



# BHARAT HEAVY ELECTRICALS LIMITED

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

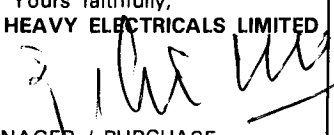
Page  
1/3  
PHONE :2577629  
GRAMS : BHARATELEC  
FAX NO: 2520719  
E-mail: srchandran@bheltry.co.in  
Web:

429-002/A

Enquiry No	Enquiry Date	Due Date for Quotation
2661400568 - 55	20.08.2014	15.09.2014
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	7519A1203600 SPINDLE AS PER DRG NO. 2M-19A-12-04258 VENDOR QUALIFYING CRITERIA Only those vendors who satisfy the following conditions will get qualified to participate in the tender: 1.Vendor should have minimum 3 years experience in this field. 2.Previous PO details for supplying similar kind of items should be submitted along with offer.Otherwise offer will be rejected. 3.Company profile details has to be provided along with offer. 4.BHEL reserves the right to visit the vendor's works for verifying the manufacturing facilities and any other credential furnished by the vendor in case the information furnished with the offers found to be false /incorrect, the offer shall be rejected.	NO	3.000	3.00	05.11.14
20	7519A1205800 CENTER WHEEL FACE AS PER DRG. NO. 2M 19A 12 04260	NO	3.000	3.00	05.11.14
30	7519A1200100 ACCELERATER AS PER DRG.NO. 3M-19A-12-11363.	NO	20.000	20.00	05.11.14
40	7519A1200400 GUARD PLATE NARROW SIDE AS PER DRG.NO. 3M 19A 12 11364	NO	5.000	5.00	05.11.14
50	7519A1202900 IMPELLER COVER AS PER DRG NO:3M-19A-12-11638	NO	3.000	3.00	05.11.14
60	7519A1205900 BEARING HOUSING AS PER DRG. NO. 3M 19A 12 11761	NO	3.000	3.00	05.11.14
70	7519A1206000	NO	10.000	10.00	05.11.14

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  
(FOSSIL BOILERS)  
Yours faithfully,



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2/3

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Web:


2661400568 / 20.08.2014

NUT AS PER DRG. NO. 3M 19A 12 12311

80	7519A1206100 IMPELLER BLADE AS PER DRG NO: 4M 19A 12 25778 ONE SET CONTAINS 4 BLADES OF EQUAL WEIGHT SO THAT PROPER BALANCING SHOULD BE THERE WHEN ASSEMBLED IN THE MACHINE. HENCE TOTALLY 100 NOS OF BLADES SHOULD BE SUPPLIED WITH SET NUMBERS ENGRAVED IN EACH BLADE FOR IDENTIFICATION.	SET	25.000	25.00	05.11.14
90	7519A1200200 CONTROL CAGE AS PER DRG.NO. 4M-19A-12-25785	NO	20.000	20.00	05.11.14
100	7519A1201400 LINER PLATE AS PER DRG NO: 4M-19A-12-26275	NO	5.000	5.00	05.11.14
110	7519A1201500 LINER PLATE AS PER DRG NO:4M-19A-12-26277	NO	5.000	5.00	05.11.14
120	7519A1201600 DOVE TAIL BOLT AS PER DRG NO. 4M-19A-12-26279	NO	50.000	50.00	05.11.14
130	7519A1202300 TAPER BUSH AS PER DRG NO:4M-19A-12-26349	NO	10.000	10.00	05.11.14
140	7519A1202600 PLATE-I AS PER DRG NO. 4M 19A 12 26477	NO	5.000	5.00	05.11.14
150	7519A1202500 PLATE-II AS PER DRG NO:4M-19A-12-26478	NO	5.000	5.00	05.11.14
160	7519A1202700 ANGLE PLATE AS PER DRG NO: 4M 19A 12 26479	NO	5.000	5.00	05.11.14
170	7519A1203100 BRACKET AS PER DRG NO. 4M-19A-12-27507-01.	NO	5.000	5.00	05.11.14
180	7519A1205700 TAPER LOCK BUSH AS PER DRG NO. 4M-19A-12-28163.	NO	10.000	10.00	05.11.14

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

  
MANAGER / PURCHASE  
(FOSSIL BOILERS)  
Yours faithfully,



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THIRUCHIRAPALLI - 620014  
TAMILNADU (INDIA)

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Page  
3/3

2661400568 / 20.08.2014

**General Note:**

GENERAL NOTE: PLEASE SUBMIT YOUR OFFER IN "TWO PART BID SYSTEM" AS PER THE ANNEXURES ENCLOSED.

ENCLOSURES:ANNEXURE II,III,IV,V,VI,VII & DRAWINGS.

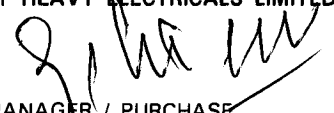
**Enclosures:**

"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.

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

  
MANAGER / PURCHASE  
(FOSSIL BOILERS)  
Yours faithfully,

**CAPITAL PURCHASE**  
**COMMERCIAL TERMS AND CONDITIONS**

**1.0 QUOTATIONS**

The Bidders shall submit the offer in **TWO INNER ENVELOPES** as indicated below which shall be sealed in one outer envelope.

**Envelope I** This sealed envelope should contain all the copies of technical bid together with un-priced commercial bid & annexure III. This envelope should be clearly marked **'Part I - Technical and commercial bid'**,

Indicating Enquiry No., Due Date and Address & Reference of the Bidder.

**Envelope II** This sealed envelope should contain **price as per Annexure-IV format**. This envelope should be clearly marked **"Part II - Price bid"**, indicating **Enquiry No., Due Date and Address & Reference of the Bidder**.

Both the envelopes (Part I & II) shall be put in one cover (**Envelope III**), duly sealed, superscribing as Part I and Part II of Enquiry No., due date of opening and the address and reference of the Bidder

The above offer should reach this office on or before the due date by 14.00 hours (IST). Late offers will not be considered.

Tender should not be addressed to any individual's name but only by designation to

**SENIOR MANAGER /PURCHASE/ CP & SP/ MM / MFG  
BHARAT HEAVY ELECTRICALS LIMITED  
HIGH PRESSURE BOILER PLANT  
TIRUCHIRAPALLI - 620 014  
TAMIL NADU**

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.

Offers should be in **ENGLISH** and accompanied by detailed technical literature, catalogue and detailed dimensional drawings in **ENGLISH** or otherwise, the offers will not be considered.

**2.0 OPENING OF TENDERS**

The Part I - Technical & commercial bid alone would be opened on the Tender opening date.

The Part II - Price bid of technically suitable Bidders alone would be opened. The Technically Suitable Bidders would be informed about the tender opening date through e-mail.

