

Annexure A

QUOTATIONS:

1.
 - a. Interested bidders / Suppliers shall submit their offer through e-Procurement mode at <https://bheleps.buyjunction.in>. **Offers in any other mode will not be accepted.**

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

REQUIREMENTS

1. A PC with Internet connectivity.
2. DSC (Digital Signature Certificate)(Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION)
3. The site is best viewed in Internet Explorer 9.0. If you are using Internet Explorer 10 or above then enable compatibility view available under Tools menu
4. Install Java 1.7 Update 67/72/79 (Both 32 & 64 Bit)

MANDATORY REQUIREMENT:

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

UNREGISTERED SUPPLIER IN EPS:

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

Please follow the below steps for registration

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

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

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

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

NB:-

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

FOR REGISTERED SUPPLIER IN EPS:

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

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

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

Annexure For Techno Commercial Bid

Check List - to be filled and submitted along with Technical Bid

BHEL Commercial Terms and Conditions for Indigenous Supplies	Vendor's Confirmation / Comments
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 quoted item wise only as per the model format enclosed	
Prices shall be quoted on " FIRM PRICE " basis only The prices should be only on F.O.R / Despatching station basis with Packing & Forwarding charges if any. Applicable % of ED & Sales Tax, Freight & Insurance, Installation & Commissioning Charges should be clearly Indicated	
Validity of offer 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	
Liquidated damages @ '0.5% per week subject to a maximum of 10% of the order value shall be applicable for delay in deliveries For Details Refer Annexure- v	
Following Risk Purchase clause 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	
Payment term for supply portion: Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials For details Refer Annexure- v	
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 sealed cover super-scribing clearly the Enquiry reference and due date.	
GST in %	
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 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
MODEL PRICE BID FORMAT FOR INDIAN BIDDERS

CAPITAL PURCHASE
Annexure-IV

Enquiry No. & Date:
Bidder's Offer No. & Date:

SI No	Description of item	Unit	Quantity	Rate in Rs.	Value in Rs.
	TOTAL VALUE IN RS.				
	Packing & Forwarding charges in % if any				
	Freight & Insurance Charges In % if freight charges are not mentioned it will be considered as FOR-BHEL TRICHY.				
	GST (indicate in %)				
	Approximate Net weight of the total consignment				
	Approximate Gross weight of the total consignment				
	Approximate Dimensions of the Consignment				
	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.				

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.**

Payment Term (Indigenous)	
If materials are receivable at Stores/Trichy without PBG	Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials.
If materials are receivable at Stores/Trichy with PBG	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 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.S.O.1722(E) dated October 5, 2006 :
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and
furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED
Act, 2006:
Rs.....Lacs

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

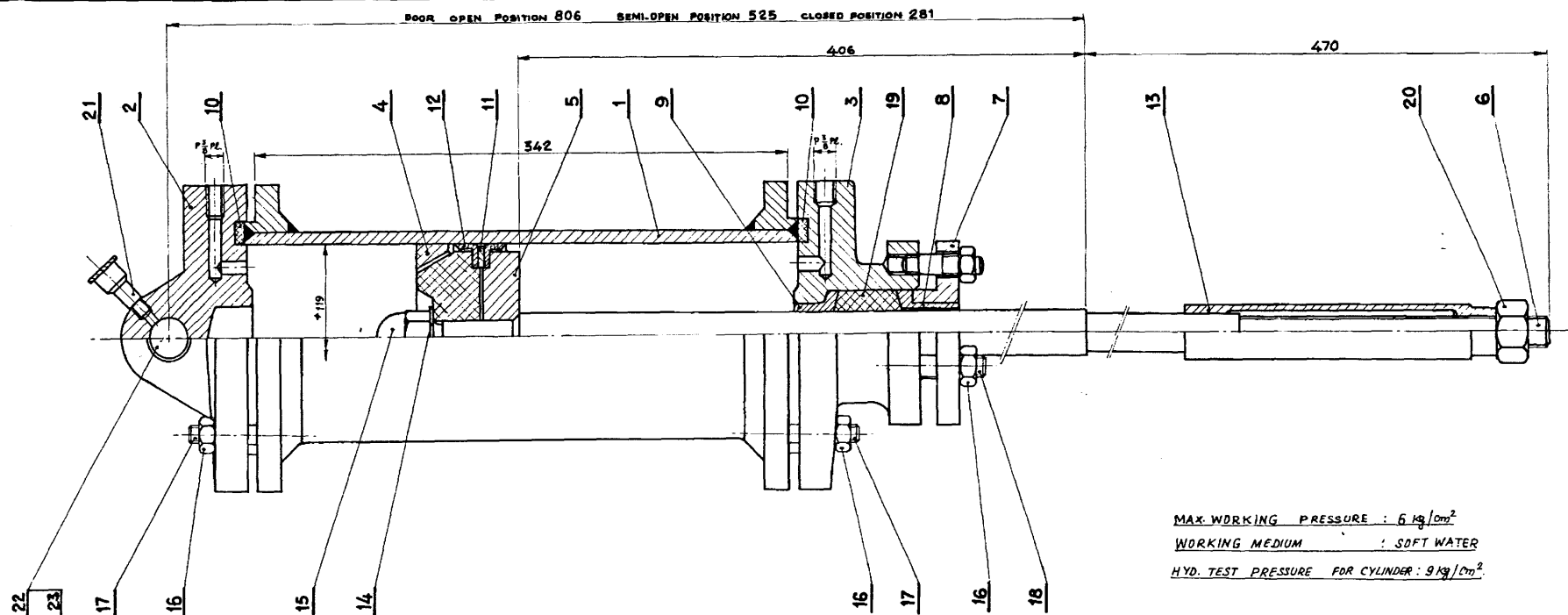
Date:

(Signature)

Name -

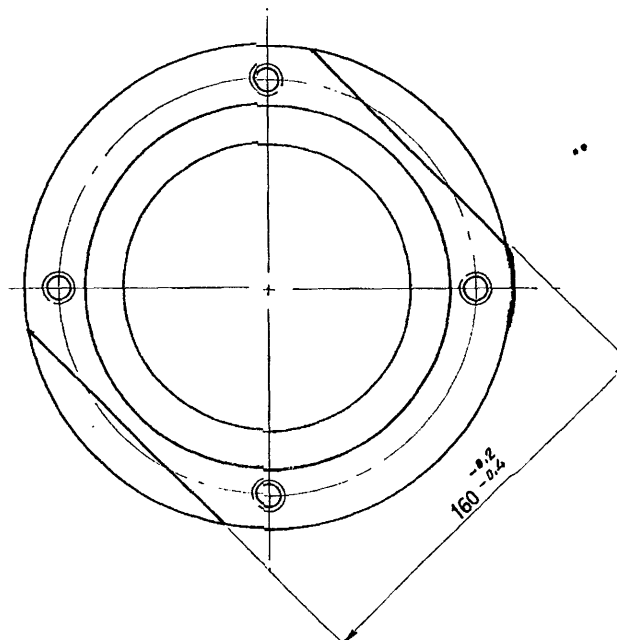
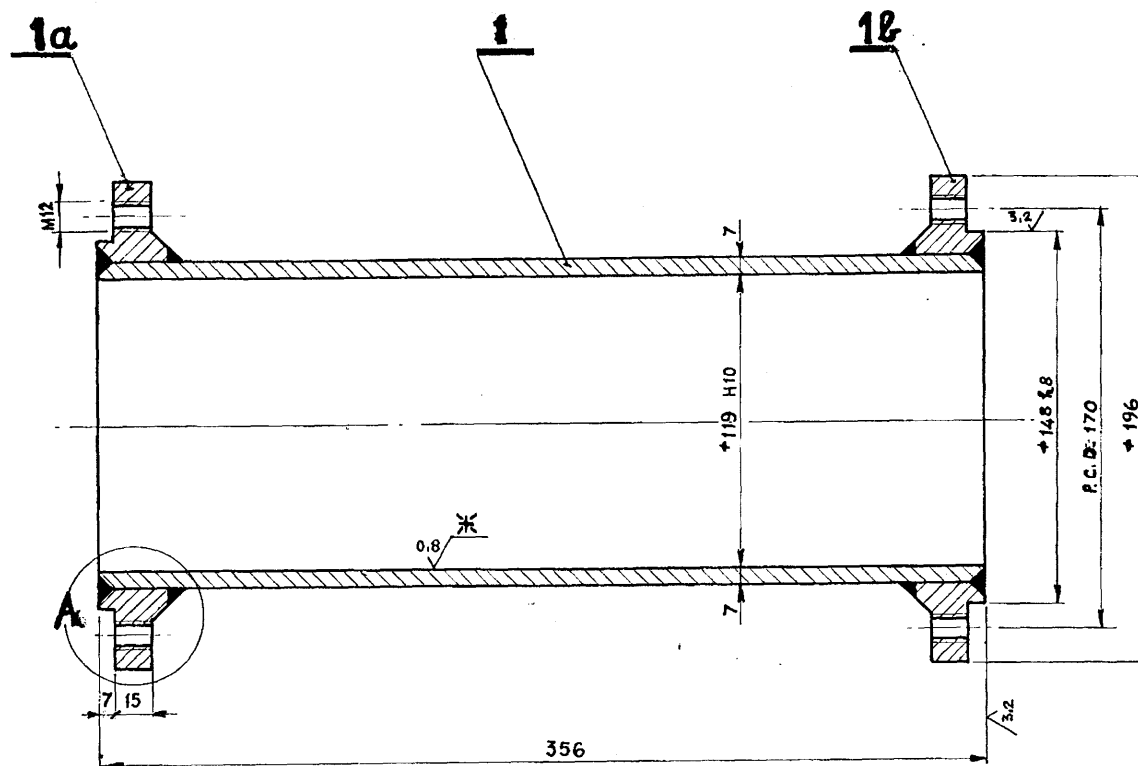
Membership number -

Seal of Chartered Accountant

[illegible]

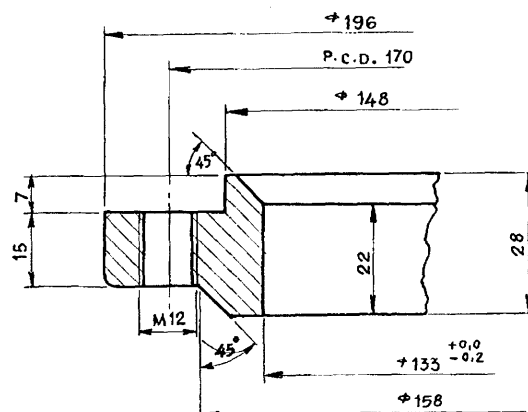
6.3/3.2/0.8/

±119 H10	+0.140
	+0.000
±148 H8	-0.000
	-0.063



✱
SURFACES TO BE CHROME PLATED
TO 0.3 THICK AND ROUND.

