

BHARAT HEAVY ELECTRICALS LIMITED,
(A Government of India Enterprises)
Heavy Plates & Vessels Plant
Visakhapatnam – 530 012 INDIA.
Web Site: www.bhelviz.co.in



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E-Mail : skmishra@bhelviz.co.in

NOTICE INVITING TENDER(NIT)

**Category of Tender: TWO BID
(PRICED + UN - PRICED)**

**SUB: Mechanical items for 22mm plate
bending roll machine**

Our Ref: [MM/2/10/3537/CAP/W-017/5017](#)

DATE: 10.04.2015

Sealed quotations in duplicate are invited from suppliers on **or before 08.05.2015** **SUPERSCRIBING OUR REFERENCE AND CATEGORY OF TENDER** on the cover, for supply of the under mentioned stores within the above due date, otherwise send **REGRET LETTER**, strictly subject to the Terms & Conditions attached herewith.
LATE TENDERS ARE NOT ACCEPTABLE.

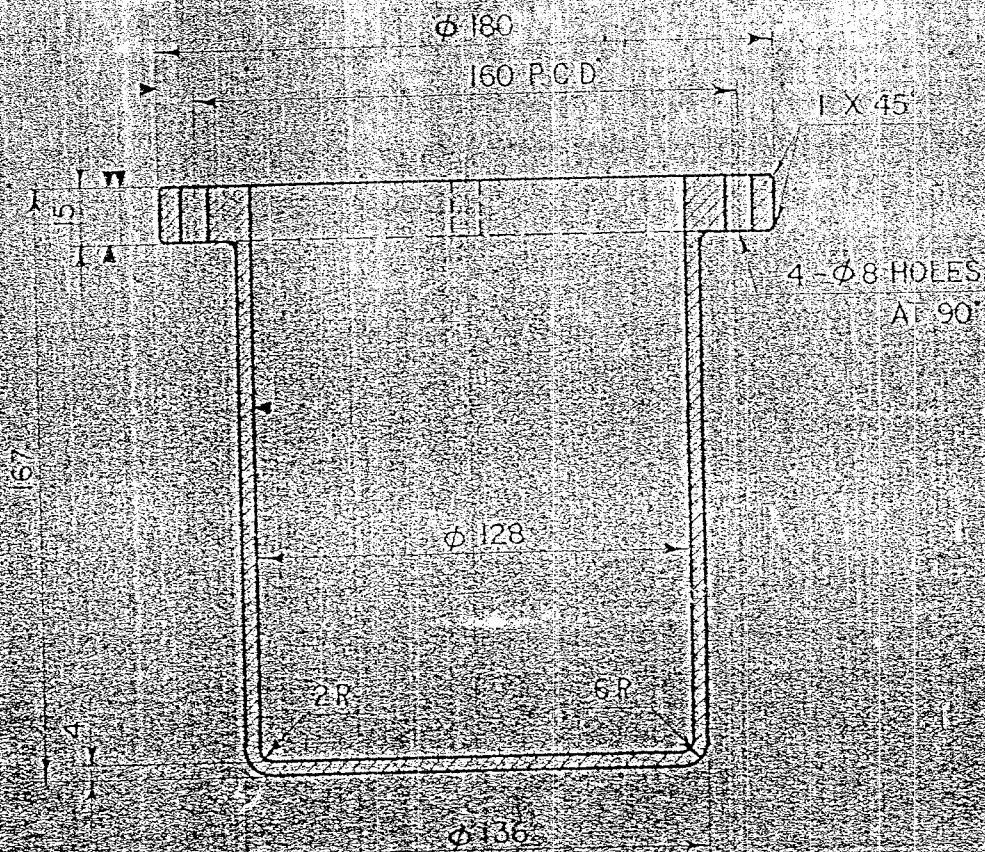
ITEM No.	DESCRIPTION / SPECN. / SIZE	QTY									
1.	Mechanical items for 22mm plate bending roll machine	Lot									
	Delivery: Delivery should be completed within 3 months from PO date Encl: <table><tr><td>1. List of Items</td><td>.....</td><td>1 Pages</td></tr><tr><td>2. Drawings</td><td>.....</td><td>20 Pages</td></tr><tr><td>3. General Terms/ commercial terms and conditions (INCLUDING CHECK LIST)</td><td>.....</td><td>9 Pages</td></tr></table>	1. List of Items	1 Pages	2. Drawings	20 Pages	3. General Terms/ commercial terms and conditions (INCLUDING CHECK LIST)	9 Pages	
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For BHARAT HEAVY ELECTRICALS LIMITED,

For MANAGER (MP-Misc. & CPS)

List of items for 22 MM Plate Bending Machine:

S.No	Drawing Number	Item Name	Quantity
1.	M4/1315/G7-97	Lead Screw Drum	2 Nos.
2.	M4/1448/G7-101	End cover For top roller	1 No.
3.	M4/1450/G7-103	End cover for swing out cylinder	1 No.
4.	M4/1451/G7-104	Spacer for piston rod (swing out unit)	2 Nos.
5.	M4/1452/G7-105	Eye Bolt (swing out unit)	2 Nos.
6.	M4/1453/G7-106	Chuck Nut (swing out unit)	2 Nos.
7.	M4/1478/G7-109	Top Roller Bearing (Hinge side)	2 Nos.
8.	M4/996/G7-67	Bearing Block	2 Nos.
9.	M4/509/G7-24	Bush For rear End of Top	2 Nos.
10.	M4/570/G7-29	Couplings for 22M	2 Nos.
11.	M3/555/G7-27	Detailed Part of Piston For 22mm Bending Roll	2 Nos. each
12.	M3/520/G7-25	Nut For 22 mm Bending roll	2 Nos.
13.	M3/457/G7-15	Element of Flexible (Bibby type) Coupling for plate	2 Nos.
14.	M3/3481/G7-196	Locking pin for 22 mm Bending roll	2 Nos.
15.	M3/1449/G7-102	Piston (swing Out unit)	1 No.
16.	M3/1321/G7-98	Worm Wheel	2 Nos.
17.	M3/1314/G7-96	Flange	4 Nos.
18.	M2/1322/G7-99	Worm Shaft	2 Nos.
19.	M2/1447/G7-100	Half Bearings	8 Nos.
20.	M2/1477/G7-108	Top Roller Bearing Block	1 No.



QTY : 2 NOS

MATL : STEEL
SPEC : IS 226

BHARAT HEAVY PLATE & VESSELS LTD

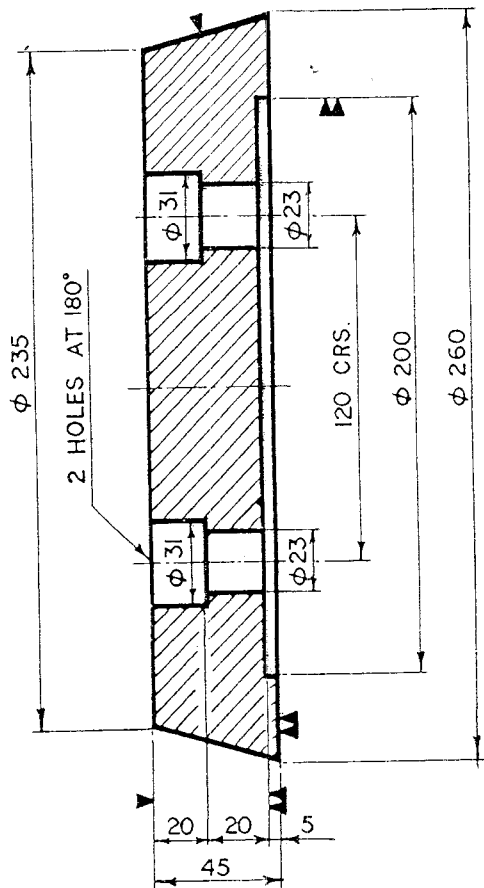
DGN

LEAD SCREW DRUM

DATE

Signature

REV 22 * ENDING ROL: 40 0022



ITEM No.	DESCRIPTION	MATL./SPEC.	QTY.	REMARKS
1	END COVER	STEEL I.S. 226	1	



BHARAT HEAVY PLATE & VESSELS LTD

VISAKHAPATNAM-INDIA

PLANT
MAINTENANCE

END COVER FOR TOP ROLLER

DGN.

