



ISO 9001:2008, 14001:2004,
50001:2011 & OHSAS 18000
MAHARATNA COMPANY

**MATERIAL MANAGEMENT (PURCHASE)
CENTRAL FOUNDRY FORGE PLANT, BHEL HARDWAR**

RANIPUR, HARIDWAR (INDIA) – 249403

Phone No. +91-1334-281277/284548, FAX No. +91-1334-225892

e-mail : amitkg@bhel.in; kraj@bhel.in; ranjank@bhel.in

Sub: Open Tender Enquiry No: 201800611

Dear Sir,

We are pleased to invite offer in **TWO PARTS** strictly as per enclosed specifications & terms and conditions for the under mentioned items.

Tender No.	Description of Equipment	Qty. (No.)	Tender Opening date and time
<u>201800611</u>	Ingot Mould 1300 MM - 1400 MM	8 Nos.	20.06.2018 at 2:00 PM (IST)

Kindly read terms and conditions carefully, offer not in accordance with the instructions is liable to be disqualified or ignored.

Please visit www.bhel.com or www.bhelhwr.co.in for more details & corrigendum if any for the tender enquiry.

01. Offers are to be submitted at below mentioned address

**Tender Box (Tender Room)
Purchase Department,
Central Foundry Forge Plant
Bharat Heavy Electrical Limited
Haridwar – 249403, Uttarakhand**

02. Tender opening date and time is indicated as above. Tenders in two part in line with 'Instruction to Bidders' is required to be submitted on or before due date. On due date, tender can be submitted up to 1.45 PM and will be opened at 2.00 P.M. on same date in the Tender Room of Material Management Department, CFFP/BHEL, Haridwar.

03. BHEL will not be responsible for any type of postal delay. Please note that late offers shall not be accepted

04. Unregistered vendors have to fill the SRF (Supplier Registration Form) of their company **online** at our website www.bhel.com or www.bhelhwr.co.in .They can fill the SRF of their company at this link: <https://supplier.bhel.in/>

05. The vendor should submit their best price at this stage itself and they will not be allowed to revise the price. Any revision / discount given by vendor subsequently will be ignored.

NOTE:

Any clarification on technical specifications can be obtained from BHEL before tender opening. Vendors are welcome to have pre-bid meeting with BHEL engineers for better understanding of our requirements.

Thanking You,

Yours Faithfully,
For & On behalf of CFFP, BHEL, Hardwar

(Executive)
Purchase Department

Note: Corrigendum if any shall not be published, kindly refer websites for any changes.



निविदा सूचना सं. ENQUIRY NO.*

4404 P/ 930/8/0061V1

दिनांक Date

30-05-2018

कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

M/S. ::

DUEDATE

20-06-2018

INDIA

Vendor Code

09285

SL	MATERIAL CODE ITEM DESCRIPTION	QUANTITY	UNIT	LOTNO	LOT DELIVERY QTY SCHEDULE
1	FF1978099100 DRG: 1300MM(02-148) REV: INGOT MOULD(1300MM(02-148) SPEC: FF05073 REV: ??	6	NO	1	6 30/07/18
2	FF1978099118 DRG: 1400MM(02-149) REV: INGOT MOULD[1400MM(02-149)] SPEC: FF05073 REV: ??	2	NO	1	2 30/07/18

** IMPORTANT: This enquiry is 2 part tender. Techno-Commercial bid (Part-1) & Price Bids (Part-2) should be submitted in separate envelopes. These two envelopes should be submitted in a common sealed envelope. Techno-Commercial Bid shall contain detailed Technical Specification, Drawings Technical documents, Catalogues, taxes & duties, payment terms, delivery period, Validity of offer, Replica of Price Bid (Copy of price bid without price part) etc. The confirmation to the special terms & conditions must be submitted alongwith Techno-Commercial bid.

Standard Instructions:

TEST CERTIFICATE REQUIRED.

GUARANTEE CERTIFICATE REQUIRED.

INSP AFTER RECPT AT CFPP.

Special Instructions:

THIRD PARTY INSPECTION REQUIRED.

