 deg. C	NO	60.000	60.00	08.06.17
150	SP5360061187 BURNER BLOCK GUARD IW-MULLITE-201198RHF BURNER BLOCK GUARD IW-MULLITE-201198RHF BURNER BLOCK GUARD FOR INNER WALL TO SUIT NA 5514-6 BURNER. DRG NO :2-7-1101-01-01198/00 MATERIAL SPECIFICATION : 1) RAW MATERIAL BASE ANDALUSITE AND MULLITE. 2) Fe2o3 : Min. 0.5% 3) P.C.E. : 36 4) RUL ta. : 1700 deg.C 5) A.P. : MAX. 16. 6) C.C.S. : MIN. 600 Kgs/cm.sq. 7) PLC. : MAX. ± 0.20 % at 1550 deg.C/2Hours. 8) SERVICE TEMP. : 1700 deg.C.	SET	6.000	6.00	08.06.17
160	SP5360061185 BURNER BLOCK GUARD OW-MULLITE-201196RHF BURNER BLOCK GUARD FOR OUTER WALL TO SUIT NA 5514-6 BURNER. DRG NO :2-7-1101-01-01196/00 MATERIAL SPECIFICATION : 1) RAW MATERIAL BASE ANDALUSITE AND MULLITE. 2) Fe2o3 : Min. 0.5% 3) P.C.E. : 36 4) RUL ta. : 1700 deg.C 5) A.P. : MAX. 16. 6) C.C.S. : MIN. 600 Kgs/cm.sq. 7) PLC. : MAX. ± 0.20 % at 1550 deg.C/2Hours. 8) SERVICE TEMP. : 1700 deg.C.	SET	6.000	6.00	08.06.17
170	SP5360061600 STRAIGHT BRICK 230X113X75 RHF STRAIGHT BRICK SIZE :230X113X75mm MATERIAL SPECIFICATION :- AL2O3 :55-60% Fe2 O3 :1%(MAX) P.C.E :36 ORTON CONE R.U.L.ta :1560 deg.C APPARENT POROSITY :22-25% C.CS :OVER 350KGS/CM.SQ SERVICE TEMP :1600 DEGREE C.	NO	7000.000	7,000.00	08.06.17
180	SP5360080221 HEARTH TOP OUTER SLAB BLOCK 406278 RHF	NO	30.000	30.00	08.06.17
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**9621700059 / 09.05.2017****23505**

HEARTH TOP OUTER SLAB BLOCK DRG NO :4-7-1101-01-06278/00 MATERIAL :80% AL2O3 Specification: AL2 O3 %MIN : 80 + or- 1.5 PCE SK MIN : 36 RUL ta deg C MIN : 1630 PLC %MAX :+/- 0.5 @ 1600 deg C For 1 hour AP %MAX : 16 for M/C, 19 for HM CCS Kgs/ cm sq MIN :8 00 FOR M/C, 500 FOR HM BD qm/cc MIN :2.8 FOR M/C, 2.7 FOR HM SPALLING CYCLES -MIN :+ 30 air quenching at 1600 C For 1 hr Size tolerance whichever is greater: + or -1% or +/- 2mm					
190	SP5360080230	NO	20.000	20.00	08.06.17
HEARTH TOP INNER SLAB BLOCK 406279 RHF HEARTH TOP INNER SLAB BLOCK DRG NO : 4-7-1101-01-06279/00 MATERIAL : 80% AL2O3 Specification: AL2 O3 %MIN : 80 + or-1.5 PCE SK MI N : 36 RUL ta deg C MIN : 1630 PLC %MAX : + or-0.5 @ 1600 deg C FOR 1 hour AP %MAX : 16 for M/C 19 for HM C CS Kgs/ cm sq MIN : 800 FOR M/C 500 FOR HM BD qm/cc MIN : 2.8 FOR M/C 2.7 FOR HM SPALLING CYCLES -MIN :+ 30 air quenching at 1600 deg C FOR 1 hour Size tolerance whichever is greater : + or-1% or +/- 2m m					
200	SP5360086416	KG	10000.000	10,000.00	08.06.17
H F SUPER REFRACTORY CASTABLE RHF HOT FACE SUPER REFRACTORY CASTBLE TO THE FOLLOWING SPECIFICATION :- AL2O3 % min 91.5 Fe2O3 % max 0.5 CCS Kg/ sq.cm min @ 110 deg.C - 350 min @ 800 deg.C - 220 min @1550 deg.C - 260 SWT deg.C min- 1800 PLC % - 1550 deg.C-+ 0.6 D RY DENSITY - KG/CUBIC MTR - 2800.					
210	SP5360086211	KG	5000.000	5,000.00	08.06.17
HIGH ALUMINA CASTABLE RHF HIGH ALUMINA CASTABLE AS PER THE FOLLOWING SPECIFICATION : Al2O3 : % MIN 70 Fe2O3 : % MAX 4 SWT : DEG.C MIN = 1550-1600 CCS : Kg/sq.cm MIN = AT 110 deg.c - 300 AT 1300 deg.c - 250 SINTERING TEMPERA TURE : deg.c 1225-1250 BD : gm/cc MIN 2.2 to 2.3					

General Note:

1. This Tender is floated on TWO-BID basis.
2. Following details are enclosed.

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MANAGER / PURCHASE
(SSTP)

**9621700059 / 09.05.2017****23505**

a.,Annexure-A - Important Note to Tenderers & Annexure-D Note to MSE Vendors enclosed. Send your MSE Certificate accordingly.

Tenderers are requested to submit their Offers in TWO-BID basis, viz.,

I.,Part I,,,,,Technical and Un-Priced Commercial Bid

II.,Part II,,,,,Price Bid

b.,,Annexure-B - Technical Conditions

c.,,Annexure-C - Commercial Conditions

3. Tenderers are required to fill in above Annexure-B and C and enclose them along with their UN-PRICED BID.

4.a. Delivery date furnished in the Enquiry is only indicative.

4.b. For Delivery Schedule - Pl. refer Clause No. C.4 of Annexure- C.

5. Price Bid of Vendors, who accept the Clause No. B.1 to B.3 of Annexure-B & C.1 to C.5 of Annexure- C. shall only be considered for further processing. Fill the Annexure-B & C and enclose it with Technical and Un-Priced commercial Bid.

For Payment term - Refer Annexure - C Point No. C- 5. Any deviation in the above payment term will attract loading as mentioned below.

For payment term deviation - "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.

Payment through Bank. LC/Advance Payment are liable for rejection.

6. For new vendors, who ever not registered with BHEL, they will be given the documents as per Annexure-E with the technical bid.

Enclosures:

"LD clause has to be confirmed without fail."

The bidder along with its associate / collaborators / sub-contractors / sub-vendors / consultants /service providers shall strictly adhere to BHEL fraud prevention policy displayed on BHEL website

<http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

PR Links

Material.	PR.No	PR.Item.	Quantity	Acc. Assign	Customer Number
SP5360061049	118342881	00010	4.000	/000000	
SP5360061057	118342881	00020	4.000	/000000	
SP5360010029	118342881	00030	7000.000	/000000	
SP5360009012	118342881	00040	11000.000	/000000	
SP5360061332	118342881	00050	150.000	/000000	
SP5360061340	118342881	00060	500.000	/000000	
SP5360061154	118342881	00070	400.000	/000000	

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For **BHARAT HEAVY ELECTRICALS LIMITED**

MANAGER / PURCHASE
(SSTP)



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Material.	PR.No	PR.Item.	Quantity	Acc. Assign	Customer Number
SP5360010010	118342881	00080	14000.000	/000000	
SP5360061162	118342881	00090	200.000	/000000	
SP5360054298	118342881	00100	600.000	/000000	
SP5360008687	118342881	00110	60.000	/000000	
SP5360008105	118342881	00130	200.000	/000000	
SP5360008172	118342881	00140	200.000	/000000	
SP5360061103	118342881	00150	60.000	/000000	
SP5360061187	118342881	00180	6.000	/000000	
SP5360061185	118342881	00190	6.000	/000000	
SP5360061600	118342881	00200	7000.000	/000000	
SP5360080221	118342881	00220	30.000	/000000	
SP5360080230	118342881	00230	20.000	/000000	
SP5360086416	118342881	00240	10000.000	/000000	
SP5360086211	118342881	00250	5000.000	/000000	

list of suppliers**RFQ-5200005893****Open Tender Dummy Code**

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For **BHARAT HEAVY ELECTRICALS LIMITED**

MANAGER / PURCHASE
(SSTP)

Annexure – B.
Technical Conditions

Vendor Code:	Vendor Name:	
Tender No.:	Tender Date:	Tender Due Date:

Sl.No.	Technical Requirement	Accepted	
B.1.	To supply of Materials as per Tender Specifications, Drawings without any deviation.		
B.2.	Test certificate for heat treatment, chemical composition to be given along with supplies.		
B.3.	Inspection will be done at vendor's works by BHEL/SSTP or BHEL's 3 rd party inspector, prior to dispatch.		
B.4.	To supply of materials with suitable preservation and packing Bricks to be packed with PALLET Packing.		
B.5	Order will be placed on Groupwise L-1 basis for all Items.Group -1 ENq. Sl.no. 30 Items.Group -2 ENq. Sl.no. 40 Items.Group -3 ENq. Sl.no. 80 Items.Group -4 ENq. Sl.no. 170 Items.Group -5 ENq. Sl.no. 10,20,50,60,70,90,100, 110,120,130,140,150,160,180,190 Items.Group -6 ENq. Sl.no. 200,210		
B.6.	Precast Press fire (PCPF) manufacturing process.	Available	Not available

Deviations, if any (attach additional sheet, if reqd) :

Signature :

Date :

Seal :

Annexure – C. **Commercial Conditions**

Vendor Code:	Vendor Name:	
Tender No.:	Tender Date:	Tender Due Date:

Sl. No.	Commercial Terms	Accepted				
C.1.	<u>Delivery Terms :</u> Free delivery at BHEL/SSTP Stores. Unloading charge will be suppliers account. ----- Other than the above terms will be rejected					
C.2.	<u>Payment :</u> 100% after 45 days after receipt and acceptance of materials by BHEL					
C.3.	<u>LIQUIDATED DAMAGES:</u> It is clearly understood among the parties to the Contract that TIME IS THE ESSENCE OF THE CONTRACT. Therefore, the delivery of the goods specified in the Purchase Order shall be made within the time prescribed. Where the Seller supplies or despatches the goods, beyond the delivery period specified, and the Purchaser will have no obligation to accept the goods. If accepted, Liquidated Damages at the rate of 0.5% (Zero point five Percent) of the value of goods delayed, per week of delay, subject to a maximum of 10% (Ten Percent) or part thereof, will be levied without prejudice to any other relief or compensation due to the Purchaser under any other conditions of the Contract. <u>RISK PURCHASE:</u> Alternatively, the Purchaser, at his option, will be entitled to terminate the Contract and to purchase elsewhere at the risk and cost of Seller, either the whole of the goods or any part, which the Seller has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available the best and nearest available substitute thereof. The Seller shall be liable for any loss, which the Purchaser may sustain by reason of such Risk Purchase(s), in addition to penalty at the rate mentioned above.					
C.4.	<u>Delivery Period :</u> <table border="1"><tr><td>Delivery from PO Date</td><td>Quantity</td></tr><tr><td>Within 10 Weeks</td><td>All Quantity</td></tr></table> More than 10 Weeks shall be rejected.	Delivery from PO Date	Quantity	Within 10 Weeks	All Quantity	
Delivery from PO Date	Quantity					
Within 10 Weeks	All Quantity					
C.5	<u>Validity – 60 Days from the date of Tender Opening.</u>					
<u>Deviations, if any (attach additional sheet, if reqd) :</u>						

Sl.No.	Commercial Terms	
C.6.	a. Excise Duty Tariff Heading	
	b. Excise Duty (%)	
	c. CESS on ED (%)	
	d. Total of ED and CESS (%)	
C.7.	a. TVNAT (%)	
	b. TIN & PAN No.	
	c. CST (%)	
C8.	Other Cost (if any) - % (or) Rs.	
C.9.	Are you Micro/Small/Medium Industry? (If YES, please furnish MSM Regn.No., along with a copy of MSM Certificate)	YES / NO MSM No. MSM Certificate enclosed(Yes/NO)
C.10.	Contact detail Name Mobile No. Mail Id	

Signature with Date & Seal :

TERMS AND CONDITIONS OF ENQUIRY

1.0 OFFER

1.1 Each Tender shall be sent in double cover. Inner cover shall be sealed with Tenderer's distinctive seal and super scribed with correct Enquiry No. and Enquiry Due Date. The Outer cover shall only bear the address of this Office and shall not have any indication that a Tender is within. Two or more Offers shall not be sent in one cover but the Offer against each Enquiry shall be sent separately to avoid confusion. Tender shall not be addressed to any individual's name but only by Designation.

1.2 Tenders shall 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 the amount quoted in words and figures, amount quoted in words shall prevail.

1.3 Rate(s) shall be net F.O.R./BHEL-SSTP STORES, inclusive of risk in transit and remain valid for 60 days from the Enquiry Due/other Taxes/Duties.

1.4 If any Sales Tax and/ or Excise Duty and/ or other Taxes/Duties is/are payable as extra to the quoted Rate, it shall be specifically stated in offer, failing which the Purchaser will not be liable for payment of Sales/Excise Duty/other Taxes/Duties.

1.5 No voluntary revision of prices will be entertained after opening the Tender(s).

1.6 Manufacturer's Name, Trade Mark or Patent No., if any, shall be specified. Illustrative leaflets giving technical particulars are required along with the Offer, wherever necessary.

1.7 Products with I.S.I. Certification Marks will be preferred.

1.8 The Purchaser shall be under no obligation to accept the Lowest Tender or any other Tender. The Purchaser shall be entitled to accept or reject any Tender, in part or full, without assigning any reason whatsoever.

1.9 The Purchaser also reserves the right to allow the Purchase Preference Facilities to the Public Enterprises, as admissible under Government Policy and Amendments thereto from time to time.

1.10 BHEL reserves the right to increase or decrease the Tender Quantity and split the Tender Quantity among more than one Tenderer and place Orders accordingly in proportion, based on commitment, requirement and Supplier's capability in terms of delivery and quality.

1.11 Lowest Rate received against Tender(s) need not be the technically acceptable L-1 Rate and BHEL reserves the right not to consider the same.

1.12 BHEL reserves the right to negotiate or re-float the opened Tender, if L-1 rate is not the lowest acceptable rate to them, inter-alia other reasons.

1.13 BHEL reserves the right to negotiate the L-1 Rate.

1.14 BHEL may order more than one Vendor at the lowest acceptable Rate.

2.0 **SAMPLES:** Wherever possible, samples shall be submitted separately whether specifically requested or not, so as to reach the Purchaser on or before the Enquiry Due Date. They shall be clearly marked with the Enquiry No. and Enquiry Date, on the cover to facilitate identification.

3.0 **PACKING AND MARKING:** The Seller shall arrange for securely protecting and packing the stores to avoid loss or damage during transit.

4.0 **TERMS OF PAYMENT:** 100% Payment will be made after 45 days of receipt & acceptance of materials at BHEL. Wherever required by the Purchaser, the successful Tenderer must send the Operation and maintenance Manual(s), Test Certificate(s), Drawing(s) etc., for the materials ordered, along with the materials and a statement to that effect shall be made in the invoice. Failure to comply with this provision, will result in delay in payment of the Bill(s), Goods dispatched either by V.P.P. or routing the documents through Bank, will not be accepted unless agreed to by the Purchaser.

5.0 **LIQUIDATED DAMAGES:** It is clearly understood among the parties to the Contract that TIME IS THE ESSENCE OF THE CONTRACT. Therefore, the delivery of the goods specified in the Purchase Order shall be made within the time prescribed. Where the Seller supplies or despatches the goods, beyond the delivery period specified, and the Purchaser will have no obligation to accept the goods. If accepted, Liquidated Damages at the rate of 0.5% (Zero point five Percent) of the order value , per week of

delay, subject to a maximum of 10% (Ten Percent) or part thereof, will be levied without prejudice to any other relief for compensation due to the Purchaser under any other conditions of the Contract.

6.0 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 Seller, either the whole of the goods or any part, which the Seller has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available the best and nearest available substitute thereof. The Seller shall be liable for any loss, which the Purchaser may sustain by reason of such Risk Purchase(s), in addition to penalty at the rate mentioned in Clause No.05 above.

7.0 CENVAT CREDIT:

7.1 Please explicitly indicate the following in the Offer to enable us to avail CENVAT Credit.

7.1.2 Central Excise Chapter Heading Number, under which the goods will be cleared and Present Rate of Excise Duty.

7.2 In the event of an Order being placed, Excise Duty will be reimbursed only based on the Duplicate Copy EXCISE INVOICE (Transporters Copy), Seller shall take acknowledgement from the authorized personnel/transporter, while delivering the goods, for having handed over the above Duplicate Copy.

7.3 If the Seller is a First Stage Dealer/Second Stage Dealer/Depot/Consignment Agent/Importer/Importer-Agent, the Seller has to confirm that he will be following the procedures in terms of the provisions of Central Excise Rules-2002 to enable BHEL to avail CENVAT Credit, under CENVAT Credit Rules-2002.

7.4 All the time of submission of Invoice(s), the Seller is required to furnish the following Certificate.

The Amount of Rs. (Rupees in words.) claimed as CENVAT in the Bill is in accordance with the provisions of the Rules in all respects and that the same has been paid to the Central Excise Authorities in respect of the materials covered by the Bill.

8.0 GENERAL: Any other conditions which might have been quoted by the Seller and are in contravention to the Terms prescribed in the Tender/Order and which have not been specifically accepted by the Purchaser, will not be applicable to the Contract and BHEL's standard Terms and Conditions shall only be applicable.

