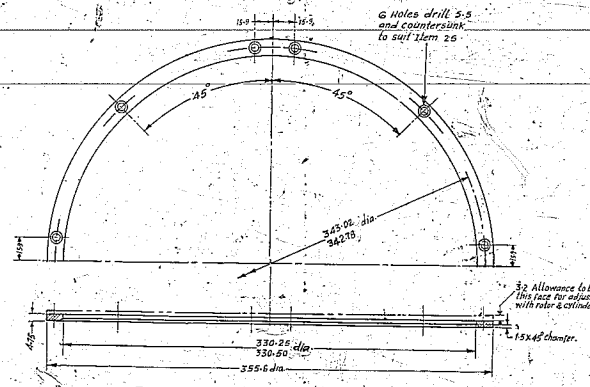
ALL DIMENSIONS ARE IN MM, UNLESS OTHERWISE STATED.

THIRD ANGLE PROJECTION

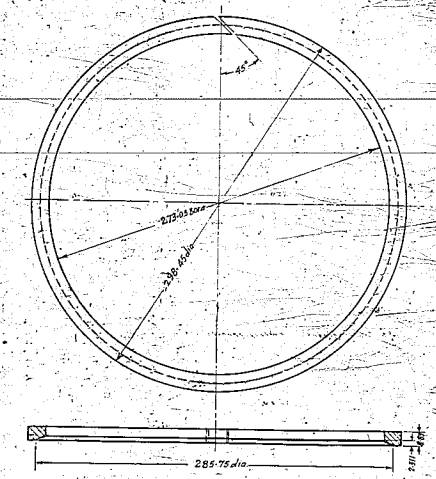
This side of drawing to be used only for endoresement by B.H.E.L. & representative of Indian Navy in tabulated form.

VESSEL	CONTRACTOR NAME	CONTRACTOR SIGNATURE	CONTRACTOR DATE	ACTION OR REMARKS	AUTHORITY OR APPROVAL FOR INDIAN NAVY	REPRESENTATIVE OF INDIAN NAVY SIGNATURE	REPRESENTATIVE OF INDIAN NAVY DATE
LEANDER Y 160	B.H.E.L.			FOR SUBMISSION			

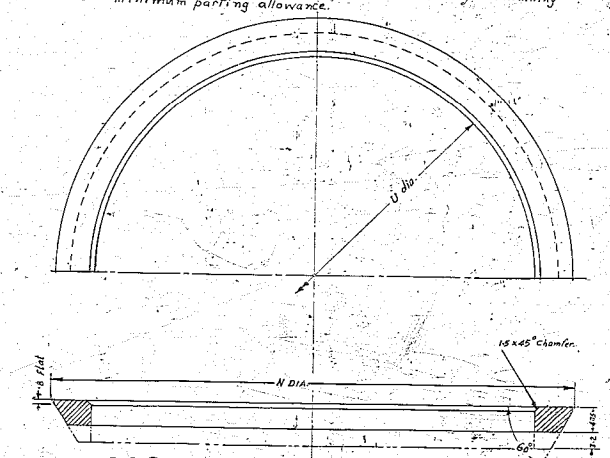


(20) DETAIL OF HALF ADJUSTING RING

✓ Allover
to suit gland and fit to place.
2 Half rings are to be produced from full machined ring maintaining minimum parting allowance.



(38) DETAIL OF FORWARD END WATER TEST RING.