DRAWING IS ENCLOSED.

SPECIFICATION IS ENCLOSED.

General Instructions:

1. Please submit authorization letter (format enclosed) for facilitating e-payment/electronic transfer of funds
2. 100% payment within 30 days after receipt & acceptance of material at CFPP BHEL, Haridwar through e-payment.
3. CFPP/BHEL RESERVES THE RIGHT TO PRE-INSPECT THE MATERIAL AT VENDOR'S WORKS / GODOWN/ PREMISES BEFORE DESPATCH.
4. ORIGINAL MANUFACTURER'S TEST CERTIFICATE IS REQUIRED ALONG WITH DESPATCH



निविदा सूचना TENDER ENQUIRY

AA-17001

Phone : (0091) 01334- 281639,281385,285336 Fax : 01334 225892 / 226458

भारत हेवी इलेक्ट्रिकल्स लिमिटेड
Bharat Heavy Electricals Ltd
सेन्ट्रल फाउन्ड्री फॉर्ज प्लांट- हरिद्वार - २४६४०३ (भारत)
Central Foundry Forge Plant, Haridwar-249403 (INDIA)

TIN NO. 05001763485
C S T NO. HR-5018287 Dt. 16-03-1995

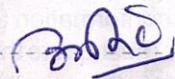
निविदा सूचना सं. ENQUIRY NO.★	4404 P/ 930/8/0061V1	दिनांक Date	30-05-2018
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

MATERIAL CODE QUANTITY UNIT LOTNO
ITEM DESCRIPTION

DOCUMENTS. IN CASE SUPPLIES ARE FROM TRADERS, IT SHALL BE THE RESPONSIBILITY OF THE TRADER TO PROVIDE ORIGINAL MANUFACTURER'S TEST CERTIFICATE WITH LINKAGE TO TRADER'S INVOICE STATING BATCH NO.

5. CFFP/BHEL Reserves the right to procure from more than one vendor.
6. Please quote prices in figures & words both. In case the prices quoted in words and figures are different, the values indicated in words will be considered for evaluation & establishing LI status.
7. 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 suspected immediately bring to the notice of BHEL Management about any fraud as soon as it comes to their notice.
- * The offers of the bidders who are on the banned list as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on web site www.bhel.com
- *In case of rejection of material after receipt at CFFP, vendor / supplier is rejected material at their cost within 45 days from the date of rejection memo / note.
- *If vendor / supplier fails to take back the rejected material from CFFP within 90 days from the date of rejection memo / note, CFFP has the right to dispose off the rejected material at the risk & cost of the vendor / supplier and no further claim for the rejected material will be entertained.
8. Documents submitted with the offer shall be signed and stamped in each page by authorized representative of the bidder.


AMIT KUMAR GUPTA
DY. MANAGER

Commercial Terms

Annexure: I

Item - Ingot Mould 1300 mm & 1400 mm

Qty. - (06+02) 08 Nos.

Confirmation/comments on the conditions given below are mandatory. Please confirm the following or else your offer is liable to be rejected.

Sr. No.	Description	Vendor Confirmation
1	Test Certificate required as per point no. 11 of technical specification.	
2	Guarantee certificate is required for a period of one year from the date of dispatch.	
3	Material shall be supplied as per tender enquiry no 201800611/4404 & according to the attached Drawings and technical specification in all respects without any deviation. Pointwise confirmation of technical specification no. FF05073 Rev. 01 is required along with offer.	
4	<u>Pointwise confirmation of PQC of Ingot Mould is required along with offer.</u> 1) The vendor must have supplied minimum one number of cast iron mould with single piece weight minimum 5 MT within a period from the date 01.04.2010 to the date of opening of tender. 2) in support of point no. (1) copy of purchase order / purchase agreements / Invoice has to be provided by vendor.	
5	Third Party Inspection will be done as per clause no. 9 of technical specification. However, Final inspection will be done after receipt of material at CFFP, BHEL, Haridwar.	
6	Delivery Term: a) For Indian supplier: FOR Destination basis, destination being Stores/CFFP/BHEL Haridwar. b) For Foreign supplier: Delivery CIF, Mumbai: - Date of B / L. Quoted rate should be inclusive of the charges like freight, service tax on freight, insurance, packing & forwarding etc. for the delivery term given above or else proper loading.	

