

BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI, TAMILNADU, INDIA
MATERIALS MANAGEMENT :: FOSSIL BOILERS
(SUB-DELIVERY)

REF: MM/SD-DRUMS
DATE: 10 MAY, 2010

SUB: VENDORS REQUIRED FOR THE SUPPLY OF BOILER DRUMS

Bharat Heavy Electricals Limited, (BHEL) Tiruchirappalli, is looking for Vendors to Supply Boiler Drums in fully assembled condition as per BHEL Drawings, Technical Delivery Conditions, Quality Plans etc.

The list of Drawings, Technical Delivery Conditions and Quality Plans to be referred for each ratings of Boiler Drum are posted on BHEL Web Site (www.bhel.com) and on National Informatics Centre Web Site (<http://tenders.gov.in/>).

The tentative requirement of boiler drums is given below:

Fully Assembled Boiler Drums for....

1) 600MW - 4 nos.

Qualification Criteria:

Manufacturers having supplied minimum 2 Boiler Drums of respective ratings or above, to Power Plants are only qualified.

Interested Vendors may register thro' BHEL Web Site OR send e-mail to the following addresses with Company Profile along with other credentials like Product Range, Production Capability, List of Customers, List of Major Machinery & Testing Equipments, Technical Collaboration if any, Quality Manuals, Quality Accreditation, etc.

The last date for registration is 15 June, 2010.

Contact Address:

Dy.General Manager/Purchase(SD) Materials Management (FB) 4 th Floor / 24 Building High Pressure Boiler Plant Bharat Heavy Electricals Limited Tiruchirappalli – 620 014 <u>Tamilnadu, India</u>	Phone: (0431) 2577074 Fax: (0431) 2520719 e-Mail ID: mkraj@bheltry.co.in
Manager/Supplier Development Cell Materials Management (Mfg) 4 th Floor / 24 Building High Pressure Boiler Plant Bharat Heavy Electricals Limited Tiruchirappalli – 620 014 <u>Tamilnadu, India</u>	Phone: (0431) 2577448 Fax: (0431) 2520719 e-Mail ID: rmkrish@bheltry.co.in

DGM/PURCHASE/SD
Materials Management (FB)
Bharat Heavy Electricals Limited
Tiruchirappalli-620014