9.0 IMPORTANT NOTE:

9.1 In the event of quoting Packing and Forwarding charges extra in the offer, the Packing charges and Forwarding charges shall be separately quoted and shall not be combined. Also please note that no Excise Duty and Sales Tax shall be payable on Forwarding charges. In case this is not complied with, corresponding Excise Duty and Sales Tax on packing charges will not be paid.

9.2 Tenderer is requested to furnish all the details called for in the Tender. In case any required data/information is / are not furnished in the Offer, Purchaser reserves the right to assume the same for the purpose of evaluation/comparison and decide the Tender accordingly.

10.0 Important Note to MSE Vendors:

10.1 20% of the tender quantity is earmarked for MSE suppliers in the tender.

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

10.3 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.

10.4 MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity five years from the date of issue with CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or Small) where the deemed validity of EM IIs over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission.

10.5 Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

IMPORTANT NOTE TO TENDERERS
(FOR INDIGENOUS & OVERSEAS SUPPLIERS)

This Tender is floated on TWO–BID System. Tenders are requested to submit their offers in TWO-BIDS (Part I: Un priced bid and Part II: Price Bid) separately.

1. **Part I: UN PRICED BID:** (Complete with technical & Commercial conditions as per enquiry The Tenderer should confirm their acceptance / comments to the Enquiry along with other commercial Terms & Conditions of the Tender. In case any deviation is taken by the Tenderer from the Tender requirements, it is to be clearly indicated in the offer with reference to the particular clause. If such deviations are not explicitly indicated in the offer, it will be construed by BHEL that the Tenderer is complying with Annexure Clause(s), Commercial terms & conditions and other conditions in full.
2. **Part II: PRICE BID:** Price (with break-up details wherever required) to be indicated.
3. **Both Un priced Bid and Price Bid is** to be submitted before 1400 hours (Indian Time) on tender Due Date.
4. Unpriced Bid shall only be opened on the Tender Due Date mentioned in the Tender online.
5. After opening the Unpriced Bid, they shall be evaluated by BHEL for their suitability. BHEL shall hold discussions with the responded Tenderers on the Technical and Commercial terms and freeze the terms & conditions of the offer. These frozen technical specifications will be communicated to responded tenderers.
6. BHEL shall offer opportunity to the responded and technically / commercially suitable Tenderers, to submit their latest Price Bid/ Impact of prices, if any in line with the frozen technical, Commercial, delivery conditions.
7. This latest Price Bid & the Impact of prices for the frozen technical specifications submitted by the Tenderers will be opened. Based on the above, the ranking of the Tenderers shall be made and accordingly the Tender shall be finalized.

Important Note to MSE Vendors

1. 20% of the tendered quantity is earmarked for MSE suppliers in this tender.
2. Out of the 20% tendered quantity reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC / ST entrepreneurs.
3. 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.
4. MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (Five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

Certificate by Chartered Accountant

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 on
date 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.5.0.1722(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

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.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

Processflow of OPEN TENDER		
Module	Steps	Remarks
Supplier Registration	Supplier visits EPS at https://bheleps.buyjunction.in . Clicks "NEW SUPPLIER" button for registration. Fills up the Registration form.	
	<u>REGISTERED SUPPLIERS :</u> For registered suppliers, they can select the ENLISTED option & complete their registration with their existing vendor code.	
	<u>UNREGISTERED SUPPLIERS :</u> For un-registered suppliers, they can select the INTERESTED option & complete their registration with their preferred Login Code.	
	Supplier maps their digital certificate at the time of registration.	
Authentication of registration	MIjunction will ensure Authentication of vendor registration as PAN BHEL basis.	
Bid Submission	Supplier will login using his/her login ID & password	
	View the RFQs under OPEN TENDER section	
	Suppliers will show their INTEREST to participate	
	Respond to RFQ	
	Upload details of TENDER FEE & EMD with the valid document proof (as attachment)	
	Uploads Pre-qualification docs, Fills Techno-commercial & Price template	
	Submits Quotation	

Part I Opening & Evaluation

2. Registration of Suppliers and Flow.

unregistered Supplier: Supplier visits EPS at <https://bheleps.buyjunction.in>

- a. Supplier visits EPS at <https://bheleps.buyjunction.in>
- b. Clicks "REGISTER" for registration
- c. Fills up the Registration Page form
- d. MJ will ensure Authentication of Registration ¹
- e. Supplier logs in with the ID and password
- f. Supplier Maps the signing Certificate
- g. MJ will ensure the authentication the signing certificate ¹.
- h. Supplier Logs in to the system again and views the RFQ
- i. Supplier Attaches himself to the RFQ by clicking the Interested button
- j. Supplier fills the bid template and makes necessary attachments
- k. Supplier submits his bid by clicking CONFIRM.

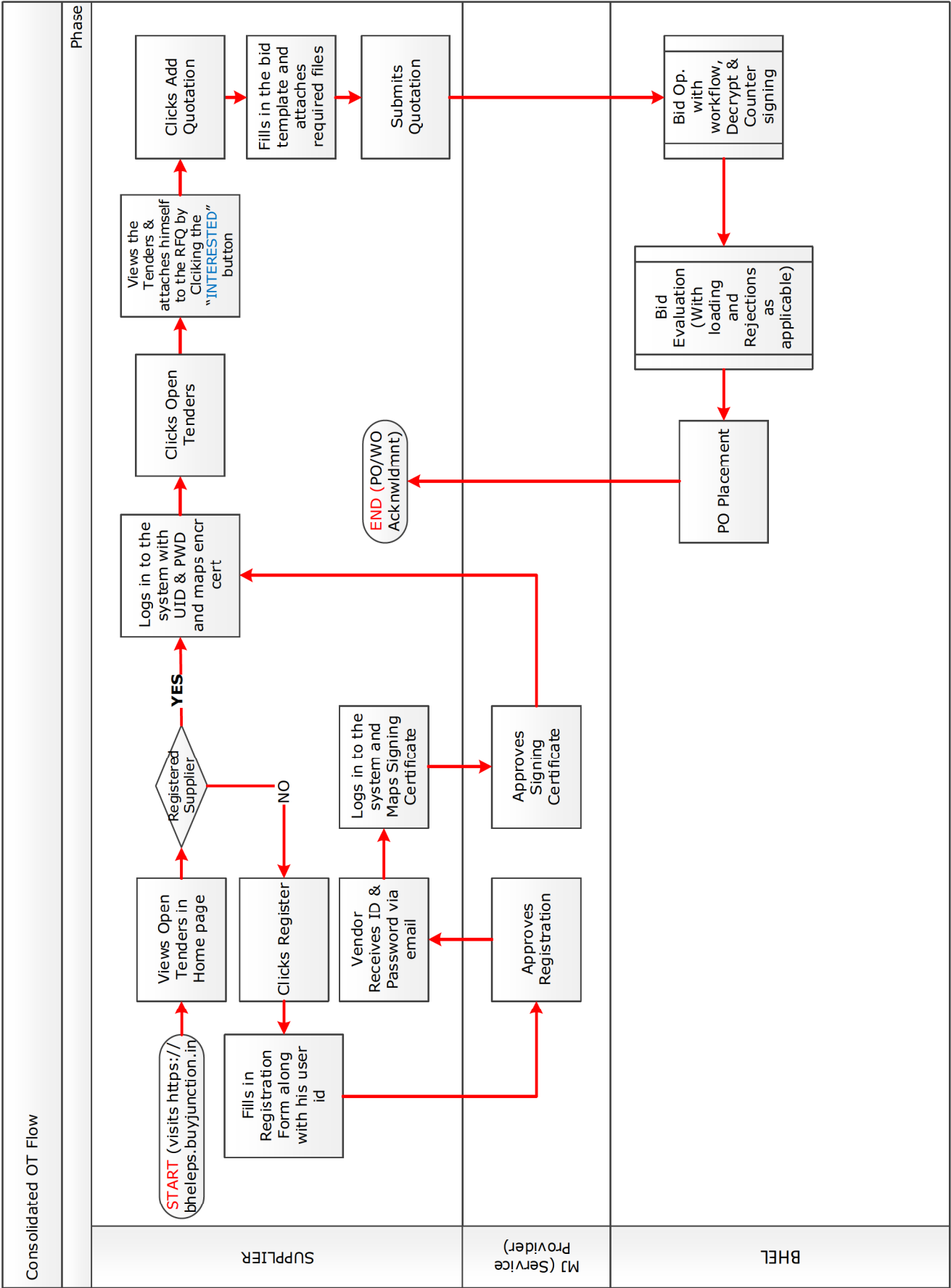
NB:-

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.