7	Payment Terms: 100% within 30 days after receipt and acceptance of material at CFFP, BHEL, Haridwar through e- payment. Any deviation, in Payment Terms by bidder w.r.t. tender conditions following loading shall be done. 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..	
8	Currency of offer: Indian Vendor: Only in Indian Rupee. Foreign Vendor: Only in USD /EURO / POUND STERLING/YEN.	
9	Validity of offer: Minimum 180 days from tender opening date.	
10	Prices shall be firm till execution of Order.	
11	Provide name of contact person, mobile no. & email address.	
12	LATE DELIVERY PENALTY CLAUSE (LD): Penalty for late delivery shall be applicable @ 0.5% per week and part thereof subject to a maximum of 10% of total P.O. value (Total material cost + packing and forwarding + freight) from the date of scheduled delivery of Purchase Order.	
13	Disputes: In event of any dispute arising out of contractual obligation, the order being finalized at Haridwar, India will be subject to Indian laws and falls under jurisdiction of the court of Law at Haridwar, India. The overseas supplier hereafter referred to as "Vendor" shall therefore abide by the verdict of court of Law at Haridwar, India.	
14	Delivery of material will be required within 02 months from the date of purchase order.	
15	Unregistered vendors have to fill SRF (Supplier Registration Form) of their company online at our website www.bhel.com or www. Bhelhr.co.in . They cn fill the SRF of their company at this site link : https://supplier.bhel.in/	
16	BHEL will prefer to deal directly with foreign vendor/ original manufacturer. In case, vendor engages any Indian agent or take service of any Indian agent, copy of agent agreement required along with offer in line with Annexure-IV attached.	
17	Risk Purchase: In case of delayed/defective supplies or non-fulfillment of any other terms & conditions given in the purchase order, the purchaser may cancel the purchase order and may also make the purchase of such material at the risk & cost of supplier.	

9)

PRE-QUALIFICATION REQUIREMENT for

Ingot Mould

02.05.2018

Ref. – Indent no.- 20180061

**Item- Ingot Mould 1300mm (26MT/Pc) – 06 no.
Ingot Mould 1400mm (27MT/Pc) – 02 no.**

PRE-QUALIFICATION REQUIREMENT:

- 1) The vendor must have supplied minimum one number of Cast Iron mould with single piece weight minimum 5 MT within a period from date 01.04.2010 to the date of opening tender.
- 2) In support of Point (1), copy of Purchase Orders/Purchase Agreements/Invoice has to be provided by the vendor.



PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)

FF 05073 Rev 01

Page 1 of 4

CAST IRON ITEMS

1. SCOPE

This specification governs the quality of cast iron Items of various sizes used for production of steel ingots in Steel Melting Shop.

2. APPLICATION

The material shall be used as tools & tackles for production of steel ingots.

3. COMPLIANCE WITH NATIONAL STANDARDS

This specification in general is based on Indian standard IS: 3005 Part II (1979) Reaffirmed 2005. First revision.

4. CONDITION OF DELIVERY

-The castings shall be produced from high carbon iron solidifying to provide a structure containing large flake graphite within a matrix consisting of free ferrite and coarse lamellar pearlite phase.

-Massive free-carbide phase and grain boundary free-carbide phase shall be absent from the matrix.

-The Cast Iron Items shall be produced in accordance with the details of the drawing referenced and designated on the purchase order.

-The internal mould profile shall be symmetrical.

-The internal surface of moulds shall have a continuous plane-of-taper along each face and along each corner. The internal faces and corners shall be smooth and free from significant porosity and non-metallic inclusions.

-External surfaces shall be free from significant defects and from protrusions/imperfections likely to impair safety conditions during use.

-Where machined, surfaces shall be free from significant porosity and non-metallic inclusions.

-Castings shall be defect free.