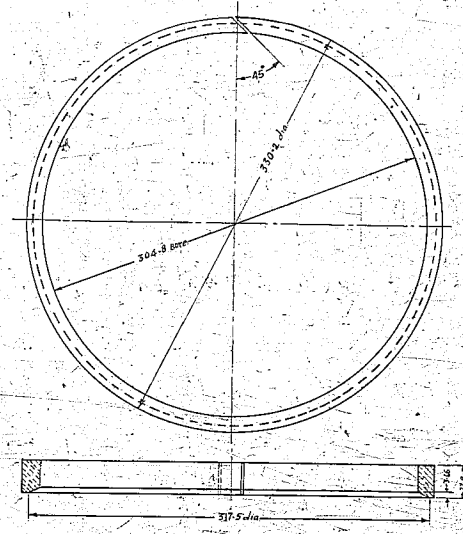


(17)(18)(19) DETAIL OF HALF ADJUSTING RING

ITEM. NO.	U DIA.	N DIA.
17	349.25 349.50	374.65 374.40
18	408.93 409.24	430.15 457.90
19	377.24 377.49	406.49 406.15

✓ Allover
to suit gland and fit to place.
2 Half rings are to be produced from full machined ring maintaining minimum parting allowance.

This allowance to be kept on this face for adjustment of gland with rotor & cylinder during erection.



(36) DETAIL OF AFT END WATER TEST RING.

TOOL LIST		
ITEM	TOOL.	DESCRIPTION.
11-B	1427325	Form Gauge
7-B	1427331	254-255 60 Pin Gauge 254-255 Metric Pin Gauge
7-B	1427332	257-258 40 Pin Gauge 256-260 Metric Pin Gauge
34B	1427333	262-263 40 Pin Gauge 262-264 Metric Pin Gauge
34C	1427334	265-266 60 Pin Gauge 265-270 Metric Pin Gauge
34A	1427335	267-268 40 Pin Gauge 267-270 Metric Pin Gauge
1A2	1427336	Dovetail Gauge.
1-C & 1-E	1427337	Dovetail Gauge.
1-D-G	1427338	Dovetail Tools L.H. & R.H.
1-F & 1-G	1427339 (4 off)	Rad. Tool with M.T. Shank.
11-B	1427615	Dovtail Tool for Baffle Stone.
1-B2	1514156	6.5 R. Tool R.H. & L.H.
11-B	1514225	'V' Tool.
7B.2A	1519219	m.o. Template for 6 holes PTS
15-G (1 off)	1514469	Bending roller for 16.3 mm wide
15-G (1 off)	1514470	Bending roller for 17 mm wide
5.7, 11 (2 off)	1514902	Roller baffle ring (16.3 wide)
4, 7, 12 (2 off)	1514903	Roller baffle ring (17.7 wide)