FOR PLATE BENDING M/C.

DRN.

Sekar

M/C.TYPE

XZM 4000/22

INV. No. 22203

CHD.

[Signature]

SCALE.

SIZE.

DRAWING No.

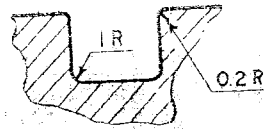
APRD.

A₄

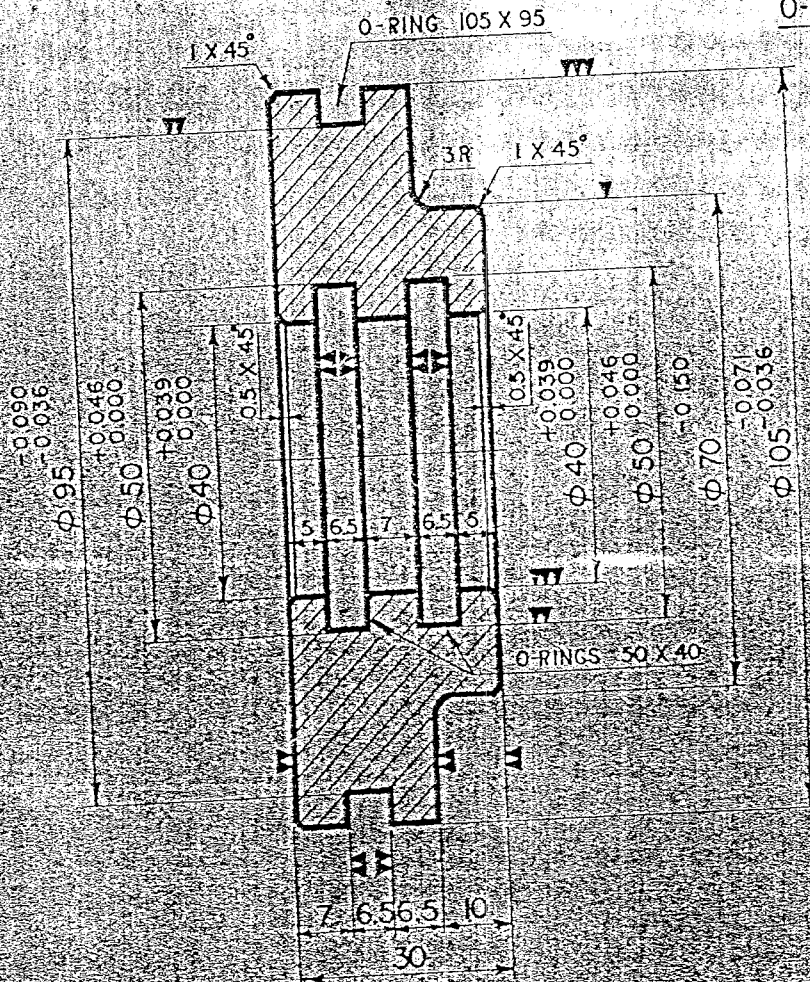
M₄ / 1448 / G7-101

ROUGH MACHINING
FINE MACHINING
GRINDING OR EQUIVALENT

ALL DIMENSIONS ARE IN MILLIMETRES
UNLESS OTHERWISE STATED.



O-RING GROOVE DETAIL



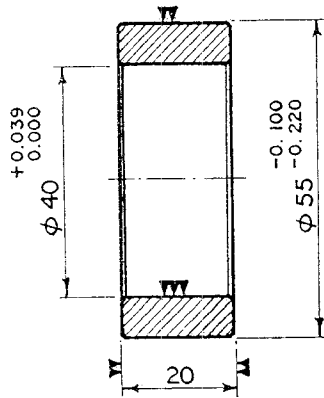
ITEM No.	DESCRIPTION	MATL./SPEC.	QTY	REMARKS
1	END COVER	STEEL EN9	1	



BHARAT HEAVY PLATE & VESSELS LTD
VISAKHAPATNAM-INDIA

ALL MACHINING
DIMENSIONS ARE IN MILLIMETRES
UNLESS OTHERWISE STATED.

PLANT MAINTENANCE	END COVER FOR SWING OUT CYLINDER		
DGN.	FOR PLATE BENDING M/C.		
DRN	M/C TYPE XZM 4000/22	INV. No	22203



FOR PISTON REFER DRG. No. M₃/1449/G7-102

ITEM No.	DESCRIPTION	MATL./SPEC.	QTY.	REMARKS
I	SPACER	STEEL ; EN 9		

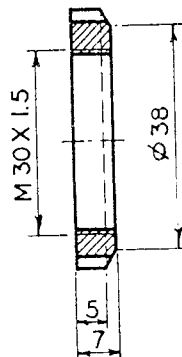
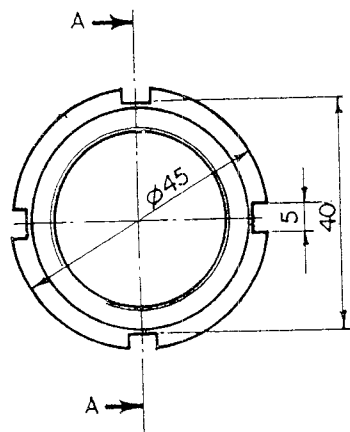


BHARAT HEAVY PLATE & VESSELS LTD

VISAKHAPATNAM-INDIA

▼ ROUGH MACHINING
 ▼ FINE MACHINING
 ▼ GANDING OR EQUIVALENT
 ALL DIMENSIONS ARE IN MILLIMETRES
 UNLESS OTHERWISE STATED.

PLANT MAINTENANCE		SPACER FOR PISTON ROD (SWING OUT UNIT)		
DGN.		FOR PLATE BENDING M/C.		
DRN.	<i>Seller</i>	M/C.TYPE XZM 4000/22	INV. No. 22203	
CHD.	<i>[Signature]</i>	SCALE.	SIZE.	DRAWING No.
APRD.			A ₄	M ₄ /1451/G7-104



SECTION A A



ALL OVER

FOR EYE BOLT REFER DRG.No.

M₄/1452/G7-105

ITEM No.	DESCRIPTION	MATL./SPEC.	QTY.	REMARKS
1	CHUCK NUT FOR EYE BOLT	STEEL ; EN 9		



BHARAT HEAVY PLATE & VESSELS LTD

VISAKHAPATNAM-INDIA

PLANT
MAINTENANCE

CHUCK NUT (SWING OUT UNIT)

DGN.

FOR PLATE BENDING M/C.

DRN.

Sekhar

M/C.TYPE XZM 4000/22

INV. No. 22203

CHD.

[Signature]

SCALE.

SIZE.

DRAWING No.