DETAIL 'A'

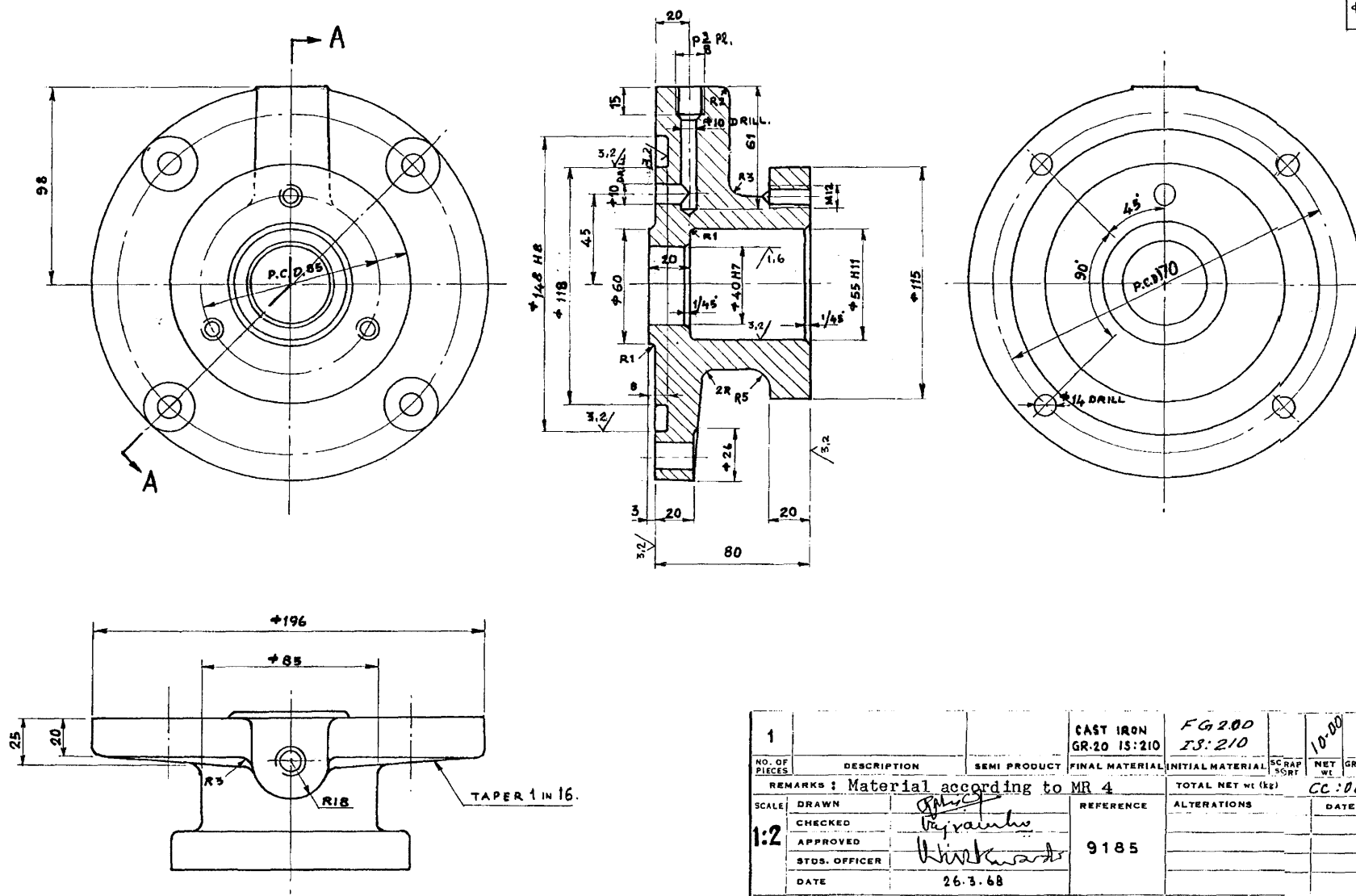


FLANGE BOTTOM	BM-C30	30CB IS: 7283	1.9		1b				
FLANGE TOP	BM-C30	30CB IS: 7283	1.9		1a				
CYLINDER	BM-C30	30CB IS: 7283	2.4	11.5	1				
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT.	GROSS WT.	DRAWING NO.	ITEM NO.
REMARKS: Material according to MR 4							TOTAL NET wt (kg) 66.00 EC: 07		
SCALE:	DRAWN	CHECKED	APPROVED	STDS. OFFICER	DATE	REFERENCE	ALTERATIONS	DATE	SIGNATURE
1:2					26.3.68	9183/a			
MACHINE: PRODUCER GAS PLANT							TYPE: 4513:01 INV. NO.		
TITLE: CYLINDER							DRAWING NO: 07		
							3-M-20&-1121		
NO. OF SHEETS:							SHEET NO:		

~ / 6.3 / 3.2 / 1.6 /

SECTION A-A

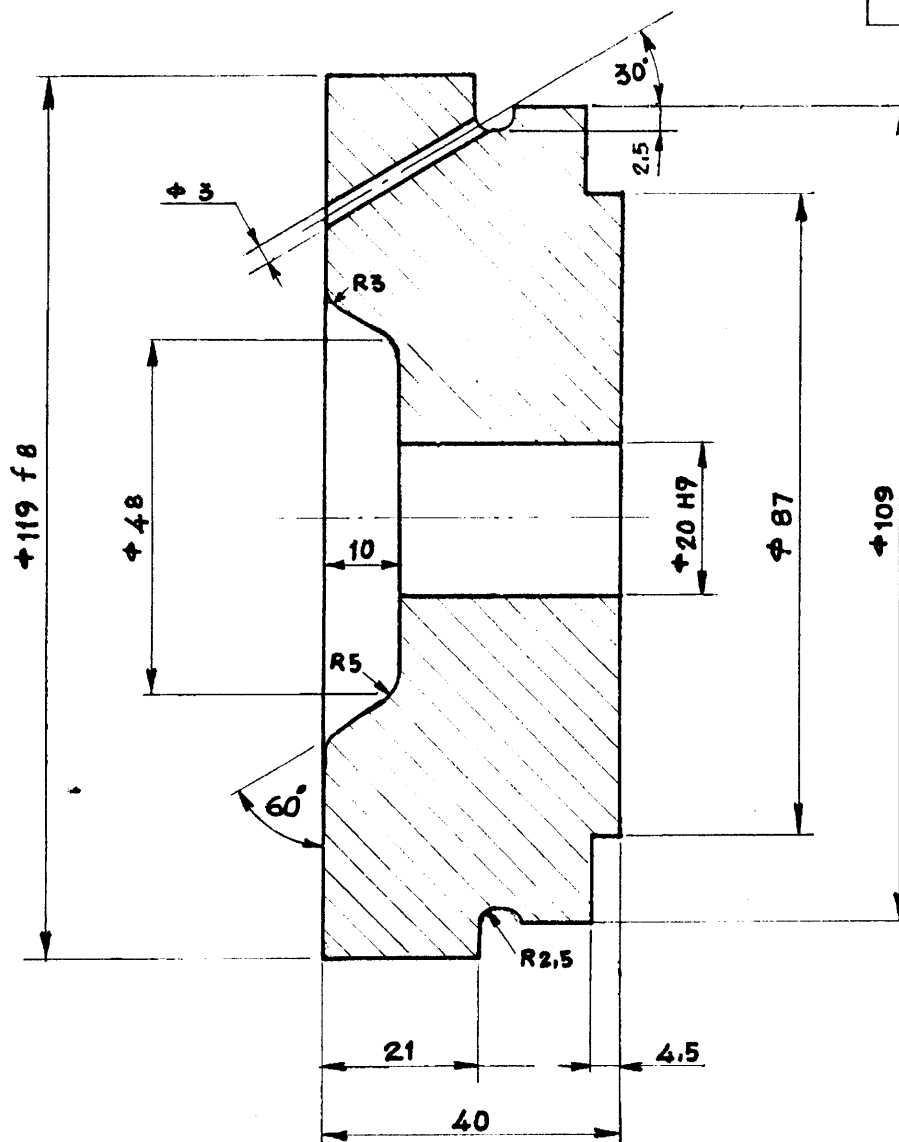
±148 H8	+0.063
±40 H7	+0.025
±55 H11	+0.190
	+0.000



1	CAST IRON GR-20 IS:210	FG 200 IS: 210	10-00	2.M.104.0423	3
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT
REMARKS : Material according to MR 4			TOTAL NET Wt (kg)		
SCALE	DRAWN	CHECKED	APPROVED	STDS. OFFICER	DATE
1:2					26.3.68
MACHINE : PRODUCER GAS PLANT			TYPE : 4513 : 01		
TITLE :			DRAWING NO. : 07		
CYLINDER HEAD LOWER			3.M.208-1122		
NO. OF SHEETS :			SHEET NO :		

3.2/

Φ 20 H9	+ 0.052
	+ 0.000
Φ 119 f8	- 0.036
	- 0.090

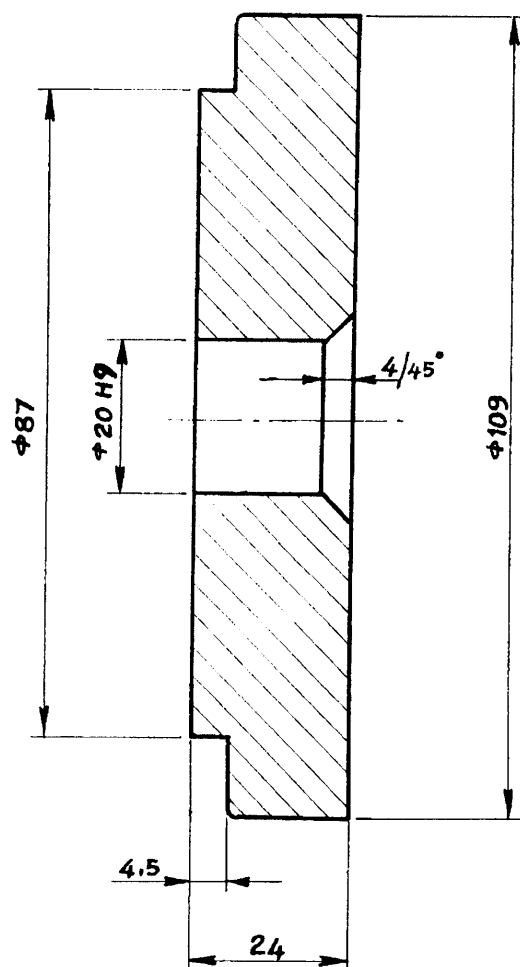


1			FIBRE					2-M-20&-0423	4
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4				TOTAL NET wt (kg) CC 00 FC 07					
SCALE	DRAWN	REFERENCE		ALTERATIONS		DATE	SIGNA- TURE	ALTERATION INDEX	
1:1	CHECKED	9186							
	APPROVED								
	STDS. OFFICER								
	DATE	26.3.68							
MACHINE : PRODUCER GAS PLANT		TYPE : 4513 : 01		INV. NO.					
TITLE :		DRAWING NO :		07					
PISTON-UPPER		4-M-20&-2753							
NO. OF SHEETS		SHEET NO :							



3.2/√

Φ 20 H9	+ 0.052
	+ 0.000



CHROMIUM PLATED ALL OVER TO 0.3 mm THICK

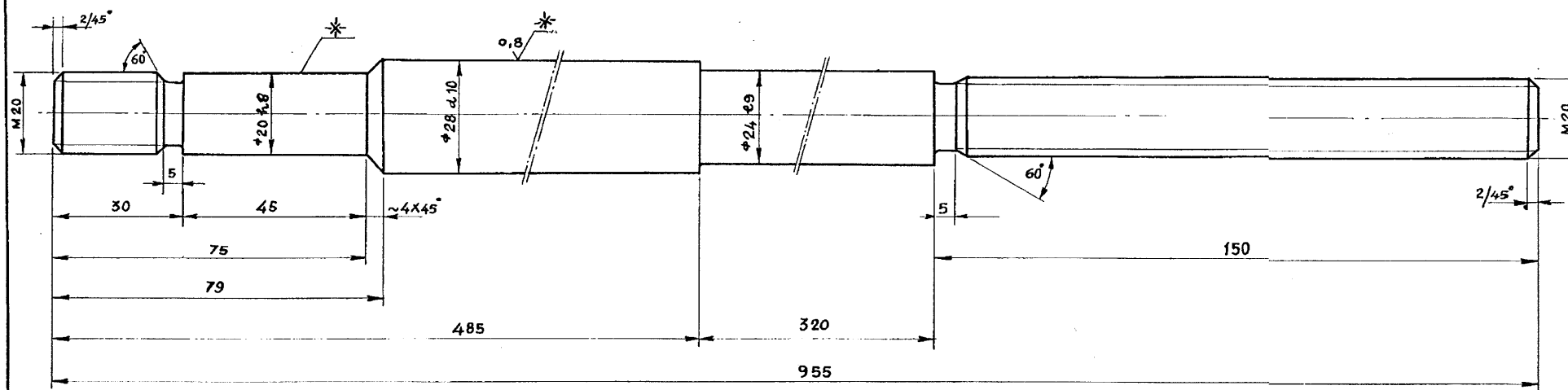
AND GROUND WHERE INDICATED.

