

Product: **NON FERROUS CASTINGS (VALVES)**Document No.: **TDC:0:413**Rev. No.: **01**Effective date: **31/01/2001**

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Revision Record: Rev:00:01/07/94; Rev:01:Text rewritten, Cl.5.0 modified.

1.0 MATERIAL

Specification:ASTM:{Latest on date of Purchase Order (PO)}:

Monel "S" (Monel 505) : ASTM A494 Gr. M25S

Nickel Bronze : ASTM B584 C97800

Aluminium Bronze : IS 305 Gr. AB1

Stellite : G-Co65Cr27W6

Supernickron :

Additional Requirement:As listed below (supplementary to Specification)

Size, Qty.,Grade/Class: As per Purchase order & Drawing / Pattern.

2.0 CHEMICAL COMPOSITION & PROCESS

Chemical composition requirements are as below:

Element	Monel S	Al. Bronze	Ni.Bronze	Supernickron	Stellite
C	0.15 max.	--	--	0.35 max.	0.90-1.40
Mn	1.50 max.	1.0 max.	1.0 max.	1.0 max.	1.0 max.
Al	--	8.5-10.5	0.005 max.	--	--
Zn	--	0.5 max.	1.0-4.0	--	--
Sn	--	0.1 max.	4.0-5.5	--	--
Pb	--	0.05 max.	1.0-2.5	--	--
Mg	--	0.05 max.	--	--	--
Si	3.50-4.50	0.25 max.	0.15 max.	5.0 max.	1.5 max.
P	0.03 max.	--	0.05 max.	--	--
S	0.03 max.	--	0.08 max.	--	--
Fe	2.50 max.	1.5-3.5	1.5 max.	10.0 max.	3.0 max.
Ni	60 min.	1.0 max.	24 - 27	65 - 70	3.0 max.
Cu	27 - 33	Remainder	64 - 67	10 - 20	--
Cr	--	--	--	5.0 max.	27 - 31
Mo	--	--	--	--	1.5 max.
W	--	--	--	--	3.5-5.5
Co	--	--	--	--	Remainder

The total of Sn, Pb, Si & Mg shall not exceed 0.30% in the case of Aluminium bronze.

Aluminium bronze castings shall be made in chill moulds only. Stellite castings to be manufactured by investment casting (Lost wax) process.

3.0 DIMENSIONS AND TOLERANCES

Tolerances as per Drawing. Untoleranced dimensions for valve components: VL:STDC:023(latest).

4.0 HEAT TREATMENT (HT)

Monel castings: Solution annealed at 870 deg.C / 30 min / Oil quench. Additionally the test bars to be age hardened at 560 deg.C / 2 hours / air cool.

Supernickron castings: Age hardening to be done in electric furnace at 640 deg.C for a period of not less than 4 hours and then cooled in furnace or in air.

Aluminium bronze, Nickel bronze and Stellite castings can be supplied in the as cast condition, without heat treatment.

5.0 MECHANICAL TESTS

Test bars to be cast integral with the casting or separately. If cast separately, they shall be cast at the same time, same mould type as the castings & from the same ladle. A metal strip with heat number stamped to be fused with the test bar during casting, to maintain traceability. The test bars to be heat treated together with the castings they represent. If 1 casting is made from more than 1 heat, separate test bars for each cast to be poured & all test bars shall satisfy the requirements.

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Following tests to be conducted per heat / HT batch, as per ASTM A370.

Acceptance as shown:

Test	Monel S	Al. Bronze	Ni. Bronze	Supernickron	Stellite
Hardness	32-42 HRC	135 BHN min.	--	320-380 BHN	38-42 HRC
Tensile strength	--	55 Kg/sq.mm (min)	35.2 Kg/sq.mm (min)	60 Kg/sq.mm (min)	--
0.2% proof strength	--	21 Kg/sq.mm (min)	15.5 Kg/sq.mm (min) (05% proof)	--	--
% Elongation	--	18 min.	10 min.	--	--

6.0 FETTLING, DRESSING & CLEANING

Dressing of castings, free from risers, ingates, notches, under cuts, deep marks etc. Gas cutting if any to be done before HT. Castings to be sand/shot blasted both inside and outside for removal of fused sand, scales, etc. Fused wires, parting line fins, chills etc. to be removed by grinding. Visual inspection of castings for surface quality as per MSS-SP-55. Items to be proof machined wherever required.

7.0 NON DESTRUCTIVE TESTING (NDT) AFTER HEAT TREATMENT

Castings to be free from surface and internal defects like porosity, shrinkage, sand inclusion, crack, cold shut and other harmful defects.

Liquid Penetrant Inspection (LPI): As per ASTM E165 on all castings.

Acceptance: (ANSI B16.34): Cracks are not permitted. For rounded indications (circular or elliptical with length < 3 times width), 4 or more indications in a line separated by 3mm or less edge to edge are not acceptable. Maximum allowable diameter of the indication: 5mm for materials upto 13mm thick & 8mm for materials above 13mm thick.

8.0 REPAIR

Repairs involving fusion welding is prohibited.