Clarifications if any required by BHEL for Technical evaluation **would be** sought from Bidders before opening of Part II - price bid

**For any queries clarifications the bidders may contact us through our FAX NO. +91 431 2520719 or through e-mail <mmcpmfg1@bheltry.co.in >&< chells@bheltry.co.in>**

**Bharat Heavy Electricals Limited, Tiruchirappalli -620 014** Annexure-III  
**MM: CP & SP**  
**Annexure For Techno Commercial Bid**  
 Check List - to be filled and submitted along with Technical Bid

<b>BHEL Commercial Terms and Conditions for Indigenous Supplies</b>	<b>Vendor's Confirmation / Comments</b>
Technical confirmation to BHEL's Specification as called for in BHEL Format shall be furnished. If needed additional sheets shall be used.	
Prices shall be <b>quoted item wise</b> only as per the model format enclosed	
Prices shall be quoted on " <b>FIRM PRICE</b> " basis only The prices should be only on <b>F.O.R / Despatching station</b> basis with <b>Packing &amp; Forwarding</b> charges if any. <b>Applicable % of ED &amp; Sales Tax, Freight &amp; Insurance, Installation &amp; Commissioning Charges should be clearly indicated</b>	
<b>Validity of offer</b> shall be for a minimum period of 120 days from the date of Tender opening	
Delivery period from the date of Letter of Intent / Purchase order shall be clearly mentioned in the offer	
<b>Liquidated damages @ '0.5% per week</b> subject to a maximum of 10% of the order value shall be applicable for delay in deliveries <b>For Details Refer Annexure- v</b>	
<b>Following Risk Purchase clause</b> shall be applicable 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 or if the same were not available, the best and the nearest available substitute therefore The supplier shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases	
<b>Payment term for supply portion:</b> Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials <b>For details Refer Annexure- v</b>	
Erection / commissioning: (if applicable only) Erection / commissioning charges if any has been mentioned in the offer or else confirmation that Erection /commissioning shall be done at free of cost is available in the offer,	
The equipment shall be guaranteed for a period of 12 months from the date of commissioning	
Final inspection and acceptance of equipment will be after installation at BHEL, Trichy	
The vendor shall provide necessary drawings, Test Certificates and Operating Maintenance Manuals etc., as called for in the Technical Specification, in the required number of copies at no extra cost	
Any warranty replacement during warranty period shall be supplied free of charge on FOR BHEL, Trichy basis.	
Offers should be submitted only in <b>sealed cover super-scribing clearly the Enquiry reference and due date.</b>	
% of Excise Duty with cess	
% of TAX (CST/VAT) (INGST with FORM-17 or CST with C-FORM)	
Packing & Forwarding Charges ( if any in % only)	
Percentage of Freight& transit insurance charges, if any Freight charges from Dispatching station to BHEL, Tiruchirappalli • Supplier should quote for F.O.R-BHEL Trichy Stores.	
As per Commercial terms and conditions, acceptance for participation in Reverse auction (RA). Yes/No to be indicated	
Name of the person for participating reverse auction	
Land Line Number	
Fax Number	
Mobile Number	
E-mail ID	

**NOTE:-**

- It is confirmed that all the terms and conditions stipulated in the Enquiry have been fully understood by us and all clarifications & details have been obtained.
- Your offer should be indicating applicable if any P&F Charges, % of ED, Sales Tax -CST or VAT, Service Tax), Freight, Insurance and Installation and Commissioning Charges etc., as per our Price Format
- Your specific acceptance to our Payment terms, LD & Risk Purchase Clause are essential for consideration of your offer. Other wise your offer is liable for rejection.
- No row shall be left blank. Please indicate NA, in case the item is "not applicable"

**Annexure For Price Bid**

**Bharat Heavy Electricals Limited TIRUCHIRAPPALLI CAPITAL PURCHASE  
MODEL PRICE BID FORMAT FOR INDIAN BIDDERS**

Annexure-IV

Enquiry No. & Date:

Bidder's Offer No. & Date:

Sl No	Description of item	Unit	Quantity	Rate in Rs.	Value in Rs.
	<b>TOTAL VALUE IN RS.</b>				
	<b>Packing &amp; Forwarding charges in % if any</b>				
	<b>Freight &amp; Insurance Charges In % if freight charges are not mentioned it will be considered as FOR-BHEL TRICHY.</b>				
	<b>Excise Duty (indicate in %)</b>				
	<b>A) TNGST — VAT (%)</b>				
	<b>B) CST with C-FORM — (%)</b>				
	<b>C) CST without C-Form — (%)</b>				
	<b>Approximate Net weight of the total consignment</b>				
	<b>Approximate Gross weight of the total consignment</b>				
	<b>Approximate Dimensions of the Consignment</b>				
	<b>The price indicated shall be inclusive of all accessories, spares etc. as given in the scope of supply. Individual item-wise break-up price shall be attached as an annexure to this price bid format.</b>				

**Signature & Seal of Vendor**

**NOTE:**

1. The price bid should be submitted only as per the above format. No row shall be left blank. Please indicate NA, in case the item is "not applicable"
2. Prices shall be quoted item-wise only as per the above format.
3. If Price quoted is Inclusive of ED, the included ED Value and Base Value shall be indicated item-wise.

<b>Payment Term (Indigenous)</b>	
<b>If materials are receivable at Stores/Trichy <u>without</u> PBG</b>	Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials.
<b>If materials are receivable at Stores/Trichy <u>with</u> PBG</b>	Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials and against 10% PBG valid for the warranty period.
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.	

Payment through Bank is not preferred. In case of Payment through Bank is opted by Supplier, BHEL prefers documents submission through bank with copy of LR and door delivery of Goods to Site/Stores with Consignee copy attached. In this case Loading will be 3% on the offered value.

Offers of indigenous Suppliers with payment terms as LC/Advance Payment are liable for rejection.

#### **Liquidated Damages / Penalty -**

Liquidated damages shall be 0.5% of the total order value per week or part thereof subject to a maximum of 10% of the total order value.

For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part thereof subject to a maximum of 10% of the total order value.

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).

#### **Guarantee / Warranty Period – (if applicable)**

Normally No deviation permitted and the deviated offers are liable for rejection.

#### **Ranking-**

BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed.

#### **Performance Bank Guarantee – (if applicable)**

Normally No deviation permitted and the deviated offers are liable for rejection.

#### **NOTE:-**

1. If the due date of tender opening happens to be a holiday, the tenders will be opened on the next working day.
2. BHEL reserves the right to go for a reverse auction (RA) instead of opening the submitted sealed bid which will be decided after technical evaluation. Information and general terms and conditions covering RA are given in commercial terms and conditions.
3. Corrigendum if any, with respect to this tender will be hosted only in the website <http://www.bhel.com> or <http://tenders.gov.in>. You are requested to visit the website regularly for updates.

**Special Provisions for Micro and Small Enterprises (MSE)**

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 the 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 attested copy of a CA certificate (Format enclosed at Annexure -VII where deemed validity of EM II certificate of five Years has 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 bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before 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."

**Certificate by Chartered Accountant on letter head**

This is to Certify that MIS .....  
(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:

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 6. 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 I 6small (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.D. No. 3322(E) dated 01.11.2013  
published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