1			BM-C 30	30 C8 IS: 7283		1.13		2-M-20 & 0423	5
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4				TOTAL NET wt (kg) CC 00 EC: 07					
SCALE	DRAWN	REFERENCE	ALTERATIONS		DATE	SIGNA- TURE	ALTERATION INDEX		
1:1	CHECKED	9187							
	APPROVED								
	STDS. OFFICER								
	DATE	26.3.68							
MACHINE : PRODUCER GAS PLANT			TYPE : 4f13:01		INV. NO.				
TITLE :			DRAWING NO :		07				
PISTON-LOWER			4-M-20 & 2754						
NO. OF SHEETS			SHEET NO :						



3,2 / 0,8

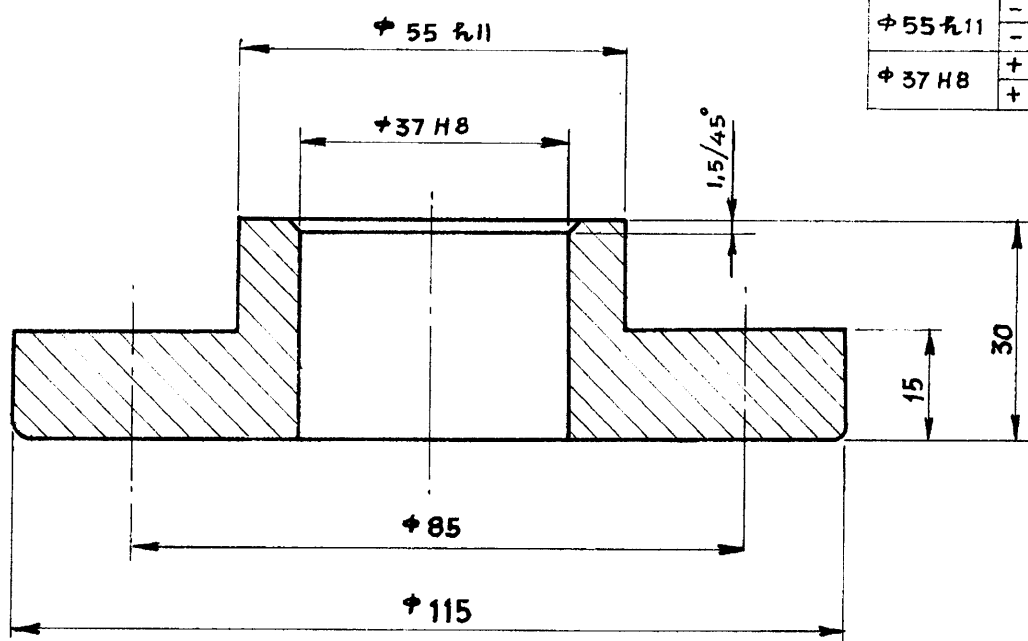
+20 $\phi 8$	- 0,000
- 0,033	
+28 $\phi 10$	- 0,065
- 0,149	
+24 $\phi 9$	- 0,040
- 0,092	



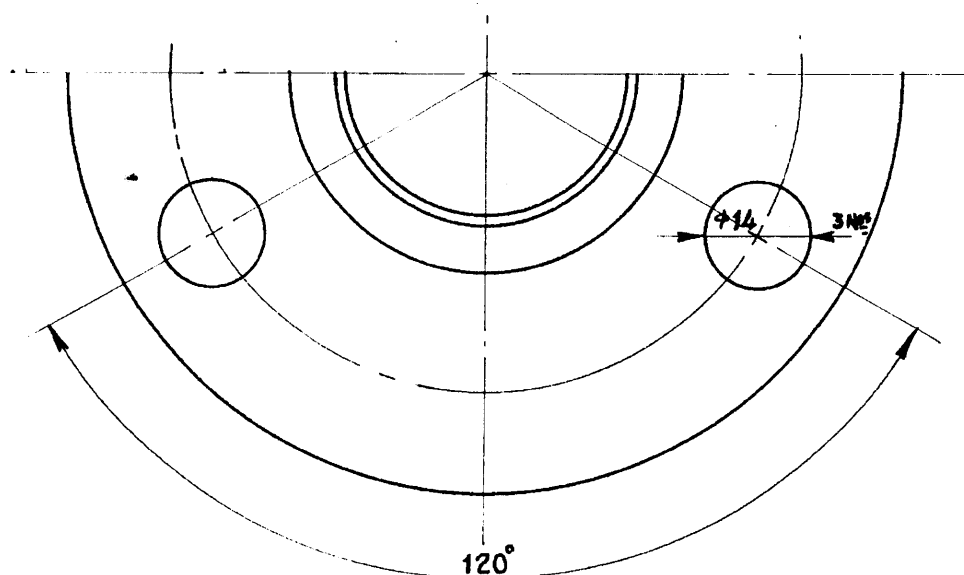
SURFACES TO BE CHROME PLATED TO 0.3 mm. THICK AND GROUND.

1			BM-C30	30CB	IS:7283	6.30	2-M-20&-0423	6
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT.	GROSS WT.	DRAWING NO.
REMARKS: Material according to MR 4				TOTAL NET WT (kg)		CC 00	EC: 07	
SCALE	DRAWN	APPROVED	REFERENCE	ALTERATIONS		DATE	SIGNA- TURE	ALTERATION INDEX
1:1			9188					
	STDS. OFFICER	DATE						
		26.3.68						
MACHINE: PRODUCER GAS PLANT				TYPE: 4513:01		INV. NO.		
TITLE:				DRAWING NO:		07		
PISTON ROD				3-M-20&-1123				
NO. OF SHEETS:				SHEET NO:				

3,2/



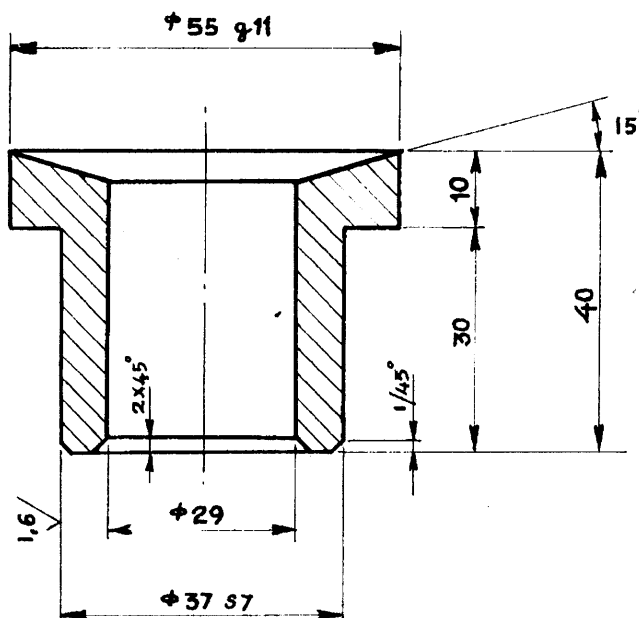
$\phi 55 H11$	- 0.000
	- 0.190
$\phi 37 H8$	+ 0.000
	+ 0.039

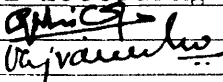


1			BM - C 20	FE 410 WA IS: 2062		1.2x		2.M-20&.0423	7
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET wt	GROSS wt	DRAWING NO.	ITEM NO.
REMARKS: Material according to MR 4				TOTAL NET wt (kg) 11.00 EC 07					
SCALE	DRAWN		REFERENCE	ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX		
1:1	CHECKED		9189						
	APPROVED								
	STDS. OFFICER								
	DATE	26.3.68							
MACHINE: PRODUCER GAS PLANT			TYPE: 4513:01			INV. NO.			
TITLE:			DRAWING NO:			07			
GLAND			4-M-20&.2755						
NO. OF SHEETS			SHEET NO:						



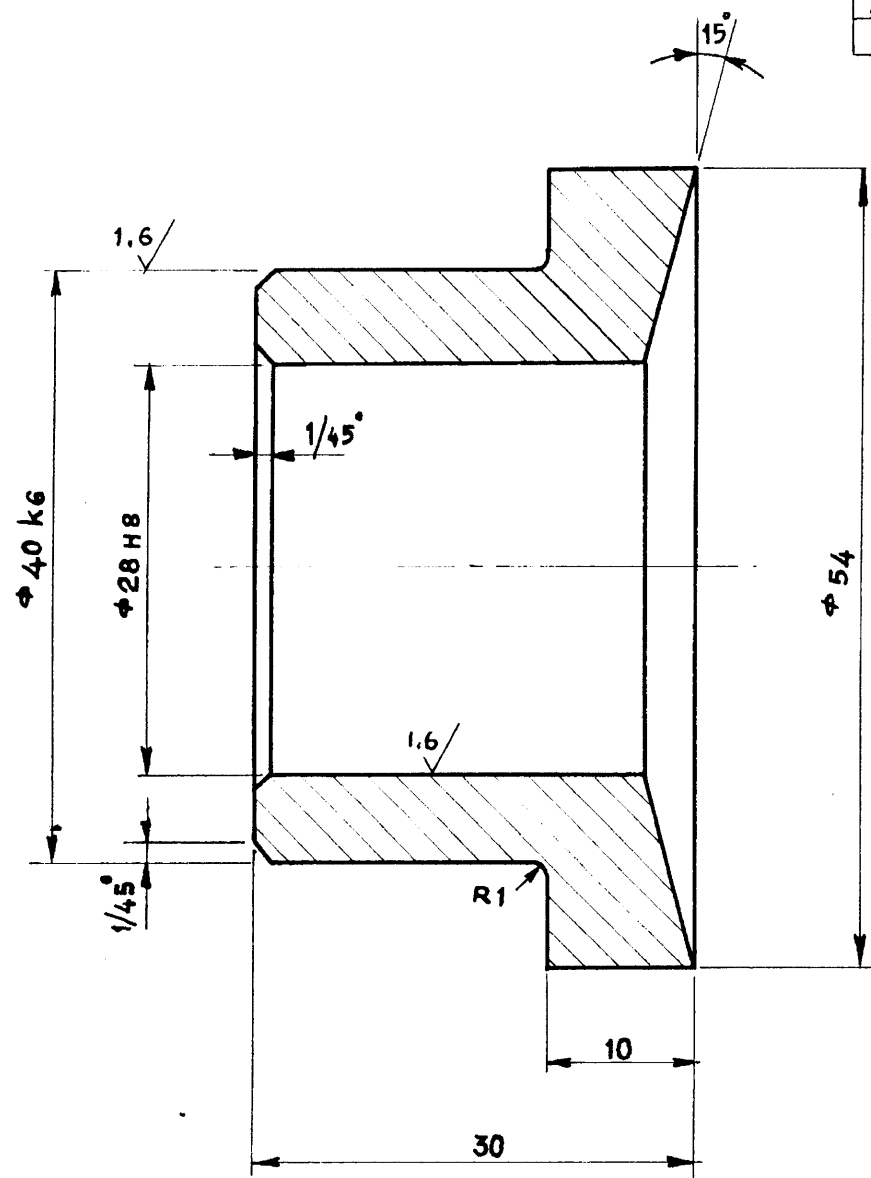
$\phi 55_{811}$	-0,010
	-0,200
$\phi 37_{57}$	+0,068
	+0,043