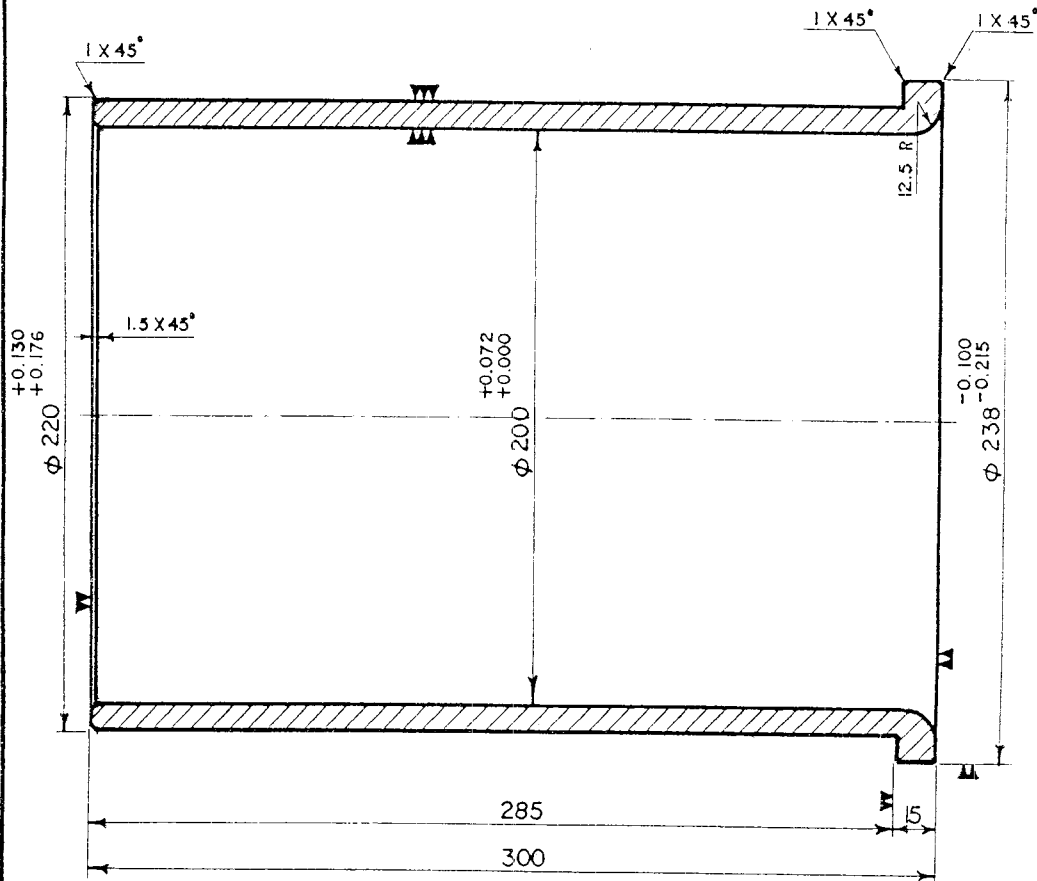
APRD.

A₄

M₄/1453/G7-106

▼ ROUGH MACHINING
▼ FINE MACHINING
▼ GRINDING OR EQUIVALENT

ALL DIMENSIONS ARE IN MILLIMETRES
UNLESS OTHERWISE STATED.



FOR BEARING BLOCK REFER DRG. M₂/1477/G₇-108

REF.: ITEM No. 110-3 IN MANUAL SHEET No. 3.

ITEM No.	DESCRIPTION	MATL./SPEC.	QTY.	REMARKS
1	BEARING	BRONZE ; I.S. 318	1	



BHARAT HEAVY PLATE & VESSELS LTD

VISAKHAPATNAM-INDIA

PLANT
MAINTENANCE

TOP ROLLER BEARING (HINGE SIDE)

DGN.

FOR PLATE BENDING M/C.

DRN.

Seena

M/C TYPE XZM 4000/22

INV. No. 22203

CHD.

101

SCALE.

SIZE.

DRAWING No.

APRD.

—

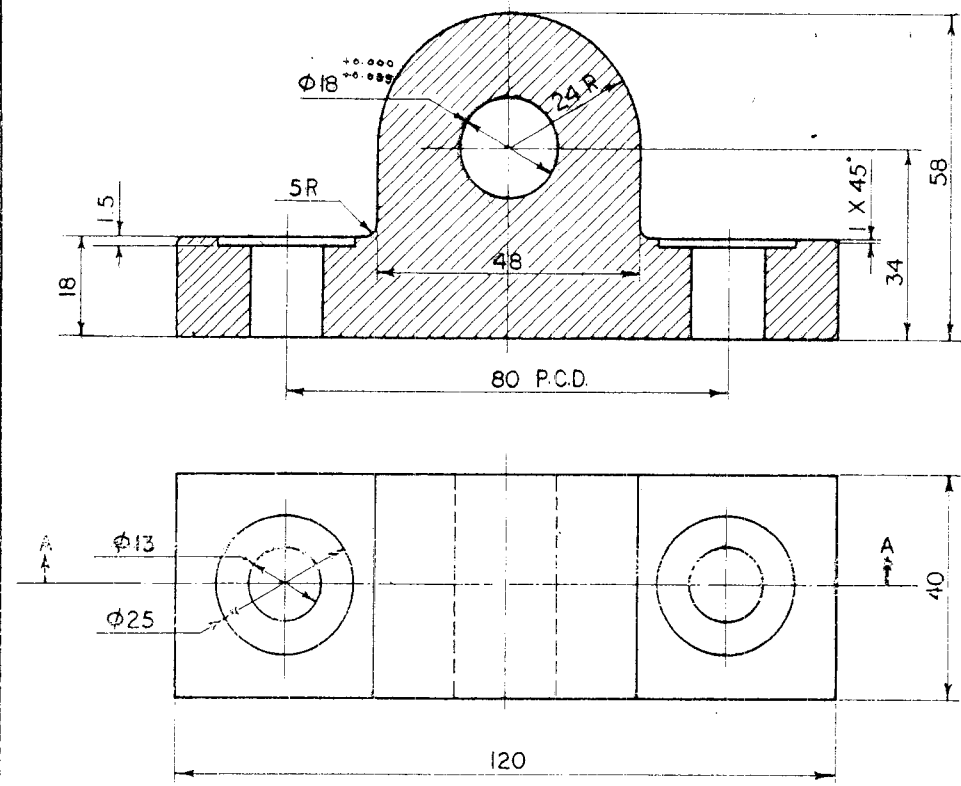
A₄

M₄/1478/G₇-109

ROUGH MACHINING
FINE MACHINING
GRINDING OR EQUIVALENT

ALL DIMENSIONS ARE IN MILLIMETRES
UNLESS OTHERWISE STATED.