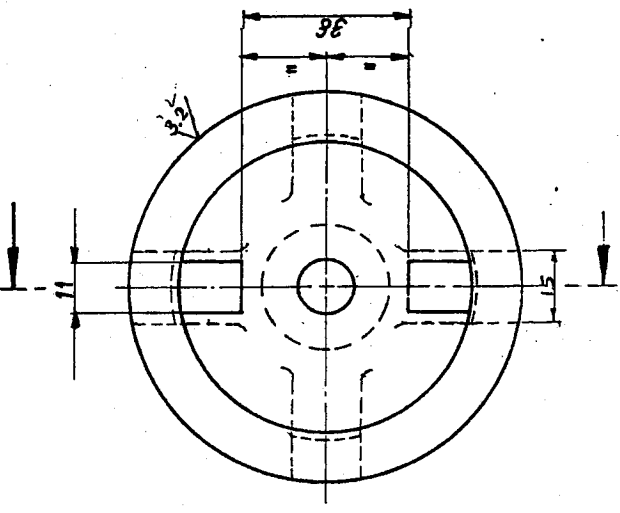
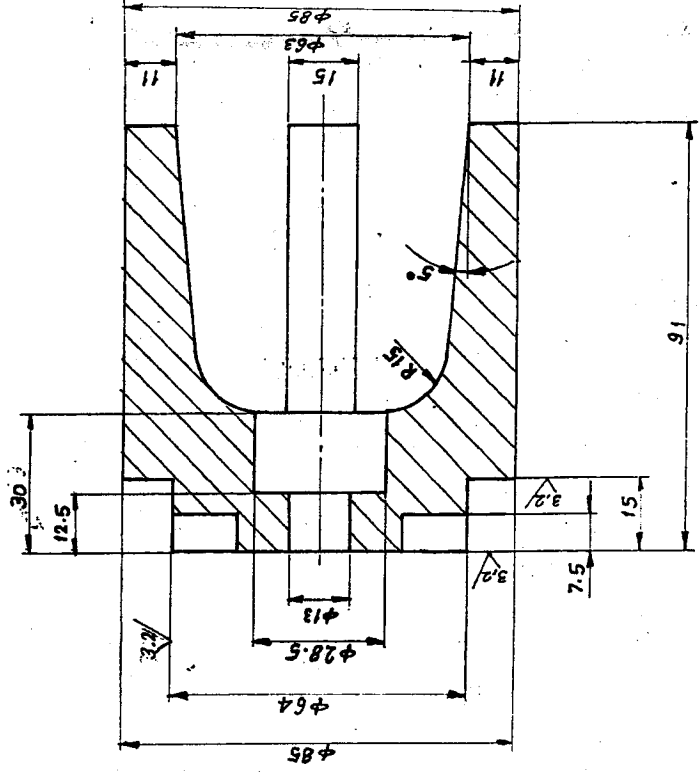
(Signature)

Name -

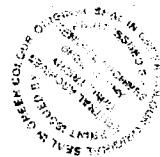
Membership number -

Seal of Chartered Accountant

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 G.E. INDUSTRIAL PRODUCTS DIVISION



HARDENED AND TEMPERED TO HBW 510



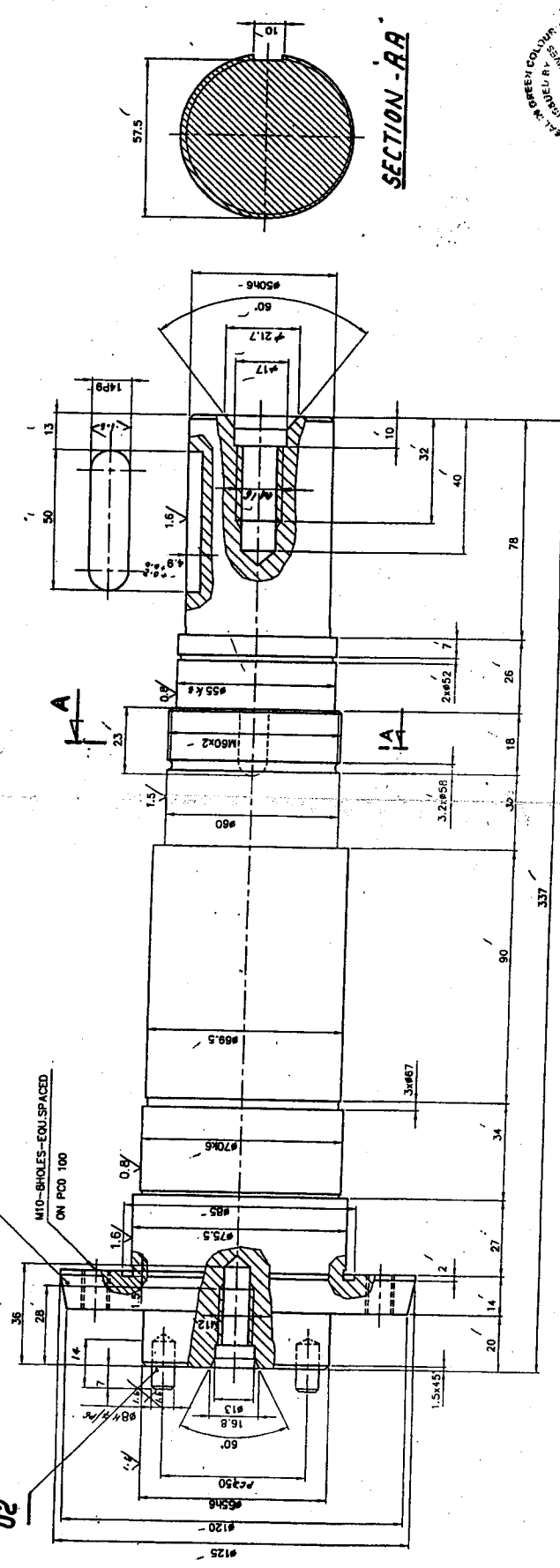
No. of Pcs.		M.H. Cr30360		15:4771	1.50	DRAWING No.	
DESCRIPTION		MATERIAL		STD/BPS	Wt. (kg)	DRAWING No.	
REFERENCE:		ALTERATIONS		CC:DD	Ec: 12	DATE	SIGN. Incls
SCALE	DRAWN	R. Hood					
1:1	CHECKED	R. Lammamany					
	APPROVED	[Signature]					
	DATE	06-09-96					
TITLE		MACHINE: SHOT BLASTING		TYPE: BND. RPH 35/43B		Total wt. (kg)	
ACCELERATOR (TURBINE)		DRAWING No.		3-M-19A-12		REV.	
No. of Sheets: 1		Sheet No.		11363			



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 TECHNICAL - 001 001  
 ALL DIMENSIONS ARE IN MM

32/1/80 g.f.

#65H6	+0.000	#70H6	+0.002
#55H6	-0.019	#50H6	-0.000
	+0.021		-0.016
	+0.002		-0.018
			-0.001
			-0.001
			-0.001
			-0.001
			-0.001
			-0.001



SECTION -A-A



RECEIVED

CHAMFER ALL SHARP CORNERS TO 1.5/45°

1	REV	DATE	BY	APP
1	1	21-01-98	P.A. ROSS	
2	2	05-08	1417888	0.01
3	3	05-08	1417888	3.16
4	4	05-08	1417888	3.16

SCALE	DRAWN	CHECKED	APPROVED	DATE
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DESCRIPTION	4508	IS 7283	5-15
MATERIAL	STANDARD METAL IN ACC.		
COMPONENT CODE	05		
EQUIPMENT CODE			
ALTERNATIONS			
REV	DATE	BY	APP