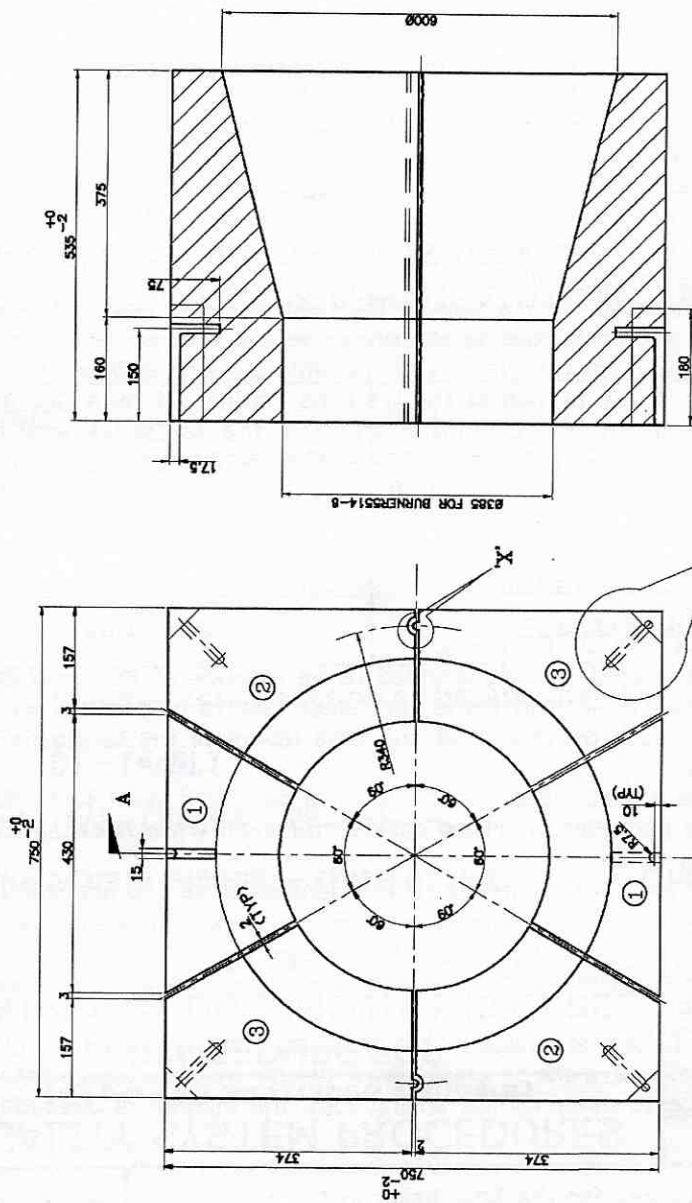
- **For registered Supplier:**

- Supplier visits EPS home page
- Supplier signs in with his/her user id and password
- Selects the RFQ Code and views it.
- Attaches himself to the RFQ by clicking the Interested button
- Supplier fills the bid template and makes necessary attachments
- Supplier submits his bid by clicking CONFIRM.

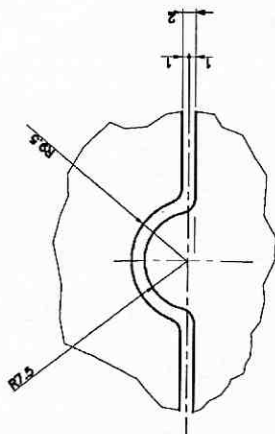
12. Consolidated Flow Diagram of OT process



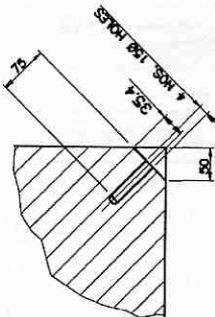
ALL DIMENSIONS ARE IN MILLIMETERS



DETAIL - 'X'



DETAIL - 'Y'



4 NO. CORNER ANCHORING GROOVES (TYPICAL DETAIL)

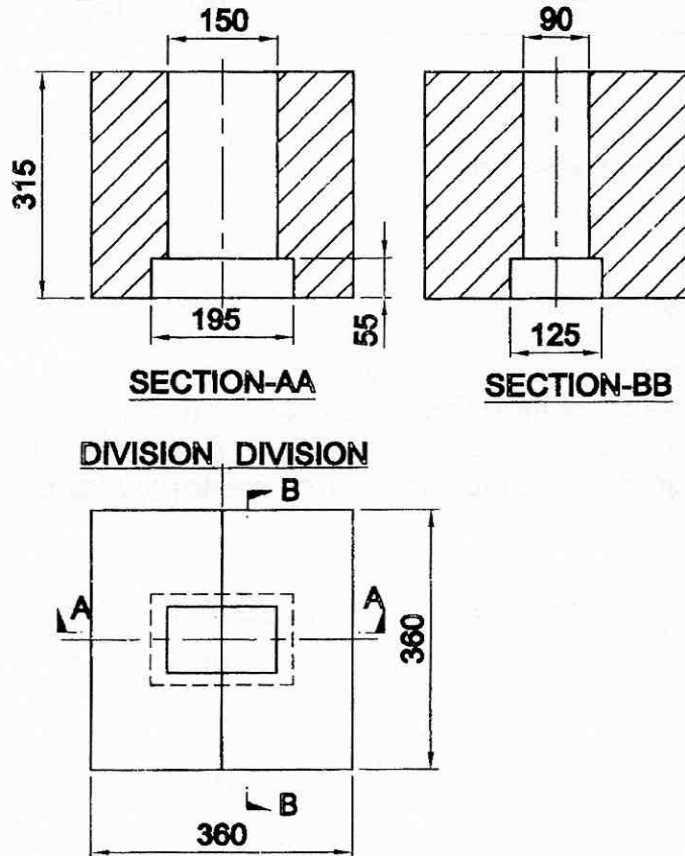
NOTES:

1. THE REFRACATORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, Voids AND OTHER FLAWS. THEY SHALL BE BURNED EVENLY THROUGHOUT, AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
2. ALL CORNERS TO BE MINIMUM 3 RADIUS, UNLESS OTHERWISE STATED.
3. TOLERANCE ON SIZE: ± 1
4. THE PRECAST BLOCK IS BUILT IN TO 8 SEGMENTS & WHEN ASSEMBLED TOGETHER, SHOULD CONFORM WITH THE OUTER DIMENSIONS.
5. IDENTIFICATION MARK TO BE PAINTED IN EACH BLOCK.

ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	QTY
16	NOTARY HEARTH FURNACE			
Bharti Heavy Electrodics Ltd SEAMLESS STEEL TUBE PLANT THRU CRIP-PALL - 620014 DATE: 16/01/2014 NAME: BHARTI HEAVY ELECTRODICS SIGN: [Signature] DATE: 16/01/2014 NAME: BHARTI HEAVY ELECTRODICS SIGN: [Signature]				
DP	MP3	SCALE	1:5	WEIGHT (Kg)
CODE	C/A/T	REF TO STD DWG NO	FA-0427-41	REV
TITLE: BURNER BLOCK GUARD OUTER WALL-NA-8514-8 DRAWING NO: 2-7-1101-01-01196 REV: 00				

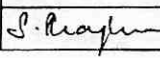
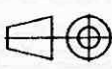
ALL DIMENSIONS ARE IN MM

REV 01	DATE 29.12.04	ALTERED	SSN.KUMAR
		CHECKED	
		APPROVED	S.Shanmugasundaram
WT. 86.33 WAS 42			



NOTES:

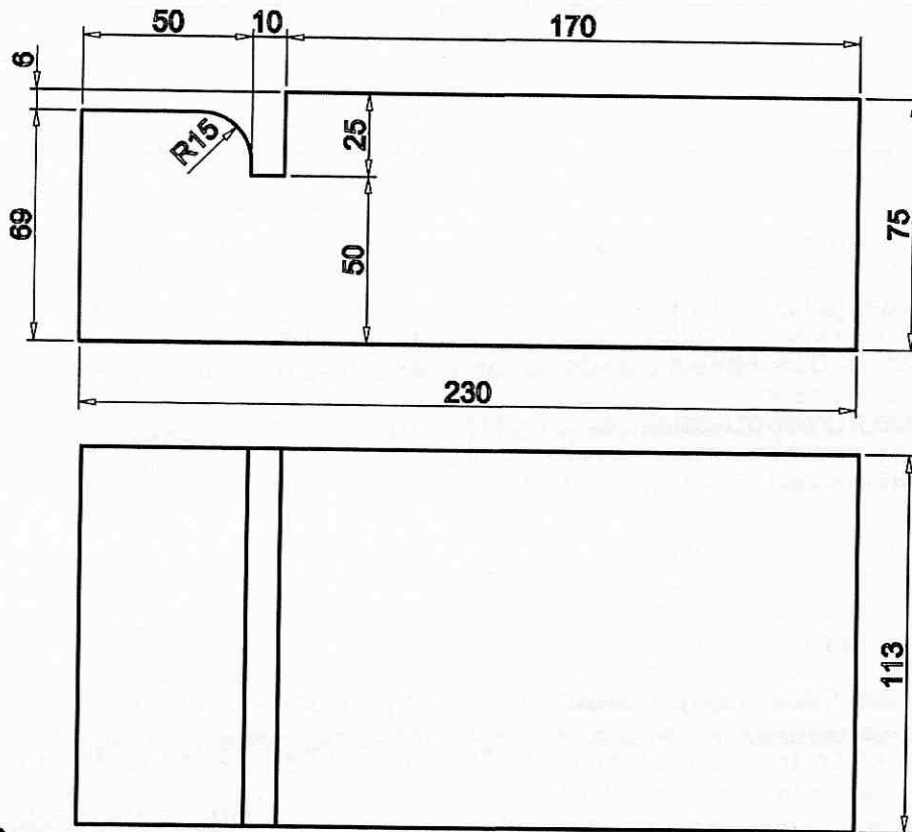
- 1) THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, VOIDS AND OTHER FLAWS. THEY SHALL BE BURNT EVENLY THROUGHOUT AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
- 2) ALL CORNERS TO BE MIN. 3mm RADII.
- 3) TOLERANCE ON SIZE ± 0