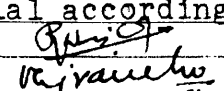
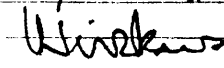
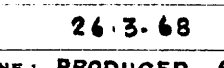


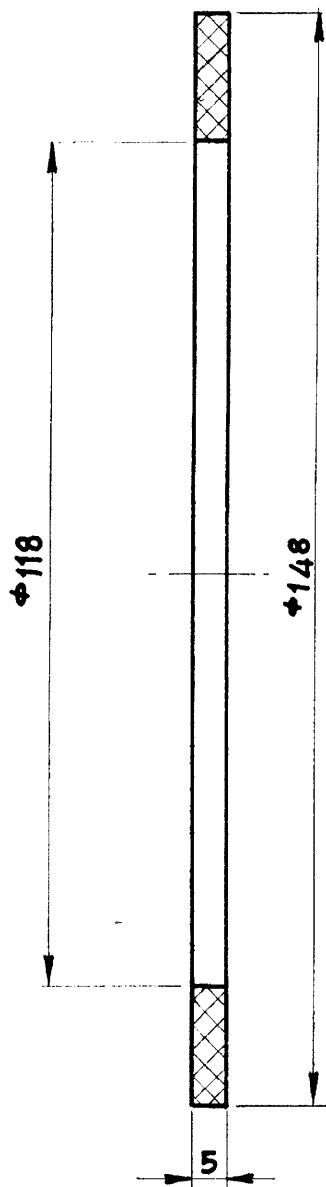
1			BRONZE	PCUSN7 IS:28	0.53		2.M-20&.0423	8
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET wt	GROSS wt	DRAWING NO.
REMARKS: Material according to MR 4				TOTAL NET wt (kg)		CC 17	EC 07	ITEM NO.
SCALE	DRAWN	  26.3.68	REFERENCE	ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX	
1:1	CHECKED		9190					
	APPROVED							
	STDs. OFFICER							
	DATE							
			MACHINE: PRODUCER GAS PLANT		TYPE: 4513:01		INV. NO.	
TITLE:			BUSH		DRAWING NO:		4-M-20&-2756 ⁰⁷	
					NO. OF SHEETS		SHEET NO:	

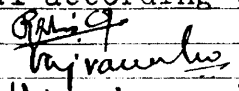
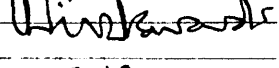
3.2/1.6/

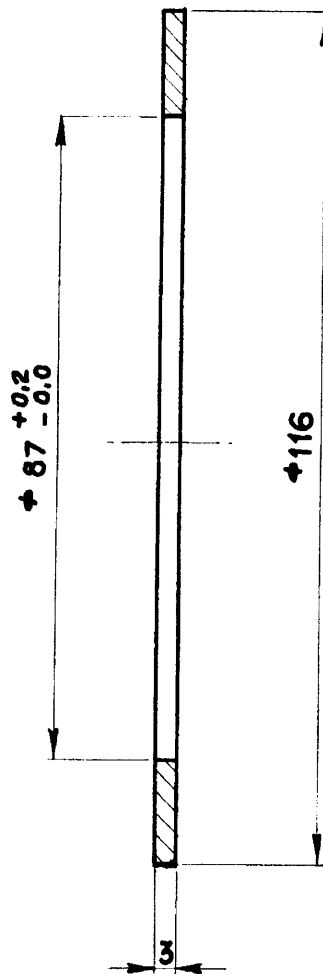
Φ40k6	+0.018
	+0.002
Φ28H8	+0.033
	+0.000



1			BRONZE	PCUSn7 IS:28		0.56		2-M-204-0423	9
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET wt	GROSS wt	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4				TOTAL NET wt (kg) CC 17 EC 07					
SCALE	DRAWN	   26.3.68	REFERENCE	ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX		
2:1	CHECKED		9191						
	APPROVED								
	STDS. OFFICER								
	DATE								
		MACHINE : PRODUCER GAS PLANT		TYPE : 4513:01		INV. NO.			
		TITLE : BUSH		DRAWING NO :		4-M-204-2757 ⁰⁷			
				NO. OF SHEETS		SHEET NO :			

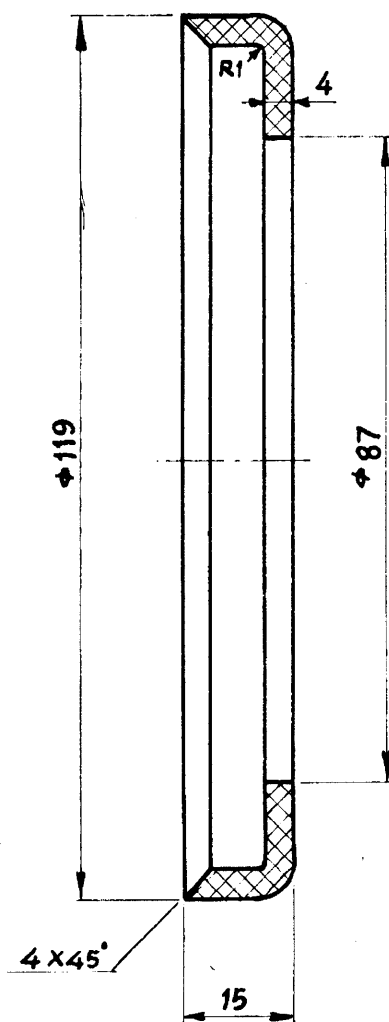


2				SOFT RUBBER						10	
NO. OF PIECES	DESCRIPTION			SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4						TOTAL NET wt (kg) 66.00 EC 07					
SCALE	DRAWN	  26.3.68		REFERENCE	ALTERATIONS		DATE	SIGNA- TURE	ALTERATION INDEX		
1:1	CHECKED			9192							
	APPROVED										
	STDS. OFFICER										
	DATE										
		MACHINE : PRODUCER GAS PLANT				TYPE : 4513:01		INV. NO.			
		TITLE : SEALING RING				DRAWING NO :		07 4-M-208-2758			
						NO. OF SHEETS		SHEET NO :			



CHROMIUM PLATED ALL OVER.

1			BM. C30	30 C8 IS: 7283		0.19		2-M. 20&.0423	11
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4				TOTAL NET Wt (kg) CC 00 EC 07					
SCALE	DRAWN	 26.3.68	REFERENCE	ALTERATIONS		DATE	SIGNA- TURE	ALTERATION INDEX	
1:1	CHECKED		9193						
	APPROVED								
	STDS. OFFICER								
	DATE								
		MACHINE : PRODUCER GAS PLANT			TYPE : 4513 : 01		INV. NO.		
		TITLE :			DRAWING NO :		07		
		RING			4-M. 20&.2759				
					NO. OF SHEETS		SHEET NO :		

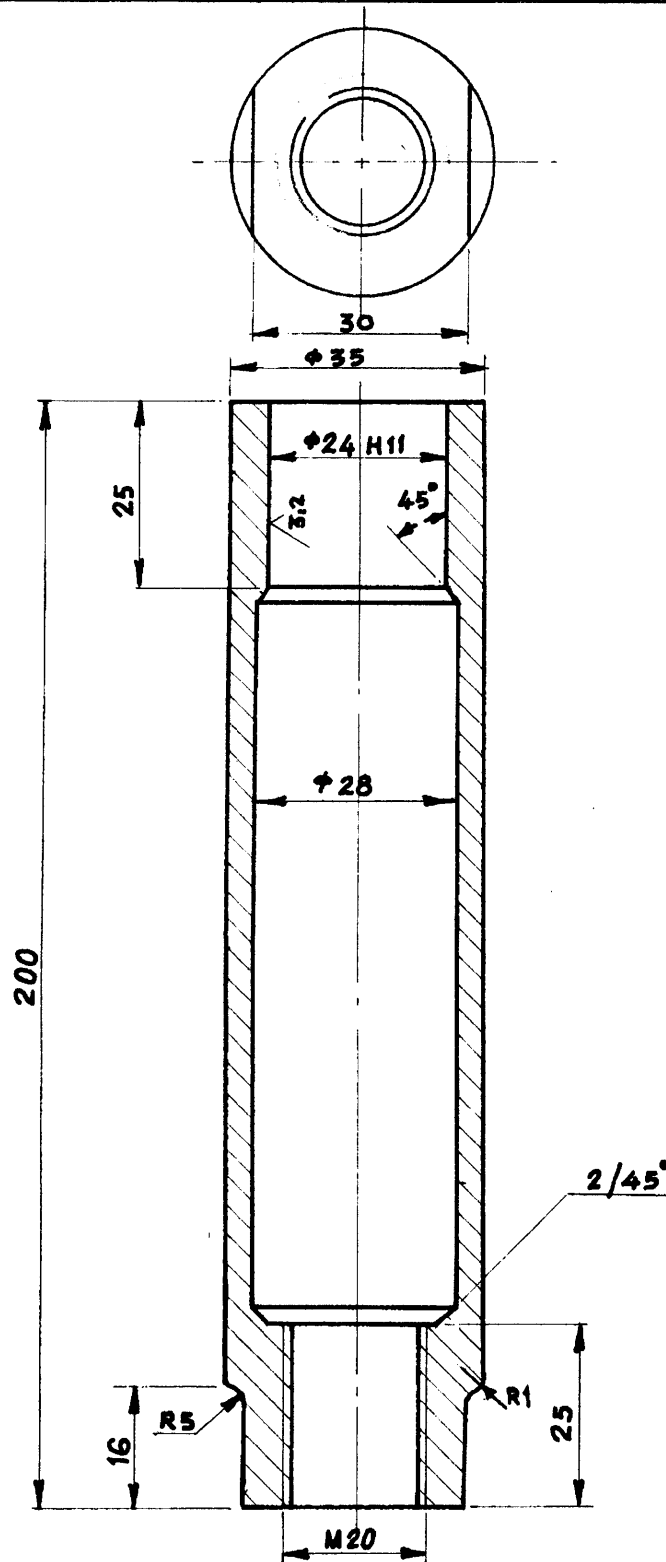


2			LEATHER					2-M-20&-0423	12
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4				TOTAL NET wt (kg) CC 00 EC 00					
SCALE	DRAWN	REFERENCE		ALTERATIONS	DATE	SIGNATURE	ALTERATION INDEX		
1:1	CHECKED	9194							
	APPROVED								
	STDS. OFFICER								
	DATE	26.3.68							
MACHINE : PRODUCER GAS PLANT		TYPE : 4513 : 01		INV. NO.					
TITLE :		DRAWING NO :		07					
PISTON CUP		4-M-20&-2760							
NO. OF SHEETS		SHEET NO :							



