

30-ST-211-01-002

DRAWING NO.

FOR SL,Nos.1&2 REFER DRG,No.30.ST.211.01.004

SL.No.	MATERIAL CODE No.	(HOLLOW) TUBE DIA	POINTING DIA	DEMAG REF.DRG.No.
03	69 21 22 0010	24	18	RH.143.1.15.018 LS
04	69 21 22 0028	25, 26, 27	20	RH.143.1.15.020 LS
05	69 21 22 0036	30	23	
06	69 21 22 0044	32	25	RH.143.1.15.025 LS
07	69 21 22 0052	35, 36	26	
08	69 21 22 0060	36, 37	30	RH.143.1.15.030 LS
09	69 21 22 0079	42.4	31	
10	69 21 22 0087	42.4, 44.5, 48	36	RH.143.1.15.036 LS
11	69 21 22 0095	51	42	RH.143.1.15.042 LS
12	69 21 22 0109	51	42	
13	69 21 22 0117	54, 57	46	RH.143.1.15.046 LS
14	69 21 22 0125	55, 57	50	RH.143.1.15.050 LS
15	69 21 22 0133	60.3, 63.5	50	RH.143.1.15.050 LS
16	69 21 22 0141	62, 63.5, 70	55	RH.143.1.15.055 LS
17	69 21 22 0150	62, 63.5, 70	55	
18	69 21 22 0168	70	62	RH.143.1.15.062 LS
19	69 21 22 0176	76.1	66	
20	69 21 22 0184	81, 82.5	74	RH.143.1.15.074 LS
21	69 21 22 0192	88.9	80	RH.143.1.15.080 LS
22	69 21 22 0206	76.1	70	
23	69 21 22 0214	63.5, 70	58	
24	69 21 22 0229	33.4, 35	27	
25	69 21 22 0230	60.3, 63.5	50	
26	69 21 22 0249	47.63	46	
27	69 21 22 0250	44.5, 47.63	40	
28	69 21 22 0080	42.4, 44.5, 48	37	
29	69 21 22 0090	51	43	
30	69 21 22 0110	54, 57	47	
31	69 21 22 0130	60.3, 63.5	50.5	
32	69 21 22 0160	70	63	

DO POLISH ON ASSY

01

0.2 (MIRROR FINISH)

02

0.005

NOTE:

HOUSING HARDNESS : 41-47 HRC

POINTING BUSH HARDNESS : 1200 HV

TEST CERTIFICATE IS REQUIRED FOR CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES INCLUDING HARDNESS AS PER SPECIFICATION

*MARK MATERIAL CODE No., POINTING DIA, FIRM'S NAME & P O No.

REV	DATE	ALTERED
08	07.03.14	CHECKED
		APPROVED

SL.No.27-32 ADDED

CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

02	HOUSING	30.ST.211.01.005/06	REV	IS:1570(Part II)-1979	
				55C8	1
01	POINTING BUSH	30.ST.211.01.003/11	REV	TUNGSTEN(W):85%	
				COBALT (Co):15%	
				TUNGSTEN CARBIDE	1
ITEM NO	DESCRIPTION	DRAWING NO	MATL CODE	UNIT WT	
			MATL SPEC	QTY	
EQPT:					
Bharat Heavy Electricals Ltd		DRN	NAME	SIGNATURE	DATE
SEAMLESS STEEL TUBE PLANT		CHD	R.KUMAR	R.Kumar	06.03.14
TIRUCHIRAPALLI - 620014		APPD	S UDHAYAKUMAR	S Udayakumar	07.03.14
			N ARUMUGANAINAR	N A Nainar	08.03.14
DEPT	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY DWG NO	ITEM
SSTP/TE	φ/M/£	NTS	/		
CODE	IS: 2102			REF TO OLD DWG NO 30.ST.211.01.002/07	
				RH143.1.15.018-080 LS	
TITLE			CARD CODE	DRAWING NO :	REV
PUSH POINTING DIES			U 01	30-ST-211-01-002	08
(ø18-80)					