9.0 MARKING AND PACKING

Details to be marked on each casting, using low stress stamps / etching / engraving:

1. Foundry code, 2. Specification, grade ("SINK" in the case of supernickron) & Melt number,
2. Other details as per drawing.

10.0 INSPECTION AND CERTIFICATION

Test certificate for each product with following details shall accompany the product & shall be countersigned by inspection agency nominated by BHEL, if specified in PO.

1. Purchase Order No.(BHEL), TDC No., Drawing & Test certificate number.
2. Specification and Grade with applicable year of code, Heat Number, Quantity & Size
3. Melting & Casting process, Chemistry including incidental elements - Heat wise.
4. Heat treatment details of the material and test bars.
5. Mechanical test results, NDE test results with reference & acceptance standard.
6. Dimensional Inspection Report where applicable.

11.0 AUDIT CHECKS AT BHEL

BHEL reserves the right to carry out audit checks for chemistry, HT condition, mechanical test and NDT on representative test bars or job. Items found defective during check or subsequent processing at BHEL are liable for rejection..

S.Lakshmi
Prepared

R.Sasikumar(QA)
Revised

S.Kumar(Engg)

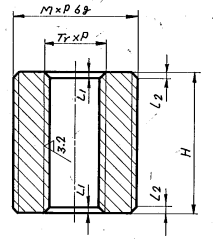
K.Rengachari
Approved

55520-0000 A 2
ON SHIMMED

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP/RP

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SLNO	REVISED DRG. NO.	OLD DRG. NO.	MATERIAL SPECN.	RAW MATL. SIZE	MATERIAL CODE	NET WT. GROSS WT.	SCRAP SORT	M x P	H	L1	L2	COMP. CODE	
1	2.V.2301.02955	2.V.2301.01817	IS 305 Gr. AB1	Ø 30 x 22	16006397	0.05 0.11	60	24x19	12x3	18	2	1.9	93 053 075
2	2.V.0231.02955	2.V.0231.01817	..	Ø 40 x 30	16006396	0.13 0.30	60	30x19	14x2	28	2	1.9	
3	2.V.2252.02955	2.V.2252.01817	..	Ø 40 x 35	16006395	0.12 0.35	60	30x19	15x3	32	2.5	1.5	
4	2.V.0203.02955	2.V.0203.01817	..	Ø 40 x 45	16006394	0.12 0.44	60	30x19	20x4	40	2.5	1.5	93 060 169
5	2.V.2251.02955	2.V.2251.01817	..	Ø 50 x 45	16006198	0.15 0.69	60	39x19	22x5	41	3.5	1.5	93 061 200 0000
6	2.V.2257.02955	2.V.2257.01817	..	Ø 50 x 45	16006198	0.20 0.69	60	42x2	24x5	40	3.5	2	93 102 033 0000
7	2.V.0206.02955	2.V.0206.01817	..	Ø 50 x 55	16006198	0.45 0.85	60	45x19	24x5	48	3.5	1.5	93 060 115 0000
8	2.V.0207.02955	2.V.0207.01817	..	Ø 50 x 55	16006198	0.55 0.85	60	45x15	26x5	52	3.5	1.5	93 102 032 0000
9	2.V.2247.02955	2.V.2247.01817	..	Ø 50 x 55	16006198	0.75 0.95	60	48x2	28x5	50	3.5	2	93 006 532 0000
10	2.V.0208.02955	2.V.208.01817	..	Ø 50 x 60	16006198	0.55 0.93	60	48x2	28x5	56	3.5	2	93 060 911 0000
11	2.V.2258.02955	2.V.2258.01817	..	Ø 70 x 60	16006394	1.20 1.81	60	60x2	32x6	55	4.0	2	93 061 201 0000
12	2.V.0210.02955	2.V.0210.01817	..	Ø 70 x 75	16006394	0.73 2.26	60	50x19	32x6	71	4.0	1.5	93 060 910 0000
13	2.V.2476.02955	2.V.2476.01817	..	Ø 70 x 75	16006198	0.46 0.85	60	45x2	24x3	50	3.5	2	93 058 467 0000
14	2.V.2478.02955	2.V.2478.01817	..	Ø 70 x 65	16006198	0.55 1.00	60	48x2	28x3	60	3.5	2	93 058 684 0000
15	2.V.2480.02955	2.V.2480.01861	..	Ø 70 x 95	16006394	1.15 2.63	60	60x4	34x3	88	3.5	3	93 060 619 0000
16	2.V.2481.02955	2.V.2481.01861	..	Ø 200 x 102	16006394	1.34 2.83	60	64x4	40x3	95	3.5	3	
17	2.V.2670.02955	2.V.2670.01861	..	Ø 80 x 120	16006343	1.47 4.73	60	64x4	44x6	115	3.5	3	93 101 379 0000
18	2.V.2477.02955	---	SA 439 TYPE-D2	Ø 50 x 55	---	0.40 0.85	20	45x2	24x3	50	3.5	2	93 105 485 0000
19	2.V.2685.02955	---	..	Ø 50 x 65	---	0.55 1.00	20	48x2	28x3	60	3.5	2	93 105 486 0000
20	2.V.2690.02955	---	..	Ø 55 x 70	92 200 055	0.55 1.33	30	48x2	28x3	60	3.5	2	93 105 644
21	2.V.2328.02955	---	..	Ø 70 x 110	92 018 063	1.15 3.62	30	60x4	36x3	88	3.5	3	93 105 645
22	2.V.M416-02955	---	..	Ø 70 x 60	---	1.20 1.81	30	60x2	32x6	55	4.0	2	93 106 960 0000
23	2.V.M420-02955	---	IS 5305 Gr AB1	Ø 50 x 45	16006198	0.40 0.70	60	48x2	28x5	53	3.5	2	93 107 037 0000
24	2.V.M418-02955	---	IS 5305 Gr AB1	Ø 50 x 45	16006198	0.40 0.80	60	45x5	24x5	53	3.5	1.5	93 107 038 0000
25	2.V.P238-02955	---	SA 439 TYPE-D2	Ø 82 x 120	---	1.47 4.73	60	64x4	44x4	115	3.5	3	93 108 211 0000