6.3 // 3.2 //

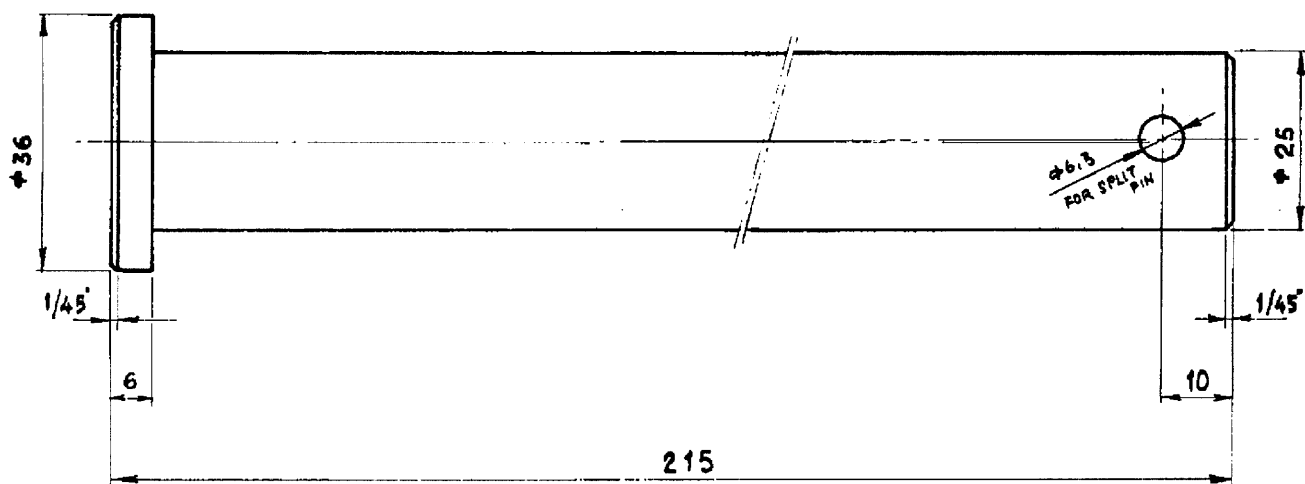
$\phi 24$ H11	+ 0.130
	+ 0.000



1			BM-C 30	30C8 IS:7283	1.01		2.M.20b-0423	13	
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4				TOTAL NET WT (kg) CC DD EC 07					
SCALE	DRAWN	REFERENCE		ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX		
1:1	CHECKED	9195							
	APPROVED								
	STDS. OFFICER								
	DATE	26.3.68							
MACHINE: PRODUCER GAS PLANT			TYPE: 4513:01		INV. NO.				
TITLE:			DRAWING NO:		07				
SLEEVE			4-M.20b-2761						
NO. OF SHEETS			SHEET NO:						



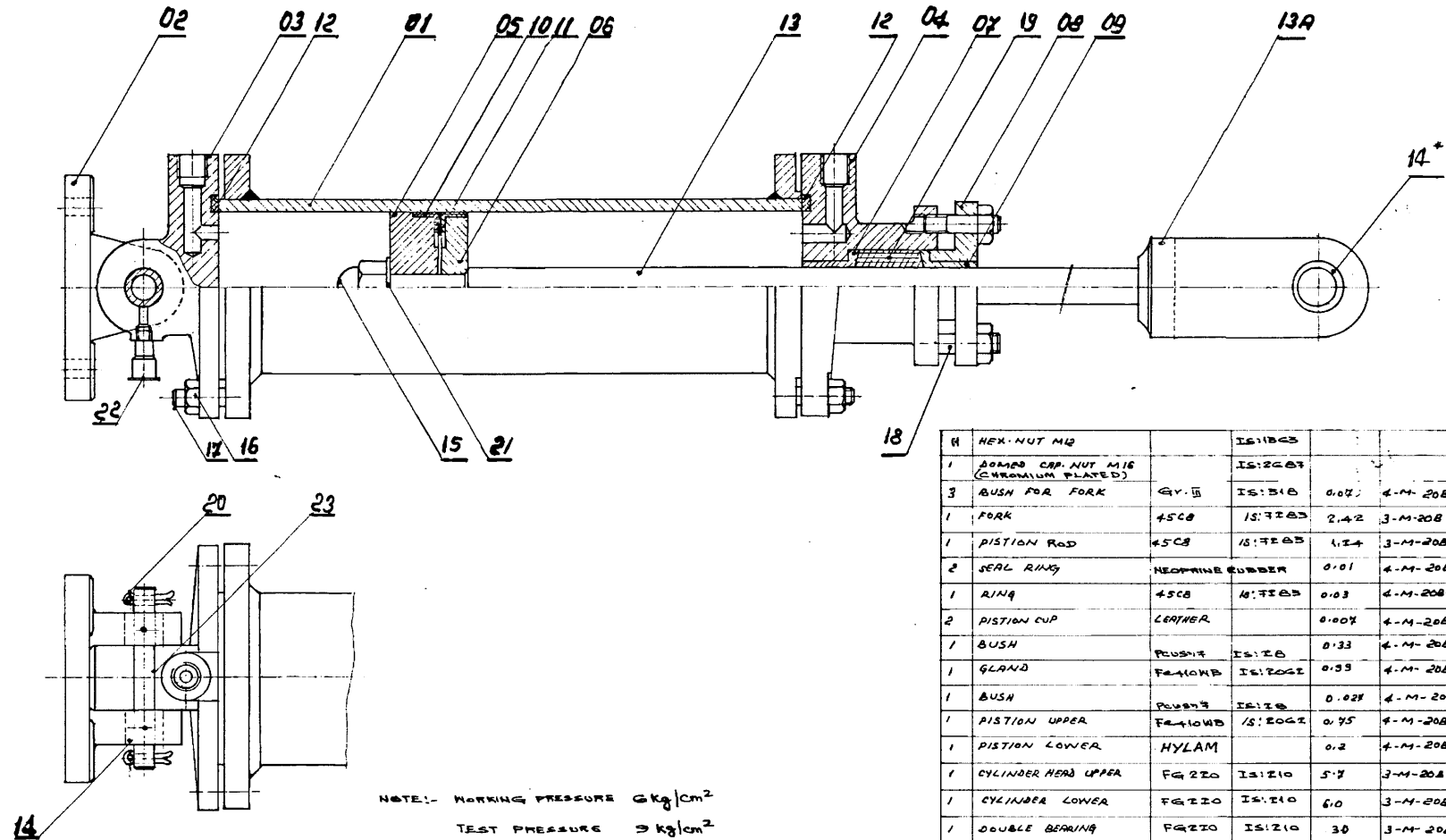
3.2 ✓



1		BM-C30	30C8 IS:7283	1.19	2-M-206-0423	22			
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS: Material according to MR 4			TOTAL NET wt (kg)		CC 00	EC 07	SIGNATURE ALTERATION INDEX		
SCALE	DRAWN	REFERENCE	ALTERATIONS		DATE				
1:1	CHECKED								
	APPROVED								
	STDS. OFFICER								
	DATE	26.8.1968							
MACHINE: PRODUCER GAS PLANT		TYPE: 4513:01		INV. NO.					
TITLE:		DRAWING NO:		07					
PIN		4-M-206-2762							
NO. OF SHEETS		SHEET NO:							



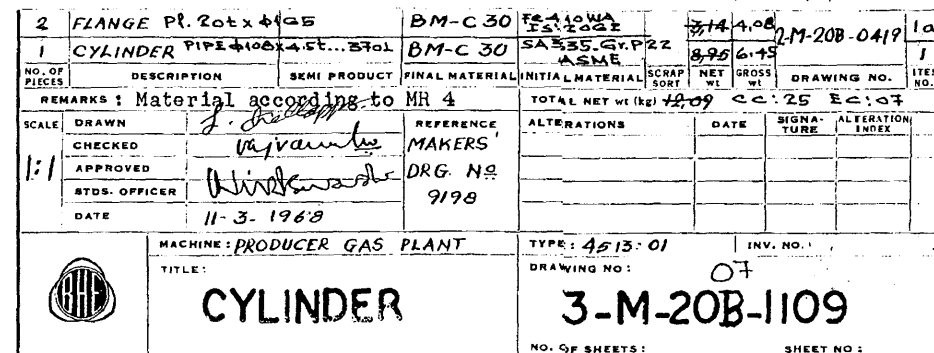
Caution
THIS DRAWING IS OF A NOLE PROTOTYPE
SHOULD NOT BE USED IN ANY
ANOTHER BEARING WITHOUT THE
PERMISSION OF BARAT HEAVY ELE. LTD.
LTD. TRICHYAPALLE - 600 001.

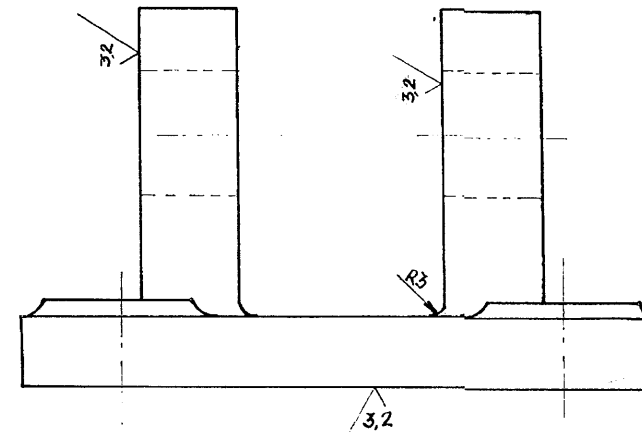
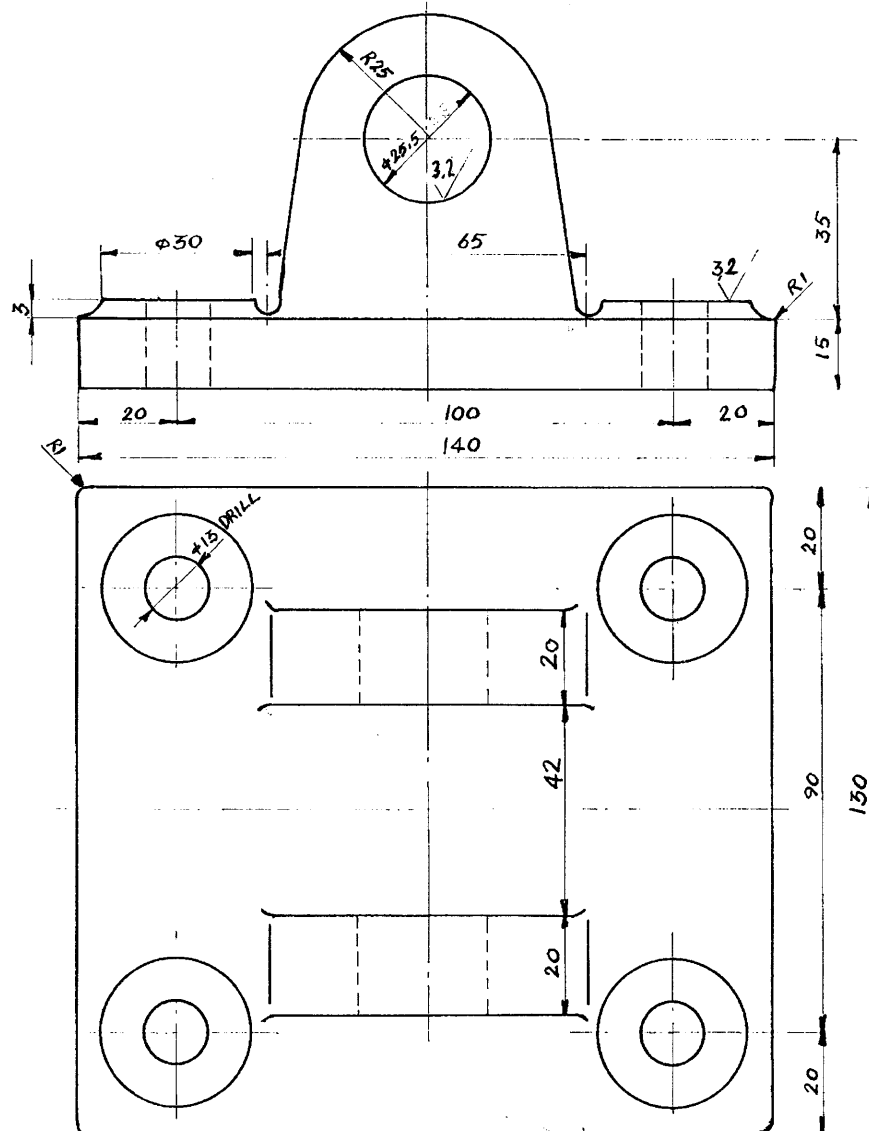