A3-SIZE

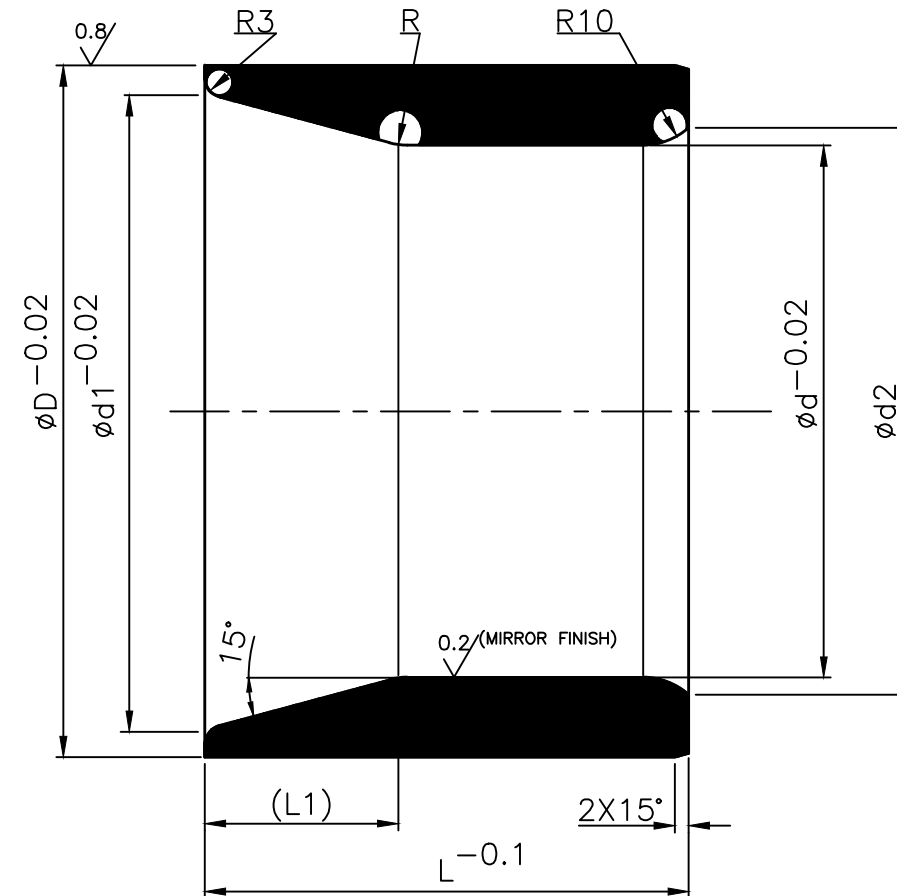
30-ST-211-01-003

DRAWING NO:

ALL DIMENSIONS ARE IN MILLIMETRES

0.8/ 0.2/

SL.No.	FOR MATERIAL CODE No	ød	ød1	ød2	R	L1	L	øD
03	69 21 22 0010	18	25	23	10	13.6	40	31
04	69 21 22 0028	20	30	25	10	18.66	50	36
05	69 21 22 0036	23	32	28	15	16.8	45	41
06	69 21 22 0044	25	35	30	15	18.66	45	41
07	69 21 22 0052	26	38	31	15	22.39	49	46
08	69 21 22 0060	30	40	35	15	18.66	49	46
09	69 21 22 0079	31	45	36	15	26.12	70	58
10	69 21 22 0087	36	52	41	20	29.8	70	58
11	69 21 22 0095	42	62	47	20	37.32	80	68
12	69 21 22 0109	42	60	47	20	33.6	55	68
13	69 21 22 0117	46	62	51	20	29.86	70	68
14	69 21 22 0125	50	62	55	25	22.39	72	68
15	69 21 22 0133	50	68	60	25	33.59	68	74
16	69 21 22 0141	55	75	60	25	37.32	76	81
17	69 21 22 0150	55	75	60	25	37.32	76	81
18	69 21 22 0168	62	80	67	30	33.6	70	86
19	69 21 22 0176	66	80	71	30	26.12	70	86
20	69 21 22 0184	74	86	79	35	22.39	80	92
21	69 21 22 0192	80	95	85	40	27.99	70	100
22	69 21 22 0206	70	81	75	35	20	70	86
23	69 21 22 0214	58	75	63	25	30	76	81
24	69 21 22 0229	27	38	32	15	20.53	49	46
25	69 21 22 0230	50	68	55	25	33.59	72	74
26	69 21 22 0249	46	74	51	20	52.25	80	84
27	69 21 22 0250	40	62	45	20	41.05	80	68
28	69 21 22 0080	37	53	42	20	29.8	70	58
29	69 21 22 0090	43	63	48	20	37.32	80	68
30	69 21 22 0110	47	63	52	20	29.86	70	68
31	69 21 22 0130	50.5	69	61	25	33.59	68	74
32	69 21 22 0160	63.0	81	68	30	33.6	70	86