6.3 / 3.2

REV DATE ALTD. T.C. BY 08 23.7.97 CHD APPD. BY 07 11.9.98 CHD APPD. BY
-SL. No. 25 INCLUDED.

BHARAT HEAVY ELECTRICALS LTD.,
BOILER PLANT UNIT, TIRUCHIRAPALLI-620 014

YOKE BUSH

REV DATE ALTD. T.C. BY 01 27.7.94 ALTD. T.C. BY 01 27.7.94
CHECKED BY M.K.V. APPROVED BY M.K.V.

DRWN: K.N. CHKD: M.K.V. APPVD: S. Kumar

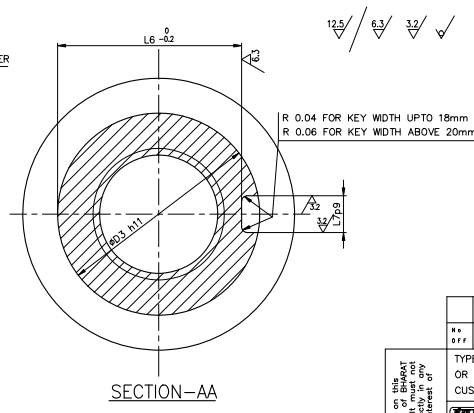
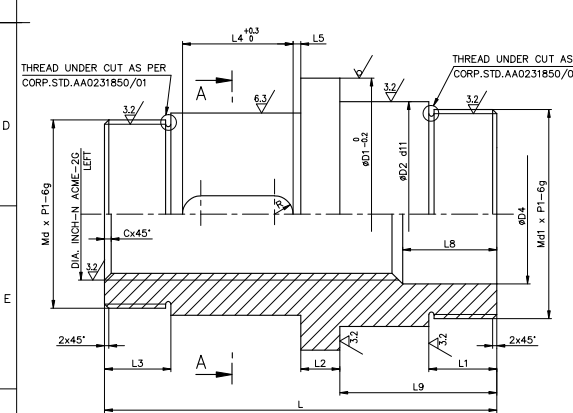
DIMENSIONS TO BE CONTROLLED WITHIN LIMITS AS SHOWN. MACHINING TOLERANCE 2.0% UNLESS OTHERWISE SHOWN. NON-MACHINING TOLERANCE 2.

DRAWING NO: 2-V-0000-02955

2-0000-0000-0000
ON SNIMW9D

ALL DIMENSIONS ARE IN MILLIMETRES. FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP / QP