NOTE:- WORKING PRESSURE 6 kg/cm^2
TEST PRESSURE 9 kg/cm^2

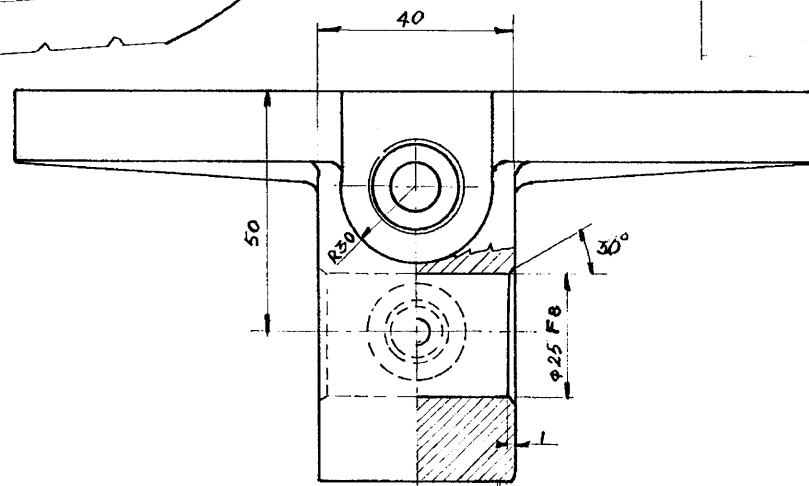
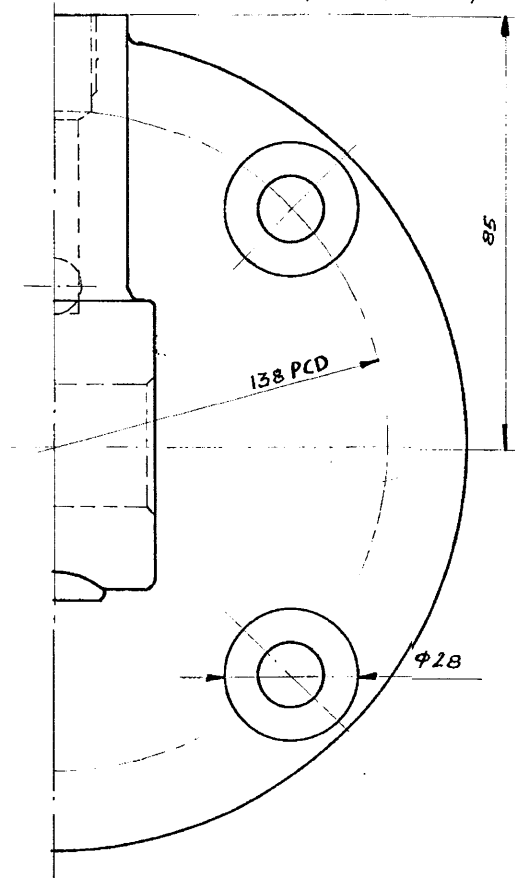
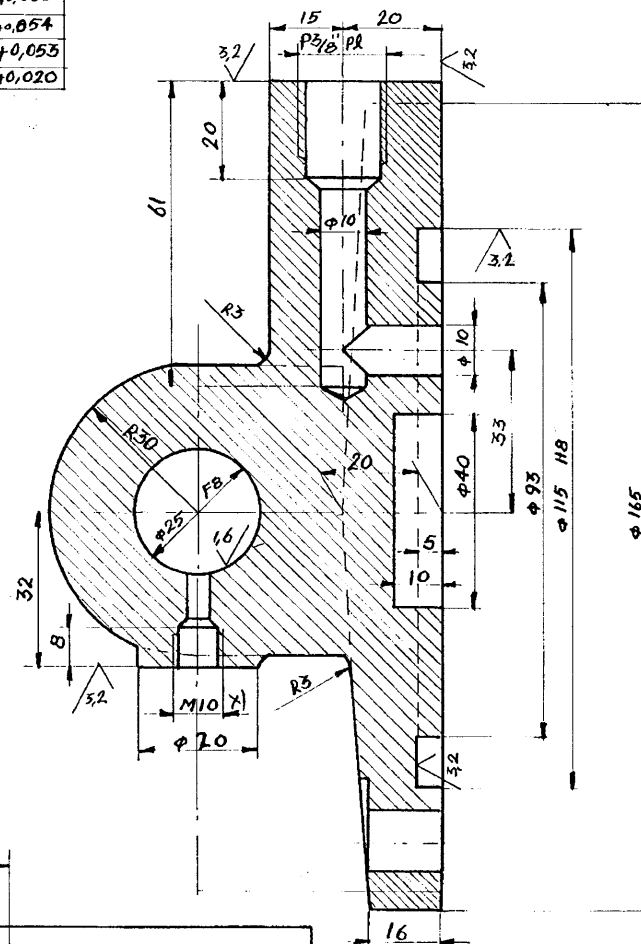
QTY	DESCRIPTION	MATERIAL	STANDARD	GRADING NO.	DATE	SIGN.	REMARKS
1	HEX. NUT M12	IS:1163					
1	BOMBS CAP. NUT M16 (CHROMIUM PLATED)	IS:2267					
3	BUSH FOR FORK	GY-15	IS:510	0.02	4-M-208-02703		
1	FORK	45CB	IS:7125	2.42	3-M-208-01113		
1	PISTON ROD	45CB	IS:7125	1.14	3-M-208-01113		
2	SEAL RING	NEOPRENE RUBBER		0.01	4-M-208-02749		
1	RING	45CB	IS:7125	0.03	4-M-208-2707		
2	PISTON CUP	LEATHER		0.004	4-M-208-2706		
1	BUSH	POWERT	IS:126	0.33	4-M-208-2705		
1	GLAND	FEALONB	IS:2002	0.33	4-M-208-2704		
1	BUSH	POWERT	IS:126	0.024	4-M-208-2703		
1	PISTON UPPER	FEALONB	IS:2002	0.75	4-M-208-2702		
1	PISTON LOWER	HYLAM		0.2	4-M-208-2701		
1	CYLINDER HEAD UPPER	FG 220	IS:1210	5.7	3-M-208-1112		
1	CYLINDER LOWER	FG 220	IS:1210	6.0	3-M-208-1111		
1	DOUBLE BEARING	FG 220	IS:1210	30	3-M-208-1110		
1	CYLINDER			10.52	3-M-208-1109		
				31.52			
1	PACKING	ASBESTOS ROPE					
5	STUD A M12X50L	IS:1862.A.G.G.					
2	STUD A M12X50L	IS:1862.A.G.G.					
1	PRODUCER GAS PLANT	4513:01					
1	HYD. CYLINDER ASSY.	2.M-208-0419					
	(COVER OPENING)						