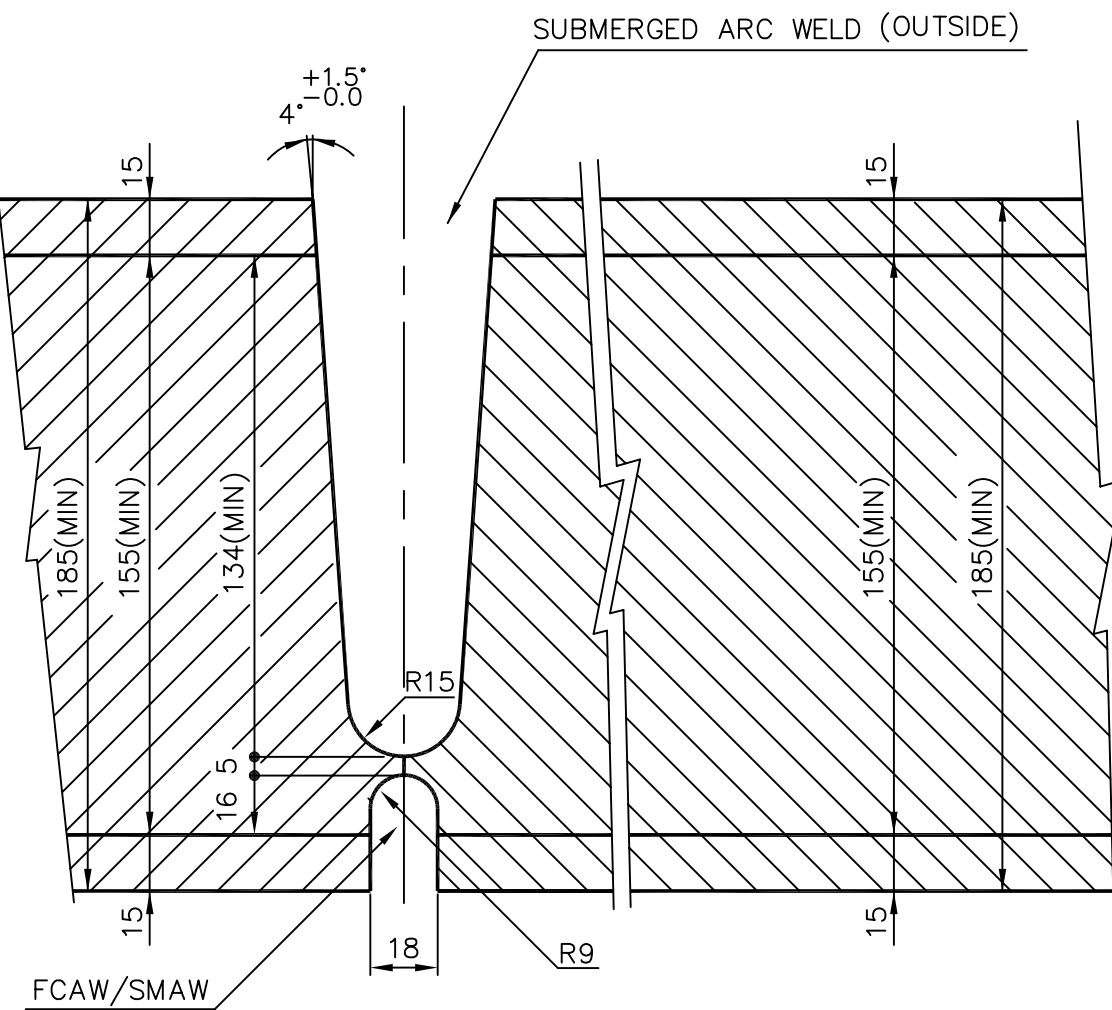
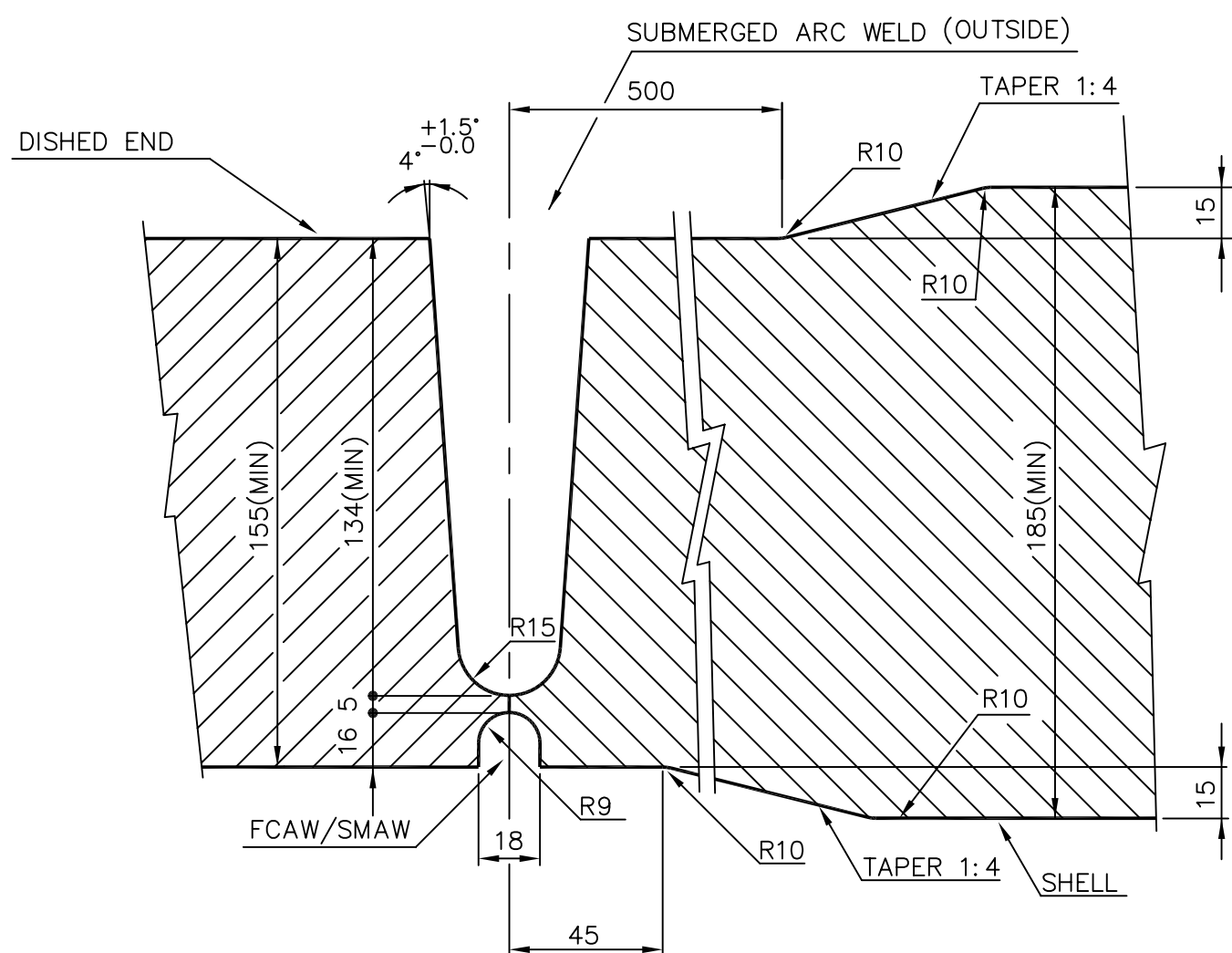
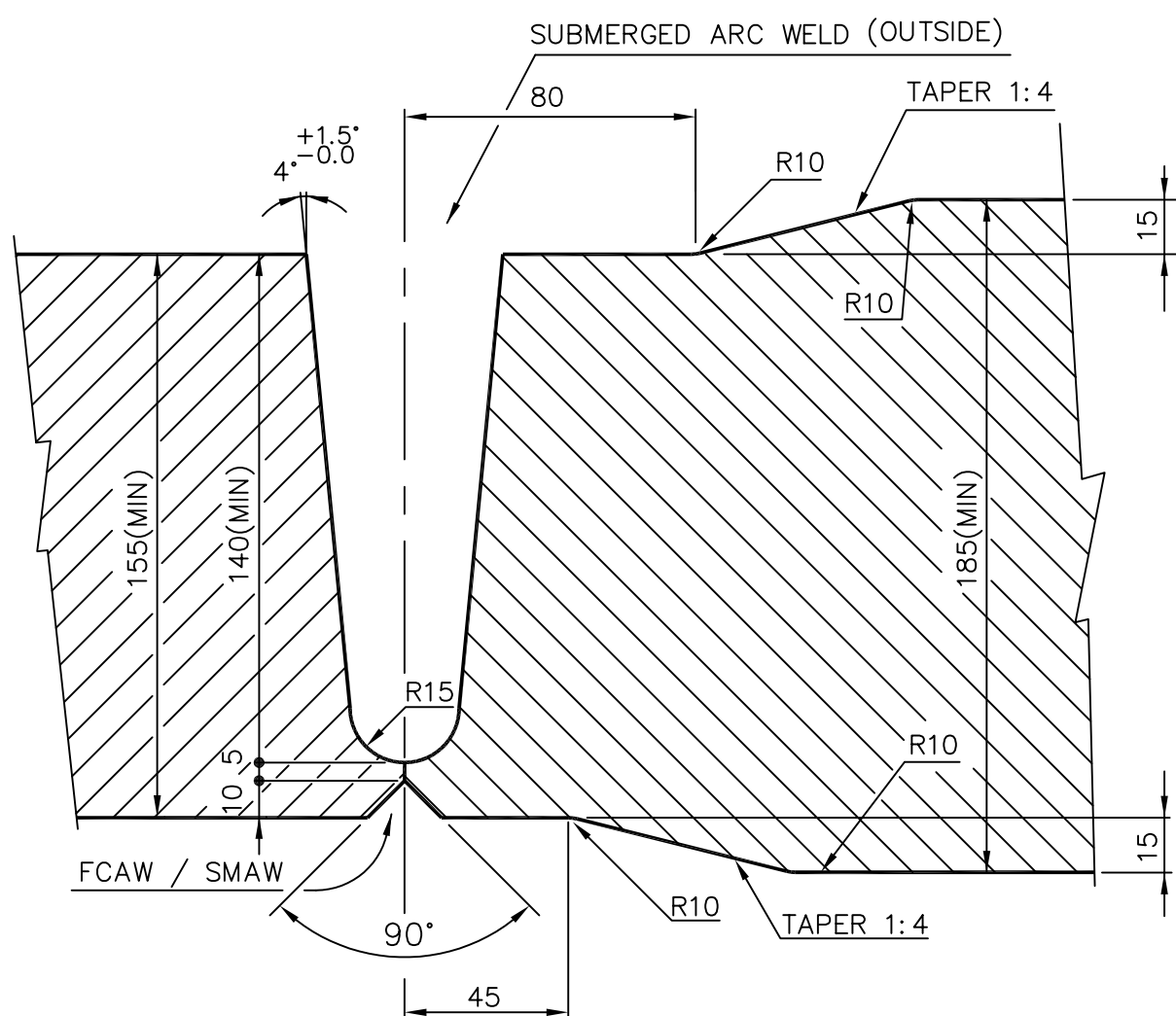