S.No	DRAWING NO	COMP. CODE	SPECN	SUGG SIZE	MATL CODE	GROSS	NET	Md x P	Md1xP1	#D1	#D2	#D3	#D4	R	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	Cx45	DIA INCH-NACME	SCRAP	SIZE/RATING	
1	2.V.N001.03307/04	931021040000	IS 305 GrAB1	---	---	---	1.65	52x2	60x2	70	62	52	31	8	118	20	10	26	36	0	46	16	52	45	3	1.125"-5ACME	60	6"-150C	
2	2.V.N009.03307/04	931025430000	IS 305 GrAB1	---	---	---	2.92	60x2	68x2	80	70	60	34	9	158	22	12	26	40	0	53	18	85	79	3	1.250"-4ACME	60	8"-150C	
3	2.V.N017.03307/04	931025680000	IS 305 GrAB1	---	---	---	1.81	52x2	60x2	70	62	52	34	8	135	20	10	26	36	0	46	16	62	62	3	1.250"-4ACME	60	6"-300C	
4	2.V.N033.03307/04	931026410000	IS 305 GrAB1	---	---	---	1.03	36x2	48x2	63	50	40	28	6	105	18	8	20	20	3	35	12	57	52	3	1.000"-5ACME	60	4"-150C&300C	
5	2.V.N041.03307/04	931026420000	IS 305 GrAB1	---	---	---	4.1	60x2	68x2	86	70	60	40	9	153	21.5	34	28	40	0	53	18	73	49	3.5	1.500"-4ACME	60	12"-150C	
6	2.V.N073.03307/03	931040140000	IS 305 GrAB1	#63x110	16006340	2.69	0.95	36x2	42x2	55	45	40	21	6	97	15	8	20	20	3	35	12	49	44	2	0.750"-6ACME	60	2"-150C&300C	
7	2.V.N025.03307/03	931040150000	IS 305 GrAB1	---	---	---	1.10	36x2	48x2	63	50	40	24	6	105	18	8	20	20	3	35	12	57	52	3	0.875"-5ACME	60	3"-150C&300C	
8	2.V.N057.03307/04	931040160000	IS 305 GrAB1	#90x#24-165	16024004	7.65	4.26	60x2	68x2	86	70	60	37	9	153	21.5	34	29	40	0	53	18	75	49	3.5	1.375"-4ACME	60	10"-150C	
9	2.V.N089.03307/02	931040170000	IS 305 GrAB1	#90x#24-165	16024004	7.65	3.15	60x2	68x2	80	70	60	37	9	158	22	12	26	40	0	53	18	53	79	3	1.375"-4ACME	60	8"-300C	
10	2.V.K385.03307/02	931040670000	ASTM A439 D2	#65x110	---	---	3.26	1.03	36x2	48x2	63	50	40	28	6	105	18	8	20	20	3	35	12	57	52	3	1.000"-5ACME	30	4"-150C&300C
11	2.V.K386.03307/02	931040680000	ASTM A439 D2	#72x140	---	---	5.1	1.89	52x2	60x2	70	62	52	34	8	135	20	10	26	36	0	46	16	62	62	3	1.250"-4ACME	30	6"-300C
12	2.V.K387.03307/02	931040690000	ASTM A439 D2	#82x165	---	---	7.8	3.15	60x2	68x2	80	70	60	37	9	158	22	12	26	40	0	53	18	53	79	3	1.375"-4ACME	30	8"-300C
13	2.V.K388.03307/03	931040700000	ASTM A439 D2	#90x160	---	---	9.1	4.26	60x2	68x2	86	70	60	37	9	153	21.5	34	29	40	0	53	18	75	49	3.5	1.375"-4ACME	30	10"-150C
14	2.V.N201.03307/03	931046570000	ASTM A439 D2	#55x100	92201676	2.7	0.95	36x2	42x2	55	45	40	21	6	97	15	8	20	20	3	35	12	49	44	2	0.750"-6ACME	30	2"-150C&300C	
15	2.V.N202.03307/02	931046580000	ASTM A439 D2	#63x110	92200056	1.8	1.1	36x2	48x2	63	50	40	24	6	105	18	8	20	20	3	35	12	57	52	3	0.875"-5ACME	30	3"-150C&300C	
16	2.V.N204.03307/02	931046590000	ASTM A439 D2	#80x145	92018087	5.7	1.65	52x2	60x2	70	62	52	31	8	118	20	10	26	36	0	46	16	52	45	3	1.125"-5ACME	30	6"-150C	
17	2.V.N205.03307/02	931046600000	ASTM A439 D2	#85x170	92200057	7.6	2.92	60x2	68x2	80	70	60	34	9	158	22	12	26	40	0	53	18	85	79	3	1.250"-4ACME	30	8"-150C	
18	2.V.N207.03307/02	931056460000	ASTM A439 D2	#90x160	---	---	9.1	4.1	60x2	68x2	86	70	60	40	9	153	21.5	34	28	40	0	53	18	73	49	3.5	1.500"-4ACME	30	12"-150C
19	2.V.N277.03307/02	931079650000	ASTM A439 D2	#55x100	92201676	1.8	0.91	36x2	42x2	55	45	40	21	6	92	10	8	20	20	3	35	12	52	39	2	0.750"-6ACME	30	2"-150C	
20	2.V.N298.03307/01	931079660000	IS 305 GrAB1	#63x110	16006340	2.7	0.91	36x2	42x2	55	45	40	21	6	92	10	8	20	20	3	35	12	52	39	2	0.750"-6ACME	60	2"-150C	
21	2.V.NC38.03307/01	932011760000	IS 305 GrAB1	#90x#24-165	16024004	7.65	3.15	60x2	68x2	80	70	60	37	9	158	22	12	26	40	0	53	18	78	79	3	1.375"-4ACME	60	8"-300C	



DIMENSION	d11	h11	p9
OVER 10	-0.120	0	---
Ø80 Ø120	-0.340	-0.220	---
Ø50 Ø80	-0.100	0	---
	-0.290	-0.190	---
10 18	---	---	-0.018
	---	---	-0.061
18 30	---	---	-0.074
	---	---	-0.026
30 50	-0.080	0	-0.026
	-0.240	0.160	-0.088