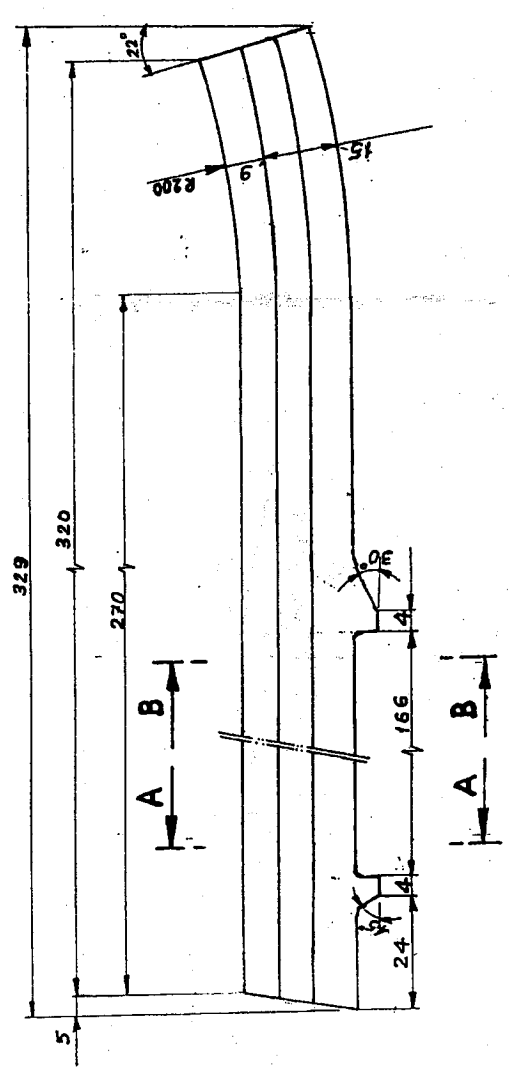
  

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REV	12
DRAWING NO	2-M-19A-04268
REV. DATE	12/11/98
REV. BY	
REV. APP	

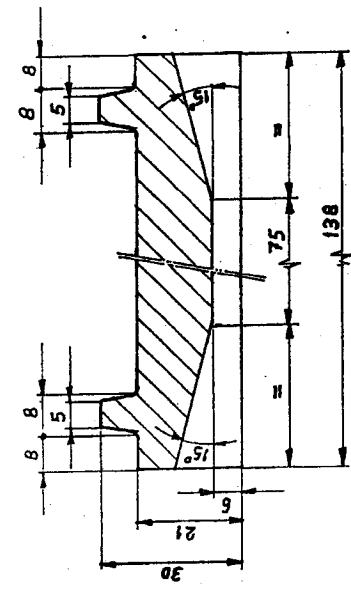
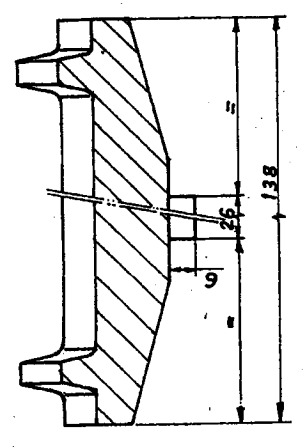


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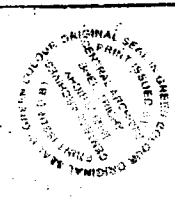


**SECTION -BB**



**SECTION-AA**

HARDENED AND TEMPERED TO HBW 510.



W.I.C. 30/550		IS: 4771	5.00
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ALTERATIONS	CC: 00	EC: 18	DATE
SCALE DRAWN	R. B. B.		
CHECKED	R. B. B.		
APPROVED	R. B. B.		
DATE	06-09-86		
MACHINE: SRBT BLASTING		TYPE: BMD MPH 36/438	
TITLE		DRAWING No.	
GUARD PLATE		3-M-19A-11364	
NARROW SIDE		12	
(TURBINE)		REV.	
No. of Sheets:		Sheet No.	

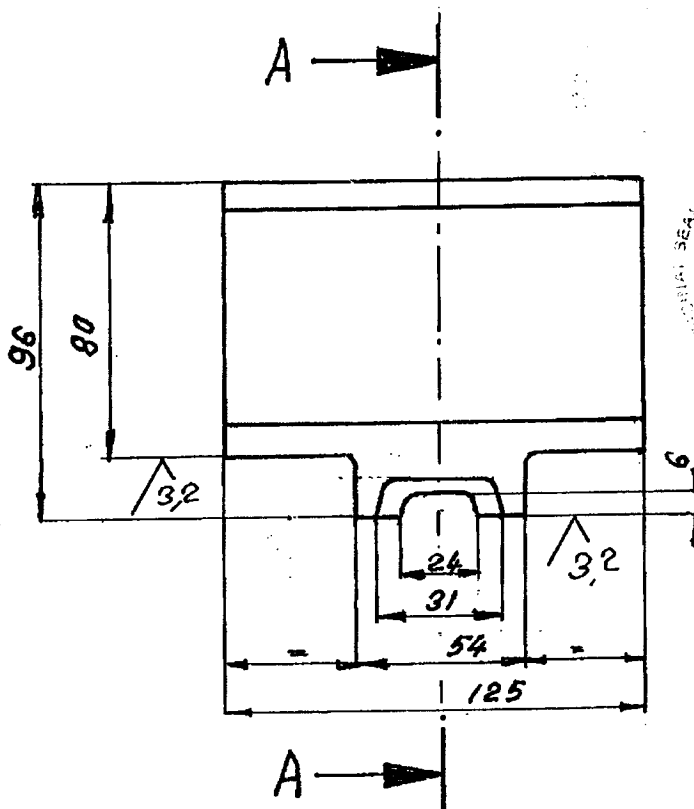




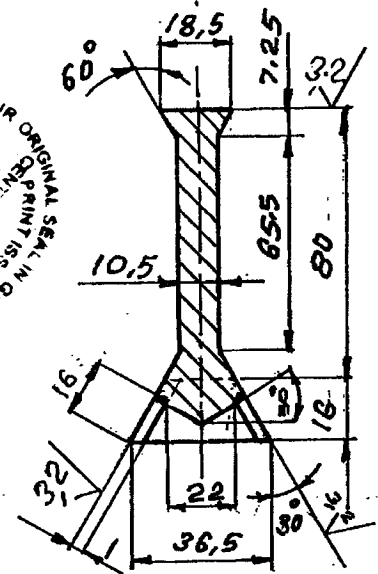
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39-607 A