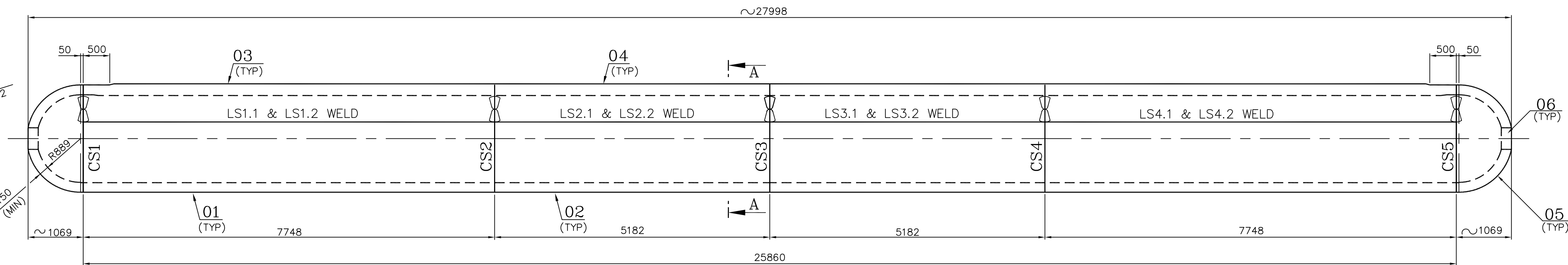
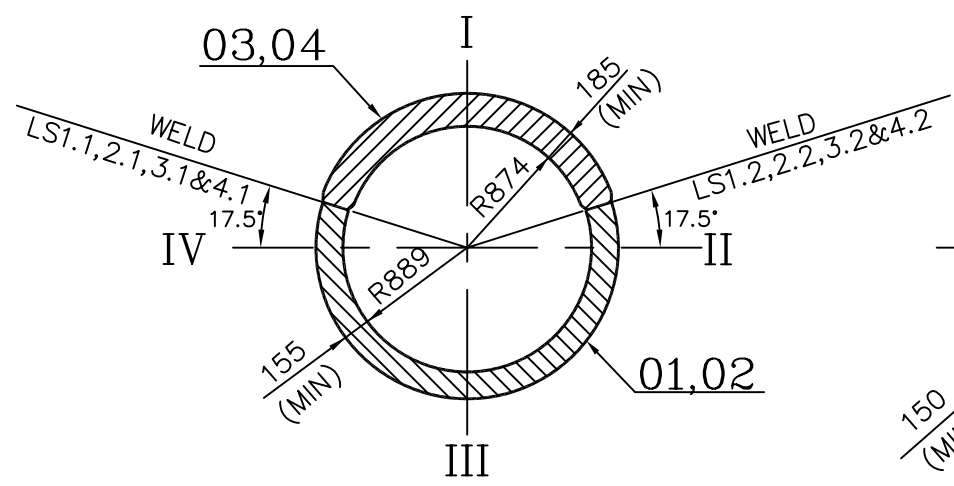
Supply of Complete Boiler Drums – List of Documents