0,8

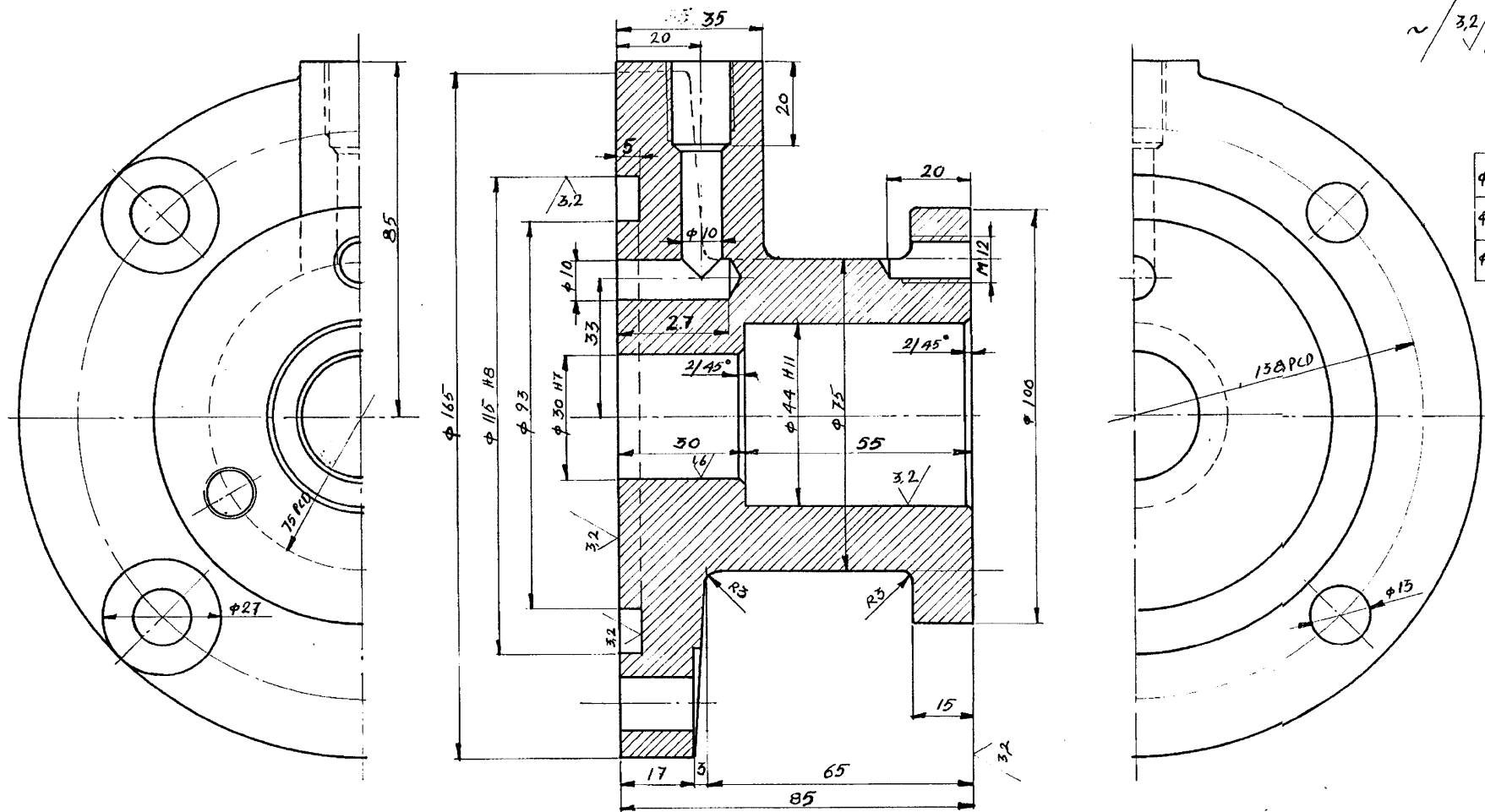




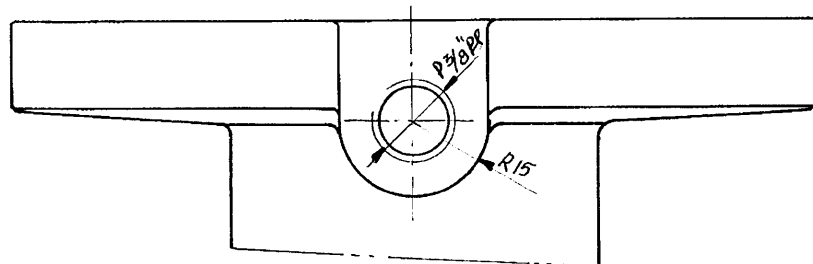
1			C.I, GR20 IS:210 FG 220	IS:210	3.0	2-M-20B-0419 2
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WE
REMARKS : Material according to MR 4			TOTAL NET WT (kg) 66.00			
SCALE	DRAWN	CHECKED	APPROVED	SYDS. OFFICER	DATE	INVENTORY
1:1					8-3-1968	
MACHINE : PRODUCER GAS PLANT			TYPE : 4513.01			
TITLE : DOUBLE BEARING			DRAWING NO : 3-M-20B-1110			
NO. OF SHEETS :			SHEET NO :			



1				C.1 GR 20 15:210 F&T20		IS: 110		6.0		2-M-20B-0A19		3							
NO. OF PIECES		DESCRIPTION		SEMI PRODUCT		FINAL MATERIAL		INITIAL MATERIAL		SCRAP SORT		NET WT		GROSS WT		DRAWING NO.		ITEM NO.	
REMARKS : Material according to MR 4																			
SCALE		DRAWN		CHECKED		APPROVED		STDS. OFFICER		DATE		REFERENCE		MAKERS		DRAWING NO		2200	
1:1		J. Reddy		Vijayanthi		Niranjana				8-3-1968									
MACHINE: PRODUCER GAS PLANT																			
TITLE:		CYLINDER HEAD LOWER																	
TYPE: 4513: 01		INV. NO. OF 3-M-20B-1111																	
DRAWING NO:		NO. OF SHEETS: SHEET NO:																	



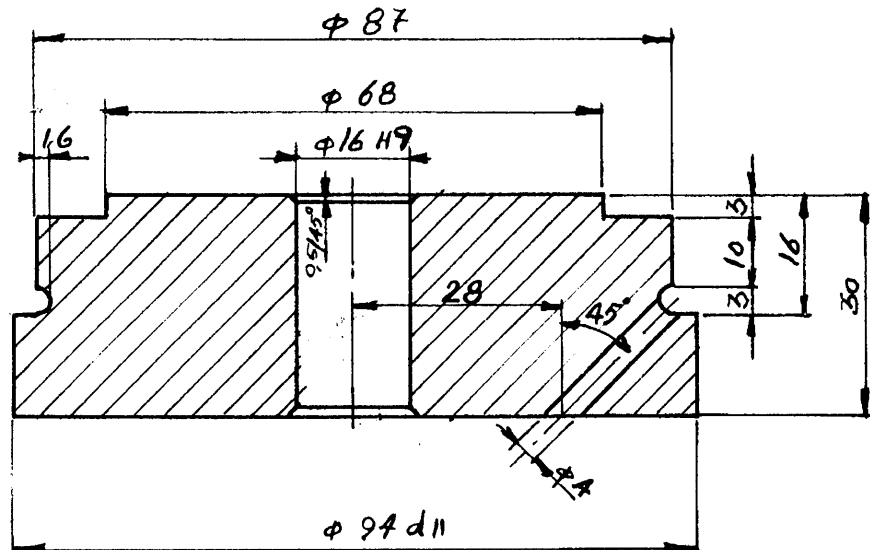
φ115H8	+0,000
φ44H11	+0,054
φ50H7	+0,160
φ27	+0,000
φ15	+0,021



1		C. I. GR 20	F4220	5,7	2-M-20B-0419	4				
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	TOTAL NET wt (kg)	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS	Material according to MR 4		REFERENCE	ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX			
SCALE	DRAWN	CHECKED	APPROVED	STDS. OFFICER	DATE					
1:1					6-3-1968					
MACHINE: PRODUCER GAS PLANT			TYPE: 4513:01		INV. NO.					
TITLE: CYLINDER HEAD UPPER			DRAWING NO: 3-M-20B-1112		NO. OF SHEETS:		SHEET NO:			

3,2

$\phi 94 \text{ d11}$	0,120
	0,340
$\phi 16 \text{ H9}$	+0,000
	+0,043



1			HYLAM.		0,2		2-M-20B-0419	5
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET Wt	GROSS Wt	ITEM NO.
REMARKS : Material according to MR 4				TOTAL NET wt (kg) 00,00 00,07				
SCALE	DRAWN	REFERENCE	ALTERATIONS					
1:1	CHECKED	MAKERS'	DATE					
	APPROVED	DRG NO.	SIGNATURE					
	STDS. OFFICER	9202	ALTERATION INDEX					
	DATE	5-3-1968						
MACHINE : PRODUCER GAS PLANT			TYPE : 4513:01			INV. NO.		
TITLE:			DRAWING NO:			07		
PISTON LOWER			4-M-20B-2710					
NO. OF SHEETS			SHEET NO :					



CAUTION

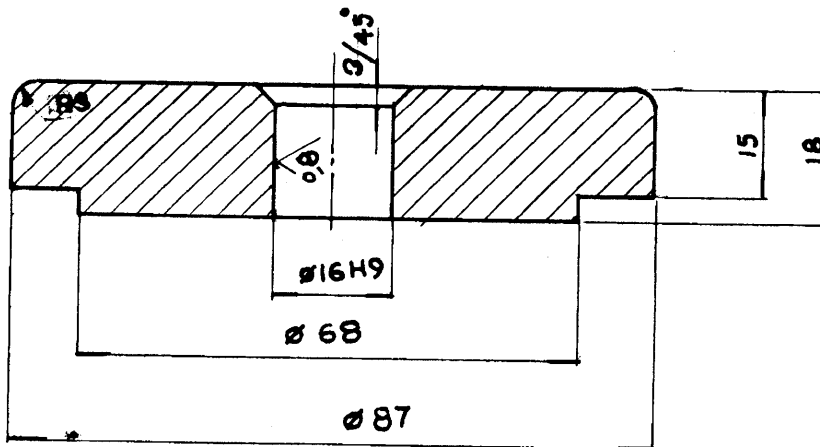
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BHARAT HEAVY ELECTRICALS LTD.,
TIRUCHIRAPALLI-14

3.2 / 0.8

Ø 16H9

+ 0, 000

+ 0, 043



CHROMIUM PLATED ALL OVER

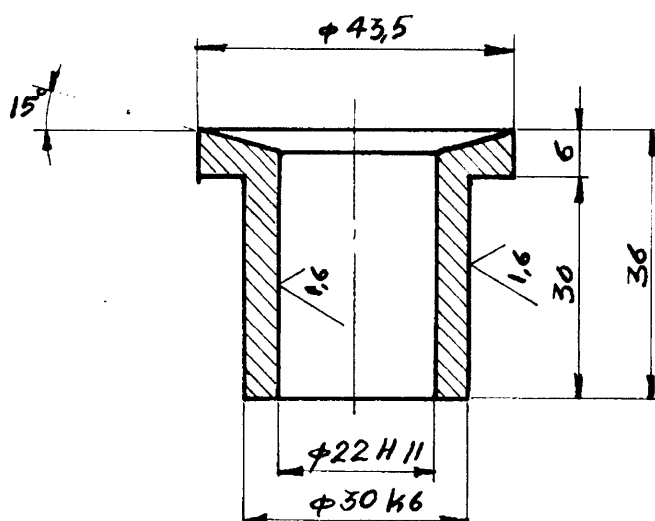
1			BM-C 30	Fe 410WB 7.5: 2062	0.75	2-M. 20B-0419	6		
NO. OF PIECES	DESCRIPTION	SEMI-PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET Wt(kg)	GROSS Wt(kg)	DRAWING NO.	ITEM NO.
REMARKS				TOTAL NET Wt (kg) 22.00 EC:07					
SCALE	V. Jayaraman		REFERENCE	ALTERATIONS					
1:1	S. Shrinivasan		MAKERS	DATE					
	S. Rajan		DRG. NO	SIGNATURE					
	23.09.76		9203	INDEX					
MACHINE PRODUCER GAS PLANT				TYPE: 4513:01		INV. NO.			
TITLE:				DRAWING NO.					
PISTON UPPER				4-M. 20B-2702					
NO. OF SHEETS				SHEET NO.					