SEAL IN GREEN COLOUR ORIGINAL PRINT ISSUED BY BHARAT HEAVY ELECTRICALS LTD. TIRUCHIRAPALLI



**SEC-AA**

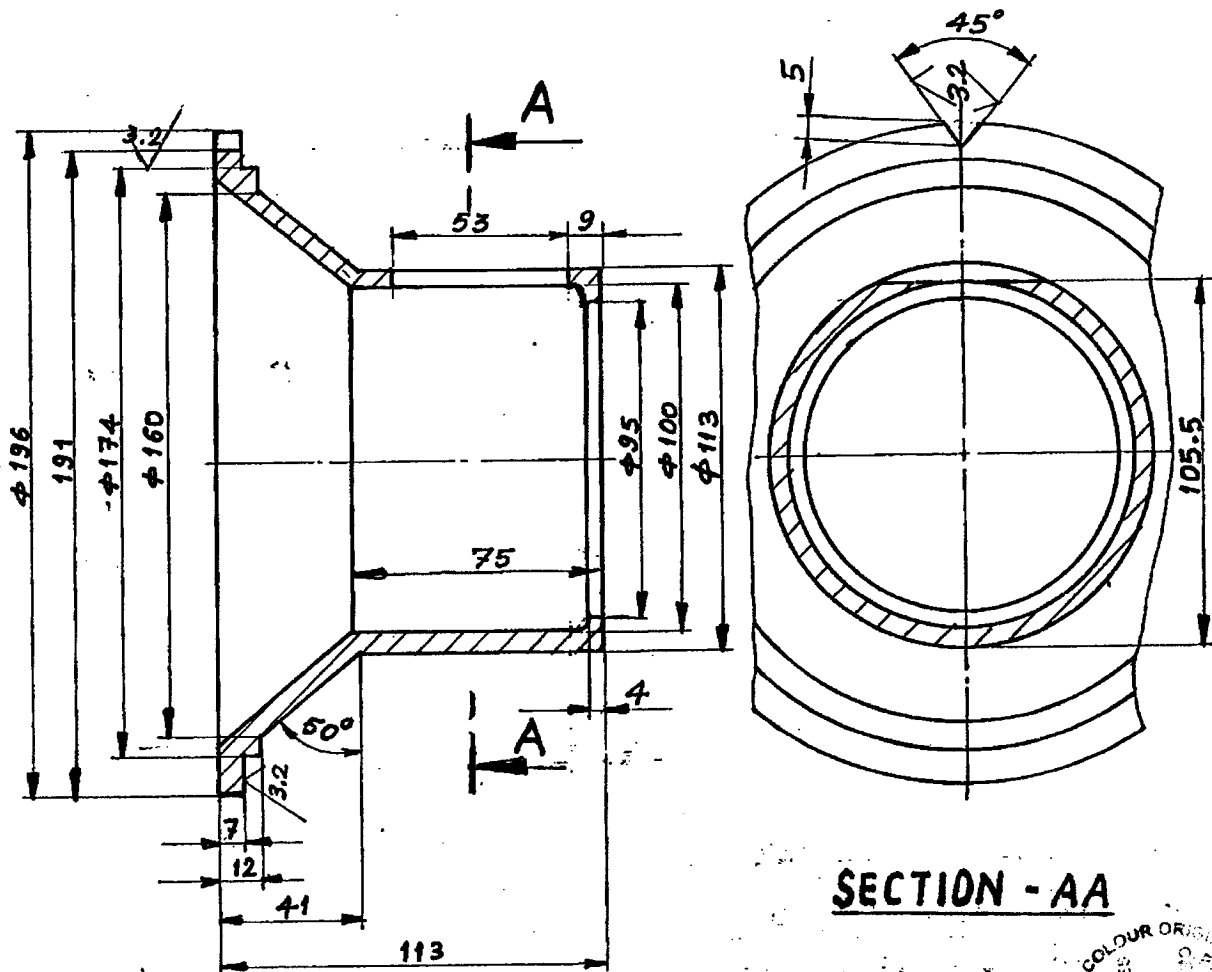
**NOTE:-** BLADE SHOULD BE SUPPLIED SET OF FOUR NUMBERS OF EQUAL WEIGHT FOR BALANCING PURPOSE,  
 THE WEIGHT & SET NUMBERS TO BE ENGRAVED IN EACH HARDENED AND TEMPERED TO HBW510 BLADE.

No. of pcs.		DESCRIPTION		MATERIAL	STD/BPS	Net wt. (kg.)	DRAWING No.		Item No.
				NIMCY 30/50	IS: 4771	0.98			
REFERENCE:				ALTERATIONS EC: 12		CC: 00	REV	DATE	SIGN.
SCALE	DRAWN	CHECKED		APPROVED		DATE			
1:2						04.09.96			
MACHINE: SHOT BLASTING				TYPE: BMD HPH 35/438		Total wt. (kg.)		REV.	
TITLE				DRAWING No.		12			
<b>IMPELLER BLADE</b>				<b>4-M-19A-25778</b>					
No. of Sheets:				Sheet No.					

**Caution**  
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3.2


39-607 A



**SECTION - AA**

HARDENED AND TEMPERED TO HBW 510

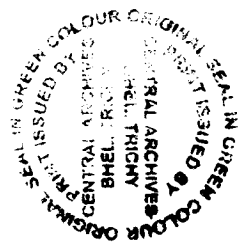
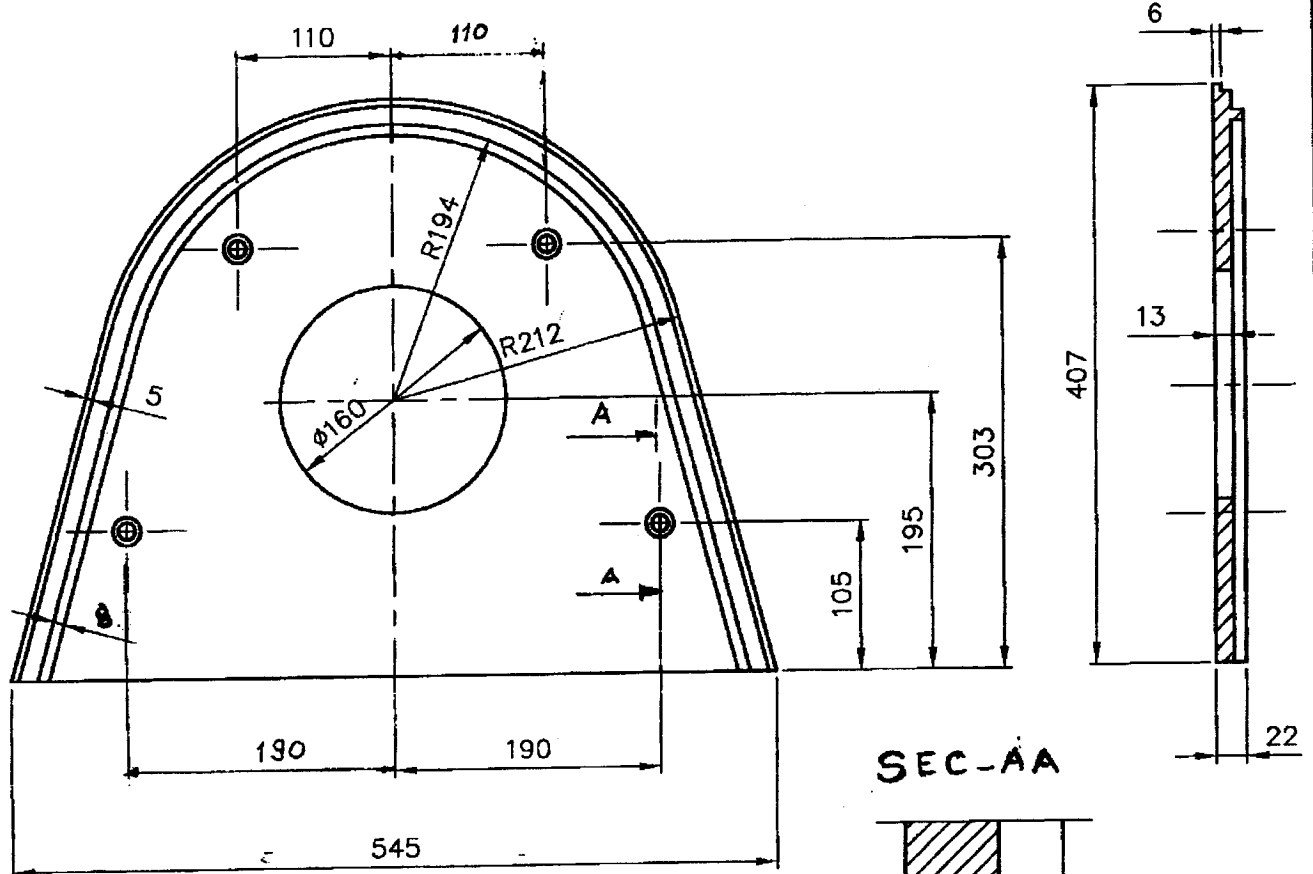
OUR ORIGINAL SEAL IN GREEN COLOUR ORIGINAL SEAL IN GREEN COLOUR  
 CENTRAL ARCHIVES  
 BHARAT HEAVY ELECTRICALS LTD.  
 TIRUCHIRAPALLI - 620 014

		N/H Cy. 30/550	IS: 4771	2.50			
No. of pcs.	DESCRIPTION	MATERIAL	STD/BPS	Net wt. (kg)	DRAWING No.	Item No.	
REFERENCE:			ALTERATIONS CC: 00 / EC: 12	DCN	DATE	SIGN.	Index
SCALE	DRAWN	R. Rival					
	CHECKED	R. Ramamurthy					
	APPROVED	<i>[Signature]</i>					
	DATE	06-09-96					
	MACHINE: SHOT BLASTING			TYPE: BMD HPH 35/43B	Total wt. (kg.)		
	TITLE			DRAWING No.		REV.	
	CONTROL CAGE (TURBINE)			4-M-19A-25785 <sup>12</sup>			
				No. of Sheets:	Sheet No.		