PREPARED BY	SANJAY IPABHROM	Worked by	MANOJ KUMAR SAHU
CHECKED BY	ROHIT VARSHNEY	Checked by	SUNIL KUMAR
APPROVED BY	P.K. AGARWAL	Supervised by	P.K. ROY
APPROVED: PLANT STANDARDS COMMITTEE			
PREPARED: SMS TECH		ISSUED: Steel Melting Shop	DATE:

4



PLANT PURCHASE SPECIFICATION

(CFFP - HARDWAR)

FF 05073 Rev 01

Page 2 of 4

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5. CHEMICAL COMPOSITION

The material shall conform to the following chemical composition when it is analyzed in accordance with IS -12308 or its equivalent national or international standard/ or any validated instrumental methods for analysis of cast iron.

ELEMENT	% MIN	%MAX
C	3.60	3.80
Si	1.50	1.80
Mn	0.50	0.70
S	0.04	0.08
P	-	0.05
Cr	-	0.04
Sn	-	0.005
Ni	-	0.20
CEV(Where $CEV = C + Si/4 + P/2$)	4.00	4.30

Where the iron used is produced as direct iron or "first fusion iron" from the blast furnace, the values of C and Si may be amended by agreement.

6. HARDNESS

The hardness of the Cast Iron Items of mass less than 15 tonnes shall not exceed 140 HB and for mass more than 15 tonnes it shall not exceed 130 HB. Hardness measurement standard should be relevant IS/ ASTM Standard/ any validated instrumental method in accordance with national/international standard.

7. FETTLING

Primary fettling of castings involve removal of stubs of riser-feeders and stubs of in-gates. The use of any type of burning/thermal technique to aid such fettling shall not be permitted. The end faces of the mould castings shall be machined normal to the centerline of the casting as per drawing.

Secondary fettling of the casting is accepted in that some fettling of casting defects from the casting may be carried out without significantly impairing the service behaviour and performance of the casting. The use of any type of burning/thermal technique shall not be permitted.

The fettling operation shall:

- Maintain the drawing defined section profile.
- Maintain a continuous plane-of-taper along each face and along each corner internally for the length of the mould.
- Localized indentations in the internal mould surface from removal of casting defects are not acceptable.

WORKED BY	M.K. Sahu		
CHECKED BY	Sunil Kumar		



PLANT PURCHASE SPECIFICATION

(CFFP - HARDWAR)

FF 05073 Rev 01

Page 3 of 4

8. HEAT TREATMENT

The Cast Iron Items shall be stress relieved by heating to a temperature of 700-750°C and soaking for 10-30 hours depending upon the thickness of the casting and by cooling slowly at the rate of 40 °C /hr in the furnace till the temperature of 250 °C is attained.

Soaking Hours:

Casting Thickness(mm)	Casting Wt(Tonnes)	Min.Soaking Hours
>300 mm	50-100	12
200- 300 mm	25-50	8
150-200	15-25	6
100-150	3-15	4

*For every increase in thickness of 25 mm, Soaking hours to be increased by by 1 Hour.

9. INSPECTION :

- CFFP reserves the right to witness/third party inspection for the testing of the material at supplier's works and therefore the supplier shall notify his readiness for inspection of casting in advance.
- Scope of third party inspection:
 - Witnessing the Chemical analysis, Heat Treatment Cycle, Mechanical Testing, Microstructure analysis for all castings.
 - Visual inspection for castings.
 - Item should be duly stamped by third party inspection agency. Details of stamp should be mentioned in inspection/ test report.
- CFFP may, at its discretion, test the casting after receipt and acceptance of the casting will be based on the CFFP'S test results.

10. IDENTIFICATION

Castings shall be identified with the maker's insignia, the casting type, and serial number. For moulds, the identity shall be cast on each trunnion side of the mould in minimum 100 mm letters readable in the wide-end-up orientation.

11. TEST CERTIFICATES

Certification shall be supplied with each casting showing compliance with the terms of this specification relating to material chemistry, heat treatment cycle, microstructure analysis, hardness and the dimensional condition as per clause-4 and inspection report as per clause- 9.