MATERIAL:TUNGSTEN CARBIDE

TUNGSTEN (W) : 85%

COBALT (Co) : 15%

HARDNESS : 1200 HV

REV	DATE	ALTERED
11	07.03.14	CHECKED
		APPROVED

SL.No.27-32 ADDED

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ITEM NO	DESCRIPTION	DRAWING NO	MATL CODE	UNIT WT
			MATL SPEC	QTY
EQPT:				
Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI - 620014		DRN	R.KUMAR	DATE 06.03.14
		CHD	S.UDHAYAKUMAR	07.03.14
		APPD	N.ARUMUGANAINAR	08.03.14
DEPT SSTP/TE	GRADE OF UNTOL. DIM φ/M/£ IS: 2102	SCALE N T S	WEIGHT (Kg) /	REF TO ASSY DWG NO 30.ST.211.01.002/08
CODE 456				REF TO OLD DWG NO RH143.1.15.018-080 LS
TITLE POINTING BUSH (FOR POINTING DIE)			CARD CODE U 01	DRAWING NO : 30-ST-211-01-003 REV 11

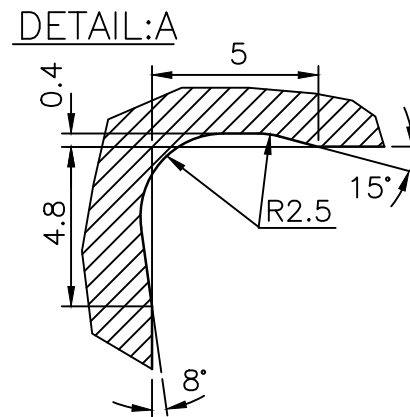
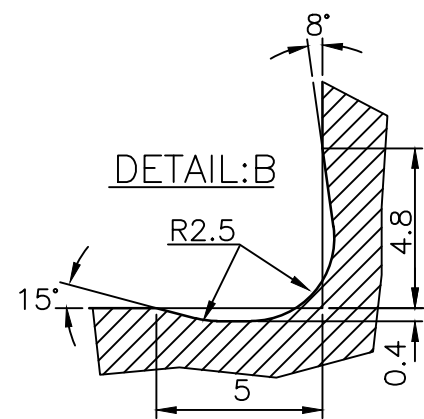
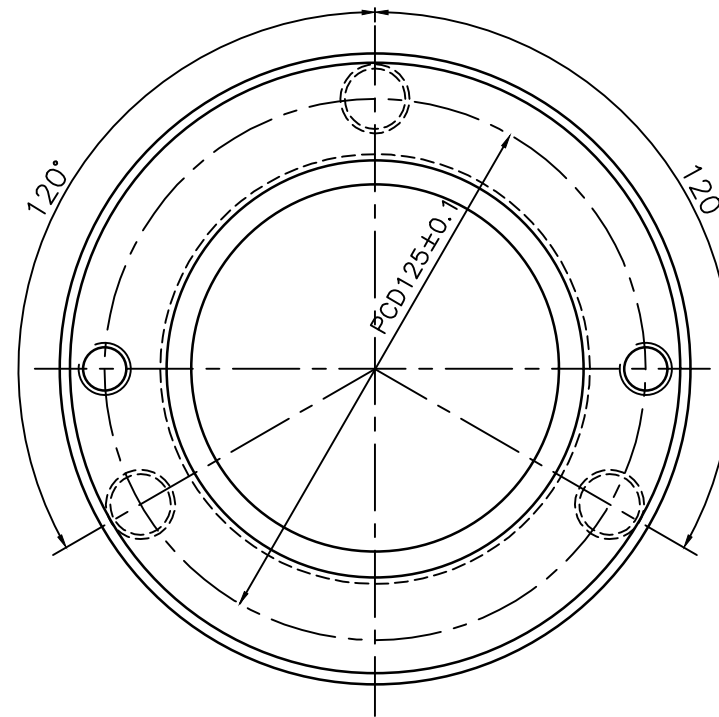
A3-SIZE

1.6 / 0.8

Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and tolerances. The part is symmetrical about a vertical centerline.