SECTION A-A

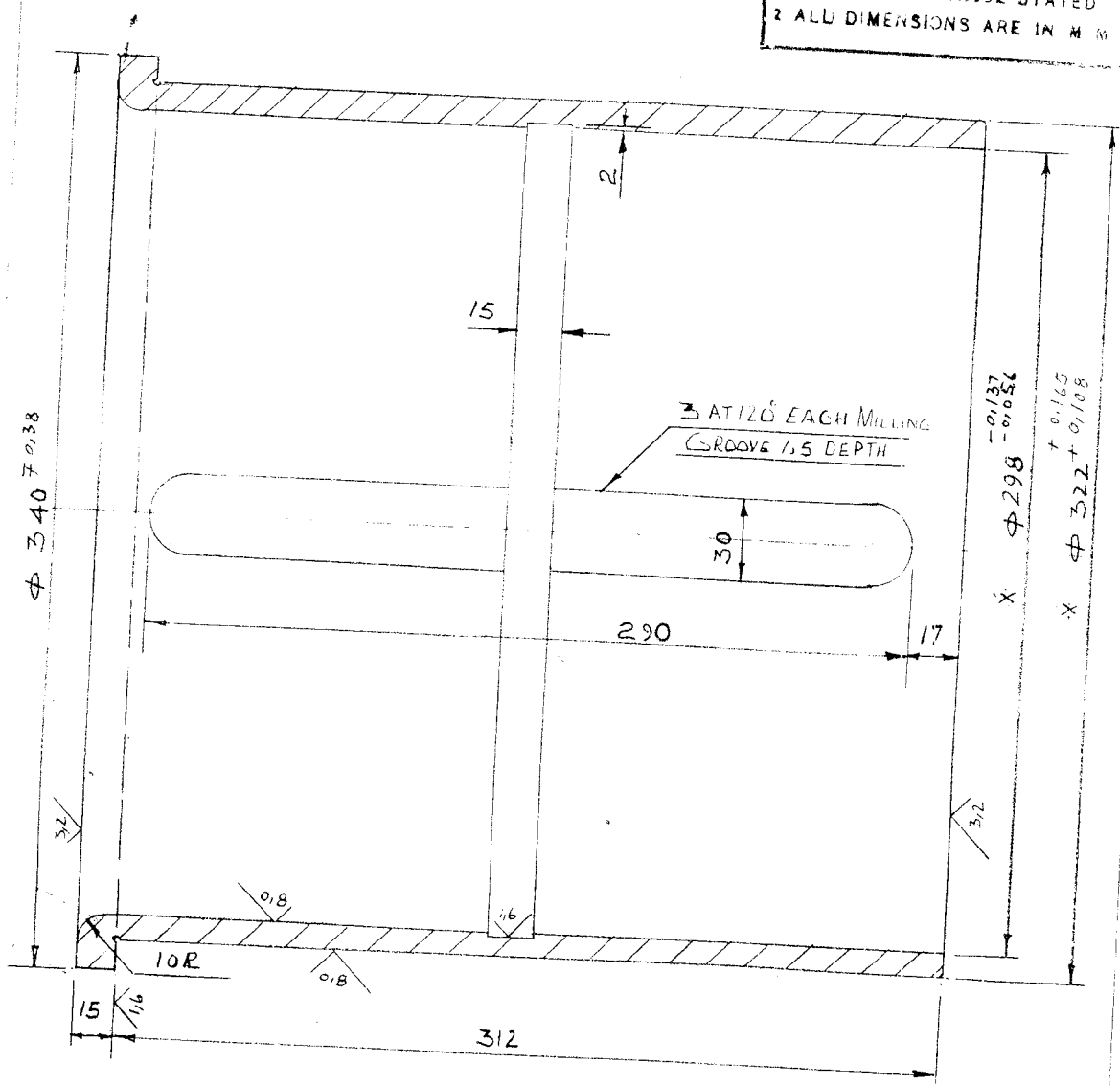


MATL. CAST IRON
 SPEC. IS 210.

BHARAT HEAVY PLATE & VESSELS LTD.

DCN.		BEARING BLOCK		
DRN.	<i>Seena</i>	FOR 22 mm BENDING ROLL XZM 4000 / 22		
CHD.	<i>[Signature]</i>	REF. DRG. NO.	SIZE.	DRAWING NO.
APPROVED.		—	A4	M4/99E/G 7-67

1- M/C TOLERANCE TO BE ± 0.08 MM
 UNLESS OTHERWISE STATED
 2 ALL DIMENSIONS ARE IN MM



MAT: BRZ

SPEC: IS 28

OR

LEAD BRONZE

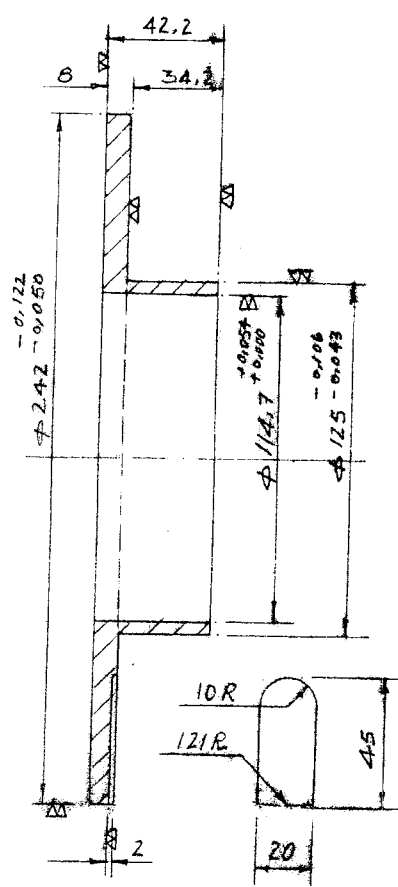
DIMENSIONS FOR STORE STOCK

* SUIT AT ASSEMBLY

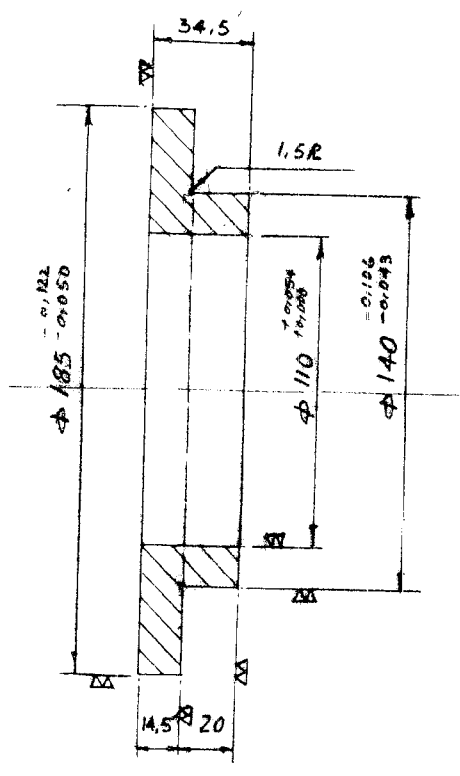
▽ ROUGH MACHINING
 ▽ FINE MACHINING
 ▽ GRINDING OR EQUIVALENT

		BHARAT HEAVY PLATE & VESSELS LTD. VISAKHAPATNAM	
PLANT MAINTENANCE		BUSH FOR REAR END OF TOP	
DGN		ROLLER X2M 4000/22 BENDING ROLL	
DRW		REF	
CHK	<i>[Signature]</i>	M/C TYPE	INV. NO
APPD		SCALE	DRAWING NO