REV	DATE	ALTERED T.R.RAMAMURTHY CHD & APPD P.BOOMNATHAN	REV	DATE	ALTERED T.R.RAMAMURTHY CHD & APPD P.BOOMNATHAN	REV	DATE	ALTERED T.R.RAMAMURTHY CHD & APPD P.BOOMNATHAN
16	17.02.09		15	21.01.08		14	28.08.07	

SL.No.21 INCLUDED

IN SL.No.-14&19 RAMATERIAL SIZE #63x110 REISED TO #55x100 WITH REVISED MATL.CODE. REFER DCP:800720

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DEPT	VL	SCALE	WEIGHT (KG)	REFERENCE INFORMATION
365-120		N T S	---	CAD REF : C203307

TITLE: YOKE BUSH

DRW: T.R.RAMAMURTHY
CHK: T.R.RAMAMURTHY
APPD: P.BOOMNATHAN

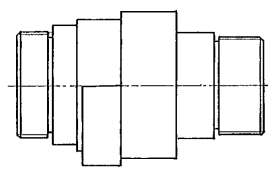
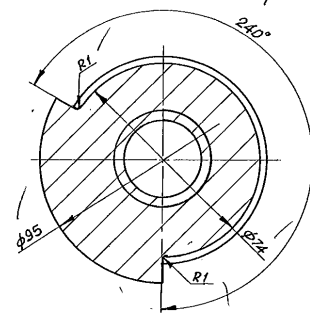
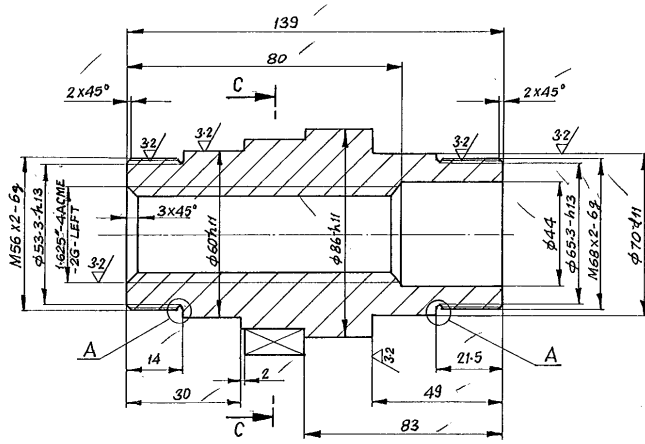
NAME: T.R.RAMAMURTHY
SIGN: [Signature]
DATE: 21.01.08

NO. OF VAR.: 16

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT CPC/P/QP

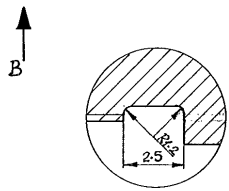
12 / 125 / 32

DIMENSIONS		TOLERANCES		
OVER	UP TO	d11	h11	h13
φ50	φ80	-0.100	0	0
		-0.290	-0.190	-0.460
φ80	φ120	0	-	-
		-0.120	-0.220	-



VIEW-B

SECTION-CC



DETAIL-A

02	3-V.N304-06878	93105 838	SA 439 TYPE 22 NR. CERTIFY	20	-	-	-	-
01	3-V.N065-06878	93104 018	IS 305 Gr. AB1	60	-	-	-	-
SL. No.	DRAWING No.	COMP. CODE	MATL. SPECN.	SCRAP BODY	NET WT (kg)	GROSS WT (kg)		ITEM NO.

BHARAT HEAVY ELECTRICALS LTD.
BOILER PLANT UNIT, TIRUCHIRAPALLI

FIRST ANGLE	SCALE	DRAWN	TOTAL NET WT. (kg)
NTS		M.P.S. <i>mnp</i>	
		CHECKED <i>sk</i>	TYPE
		APPROVED <i>sk</i>	
		DATE 9/10/92	NEW/OLD ORG. NO.

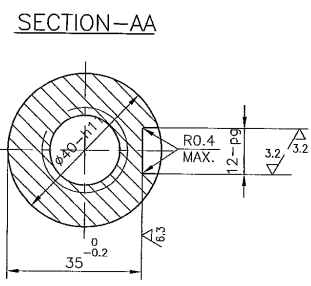
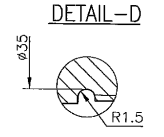
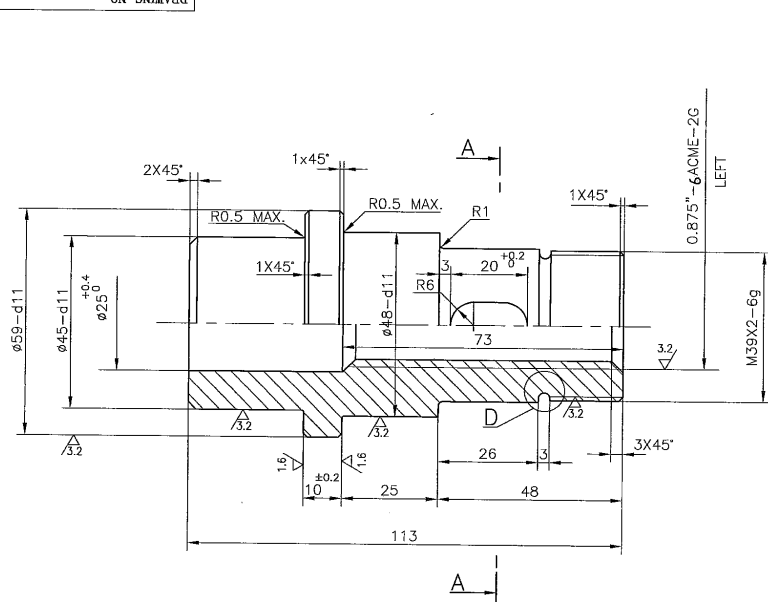
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33-116