3,2

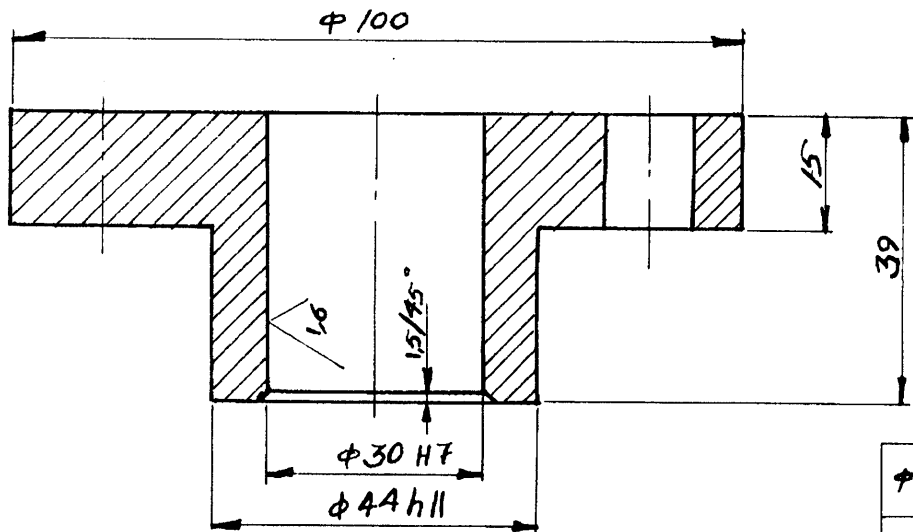
1,6

$\phi 22 H11$	+0,000
	+0,130
$\phi 30 h6$	+0,002
	+0,015

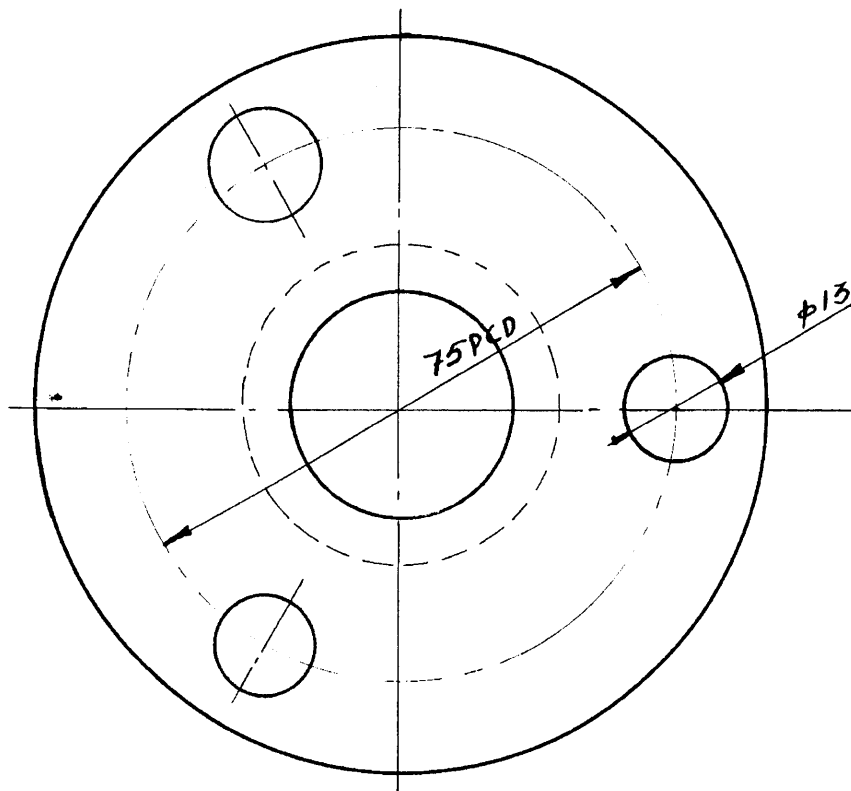


1			BRONZE GR2 15:318		0,027		2-M-20B-0419	7
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	ITEM NO.
REMARKS: Material according to MR 4				TOTAL NET wt (kg) 00:17 80:07				
SCALE	DRAWN	REFERENCE	ALTERATIONS					
1:1	CHECKED	MAKERS'	DATE					
	APPROVED	DRAWING NO.	SIGNATURE					
	STDS. OFFICER	9204	ALTERATION INDEX					
	DATE	6-3-1968						
MACHINE: PRODUCER GAS PLANT		TYPE: 4513: 01		INV. NO.				
TITLE:		DRAWING NO:		07				
BUSH		4-M-20B-2703						
NO. OF SHEETS		SHEET NO:						





$\phi 30 \text{ HF}$	+0,000
	+0,021
$\phi 44 \text{ H11}$	-0,000
	-0,160



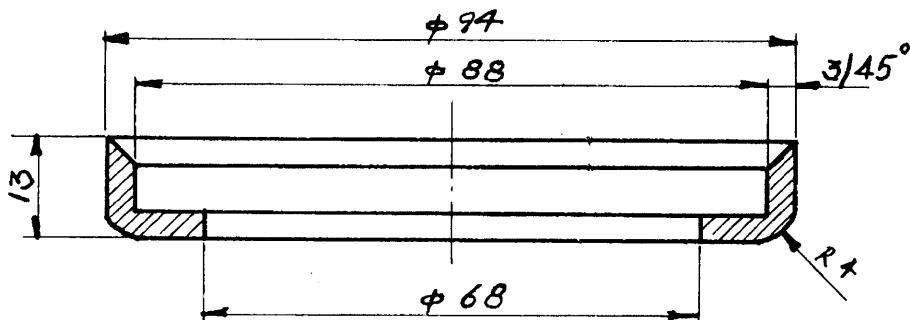
1			FE 410NB BM-C 20	IS: 2062		0,99		2-M-20B-0419	8
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET wt	GROSS wt	DRAWING NO.	ITEM NO.
REMARKS: Material according to MR 4				TOTAL NET wt (kg) 00:00 ± 0,07					
SCALE	DRAWN		REFERENCE	ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX		
1:1	CHECKED		MAKERS'						
	APPROVED		DRG. NO.						
	STDS. OFFICER		9205						
	DATE	5-3-1968							
MACHINE: PRODUCER GAS PLANT		TYPE: 45/3:01		INV. NO.					
TITLE:		DRAWING NO:		07					
GLAND		4-M-20B-2704							
NO. OF SHEETS		SHEET NO:							



1,6

Technical drawing of a mechanical part, likely a bush or sleeve, showing a cross-section. The part has a central hole with a diameter of 22 mm and a total outer diameter of 30 mm. The length of the part is 45 mm. The drawing includes dimensions for the hole diameter (22 mm), the outer diameter (30 mm), the length (45 mm), and the thickness of the material (1.6 mm). A 15-degree angle is indicated on the left side.

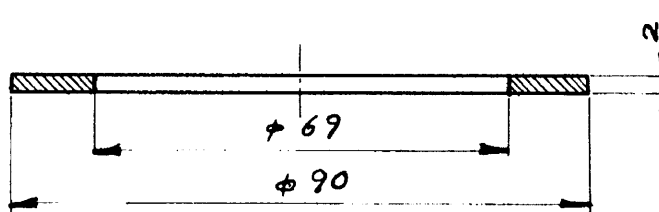
1			BRONZE GR2 IS 318			933		2-M-20B-0419	9
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4				TOTAL NET wt (kg) 22.17 E.C. 07					
SCALE	DRAWN	<i>L. De la... Vijayanthi Whiskered</i>	REFERENCE	ALTERATIONS	DATE		SIGNA- TURE	ALTERATION INDEX	
1:1	CHECKED		MAKERS'						
	APPROVED		DRG. N ^o .						
	STDs. OFFICER		9206						
	DATE	6-3-1968							
			MACHINE: PRODUCER GAS PLANT	TYPE: 4513:01		INV. NO.			
			TITLE:			DRAWING NO:			
			BUSH	07 4-M-20B-2705					
				NO. OF SHEETS		SHEET NO:			



2			LEATHER			0,007	2-M-20B-0419	10
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.
REMARKS : Material according to MR 4				TOTAL NET wt (kg) 00,16 Ec:07				
SCALE	DRAWN	<i>J. Grellet</i> <i>Vijayachandran</i> <i>W. K. S. S. S.</i> 6-3-1968	REFERENCE	ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX	
1:1	CHECKED		MAKERS'					
	APPROVED		DRG N°					
	STDS. OFFICER		9207					
	DATE							
MACHINE : PRODUCER GAS PLANT		TYPE : 4513:01		INV. NO.				
TITLE :		DRAWING NO :		07				
PISTON CUP		4-M-20B-2706						
NO. OF SHEETS		SHEET NO :						

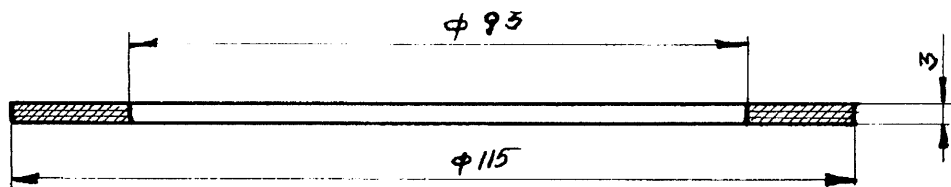


3.2

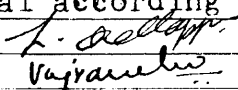
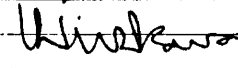


CHROMIUM PLATED ALL OVER

1			BM-C 30 45CB	IS: 7203		0.05		2-M-20B-0419	11
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4				TOTAL NET wt (kg) 22.00 EC:07					
SCALE	DRAWN	2. J. J. J.	REFERENCE	ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX		
1:1	CHECKED	by v. a. v.	MAKERS'						
	APPROVED	Whitaker	DRG. NO.						
	STDS. OFFICER		9208						
	DATE	6-3-1968							
		MACHINE : PRODUCER GAS PLANT		TYPE : 4513: 01		INV. NO.			
		TITLE : RING		DRAWING NO : 4-M-20B-2707		07			
				NO. OF SHEETS		SHEET NO :			



SHORE HARDNESS A 75 ± 2.

2			SOFT RUBBER NEOPRENE RUBBER		0,01		2-M-20B-0419	12	
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS : Material according to MR 4			TOTAL NET wt (kg) 20,00 EC:07						
SCALE	DRAWN	  6-3-1968	REFERENCE MAKERS'	ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX		
1:1	CHECKED		DRG. NO.						
	APPROVED		9209						
	STDS. OFFICER								
	DATE								
		MACHINE : PRODUCER GAS PLANT		TYPE : 4513: 01		INV. NO.			
		TITLE:		DRAWING NO:		07			
		SEAL RING		4-M-20B-2708					
				NO. OF SHEETS		SHEET NO :			

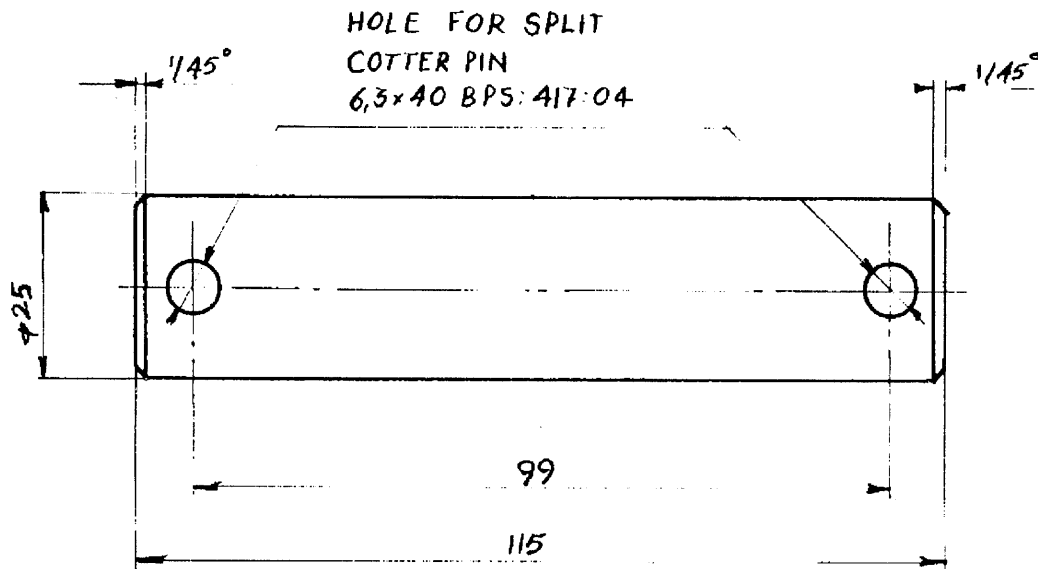
1.6

+0,033



4-M-20B-2709

3,2



1			BM-C30 30CB	IS: 7283	0A25	2-M-20B-0419	23		
NO. OF PIECES	DESCRIPTION	SEMI PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET WT	GROSS WT	DRAWING NO.	ITEM NO.
REMARKS: Material according to MR 4				TOTAL NET wt (kg) 66.31. E0:07					
SCALE	DRAWN		REFERENCE	ALTERATIONS	DATE	SIGNA- TURE	ALTERATION INDEX		
1:1	CHECKED	<i>V. V. V. V. V.</i>							
	APPROVED	<i>W. K. K. K. K.</i>							
	STDS. OFFICER								
	DATE	22-3-1968							
MACHINE: PRODUCER GAS PLANT				TYPE: 4518:01		INV. NO.			
TITLE: PIN (φ25x115x99)				DRAWING NO: 4-M-20B-2746		07			
				NO. OF SHEETS		SHEET NO:			