STAR BOARD SPARE DOCK	STAR BOARD SPARE SHIP	STAR BOARD WORKING	PORT SPARE DOCK	PORT SPARE SHIP	PORT WORKING	ITEM NO	DESCRIPTION SIZE OR WEIGHT	PART. CODE NO.	MATERIAL	PATTERN STYLE LAT. OR DRG. NO.	REMARK
		1			1	1	Main aft. gland ring (top half), Carbon steel Forging	BP 9402640070	AA19331	0-10505-92531/17	
		1			1	2	Main aft gland ring (bottom half) Carbon steel Forging	BP9402640088	AA19331	0-10505-92531/18	
		1			1	3	Main inner for'd gland ring (Top half), Carbon steel Forging	BP 9402640053	AA19331	0-10505-92531/15	
		1			1	4	Main inner for'd gland ring (bottom half), Carbon steel Forging	BP 9402640061	AA19331	0-10505-92531/16	
		1			1	5	Main inner for'd gland ring (Top half), Carbon steel Forging	BP9402640037	AA19331	0-10505-92531/13	
		1			1	6	Main inner for'd gland ring (bottom half), Carbon steel Forging	BP9402640045	AA19331	0-10505-92531/14	
		1			1	7	Main outer for'd gland ring (Top half), Carbon steel Forging	BP9402640010	AA19331	0-10505-92531/11	
		1			1	8	Main outer ford gland ring (bottom half), Carbon steel Forging	BP9402640029	AA19331	0-10505-92531/12	
18 Halves	18 Halves	18 Halves	18 Halves	18 Halves	18 Halves	9	Baffle ring (in halves) 0.56 th. x 143 x 490 lg. each Stainless steel	BP10719820 28	BP10782	Cut to suit.	
16 Halves	16 Halves	16 Halves	16 Halves	16 Halves	16 Halves	10	Baffle ring (in halves) 0.56 th. x 11.7 x 490 lg. each "	BP10719820 10	BP10782	Cut to suit.	
18 Halves	18 Halves	18 Halves	18 Halves	18 Halves	18 Halves	11	Baffle ring (in halves) 0.56 th. x 143 x 572 lg. each "	BP10719820 28	BP10782	Cut to suit.	
16 Halves	16 Halves	16 Halves	16 Halves	16 Halves	16 Halves	12	Baffle ring (in halves) 0.56 th. x 11.7 x 572 lg. each "	BP10719820 10	BP10782	Cut to suit.	
18 Halves	18 Halves	18 Halves	18 Halves	18 Halves	18 Halves	15	Baffle ring (in halves) 0.56 th. x 143 x 520 lg. each "	BP10719820 28	BP10782	Cut to suit.	
16 Halves	16 Halves	16 Halves	16 Halves	16 Halves	16 Halves	14	Baffle ring (in halves) 0.56 th. x 11.7 x 520 lg. each "	BP10719820 10	BP10782	Cut to suit.	
18 Halves	18 Halves	18 Halves	18 Halves	18 Halves	18 Halves	15	Baffle ring (in halves) 0.56 th. x 143 x 440 lg. each "	BP10719820 28	BP10782	Cut to suit.	
16 Halves	16 Halves	16 Halves	16 Halves	16 Halves	16 Halves	16	Baffle ring (in halves) 0.56 th. x 11.7 x 440 lg. each "	BP10719820 10	BP10782	Cut to suit.	
Rings	Rings	Rings	Rings	Rings	Rings	17	Adjusting ring (in halves), 10 th x 375 x 375 each Stn. Stl. ring with Stn. Stl. plate	AA10118080 72	AA10108	1 machined ring made 2 half rings	
Ring	Ring	Ring	Ring	Ring	Ring	18	Adjusting ring (in halves), 10 th x 439 x 439 each Stn. Stl. ring with Stn. Stl. plate	AA10118080 72	AA10108	1 machined ring made 2 half rings	
Ring	Ring	Ring	Ring	Ring	Ring	19	Adjusting ring (in halves), 10 th x 407 x 407 each Stn. Stl. ring with Stn. Stl. plate	AA10118080 71	AA10108	1 machined ring made 2 half rings	
Rings	Rings	Rings	Rings	Rings	Rings	20	Adjusting ring (in halves) 10 th x 356 x 356 each Stn. Stl. ring with Stn. Stl. plate	AA10118080 72	AA10108	1 machined ring made 2 half rings	
		2-3 Pieces			2-3 Pieces	21	Caulking Piece 50.8 lg. each Annealed wrought iron stn	BL9092601152			
						22					
						23					
		23			23	25	Screw SLT. C'SK. A.P. M5 x 10-4.8	AA7122101096	AA7122101		
		2			2	26	Keys (Top & Bottom), 16 x 10 x 75 lg. C.D. Parallel S. Key Bar.	AA10203120 58	AA10212	Detailed on Sht 4.	
		2			2	27	Keys (Top & Bottom). 16 x 10 x 50 lg. C.D. Parallel S. Key Bar.	AA10203120 60	AA10212	Detailed on Sht 4.	
		4			4	28	Side Keys, 28 x 16 x 220 lg. C.D. Parallel S. Key Bar.	AA10203121 06	AA10212	Detailed on Sht 4.	
		4			4	29	Side Keys, 28 x 16 x 130 lg C.D. Parallel S. Key Bar.	AA10203121 06	AA10212	Detailed on Sht 4.	
		4			4	30	M8 x 25 lg. Slotted C'SK. Hd. S. Screw, 0.16 x 150 lg. Stn. Stl. Stn. Stl. Bar.	AA10102080 80	AA10108	31162190561	
		4			4	31	M6 x 25 lg. Slotted C'SK. Hd. S. Screw, 0.12 x 150 lg. Stn. Stl. Stn. Stl. Bar.	AA10102080 71	AA10108	31162190561	
		2-3 Meters			2-3 Meters	32	3.0 dia. Asbestos cord.	BP2356491018	BP23591		
		4			4	33	m 10 Check screw, @ 32 x 150 lg. Stn. Stl. Stl. 9/ly Bar.	AA10102081 44	AA10108	Detailed on Sht 4	
		4			4	34	m 6 check screw, @ 20 x 130 lg. Stn. Stl. Stl. 9/ly Bar.	AA10102081 01	AA10108	Detailed on Sht 4	
		16			16	35	Crushing Peg 0.12 x 6.5 lg. Stn. Stl. Stl. 9/ly Bar.	AA10102080 71	AA10108	Detailed on Sht 4	
		1			1	36	Water Test ring Rubber.	BP9092602370		Hyde R 143/60 Shore Hardness	
		1			1	37	Jubilee clip 330-2 I.D. Steel	BP9092602388			
		1			1	38	Water Test ring. Rubber	BP9092602396		Hyde R 143/60 Shore Hardness	
		1			1	39	Jubilee clip 298-45 I.D. Steel.	BP9092602400			
2-3 Pieces			2-3 Pieces			40	Caulking Piece (Repairs) 50.8 lg. each Annealed wrought iron stn	BL9092601403			