				55% AL ₂ O ₃		8	
ITEM NO	DESCRIPTION	DRAWING NO		MATL CODE		UNIT WT	
				MATL SPEC		QTY	
EQPT: WALKING BEAM FURNACE							
 Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME SSN.KUMAR		SIGNATURE SSN.Kumar	DATE 28.12.04	
		CHD					
		APPD	S.Shanmugasundaram			28/12/04	
DEPT MPG	GRADE OF UNTOL DIM C/M/F	 SCALE 1:10		WEIGHT (Kg) 86.33		REF TO ASSY DRG	
CODE						REF TO OLD DRG FA-0428-1B/7	
TITLE CHARGE RECEIVER BLOCK				CARD CODE U 01	DRAWING NO : 4-7-1150-01-06300		REV 01

ALL DIMENSIONS ARE IN MM

REV	DATE	ALTERED	<i>M. Ganesan</i>
01	02.09.14	CHECKED	<i>P. S. Singh</i>
		APPROVED	<i>S. Loganathan</i>

New border Inserted



NOTES:

- 1) **THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, VOIDS AND OTHER FLAWS. THEY SHALL BE BURNT EVENLY THROUGHOUT AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.**
- 2) **ALL CORNERS TO BE MIN. 5mm RADII.**

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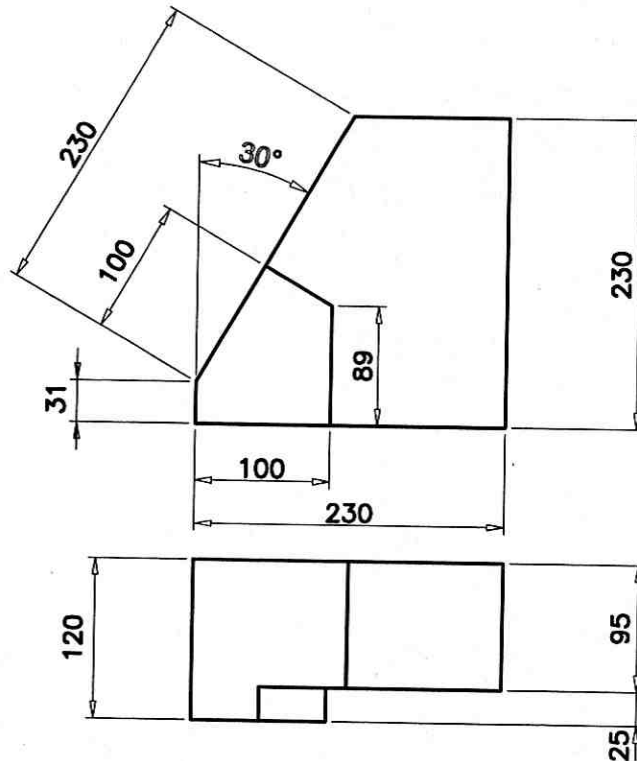
ITEM NO		DESCRIPTION		DRAWING NO		55%-60% Al_2O_3		730	
						MATL CODE		UNIT WT	
						MATL SPEC		QTY	
EQPT: ROTARY HEARTH FURNACE									
DEPT		GRADE OF UNTOL DIM		SCALE		WEIGHT (Kg)		REF TO ASSY DWG NO	
SSTP		IS: 2102		1:2		4.8		-	
CODE		456						REF TO OLD DWG NO	
								358105 2/2-2	
TITLE		RHF - WALL ANCHOR BRICK		CARD CODE		DRAWING NO :		REV	
				U 01		4-7-1101-01-06317		01	

A4-SIZE

ALL DIMENSIONS ARE IN MM

REV	DATE	ALTERED	<i>M. Jeyaseelan</i>
01	28.08.14	CHECKED	<i>S. S. Sundaram</i>
		APPROVED	<i>S. S. Sundaram</i>

New border inserted



NOTES:

1. THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, VOIDS AND OTHER FLAWS, THEY SHALL BE BURNT EVENLY THROUGHOUT, AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
2. ALL CORNERS TO BE MINIMUM 3 mm. RADII, UNLESS OTHERWISE STATED.
3. TOLERANCE ON SIZE $\begin{matrix} +0 \\ -1 \end{matrix}$

CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

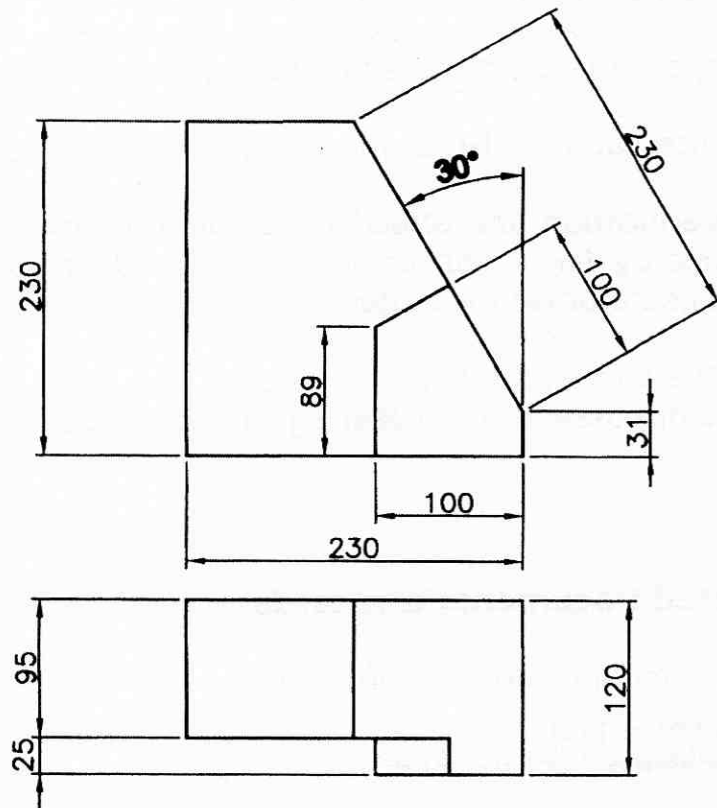
ITEM NO	DESCRIPTION	DRAWING NO	88-80% AL2O3	2	
			MATL CODE	UNIT WT	
			MATL SPEC	QTY	
EQPT: ROTARY HEARTH FURNACE					
 Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME SSN.KUMAR	SIGNATURE <i>SSN.Kumar</i>	DATE 15.12.04
		CHD	SSN.KUMAR	<i>SSN.Kumar</i>	15.12.04
		APPD	S.S.SUNDARAM	<i>S.S.Sundaram</i>	15.12.04
DEPT SSTP	GRADE OF UNTOL DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
CODE 436	$\phi/M/F$ IS: 2102	1:1	10	REF TO OLD DWG NO FA-0427-3/9	-
TITLE RHF - SKEW BACK-L.H CHARGING & DISCHARGING DOORS			CARD CODE U 01	DRAWING NO : 4-7-1101-01-06285	REV 01

A4-SIZE

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IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY MANNER DETRIMENTAL TO INTEREST OF THE COMPANY

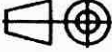
ALL DIMENSIONS ARE IN MM

REV ON	DATE	ALTERED
		CHECKED
		APPROVED



NOTES:

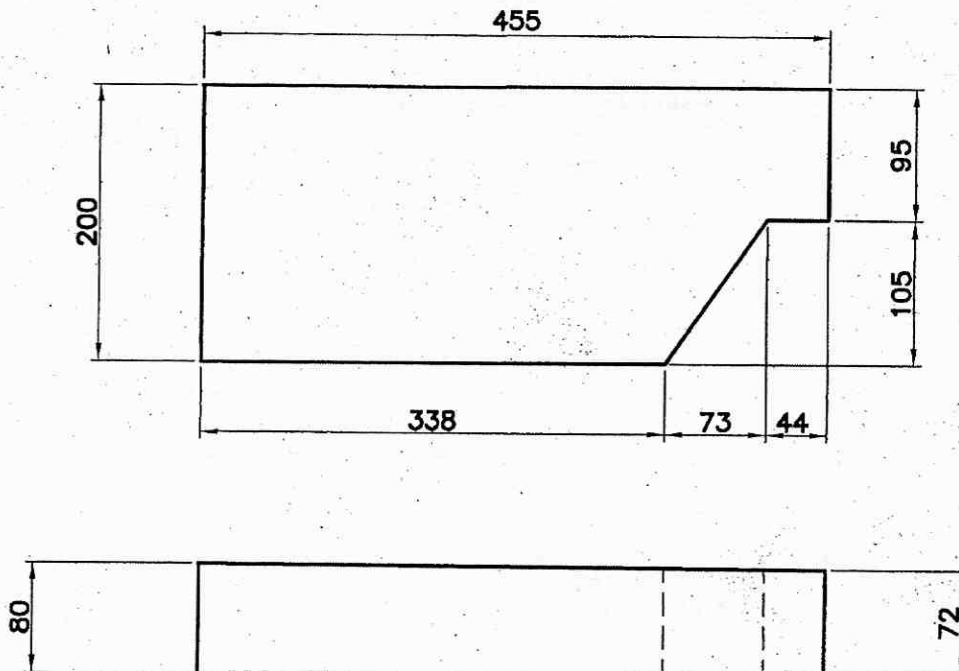
1. THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, VOIDS AND OTHER FLAWS, THEY SHALL BE BURNT EVENLY THROUGHOUT, AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
2. ALL CORNERS TO BE MINIMUM 3 mm. RADII, UNLESS OTHERWISE STATED.
3. TOLERANCE ON SIZE ± 0.1

					65-60% Al_2O_3	2
ITEM NO	DESCRIPTION	DRAWING NO			MATL CODE	UNIT WT
					MATL SPEC	QTY
EQPT: ROTARY HEARTH FURNACE						
		Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	NAME SANKUMAR	SIGNATURE S. Sankumar
				CHD		DATE 16.12.04
				APPD	S. SHANMUGASUNDARAM	16/12/04
DEPT MPG	GRADE OF UNTOL DIM E/N/T		SCALE 1:5	WEIGHT (Kg) 10	REF TO ASSY DRG	ITEM NO
CODE					REF TO OLD DRG FA-0427-3/8	
TITLE SKEW BACK-R.H CHARGING & DISCHARGING DOORS				CARD CODE U 01	DRAWING NO : 4-7-1101-01-06284	REV 00

CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LTD
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANYWAY DETERMINANT TO INTEREST OF THE COMPANY

ALL DIMENSIONS ARE IN MM

REV	DATE	ALTERED
01		CHECKED
		APPROVED

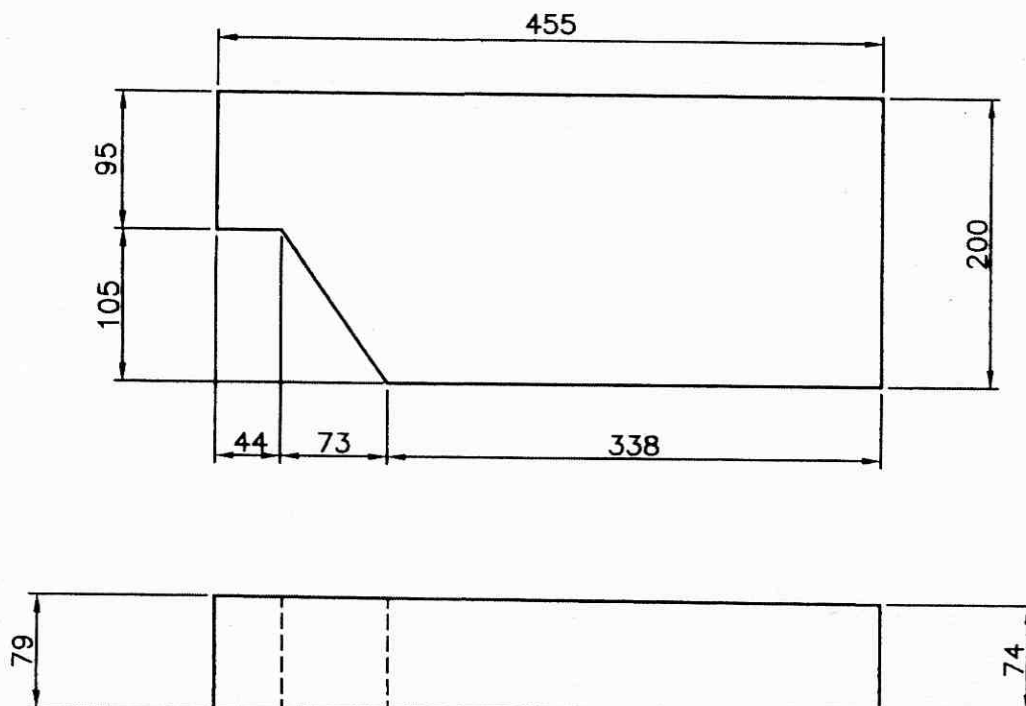


NOTES:

1. THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, VOIDS AND OTHER FLAWS, THEY SHALL BE BURNT EVENLY THROUGHOUT, AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
2. ALL CORNERS TO BE MINIMUM 3 mm. RADII, UNLESS OTHERWISE STATED.
3. TOLERANCE ON SIZE $\begin{matrix} +0 \\ -1 \end{matrix}$

ITEM NO	DESCRIPTION	DRAWING NO	80% AL ₂ O ₃	360
			MATL CODE	UNIT WT
			MATL SPEC	QTY
EQPT: ROTARY HEARTH FURNACE				
		Bharat Heavy Electricals Ltd		
		SEAMLESS STEEL TUBE PLANT		
		TIRUCHIRAPALLI - 620014		
DEPT: MPG		DRN	NAME	SIGNATURE
GRADE OF UNTOL. DIM		CHD	SSN.KUMAR	<i>SSN.Kumar</i>
CODE		APPD	S.SHANMUGASUNDARAM	DATE
SCALE		REF TO ASSY DRG		15.12.04
1:5		REF TO OLD DRG		
WEIGHT (Kg)		FA-0427-3/3		
17.4		DRAWING NO :		ITEM NO
TITLE		4-7-1101-01-06279		
HEARTH TOP INNER		REV		
SLAB BLOCK		00		
CARD CODE				
U 01				

REV	DATE	ALTERED
01		CHECKED
		APPROVED



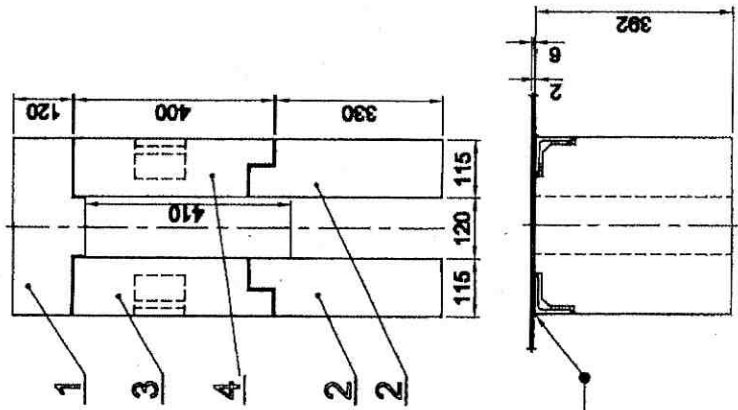
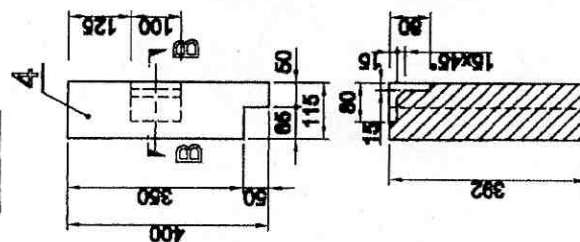
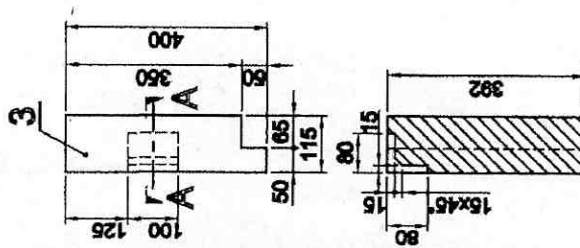
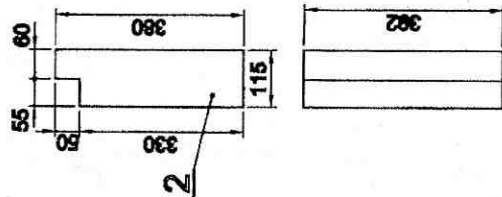
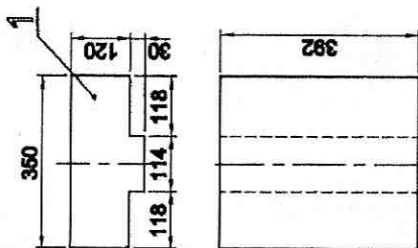
NOTES:

1. THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, VOIDS AND OTHER FLAWS, THEY SHALL BE BURNT EVENLY THROUGHOUT, AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
2. ALL CORNERS TO BE MINIMUM 3 mm. RADII, UNLESS OTHERWISE STATED.
3. TOLERANCE ON SIZE ± 0.1

ITEM NO		DESCRIPTION		DRAWING NO		80% AL ₂ O ₃		600	
						MATL CODE		UNIT WT	
						MATL SPEC		QTY	
EQPT: ROTARY HEARTH FURNACE									
		Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014			DRN	NAME	SIGNATURE	DATE	
					CHD	SENJUMAR	S. S. Kumar	16.12.04	
					APPD	S. SHANMUGASUNDARAM	S. Shanmugam	16/12/04	
DEPT	MPG	GRADE OF UNTOLED DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DRG				ITEM NO
CODE		2/1/1	1:5	17.6	REF TO OLD DRG FA-0427-3/2				
TITLE					CARD CODE	DRAWING NO :			REV
HEARTH TOP OUTER SLAB BLOCK					U 01	4-7-1101-01-06278			00

ALL DIMENSIONS ARE IN MILLIMETRES

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ITEM No	MATERIAL	QTY	WT(kg)
4	55%AL ₂ O ₃	1	33
3	55%AL ₂ O ₃	1	33
2	55%AL ₂ O ₃	2	32
1	55%AL ₂ O ₃	1	38

NOTE:

- 1) THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, Voids AND OTHER FLAWS. THEY SHALL BE BURNT EVENLY THROUGHOUT AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
- 2) ALL CORNERS TO BE MIN. 3mm RADIUS.
- 3) TOLERANCES ON SIZE: ±1
- 4) BRICKS TO BE INSPECTED IN ASSEMBLED CONDITION WITH OUT MOTOR

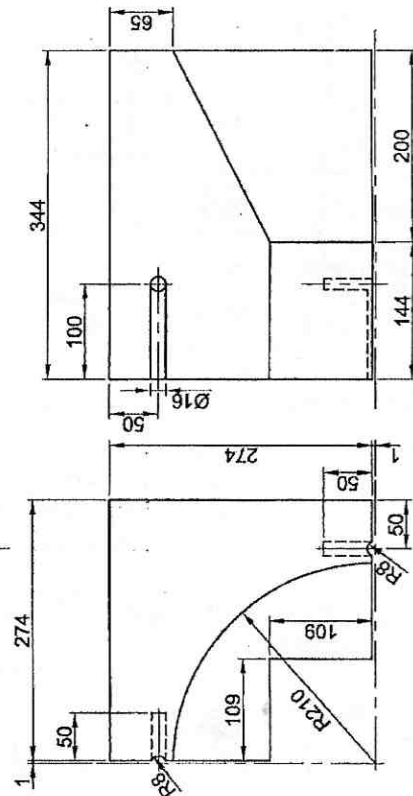
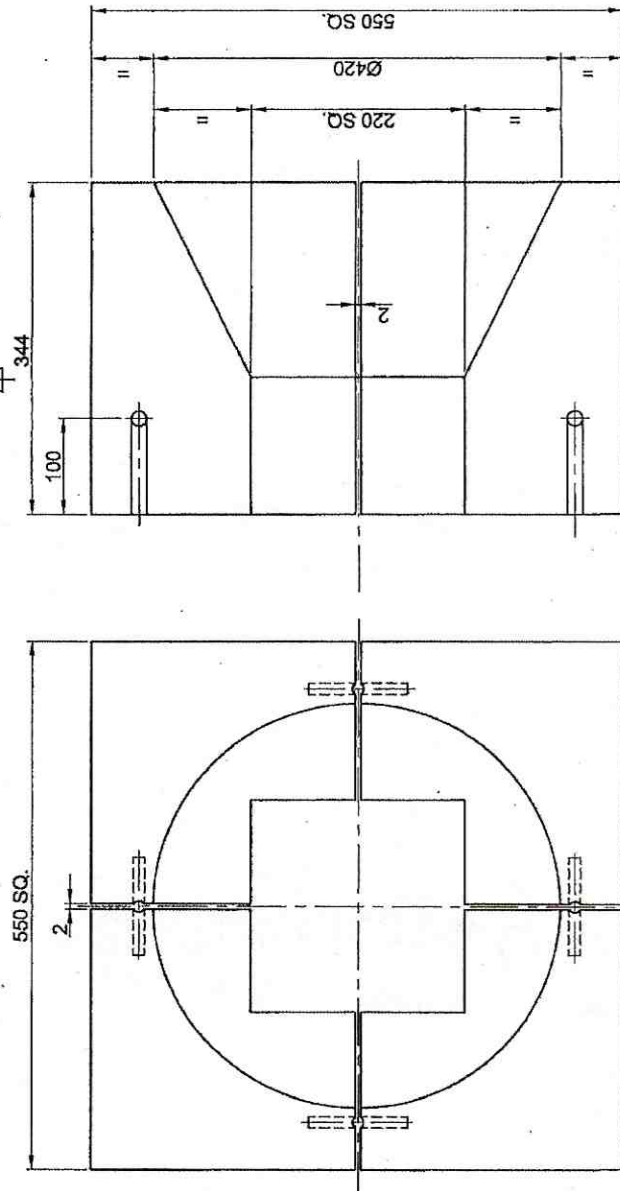
SECTION-AA

SECTION-BB

ITEM NO		DESCRIPTION		DRAWING NO		MATERIAL CODE		MATERIAL SPEC		UNIT		WT		QTY	
EQUIP: WALKING BEAM FURNACE				Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014				DATE 28.12.04		SIGNATURE J. S. S. S.		DATE 28.12.04			
DEPT.		MFG		SCALE		GRADE OF UNIT, DIM 6/11/1		MOQ/TOD		REF TO ASST DNG NO		REF TO OLD DNG NO		DRAWING NO :	
REV		DATE		APPROVED		1:10		106		8. S. S. S. S.		FA-0428-1B		REV	
ZONE		ZONE		ZONE		ZONE		ZONE		ZONE		ZONE		ZONE	
TITLE															
CHARGER BLOCK ASSY															
3-7-1150-01-04714															

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ALL DIMENSIONS ARE IN MILLIMETRES



DETAIL OF ONE SEGMENT

NOTES:

1. THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, VOIDS AND OTHER FLAWS, THEY SHALL BE BURNT EVENLY THROUGHOUT, AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
2. ALL CORNERS TO BE MIN. 3mm RADII.
3. TOLERANCE ON SIZE +0 -1

ITEM NO	DESCRIPTION	DRAWING NO	55-60% AL ₂ O ₃	MATL CODE	MATL SPEC	UNIT WT	QTY
EQUIP: WALKING BEAM FURNACE							
Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014							
DEPT	MPG	GRADE OF MATERIAL	SCALE	WEIGHT(KG)	REF TO ASSY DWG NO	REF TO OLD DWG NO	REV
08-04-05	08-04-05	08-04-05	1:5	188	FA-0428-1A	FA-0428-1A	01
TITLE							
BURNER BLOCK GUARD							
DRAWING NO : 3-7-1150-01-04709							

Technical drawing of a mechanical part, showing front and side views with dimensions.

Front View (Left):

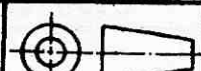
- Overall width: 75 ± 1
- Overall height: 275 ± 2

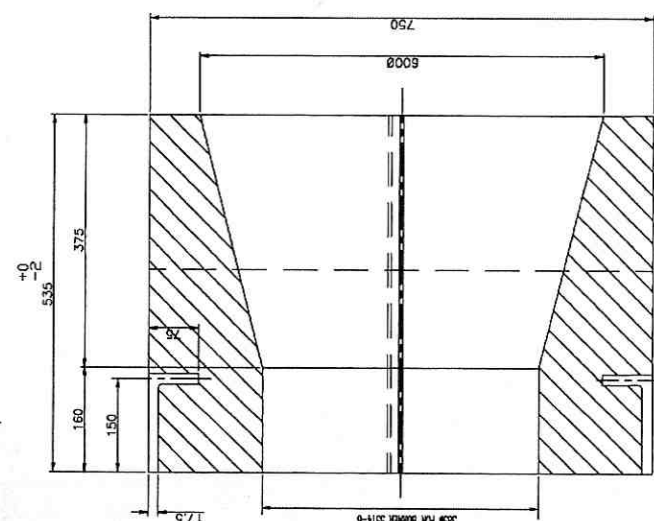
Side View (Right):

- Overall width: 90 ± 1
- Overall height: 275 ± 2
- Internal width (lower section): 75
- Internal width (upper section): 15
- Internal width (lower section, right side): 45
- Internal width (lower section, right side): 15
- Internal width (lower section, right side): 135
- Internal width (lower section, right side): 15
- Internal width (lower section, right side): 65