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ALL DIMENSIONS ARE IN MM

3.2/1/1/1



HARDENED AND TEMPERED TO HBW 510

No. of Pieces	DESCRIPTION	NIH Cr 30 550	IS: 4771	14.50	DRAWING No.		ITEM No.
		MATERIAL	STANDARD	NET.WT.IN KGS.	EQUIPMENT CODE: 12		
REFERENCE:		COMPONENT CODE: 00		EQUIPMENT CODE: 12			
SCALE		ALTERATIONS:		DCN REF	DATE	SIGN.	INDEX
1:5	DRAWN	R. Narayanan					
1:1	CHECKED	R. Ramamorthy					
	APPROVED	[Signature]					
	DATE	25.09.98					
MACHINE: SHOT BLASTING		TYPE: HPH 35		DRAWING No.		REV.	
TITLE:		LINER PLATE		4-M-19A-26275			
(FEEDING SIDE)		No. of Sheets		Sheet No.			

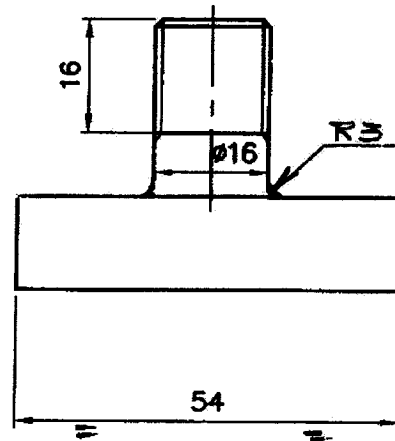
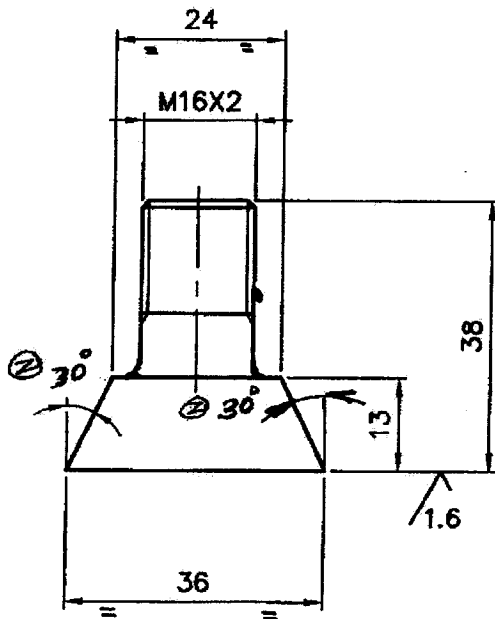


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CAUTION:

ALL DIMENSIONS ARE IN MM

3.2/1.6/ ✓/✓/✓



HARDENED TO HRC 40 ± 2



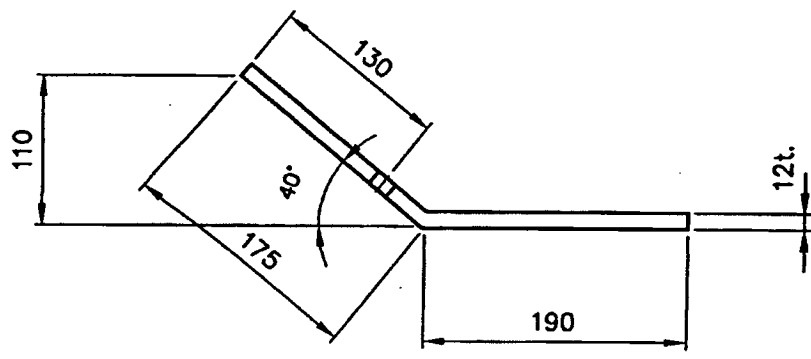
36x54x38		SSCB	IS15617	0.24		
No. of Pieces	DESCRIPTION	MATERIAL	STANDARD	NET.WT.IN KGS.	DRAWING No.	ITEM No.
REFERENCE:			COMPONENT CODE: 33	EQUIPMENT CODE: 12		
SCALE			ALTERATIONS:	DCN REF	DATE	SIGN.
1:1	DRAWN	R. Narayanan	30° WAS 26°			②
	CHECKED	R. Ramamoorthy				
	APPROVED	<i>[Signature]</i>				
	DATE	09.10.98				
	MACHINE: SHOT BLASTING		TYPE: HPH 35/438			
	TITLE: DOVETAIL BOLT M16x2-38 (TURBINE BLADE LOCKING)		DRAWING No: 12		REV.	
			4-M-19A-26279			
			No. of Sheets	Sheet No		



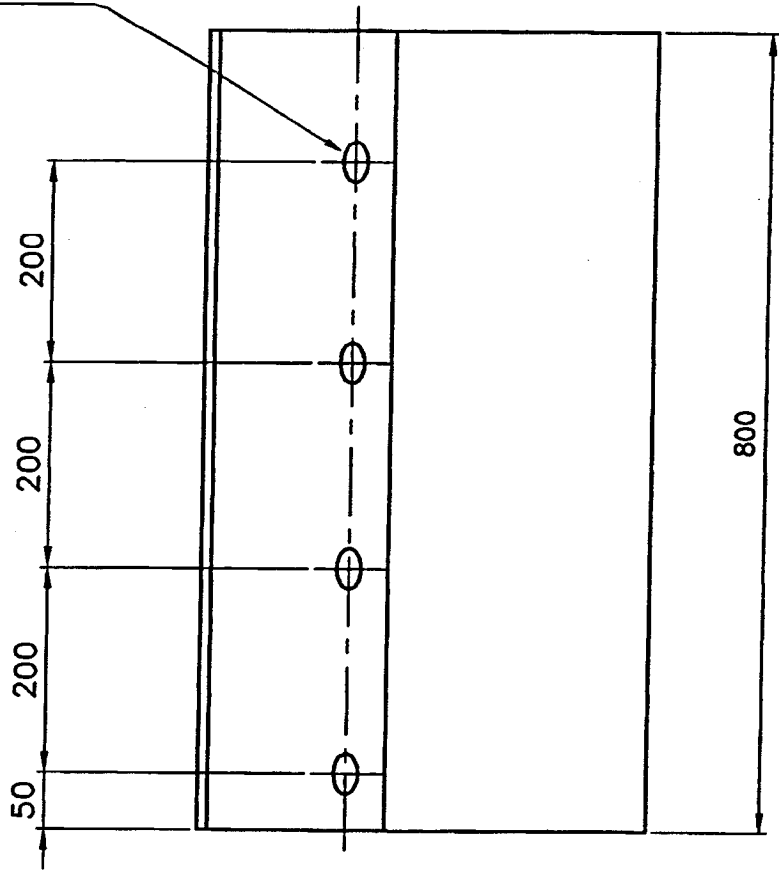
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ALL DIMENSIONS ARE IN MM