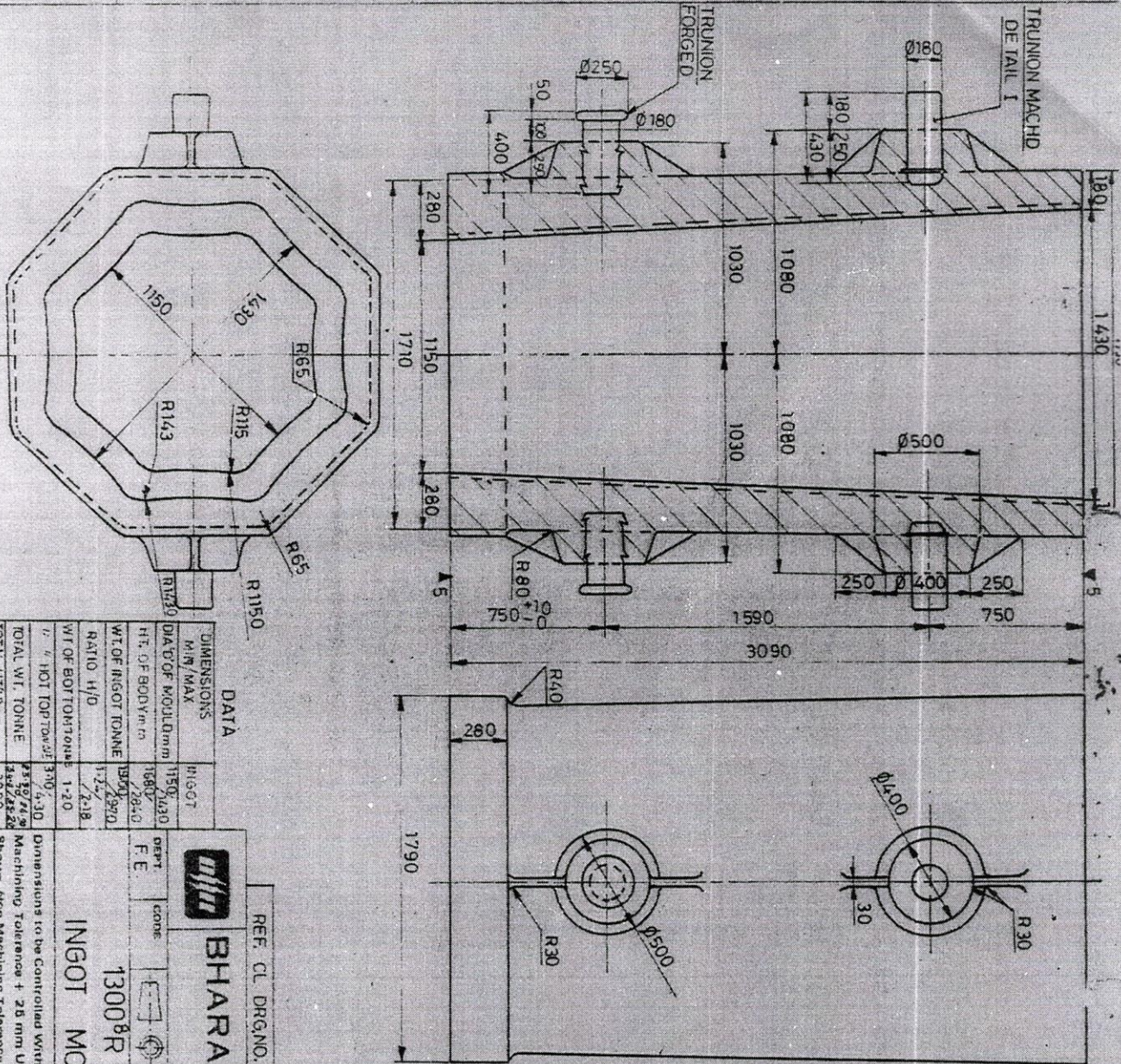
WORKED
BY

M.K. Sahu

CHECKED BY

Sunil Kumar

2



DIMENSIONS	
MIN. MAX.	
DATA OF MOLDING	1150/1150
HT. OF BODY	1080/1080
WT. OF RIGOT TONNE	1300/1300
RATIO H/D	1.2/2.18
WT. OF BOT TONNE	1-20
WT. OF HOT TOP TONNE	3-10
TOTAL WT. TONNE	23.50/23.50
TOTAL HT (mm)	3030

REF. CL DRG. NO. 272 FOR 1300⁸R INGOT MOULD

BHARAT HEAVY ELECTRICALS LTD.