Key dimensions and tolerances:

- Overall width: L
- Overall height: 100
- Central vertical slot width: 10
- Base plate thickness: 10
- Vertical support height: 10
- Top surface flatness: ± 0.05
- Bottom surface flatness: ± 0.10
- Material properties: Yield strength 160 MPa, Tensile strength 200 MPa
- Section lines: A-A and B-B



SIGNATURE

REV 06	DATE 07.03.14	ALTERED <i>R. K. K...</i>
		CHECKED
		APPROVED <i>N. A. Nainan</i>

SL.No.27-32 ADDED

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				IS:1570(PartII)1979			
				55C8			
ITEM NO	DESCRIPTION	DRAWING NO	MATL CODE		UNIT WT		
			MATL SPEC		QTY		
EQPT:							
		Bharat Heavy Electricals Ltd SEAMLESS STEEL TUBE PLANT TIRUCHIRAPALLI – 620014		DRN	NAME R.KUMAR	SIGNATURE <i>R.Kumar</i>	DATE 06.03.14
				CHD	S UDHAYAKUMAR	<i>S Udayakumar</i>	07.03.14
				APPD	N ARUMUGANAINAR	<i>N A Nainar</i>	08.03.14
DEPT SSTP/TE	GRADE OF UNTOL. DIM ϕ /M/F IS:2102		SCALE N T S	WEIGHT (Kg) /	REF TO ASSY DWG NO 30.ST.211.01.526		ITEM 02
CODE 456					REF TO OLD DWG NO RH143.1.15.018–080 LS		
TITLE HOUSING (FOR POINTING DIE)				CARD CODE U 01	DRAWING NO : 30-ST-211-01-005		REV 06

SL.No	FOR MATERIAL CODE No.	ød	ød1	L	L1	L2	Wt/Kg
03	69 21 22 0010	30.8	23	70	60	40	6.4
04	69 21 22 0028	35.8	25	70	60	50	7.4
05	69 21 22 0036	40.8	30	70	60	45	8.4
06	69 21 22 0044	40.8	30	70	60	45	8.4
07	69 21 22 0052	45.8	35	80	70	49	9.3
08	69 21 22 0060	45.8	35	80	70	49	9.3
09	69 21 22 0079	57.8	41	100	90	70	11.1
10	69 21 22 0087	57.8	41	100	90	70	11.1
11	69 21 22 0095	67.8	47	120	110	80	12.3
12	69 21 22 0109	67.8	47	70	60	55	7.4
13	69 21 22 0117	67.8	51	120	110	70	12.2
14	69 21 22 0125	67.8	55	120	110	72	12.1
15	69 21 22 0133	73.8	60	90	80	68	6.6
16	69 21 22 0141	80.8	60	90	80	76	7.6
17	69 21 22 0150	80.8	60	120	110	76	12.3
18	69 21 22 0168	85.8	67	100	90	70	7.9
19	69 21 22 0176	85.8	71	100	90	70	12.5
20	69 21 22 0184	91.8	79	100	90	80	8.2
21	69 21 22 0192	99.8	85	120	110	70	8.4
22	69 21 22 0206	85.8	79	100	90	70	12.5
23	69 21 22 0214	80.8	67	120	110	76	11.5
24	69 21 22 0229	45.8	35	80	70	49	9.3
25	69 21 22 0230	73.8	60	120	110	72	11.5
26	69 21 22 0249	83.8	55	120	110	80	8.2
27	69 21 22 0250	67.8	55	120	110	80	9.5
28	69 21 22 0080	57.8	41	100	90	70	11.1
29	69 21 22 0090	67.8	47	120	110	80	12.3
30	69 21 22 0110	67.8	51	120	110	70	12.2
31	69 21 22 0130	73.8	60	90	80	68	7.1
32	69 21 22 0160	85.8	67	100	90	70	7.9

HEAT TREAT TO 100 Kg/mm²

HARDNESS 41-45 HRC

A3-SIZE