3.2/ / /



4HOLES Ø25



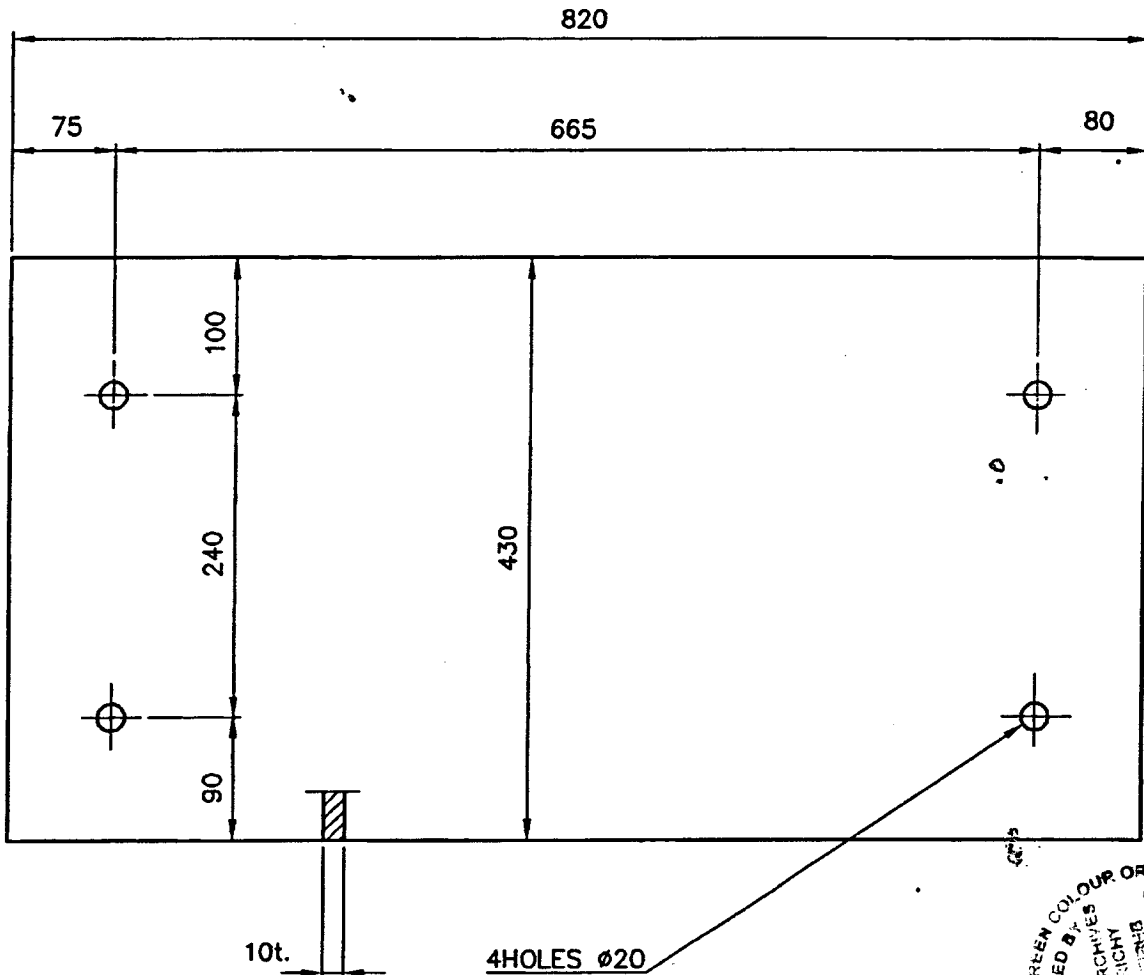
HARDENED AND TEMPERED TO HBW 510.

12 x 365 x 800		Ni H Cr 30/35D	IS: 4771	27.5		
No. of Pieces	DESCRIPTION	MATERIAL	STANDARD	NET.WT. IN KGS.	DRAWING No.	ITEM No.
REFERENCE:				COMPONENT CODE: 00	EQUIPMENT CODE: 12	
SCALE	DRAWN	G.G.R. <i>[Signature]</i>	ALTERATIONS:	DCN REF	DATE	SIGN.
/	CHECKED	<i>R. Ramamurthy</i>				
	APPROVED	<i>[Signature]</i>				
	DATE	04/09/99				
MACHINE: SHOT BLASTING			TYPE: BMD HPH 35			
TITLE: <b>PLATE-I</b> (INSIDE CHAMFER WALL)			DRAWING No: <b>4-M-19A-26477</b>		REV.	
			No. of Sheets:		Sheet No:	

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ALL DIMENSIONS ARE IN MM

3.2 / ✓ / ✓ / ✓



ORIGINAL SEAL IN GREEN COLOUR  
 ORIGINAL PRINT IN GREEN  
 CENTRAL ARCHIVES  
 BHARAT HEAVY ELECTRICALS  
 TRICHIRAPPALLI

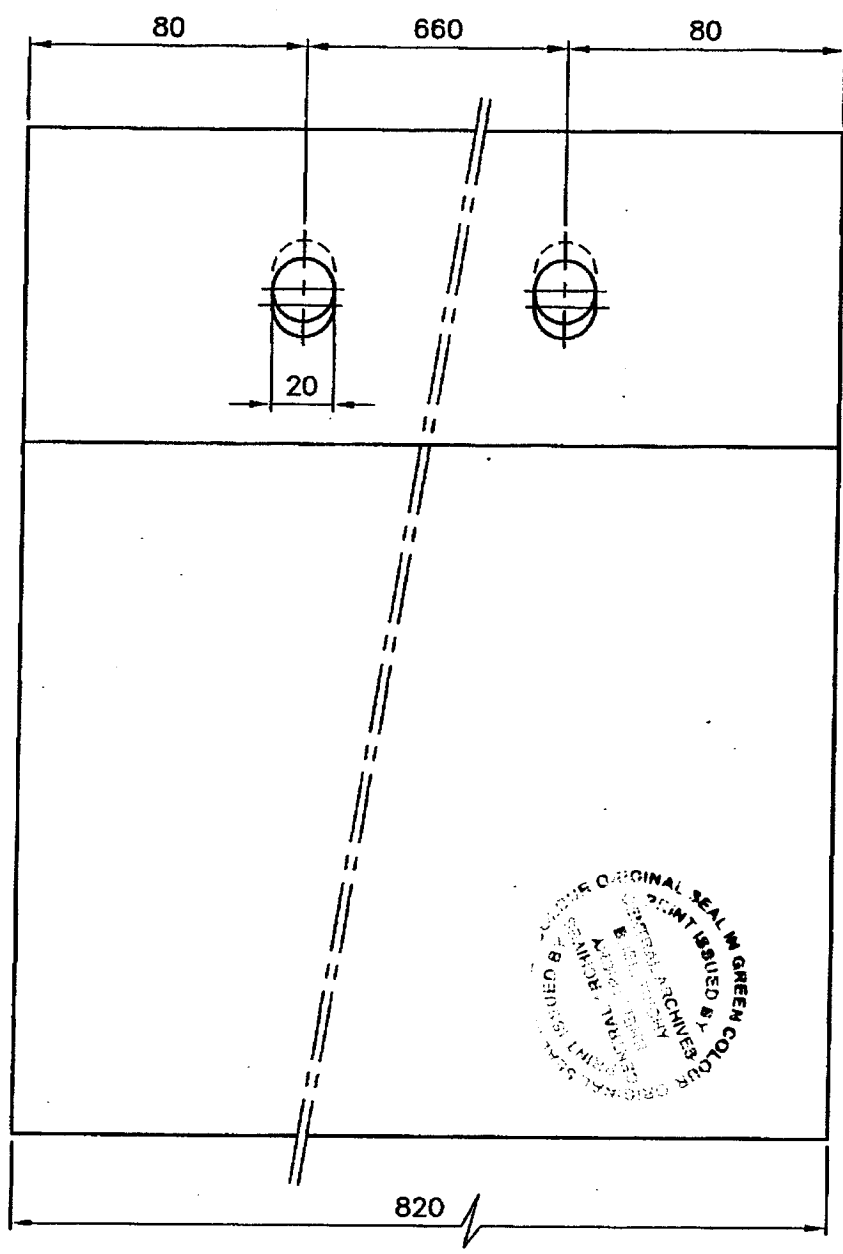
HARDENED AND TEMPERED TO HBW 510.