Drawings	a) 270 MW – 6 Nos.	1.Boiler Drum-Undrilled	1.04.126.00870/00 (1216-1.pdf)
		2.Boiler Drum with stubs and drilling details	0.04.126.01324/00 (1216-2.pdf)
		3. Boiler Drum with stubs and drilling details	0.04.126.01325/00 (1216-3.pdf)
	b) 500 MW – 2 Nos.	1.Boiler drum	1.04.126.00856/ (0654-1.pdf)
		2.Boiler Drum with stubs and drilling details	0.04.126.01273/00 (0654-2.pdf)
		3. Boiler Drum with stubs and drilling details	0.04126.01268/ (0654-3.pdf)
	c) 600 MW – 4 Nos.	1.Boiler drum	1.04.126.00669/00 (1600-1.pdf)
		2.Boiler Drum with stubs and drilling details	0.04.126.01302/00 (1600-2.pdf)
		3. Boiler Drum with stubs and drilling details	0.04126.01308/00 (1600-3.pdf)
TDCs	a) TDC:0:101 Rev.11	TDC for Seamless Steel Pipes (For Boilers)	
	b) TDC:0:102 Rev.11	TDC for Seamless Steel Tubes (For Boilers)	
	c) TDC:0:201 Rev.06	TDC for Boiler Quality Plates to SA 299 Gr.A (Boilers)	
	d) TDC:0:202 Rev.04	TDC for Boiler Quality Plates to SA 515 & SA 387 (Boilers)	
	e) TDC:0:401 Rev.01	TDC for Carbon steel forgings to Specn. SA 105 for use in Drum Nozzles.	
	f) TDC:0:424 Rev.00	TDC for Drum (Undrilled) for Boilers.	
QAP	a) SIP:PP:04/06	Hydrostatic testing of Pressure parts (Boilers, Pressure vessels & Heat exchangers)	
	b) SIP:PP:05/00	Quality Assurance Diameter, Circulating and profile requirements (Boiler Drums)	
	c) SIP:PP:22/03	Procedure or surface preparations and painting (Boilers and value components)	
	d) QCP:001/05	QCP for fabrication of Pressure parts (other than tubular products)	
	e) SIP:PP:02/00	Quality Assurance visual inspection of Pressure parts except tubular products.	
	e) SIP:PP:08/00	Quality Assurance Welding of Lifting Lugs to Boiler Drums	