▽ ROUGH MACHINING
 ▽ FINE MACHINING
 ▽▽ GRINDING OR EQUIVALENT




MAT: STEEL
 SPEC: IS.226

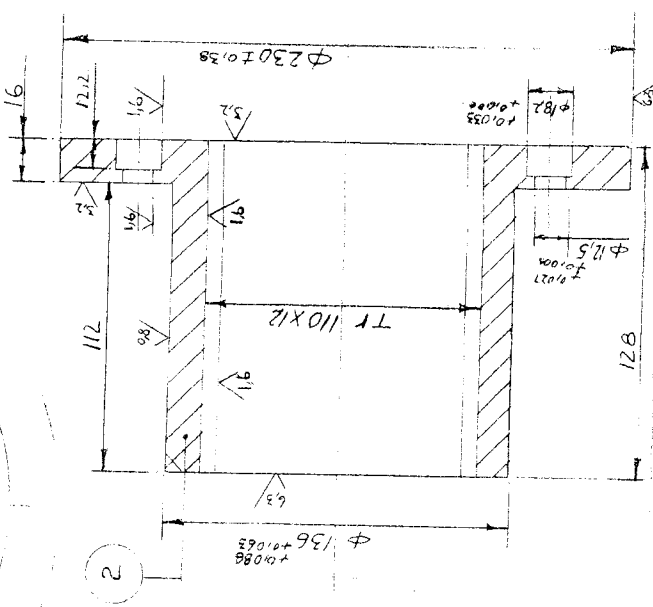
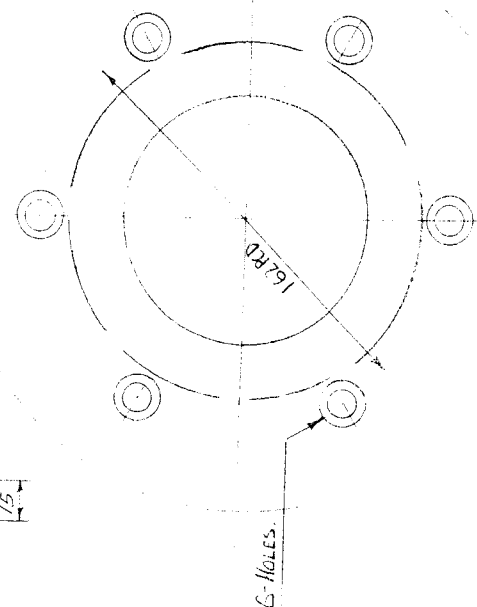
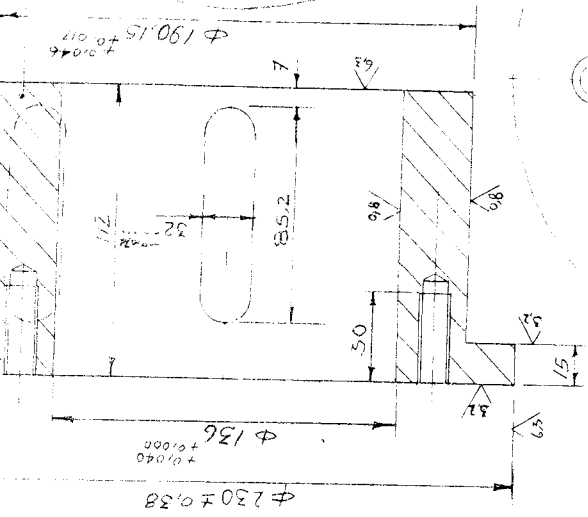
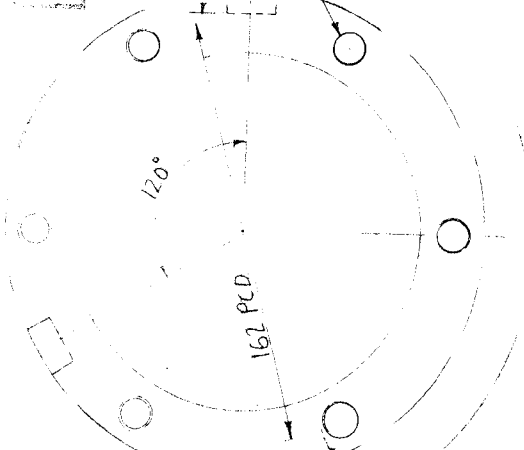


MAT: STEEL
 SPEC: IS.226

1 M/C TOLERANCE TO BE ± 0.03 MM
 UNLESS OTHERWISE STATED
 2 ALL DIMENSIONS ARE IN M.M

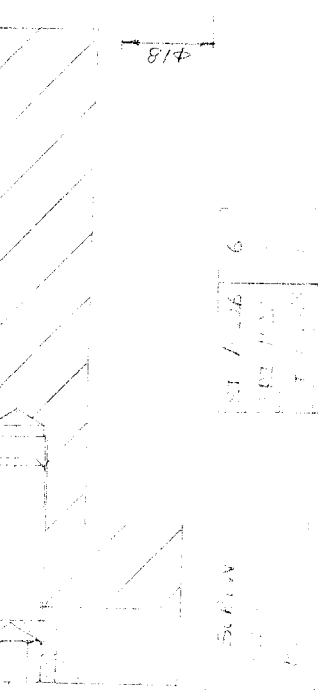
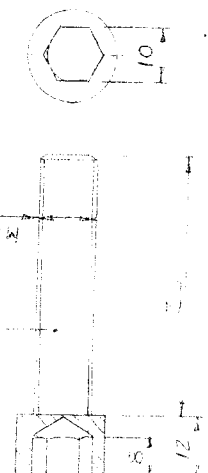
 BHAKAT HEAVY PLATE & VESSELS LTD. VISAKHAPATNAM			
PLANT MAINTENANCE		COUPLINGS FOR 22MM	
DGN:		BENDING ROLL.	
DRN:		REF.	
CHD:		M/C TYPE.	INV. NO.
APRD:		SCALE	DRAWING NO.
		SIZE	
		MA	MA/570/97-29

WELDING OR EQUIVALENT



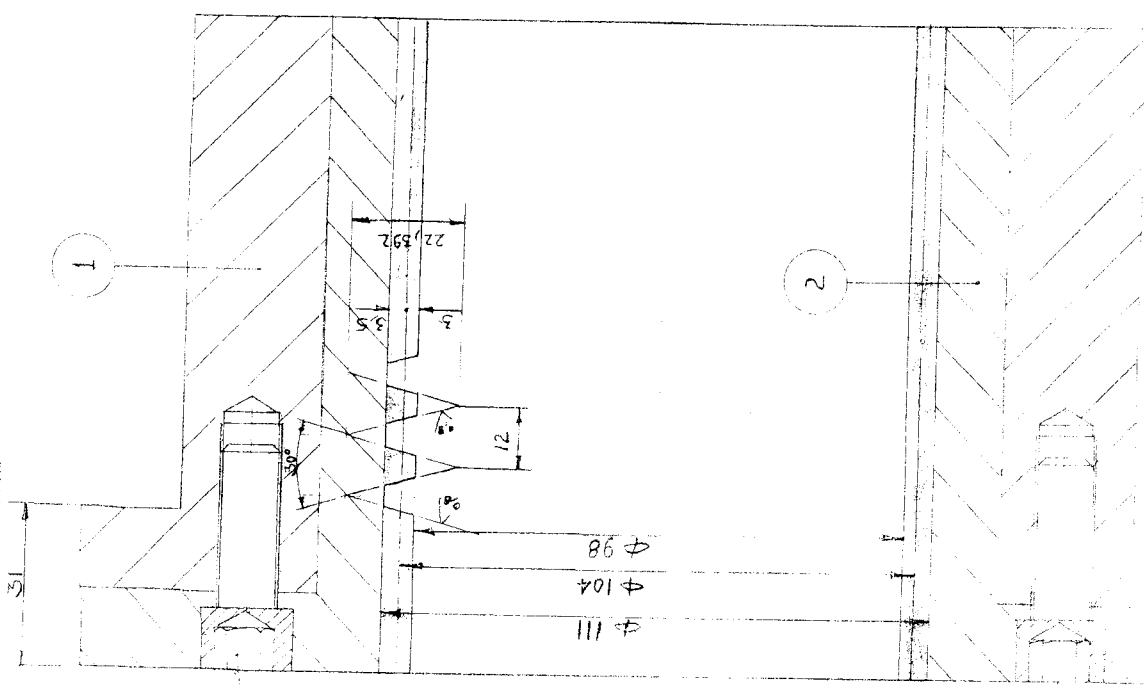
WELDED PLATE & METALS LTD
VIJAYAKHARJUR

MAINT. PRICE	NIL	FOR
DGN	27 MM BENDING ROLL 400x122	
DATE		
REV		
M.C. TYPE	XZ M 400x122	INV. NO. 5402
SIZE	M3	DRAWING NO.
		M3/520/G7-25



RIN 4R 34 03 0552

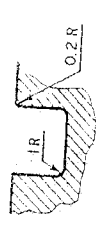
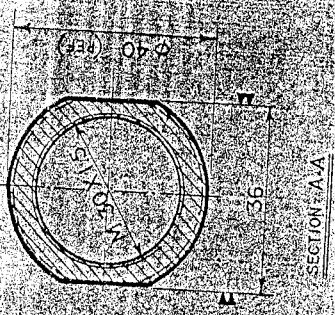
WELDING OR EQUIVALENT