No. of Pieces	10t. x 430 x Ø20		Ni H Cr. 30/550	IS: 4771	27, 68		
	DESCRIPTION		MATERIAL	STANDARD	NET.WT.IN KGS.	DRAWING No.	ITEM No.
REFERENCE:				COMPONENT CODE: 00		EQUIPMENT CODE: 12	
SCALE				ALTERATIONS:	DCN REF	DATE	SIGN.
/	DRAWN	G.G.R./					
	CHECKED	R. Ramamathy					
	APPROVED	H. J.					
	DATE	04/09/99					
	MACHINE: SHOT BLASTING			TYPE: BMD HPH 35			
	TITLE: " PLATE-II (INSIDE CHAMFER WALL)			DRAWING No: 4-M-19A-26478		REV.	
				No. of Sheets:	Sheet No:		

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ALL DIMENSIONS ARE IN MM

3.2 / / /



HARDENED AND TEMPERED TO HBW 510.

12t.x316 x 820		N H Cr.30/550	IS: 4771	22.40		
No. of Pieces	DESCRIPTION	MATERIAL	STANDARD	NET.WT.IN KGS.	DRAWING No.	ITEM No.
REFERENCE:			COMPONENT CODE: 00		EQUIPMENT CODE:	
SCALE	DRAWN	ALTERATIONS:		DCN REF	DATE	SIGN.
1:2	CHECKED					
	APPROVED					
	DATE					
MACHINE: SHOT BLASTING			TYPE: BMD/HPH-35			
TITLE: ANGLE PLATE (ROOF)			DRAWING No: 12		REV.	
			4-M-19A-26479			
			No. of Sheets:		Sheet No:	

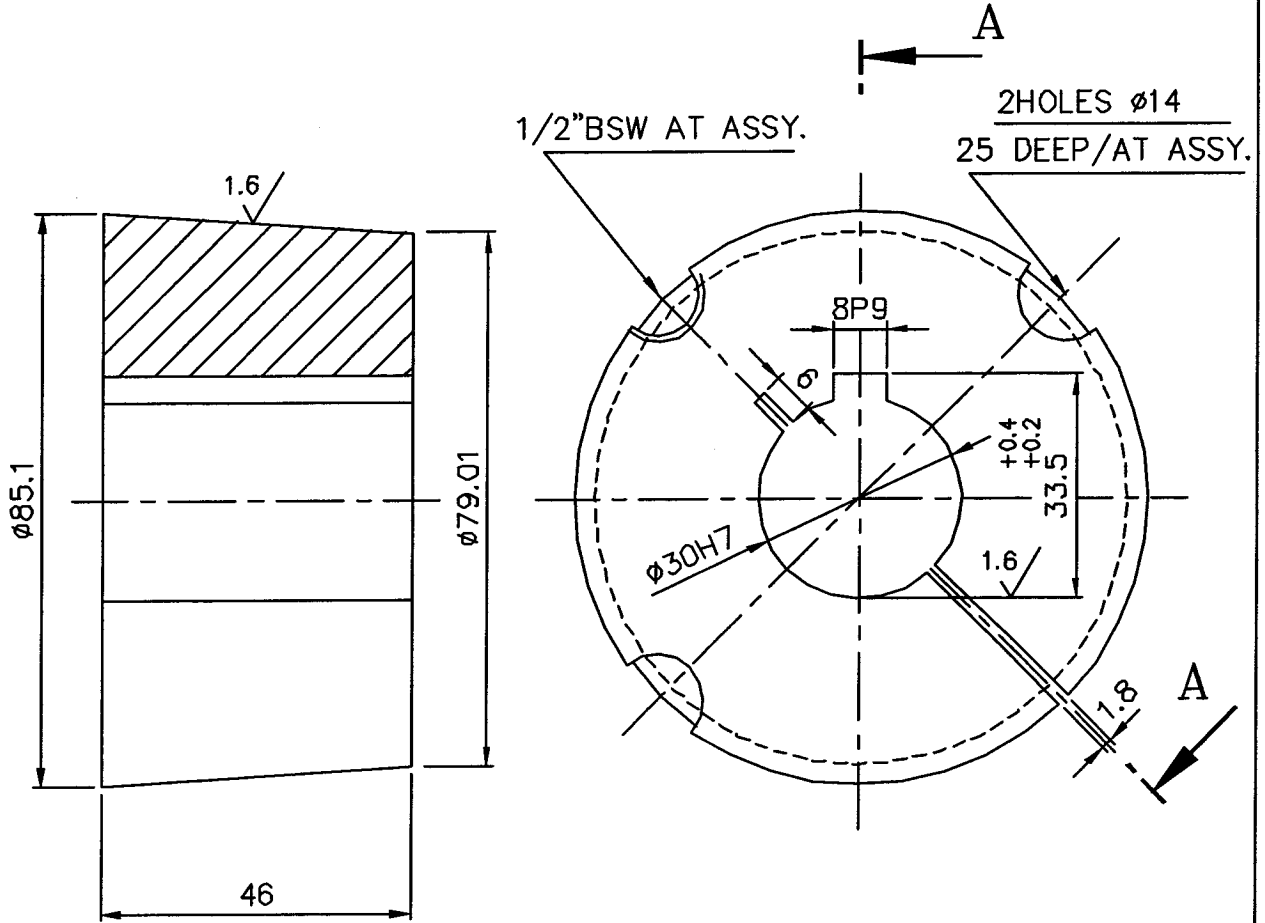




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ALL DIMENSIONS ARE IN MM

8P9	-0.015	Ø30H7	+0.021	3.2//1.6//	✓/✓/✓
	-0.051		0.000		



SEC-AA

NOTE:

ALL SHARP CORNERS TO BE CHAMFERED 1/45°



Ø85.1x46L	FG220	IS: 210	1.10			
No. of Pieces	DESCRIPTION	MATERIAL	STANDARD	NET.WT.IN KGS.	DRAWING No.	ITEM No.
	REFERENCE:		ALTERATIONS:	DCN REF	DATE	SIGN.
SCALE	DRAWN	G.GOVINDARAJ				
1:1	CHECKED	R.RAMAMOORTHY				
	APPROVED	C.S.JAYASHEELAN				
	DATE	10/04/08				
MACHINE: SHOT BLASTING	TITLE:		TYPE: BMD-HPH 35		REV.	
	TAPER LOCK BUSH (ID30xOD85.1x46L)		DRAWING No:			
	(SHAKER MECHANISM)		4M19A1228163			
			Sheet No		Noof Sheets:	