DRAWING NO: 1-04-126-00869

FOR TOLERANCES OF UNTOLERANCED
DIMENSIONS DURING MANUFACTURE
REFER PLANT STD. NO TP 023 0299

SECTION – AA



DETAIL LS1.1,LS1.2,LS2.1,LS2.2,LS3.1LS3.2,LS4.1&LS4.2

DETAIL CS1&CS5

DETAIL CS2,CS3&CS4

SCALE 1:2

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PARAMETERS :

- | | |
|--|-------------------|
| 01. DESIGN PRESSURE | : 210 KG/SQ.CM(G) |
| 02. DESIGN TEMPERATURE | : 369°C |
| 03. HYDRAULIC TEST PRESSURE AT SHOP | : 315 KG/SQ.CM(G) |
| 04. DESIGN,MANUFACTURING & INSPECTION AS PER | : IBR |

TYPE OF WELD	TYPE OF ELECTRODE	TYPE OF FLUX
SHIELDED METAL ARC WELDING	E 7018 -1	_____
SUBMERGED ARC WELDING	WIRE US49 OR EQUIVALENT	FLUX TAPADIA Gr.80M OR EQUIVALENT
FLUX CORED ARC WELDING	DW 100 OR EQUIVALENT	_____

NOTES:



01. CIRCUMFERENTIAL & LONGITUDINAL SEAMS ARE TO BE 100% RADIOGRAPHED.
02. TOLERANCE ON THE FINISHED DRUM AND INSPECTION SHALL SATISFY THE I.B.R.
03. WELDING SEQUENCE : ACC. TO PROCESS SHEET.
04. HEAT TREATMENT SEQUENCE : AS PER I.B.R.
05. PLACE THE MAN HOLE COVER INSIDE THE DRUM BEFORE WELDING DISHED END.

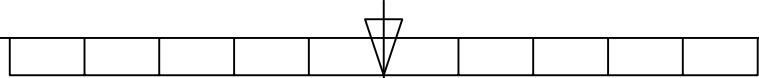
REFERENCE DRAWING:

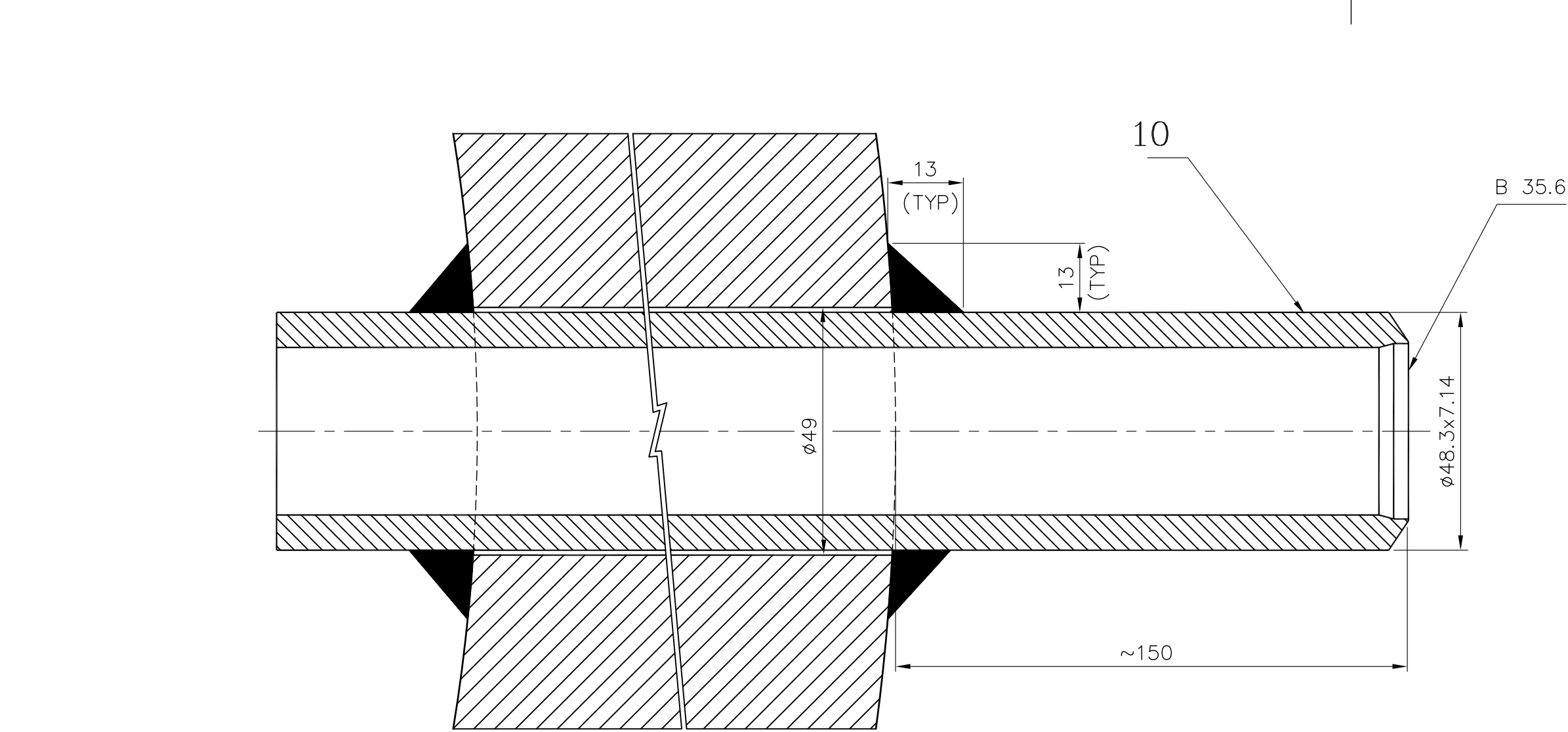
01. ALLOWABLE DRUM TOLERANCES - 0-03-000-00001