UNIT: C.F.F.P. HARDWARE

DEPT: F.E. CODE: 1300⁸R

SCALE: 1:20 (A1:10)

WEIGHT (KG): 26.0 T

INGOT MOULD

Dimensions to be Controlled within limits as Shown

Machining Tolerance + 25 mm Unless Otherwise Shown, from Machining Tolerance ±

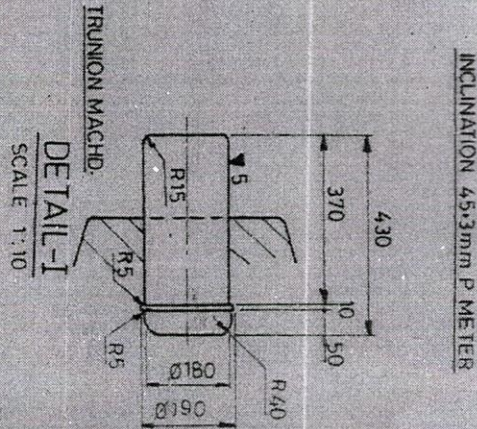
CAMP CODE: 02-148

DRAWING NO: 02-148

SHEET NO. 01

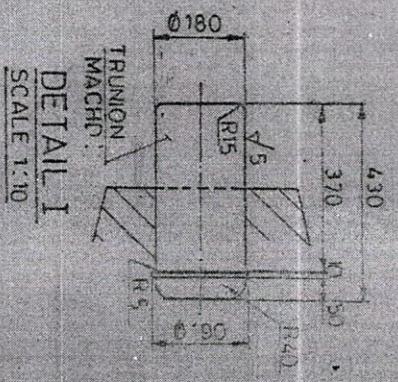
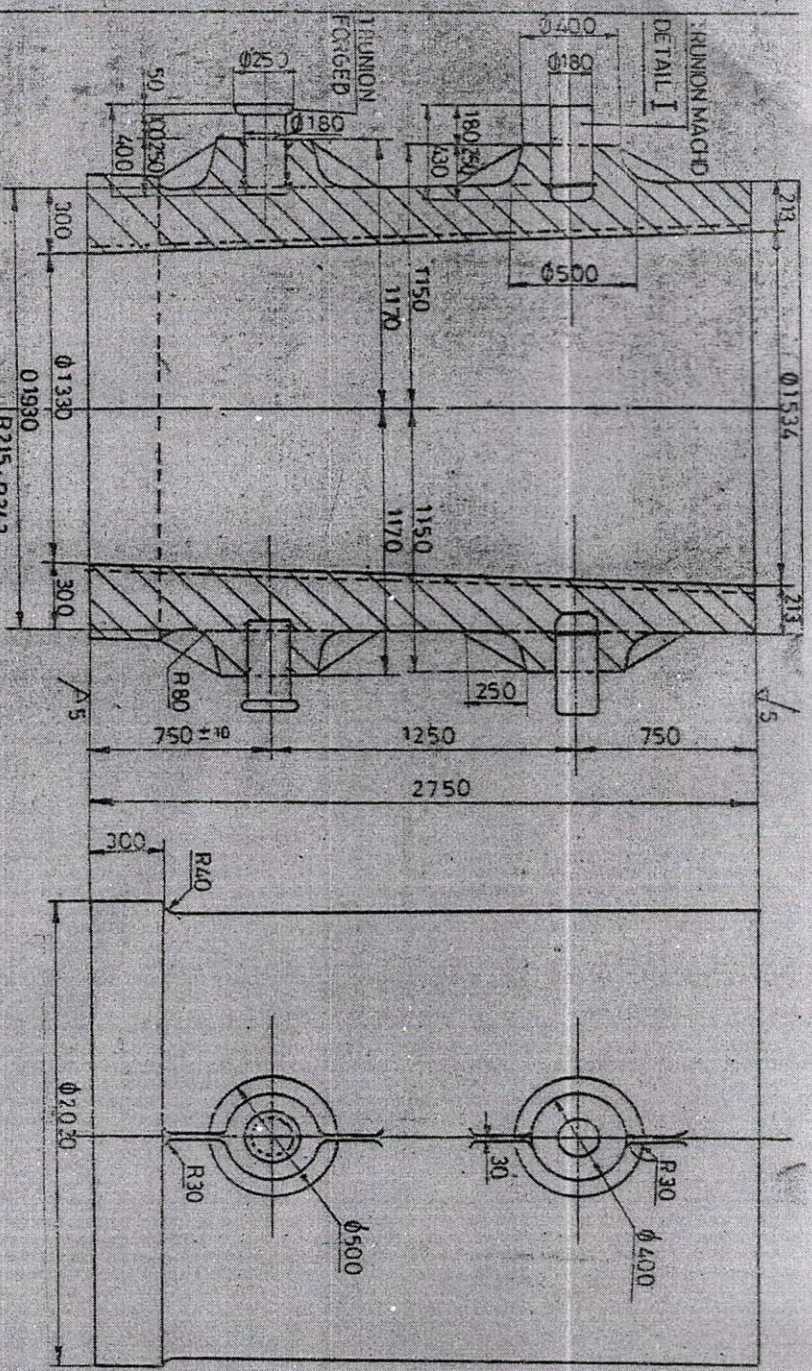
NO. OF SHEETS: 01