TITLE	YDKE BUSH
DRAWING NO.	3-V-0000-06878
REVISION	01

REV.	DATE	ALTERED T.C.I.C.
01	19.7.98	CHECKED + APPD <i>sk</i>
ZONE	SL. NO. 02 INCLUDED.	

DRAWING NO. 3-V-0000-23978



ø45-d11	-0.080
	-0.240
ø40-h11	-0.160
	0
ø48-d11	-0.080
	-0.240
12-P9	-0.018
	-0.061
ø59-d11	-0.100
	-0.290

NOTE:
01. BREAK ALL SHARP CORNERS.

02	BAR ø60x120	-	ASTM A439 TYPE D2	SR	30	1.01	2.66	3-V-F511-23978	014
01	BAR ø60x120	16006340	IS 305 Gr AB1 CERTIFY	SH	60	1.01	2.66	3-V-F501-23978	014
SL No	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No COMP. CODE	ITEM No

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

REV	DATE	ALTERED
		CHD & APPD

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD.
UNIT: HIGH PRESSURE BOILER PLANT.
TIRUCHIRAPALLI-620014.

DEPT	VL	SCALE	WEIGHT (KG)	REFERENCE INFORMATIONS	NO. OF ITEMS
365-121		NTS	1.01	CAD C323978	

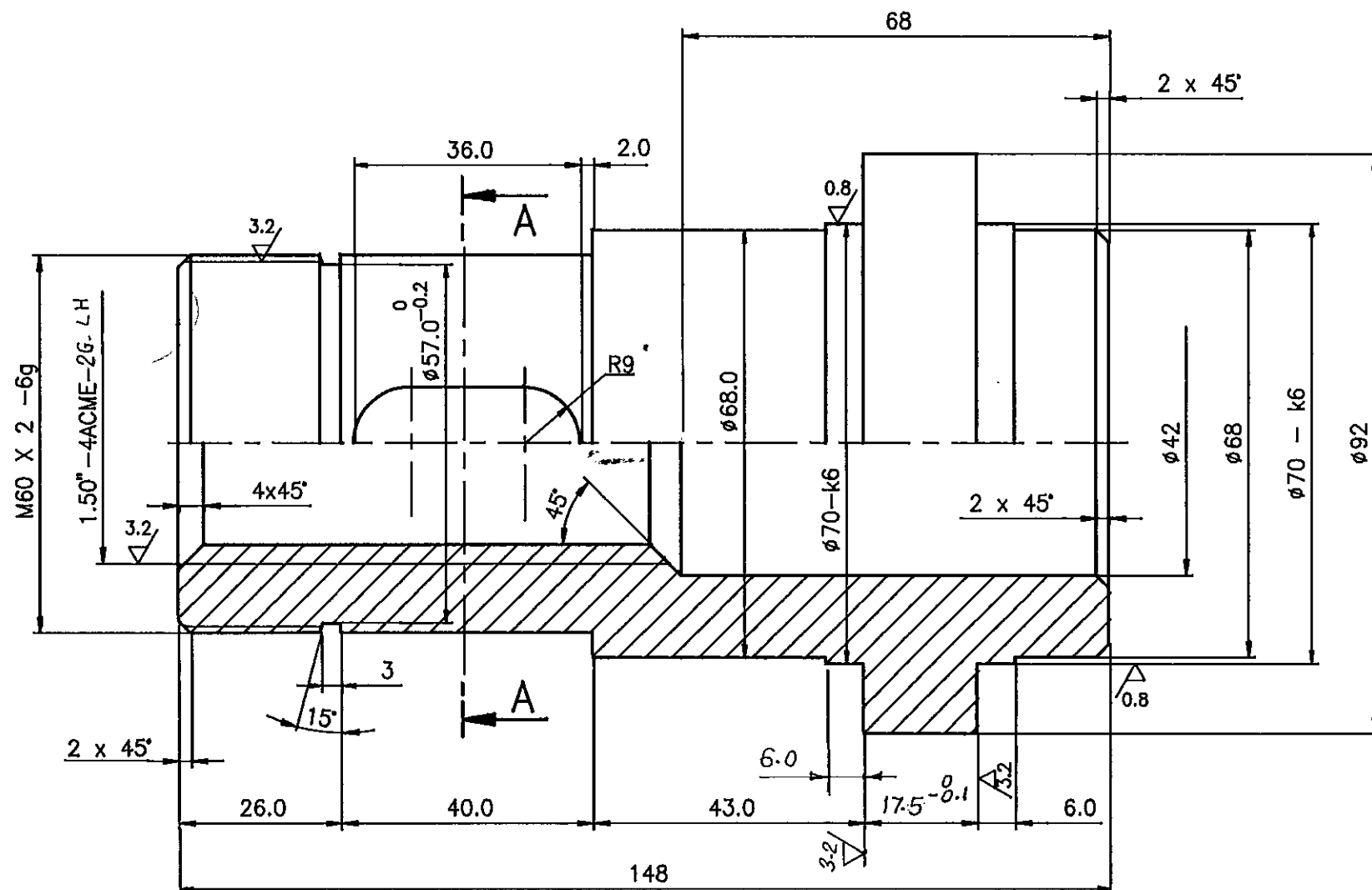
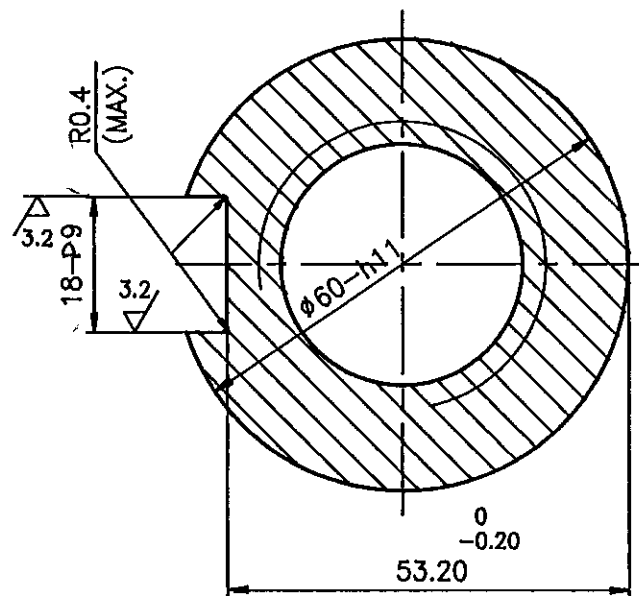
TITLE: **YOKE BUSH**