REV 01	DATE	ALTERED :
		CHD & APPD :
ZONE		

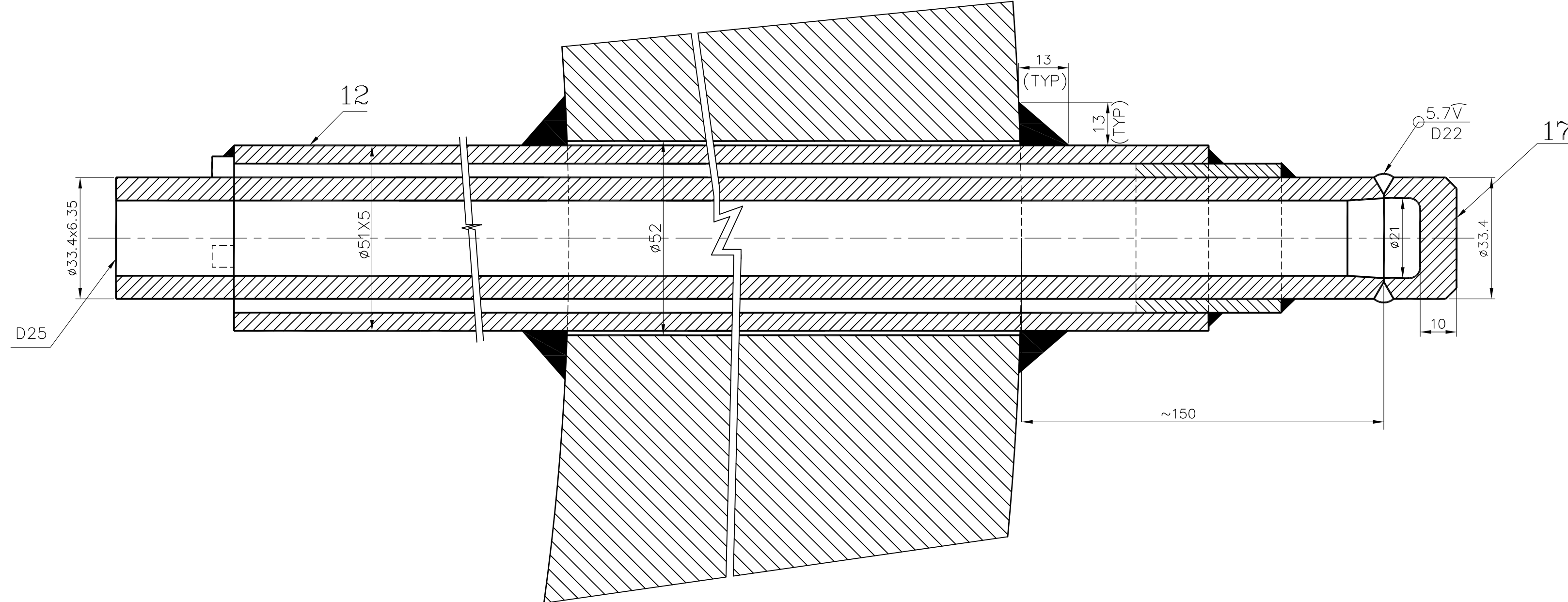
CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT								
 355-053 Bharat Heavy Electricals Ltd UNIT: HIGH PRESSURE BOILER PLANT TURUCHIRAPALLI - 620014					DRN	K.GAYATHRI	SIGNATURE	DATE 20.10.08
					CHD	M.S		21.10.08
					APPD	M.S		21.10.08
DEPT	PP	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE 1:50 1:2	WEIGHT (Kg) 228033.28	REF TO ASSY / OLD DWG		
CODE	121							
TITLE BOILER DRUM						DRAWING NO : 1-04-126-00869		REV 00