ST 1	26	6
ST 2	12	12
ST 3	12	12

50/11

HARD CHROME PLATING 0.05-0.06



O-RING GROOVE DETAIL

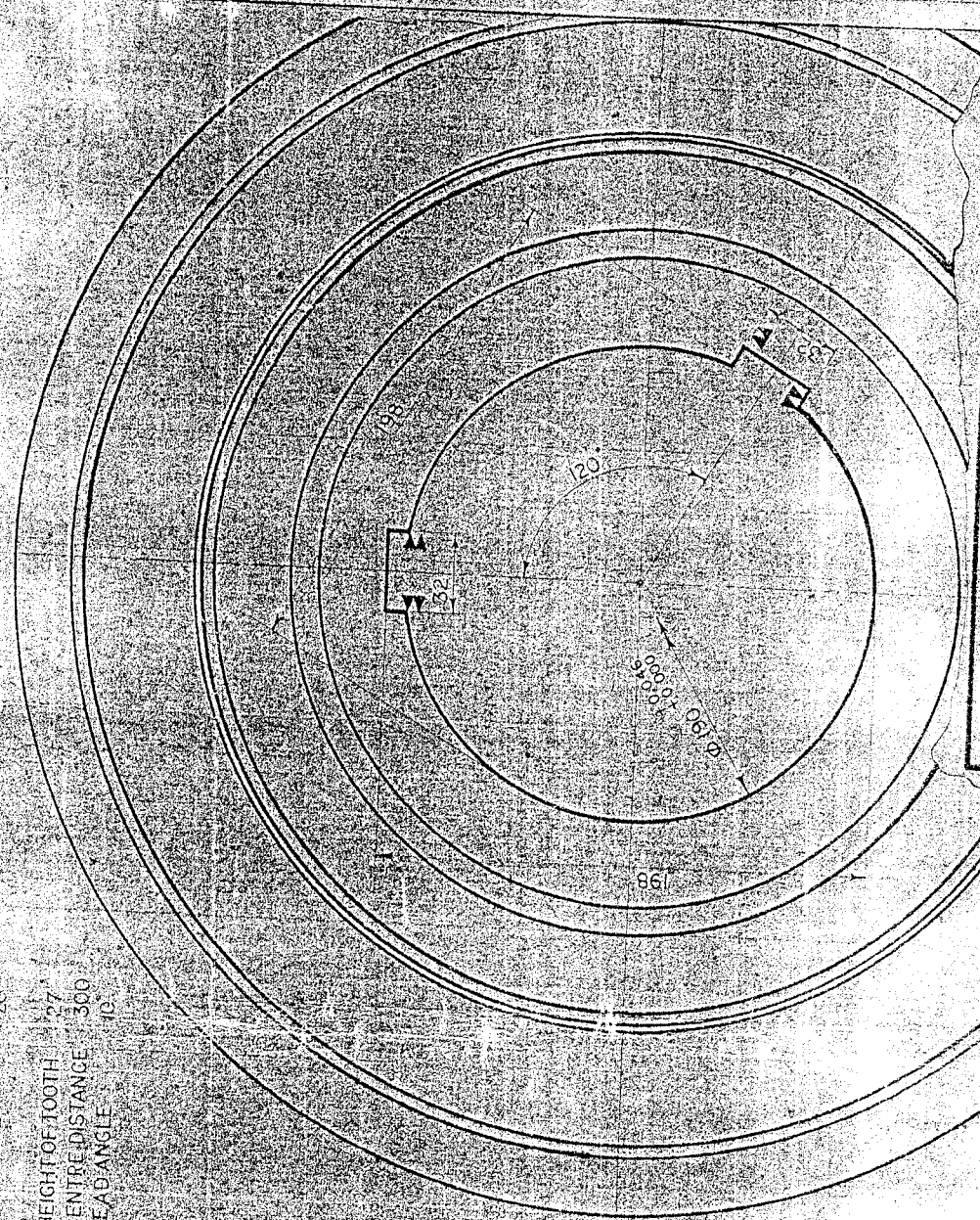
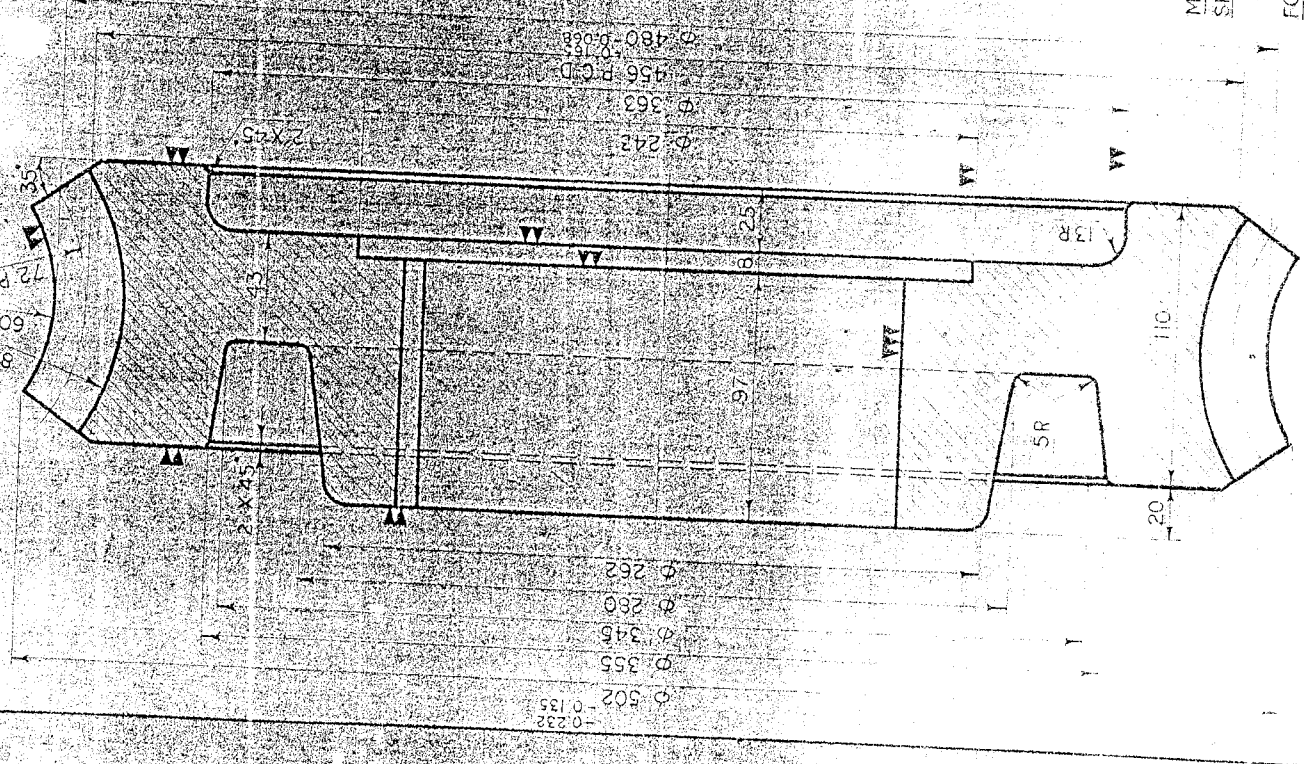
ITEM No.	PISTON	DESCRIPTION	STEEL	EN 24	MATL./SPEC.	QTY	REMARKS
 BHARAT HEAVY PLATE & VESSELS LTD VISAKHAPATNAM-INDIA							
PLANT MAINTENANCE		PISTON (SWING OUT UNIT)					
DGN.			FOR PLATE BENDING M/C				
DRN.	S. S. S.		M/C TYPE	XZM 4000/22	INV. No.	22203	
CHD.			SCALE	SIZE	DRAWING No.		
APRD.				A3	M ₃ / 1449 / G 7-102		