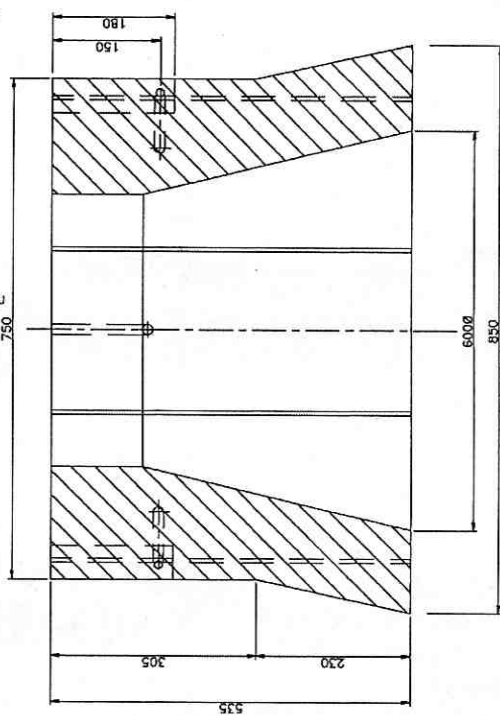
1. THE REFRACTORIES SHALL BE COMPACT OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS VOIDS AND OTHER FLAWS. THEY SHALL BE BURNT EVENLY THROUGHOUT. AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
2. ALL CORNERS TO BE MIN 3mm RADII

[illegible]

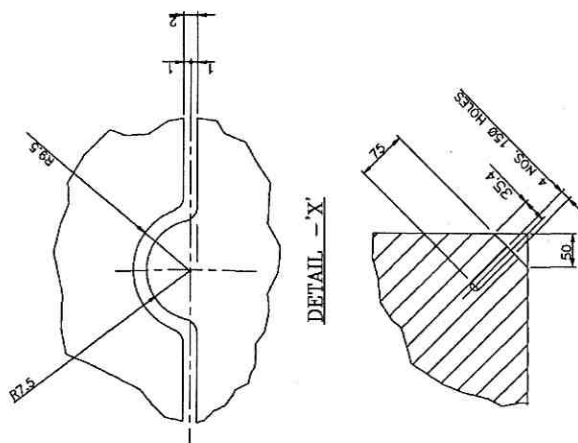
		Bharat Heavy Electricals Ltd., SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI-620 014		DRN	NAME	SIGN	DATE
				CHD	<i>S. C. Sekar</i>		
				APPD	<i>S. C. Sekar</i>		1 11 99
DEPT	GRADE OF UNTOL. DIM		SCALE	WEIGHT (kg)	REF TO ANY OLD DRG	ITEM NO.	
CODE	C/M/F		1:2.5		H-31 4-1101-54-298		
TITLE				CARD CODE	DRAWING NO.	REV.	
ROOF SIDE SUPPORT BRICK.				U 01	47-1101-01-04451	01	



SECTION-AA



SECTION-BB



DETAIL - 'Y'

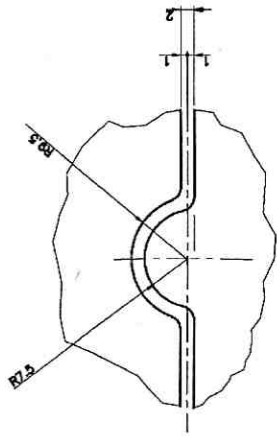
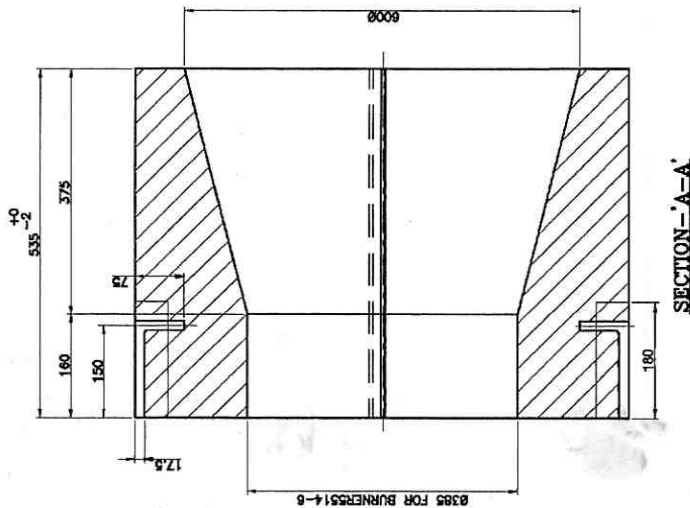
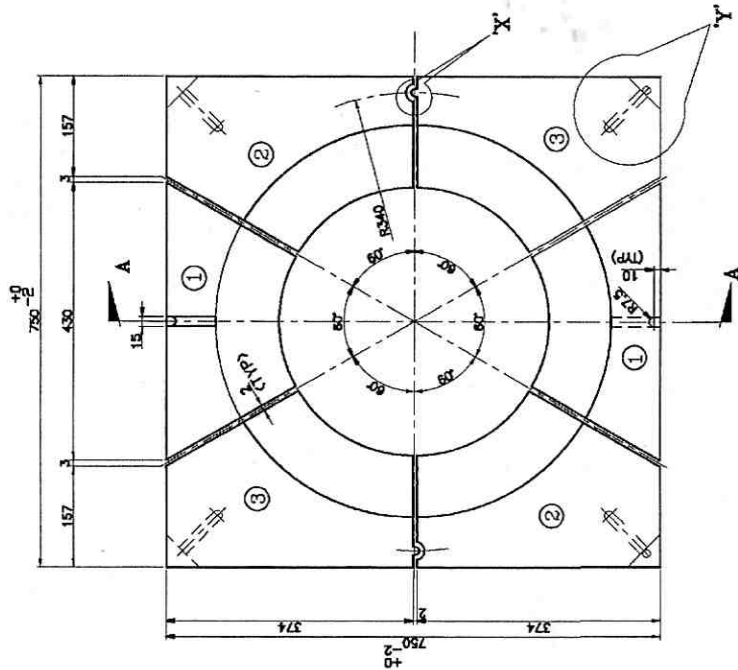
4 NOS. CORNER ANCHORING GROOVE(TYPICAL DETAIL)

NOTES:

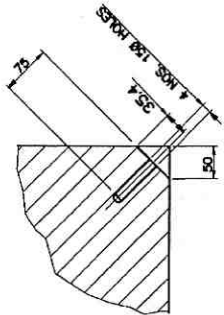
1. THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, Voids AND OTHER FLAWS. THEY SHALL BE BURNED EVENLY THROUGHOUT, AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO SOFT CORNERS.
2. ALL CORNERS TO BE MINIMUM 3 mm. RADIi, UNLESS OTHERWISE STATED.
3. TOLERANCE ON SIZE. ⁴
4. THIS PRECAST BLOCK IS SPLITTED IN TO 6 SEGMENTS & WHEN ASSEMBLED TOGETHER SHOULD COINCIDE WITH THE OUTER DIMENSIONS.
5. IDENTIFICATION MARK TO BE PAINTED IN EACH BLOCK.

ITEM NO		DESCRIPTION		DRAWING NO		82035 N. 03 UNIT WT MATL SPEC MATL SPEC QTY	
		Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TRICHURAPPALI - 620014		DIA 100		MAKE BHARAT SIZE 100x10mm	
MFG NO		SCALE		WEIGHT (KGS)		DATE 17.12.84	
MFG				1:5		6405	
GRADE OF MATERIAL		C/M/P		DIA 100		SIZE 100x10mm	
MFG				DIA 100		SIZE 100x10mm	
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MFG							

ALL DIMENSIONS ARE IN MILLIMETERS



DETAIL - 'X'



DETAIL - 'Y'

SECTION - 'A-A'

4 NO. CORNER ANCHORS GROOVETYPICAL DETAIL

NOTES:

1. THE REFRACTORIES SHALL BE COMPACT, OF HOMOGENEOUS TEXTURE AND FREE FROM CRACKS, Voids AND OTHER FLAWS. THEY SHALL BE BURNT EVENLY THROUGHOUT, AND SHALL HAVE SUFFICIENT MECHANICAL STRENGTH AND NO BOTT CORNERS.
2. ALL CORNERS TO BE MINIMUM 3 mm RADIUS, UNLESS OTHERWISE STATED.
3. TOLERANCE ON SIZE ± 2
4. THIS PRECAST BLOCK IS SPLITTED IN TO 8 SEGMENTS & WHEN ASSEMBLED TOGETHER SHOULD COINCIDE WITH THE OUTER DIMENSIONS.
5. IDENTIFICATION MARK TO BE PAINTED IN EACH BLOCK.

ITEM NO	DESCRIPTION	DRAWING NO	MATL CODE	UNIT WT	QTY
15	ROTARY HEARTH FURNACE				
EGPT: Bharat Heavy Electricals Ltd TIRUCHIRAPPALLI - 620014					
SCALE	1:5	WEIGHT (Kg)	623	REF TO ASSY Dwg NO	FA-0427-4/1
DATE	15/07/2011	APPROVED		REV	00
TITLE: BURNER BLOCK GUARD OUTER WALL-WA-05149					