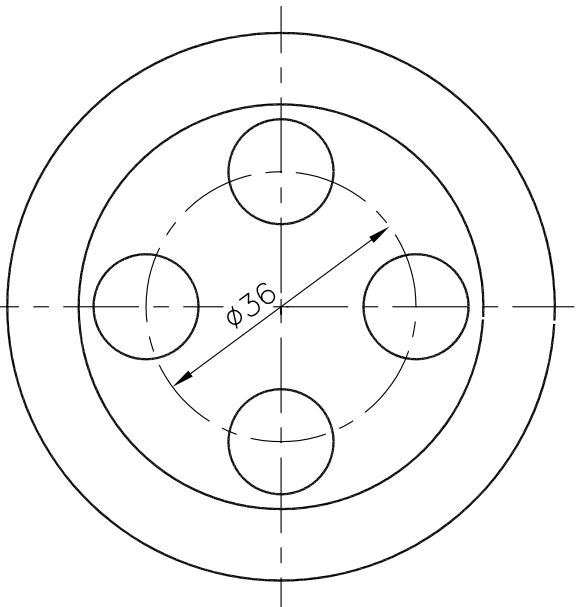
DETAIL - 3
(SCALE-1:1)

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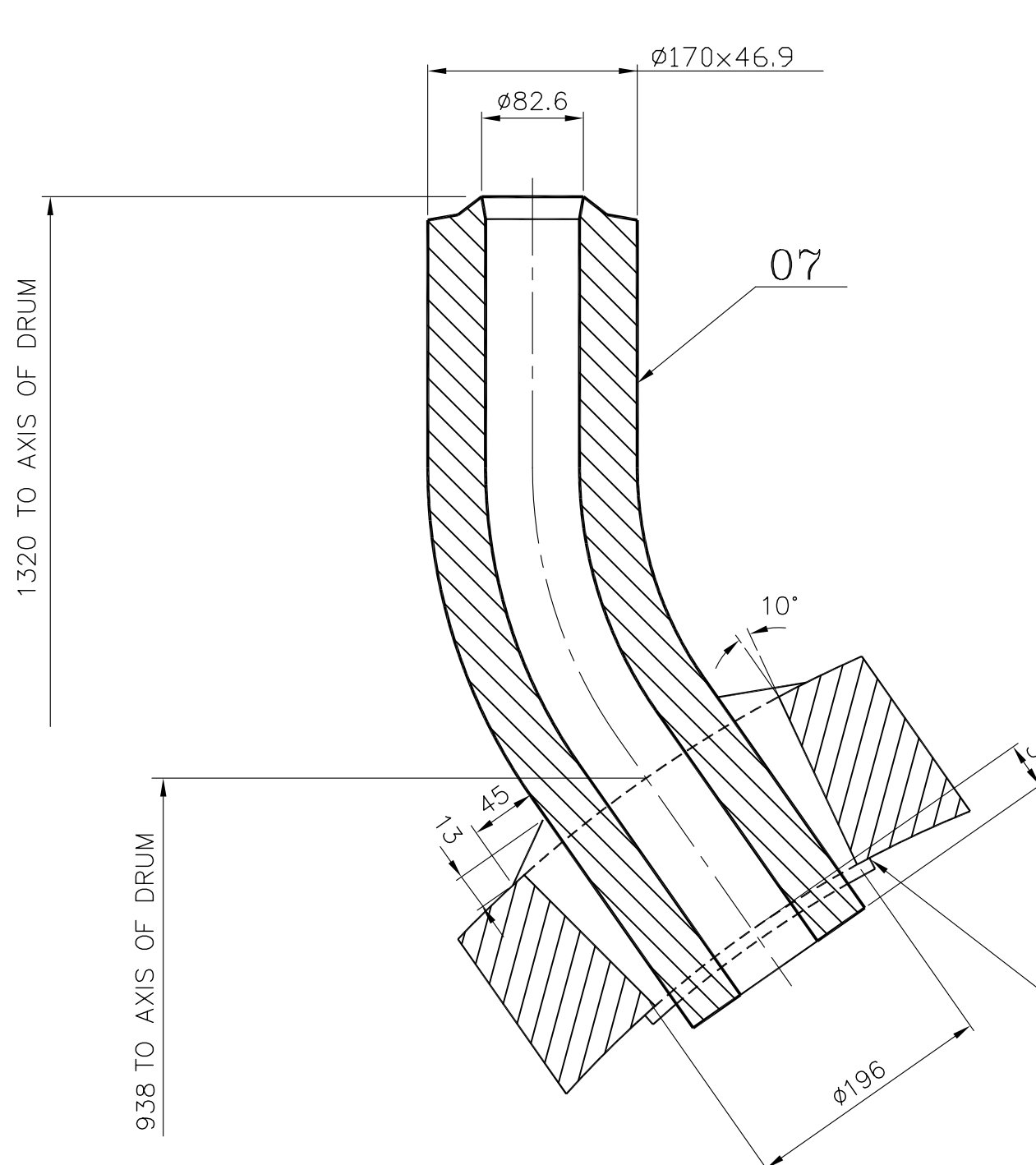
Technical drawing of a mechanical assembly (Fig. 1) showing a cross-section of a shaft with a central hole and a surrounding housing. The shaft has a diameter of 109 mm and a length of 150 mm. The housing has an outer diameter of 125 mm and a thickness of 13 mm. The assembly is labeled with 'D56.1' and '16'.