CARD CODE	DRAWING NO.	REV
U 01	3-V-0000-23978	

DRAWING NO. 3-V-F504-17450/01

6.3 / 3.2 / 0.8

SECTION - AA



φ 70-k6	+0.021
	+0.002
φ 60-h11	0
	-0.190
18 - P9	-0.018
	-0.061

01	SUGGESTED SIZE BAR φ94 x 155		IS 305 Gr. AB1 CERTIFY	-	60	2.75	8.30	-	-
NO OFF	DESCRIPTION	MATL CODE	MATL SPECH	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

	BHARAT HEAVY ELECTRICALS LTD.,		DRN	NAME	SIGN	DATE	NO. OF VAR.
	UNIT: HIGH PRESSURE BOILER PLANT.		CHD	M.SRINIVASAN	<i>[Signature]</i>	31.5.96	
	TIRUCHIRAPALLI-620014.		APPD	K.S.RAMAN	<i>[Signature]</i>	1.6.96	

REV	DATE	ALTERED
01	1-12-98	CHD & APPD
DCN:CS:0945	DIMENSION 17.5 ⁰ / _{-0.1} WAS 18.0	

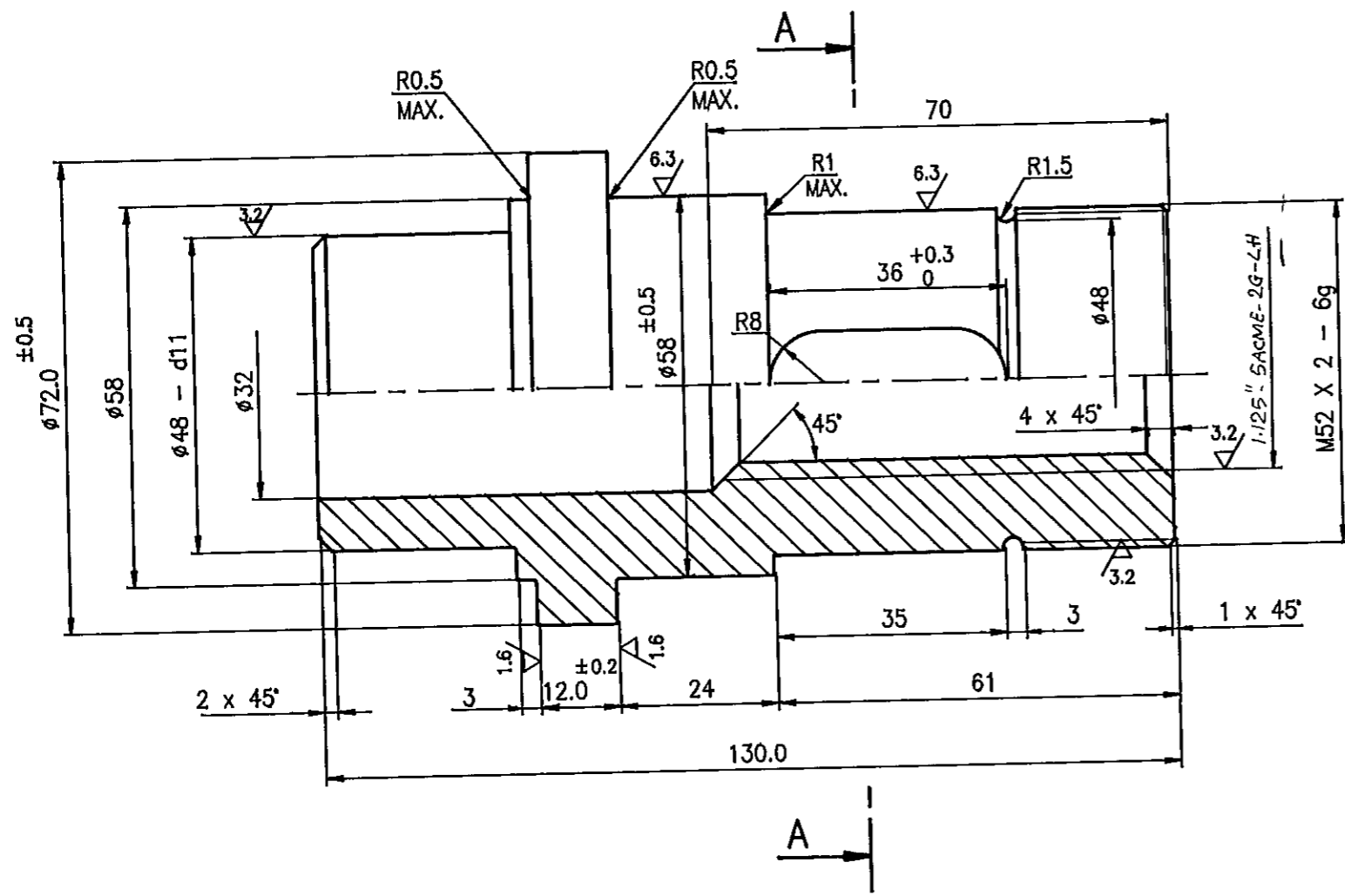
CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

DEPT VL	SCALE	WEIGHT (KG)	REFERENCE INFORMATION	NO. OF TEMPL
CODE 320	NTS	2.75	Component Code :931662720000 CAD :C317450	
TITLE		CARD CODE	DRAWING NO.	REV
YOKE BUSH		U 01	3-V-F504-17450	01