TOTAL WT. = 26.0 T APPROX

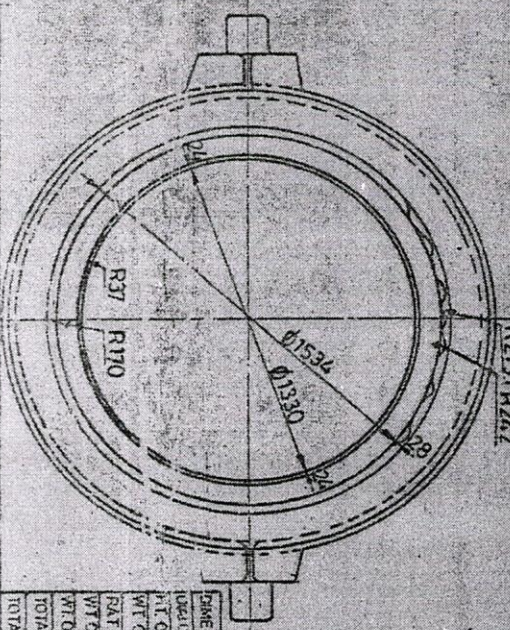


INCLINATION 45.3mm P METER

1



REF. CLDRG. NO. 349 FOR 1400^{mm} R INGOT MOULD.
COMPOSITION OF MATERIAL
RFE/CI/RHE/L/53



DATA

ITEM NO.	DESCRIPTION	UNIT	QTY
1	INGOT MOULD	NO	1
2	TRUNION MACHD	NO	1
3	FLANGE	NO	1
4	FLANGE	NO	1
5	FLANGE	NO	1
6	FLANGE	NO	1
7	FLANGE	NO	1
8	FLANGE	NO	1
9	FLANGE	NO	1
10	FLANGE	NO	1
11	FLANGE	NO	1
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93	FLANGE	NO	1
94	FLANGE	NO	1
95	FLANGE	NO	1
96	FLANGE	NO	1
97	FLANGE	NO	1
98	FLANGE	NO	1
99	FLANGE	NO	1
100	FLANGE	NO	1

BHARAT HEAVY ELECTRICALS LTD.
UNIT: C.F.F.P. HARDWARE

1400^{mm} R
INGOT MOULD

Dimensions to be Contd. 2. Vertical Limits as Shown
Machining Tolerance: ± 25 mm Unless Otherwise Shown
Non Machining Tolerance: ±

02-149