Note:-
1. All dimensions expressed as limits of size denote manufacturing requirements.
2. Tolerance must not be cumulative.

MATERIAL TO PS 10649 IS ALSO ACCEPTABLE

REVISIONS					
05	DATE 26.7.95 CKD. APPD.	04	DATE 23-12-92 CKD. APPD.	03	DATE 25.5.92 CKD. APPD.
	Tool Nos. 1514902 and 1516903 added in Tool list. Upper rem minutes dated 22.8.95. Matl. Spec. for Item 9 to 16 was PS 10649. Matl code no. for items 9 to 16 changed.		Dtg revision brought in line with corporate std AA0425 Iss clause 4.5		In BOM item 29 - 28 x 16 x 130 lg. was 22 x 14 x 130 lg. Matl. code was AA10203120 84

REVISIONS					
02	DATE 28.8.91 CKD. APPD.	01	DATE 15.9.88 CKD. APPD.		
	In tool list tool Nos. 1514469 & 1514470 added as per rem of 16.8.91. In BOM for item nos. 10, 12, 14 & 16 the width was 11.684. Matl. Spec. for items 9 to 16 was PS 10649		Tool Nos:- 1427615, 1514156 & 1514225 added in Tool list. Drg revised as per rem 12.9.88.		

Dimensions with limits to be made to gauges	
Machining tolerances ± .25 mm. unless shown otherwise	
Non machining tolerances ± mm	
DRAWING ISSUED BY:- STEAM TURBINED. O.	
DRN.	16-6-88
CKD.	29.6.88
DRG. APPD.	12.7.88
DESN APPD.	

PRINTS TO -	QTY
S.T.C.	1
S.T.M.	4
T.C.X. (STM)	1
FDM	4
TGM (C.O.)	1

DRAWING REFERENCE:
REF. R-212/799/E/E.E./G 261256B - REV. 6.

BHARAT HEAVY ELECTRICALS LIMITED
BHOPAL

MAIN TURBINE GLANDS
MARINE MAIN STEAM TURBINE

SCALE :- N.T.S. | W.O. 16130-H-336-19 & 16132-H-336-19 | 0-10505-92568

PREFIX: 2009 | SHEET 1 OF 4 SHEETS

0-10505-92568 SHT. 1 OF 4 SHTS.

0-10505-92568

0-10505-92568