Technical drawing of a shaft assembly (Fig. 10). The drawing shows a shaft with a diameter of $\phi 14.5 \frac{+0.02}{-0.03}$ (TYP) and a length of ~ 150 mm. The shaft is supported by a pulley with a diameter of $\phi 74$ mm and a width of 25 mm. The pulley has a keyway with a width of 13 mm (TYP). The shaft is also supported by a gear with a diameter of $\phi 56.1$ mm and a width of 13 mm (TYP). The gear has a keyway with a width of 13 mm (TYP). The assembly is shown in a cross-section view with hatching for different components. The shaft is labeled 14, the pulley is labeled 15, and the gear is labeled 18. The drawing includes dimensions for the shaft diameter, pulley diameter, pulley width, gear diameter, gear width, and shaft length. It also includes typical values for the keyway width and the shaft diameter.

ALL TUBES (ITEM NO:15) ARE TO BE
PLUGGED BY WELDING PERMANENTLY
BEFORE HYD. TEST





DESIGNATION	DESCRIPTION	ITEM NO	REFERENCE
V1	INSTRUMENTATION & WATER LEVEL GAUGE TAPPINGS	10	DETAIL-H
V2	INSTRUMENTATION & WATER LEVEL GAUGE TAPPINGS	11	DETAIL-J
V3	NIPPLE FOR SAMPLING	12	DETAIL-K
V4	CHEMICAL FEED NIPPLE	13	DETAIL-L
V5	TEST TAPPINGS	14&15	DETAIL-M
V6	CONTINUOUS BLOW DOWN NOZZLE	16	DETAIL-N
V7	EMERGENCY DRUM DRAIN	16	DETAIL-N

[illegible]

SECTION-C2C2
(SCALE-1:5)

TEMPORARY CHILL BAR, REMOVE
AFTER GROOVE IS WELDED.
GROOVE BACK TO SOUND METAL
BEFORE MAKING FILLET WELD (13)

REV	DATE	ALTERED :
01		CHD & APPD :
ZONE		

CAUTION: The information on this label is not to be used as a substitute for the manufacturer's instructions. It must not be used to alter the design or construction of the product. It must not be used to alter the performance of the product. It must not be used to alter the safety of the product.	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		NAME P. ANBU		SIGNATURE 		DATE 01.01.09	
			Bharat Heavy Electricals Ltd HIGH PRESSURE BOILER PLANT TIRUCHIRAPPALLI - 620014		DWH CHD		M/S/DWG 02.01.09	
	1055-002				WGS AFS		02.01.09	
	DEPT CODE 121		1/10 1,1,1,5		WEIGHT (KG) —		NO TO ASSY / OLD DWG 0-04-126-01287	
TITLE STUBS AND DRILLING DETAILS OF DRUM		1/10 1,1,1,5		WEIGHT (KG) —		NO TO ASSY / OLD DWG 0-04-126-01287		REV 00