▽ ROUGH MACHINING
 ▽ FINE MACHINING
 ▽ GRINDING OR EQUIVALENT

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

REF No. No

NO. OF TEETH 38
 MODULE 12
 PRE-ANGLE 20°
 HEIGHT OF TOOTH 27
 CENTRE DISTANCE 300
 LEAD ANGLE 10



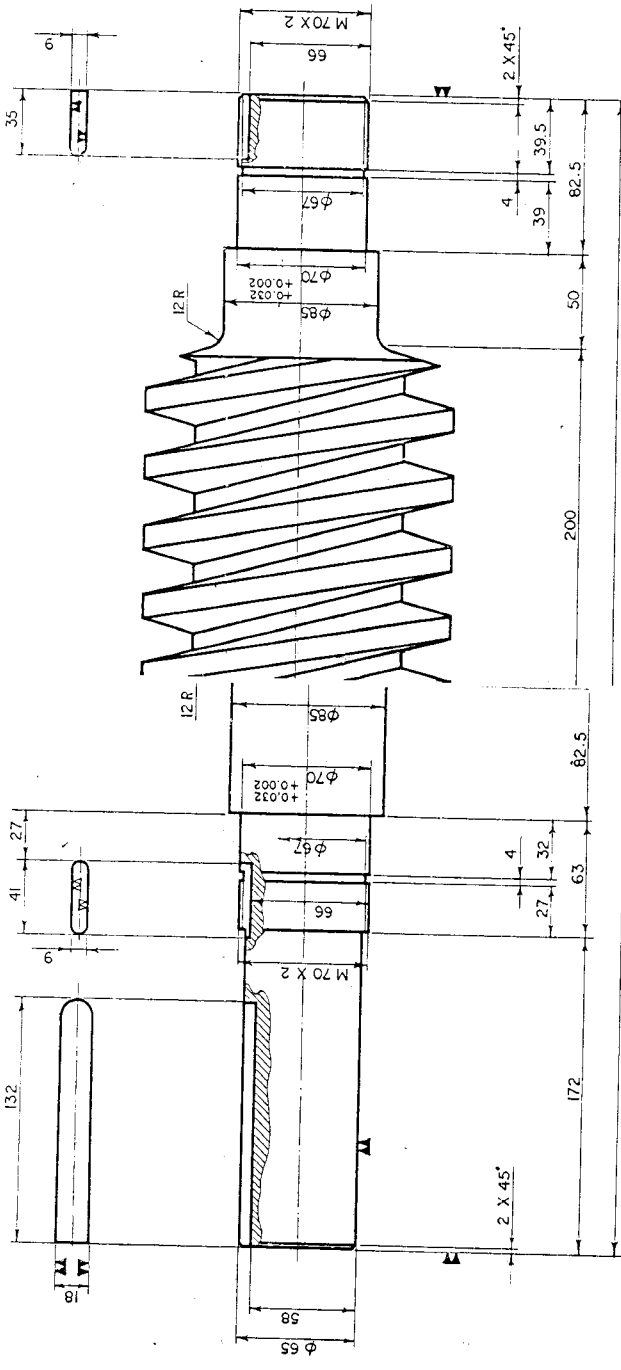
BHARAT HEAVY PLATE & VESSELS LTD.			
DGN	WORM WHEEL		
DRN	FOR BENDING ROLL - XZM 4000/22		
CHD	REF. DRG. NO.	SIZE	DRAWING NO.
APPROVED		A3	M3/1321/57-99

MATL: ALUMINIUM BRONZE
 SPEC: IS 305 GRADE 2

FOR WORM SHAFT REFER DRG No. M2/1322/C7-99

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

DRAWING NOT TO BE SCALED.



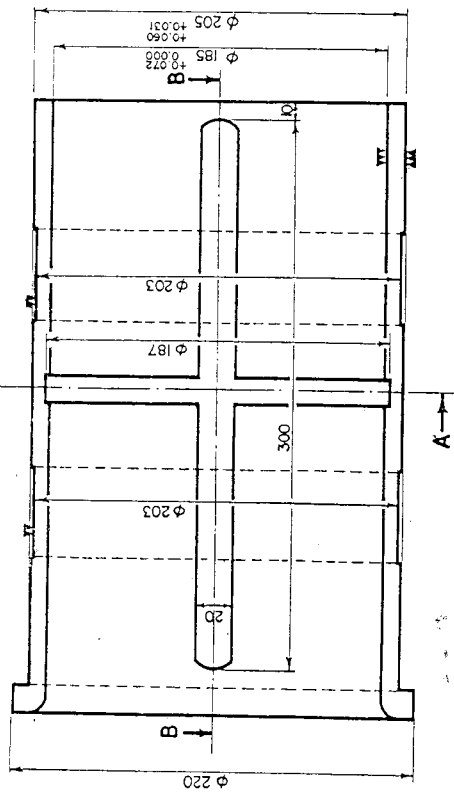
HEAT TREAT TO HRC - 30, 32

MODULE 12
 PRESSURE ANGLE 20°
 PITCH CIRCLE DIA. 144 φ
 OUTSIDE DIA. 168 φ
 PITCH 37
 NO. OF STARTS 2
 LEAD 74
 LEAD ANGLE 9° 17'
 HAND OF HELIX RIGHT
 DISTANCE BETWEEN A 300
 MATING GEAR DRG. NO. M3/1321/G7-98
 NO. OF TEETH 38

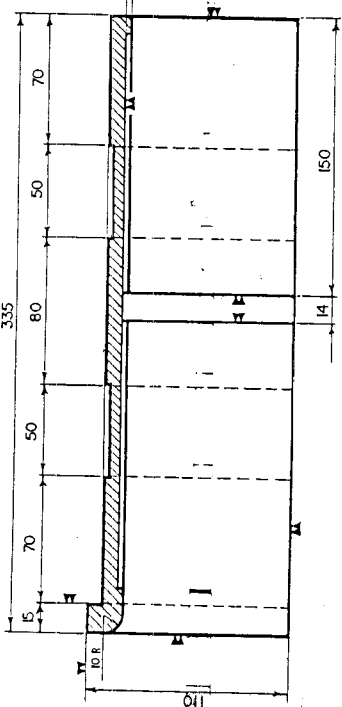
ITEM NO.	WORM SHAFT	STEEL : EN 24	QTY. / REMARKS.
		MATL. / SPEC.	
BHARAT HEAVY PLATE & VESSELS LTD VISAKHAPATNAM			
PLANT MAINTENANCE		WORM SHAFT	
DGN.	FOR 22 ^{mm} . BENDING ROLL		
DRN.	M/C TYPE. XZM 4000/22	INV. NO. 22203	
CHD.	SCALE.	SIZE.	DRAWING NO.
APKD.	A2	A2	M2 / 1322 / G7-99

▼ ROUGH MACHINING
 ▼ FINE MACHINING
 ▼ GRINDING OR EQUIVALENT

DRAWING NOT TO BE SCALING
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.