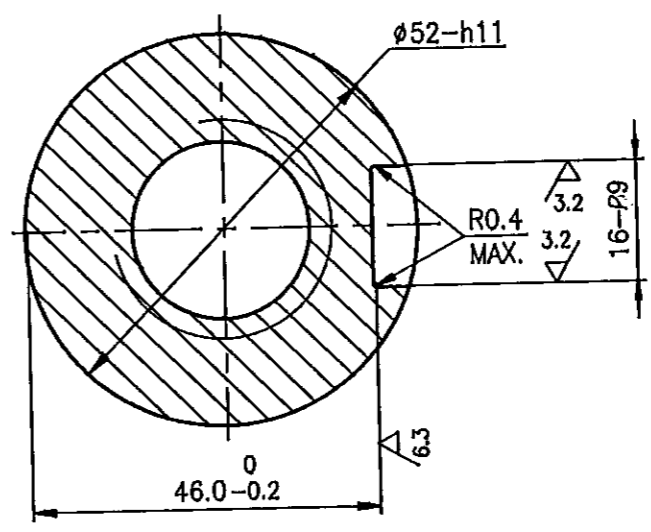
ALL DIMENSIONS ARE IN MILLIMETRES. FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP / QP.

DRAWING NO. 3-V-F503-17652

12.5 / 6.3 3.2 1.6



SECTION - AA





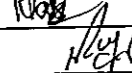
ø52 - h11	-0
	-0.190
ø48 - d11	-0.240
	-0.080
16 - P9	-0.018
	-0.061

NOTE

01. BREAK ALL SHARP CORNERS.

01	SUGGESTED SIZE BAR ø75 x 140	-	IS 305 GR AB1 CERTIFY	-	60	1.75	4.85	-	014
NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		 BHARAT HEAVY ELECTRICALS LTD., UNIT: HIGH PRESSURE BOILER PLANT. TIRUCHIRAPALLI-620014.		DRN	NAME	SIGN	DATE	NO. OF VAR.
DEPT VL CODE 320				CHD	M.SRINIVASAN		31.5.96	
				APPD	K.S.RAMAN		1.6.96	
TITLE		SCALE	WEIGHT (KG).	REFERENCE INFORMATION		NO. OF ITEMS		
YOKE BUSH		NTS	1.75	Component Code :93 167 078 0000				
CARD CODE		DRAWING NO.		CAD :C317652		REV		
U 01		3-V-F503-17652						

REV	DATE	ALTERED
		CHD & APPD