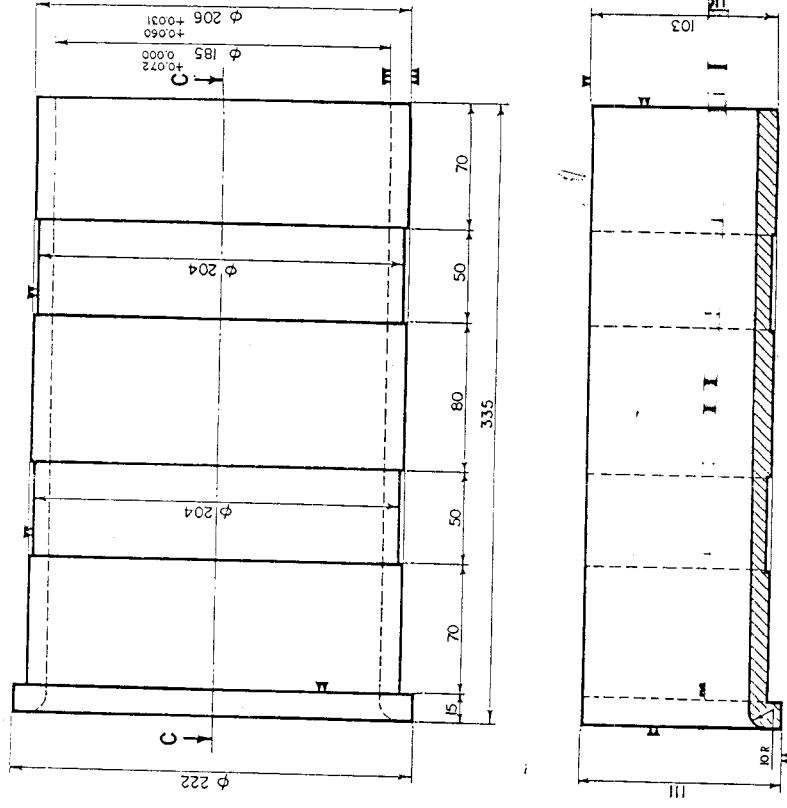
SECTION A-A



SECTION B-B

MATL. : CAST IRON
SPEC. : IS. 210; GRADE 25
QTY. : 4 Nos.

TOP HALF



SECTION C-C

MATL. : BRONZE
SPEC. : IS. 318.
QTY. : 4 Nos.

BOTTOM HALF

CHAMFER ALL SHARP CORNERS WITH 1X45°

▽ ROUGH MACHINING
▽▽ FINE MACHINING
▽▽▽ GRINDING OR EQUIVALENT

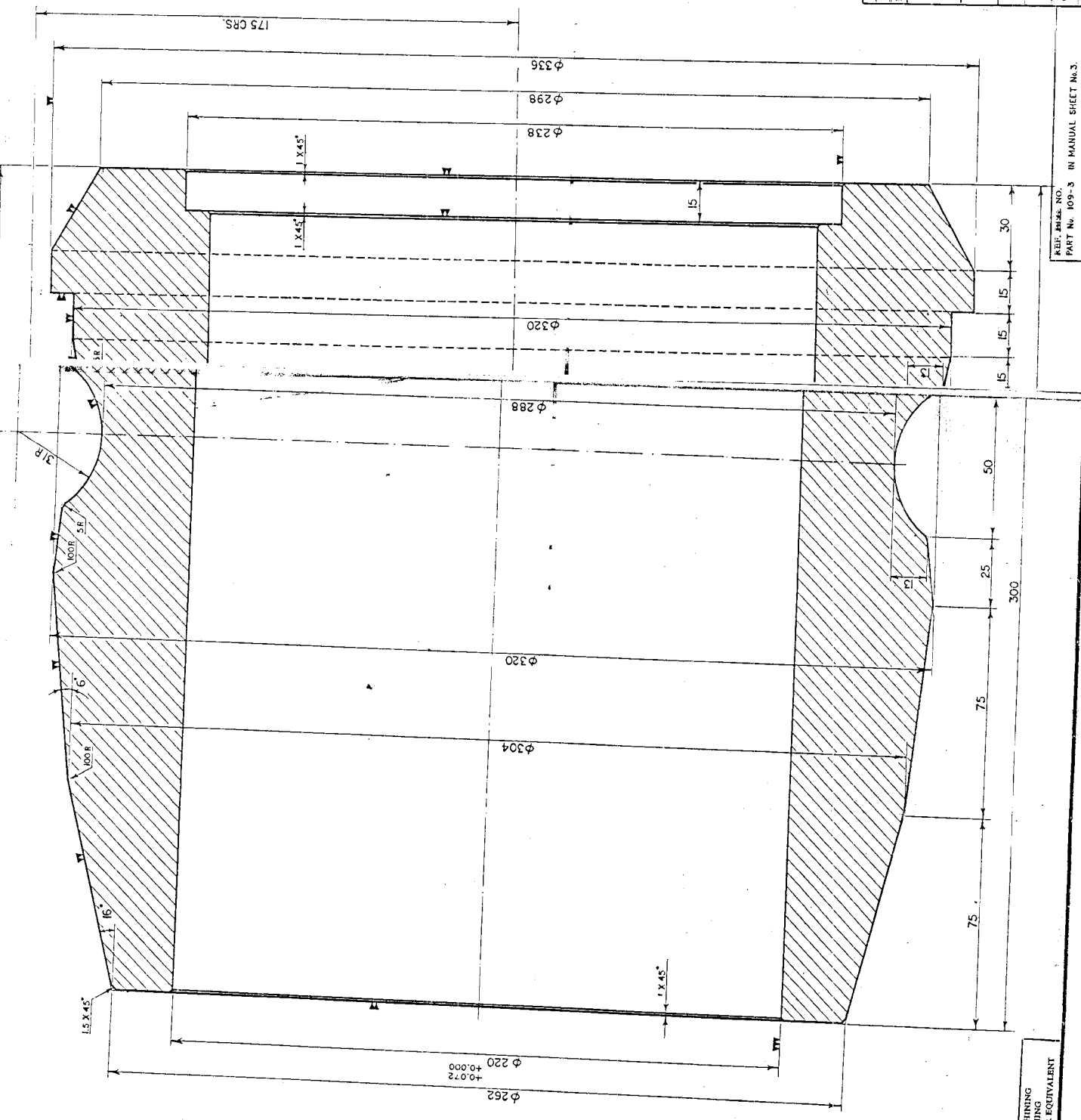
ITEM No.	DESCRIPTION	MATL. SPEC.	QTY.	REMARKS
	BHARAT HEAVY PLATE & VESSELS LTD VISAKHAPATNAM			
PLANT MAINTENANCE		HALF BEARINGS		
DGN.				OF BOTTOM ROLLERS - PLATE BENDING M/C.
DRN.				M/C TYPE XZM 4000/22
CHD.	SCALE.	SIZE.	INV. No.	DRAWING No.
APRD.		A ₃	M ₂	1447 / G 7-100

REF. DRG. No.

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

DRAWING NOT TO BE SCALED.

100 CRS.



FOR TOP ROLLER BEARING REFER DRG. No. M4/1478/57-109

- ▽ ROUGH MACHINING
- ▽ FINE MACHINING
- ▽ GRINDING OR EQUIVALENT

DEPT. FILE NO. PART No. 109-3 IN MANUAL SHEET No. 3.

ITEM No.	BEARING BLOCK	CAST STEEL: I.S. 1030	QTY. 1
	DESCRIPTION	MATL./SPEC.	QTY. 1
BHARAT HEAVY PLATE & VESSELS LTD VISAKHAPATNAM			
PLANT MAINTENANCE		TOP ROLLER BEARING BLOCK	
		HINGE SIDE	
DGN.	FOR PLATE BENDING M/C		
DRN.	M/C TYPE. XZM 4000/22	INV. NO. 22203	
CHD.	SCALE.	SIZE	DRAWING NO.
APPD.			1477/c

BHARAT HEAVY ELECTRICALS LIMITED,
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Heavy Plates & Vessels Plant
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NOTICE INVITING TENDER(NIT)

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(PRICED + UN - PRICED)**

**SUB: Mechanical items for 22mm plate
bending roll machine**

Our Ref: [MM/2/10/3537/CAP/W-017/5017](#)

DATE: 10.04.2015

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LATE TENDERS ARE NOT ACCEPTABLE.

ITEM No.	DESCRIPTION / SPECN. / SIZE	QTY									
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2. Drawings	20 Pages									
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For BHARAT HEAVY ELECTRICALS LIMITED,

For MANAGER (MP-Misc. & CPS)