

3-80-300-19825

DRAWING No.

NOTES: -

- 01. APPLICABLE FOR P91/P92**  
**i) STRAIGHT WITH STRAIGHT/FITTING**  
**ii) BEND WITH BEND/FITTING**  
 02. FOR OD MISMATCHING REF. FIGURE-Xa.  
 03.  $\alpha = 6^\circ$  FOR WALL THICKNESS  $\leq 30$  mm  
 04.  $\alpha = 10^\circ$  FOR WALL THICKNESS  $> 30$  mm

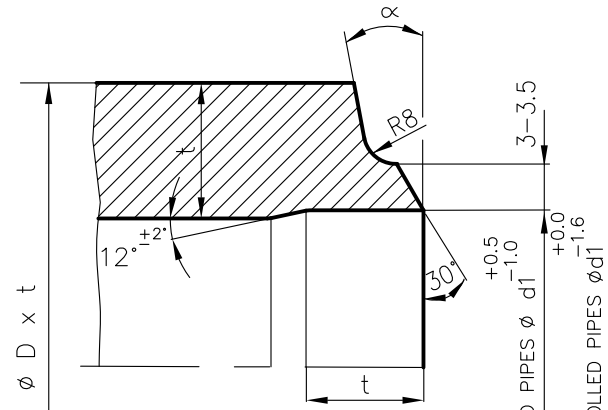


FIGURE - X

**MATCHING EDGE PREPARATION FOR MISMATCH OD APPLICABLE FOR BENDS/FITTINGS OF P91/P92 MATERIALS**

NOTES: -

01. OD OF STRAIGHT TO BE PHYSICALLY MEASURED/VERIFIED.  
 02.  $\alpha = 6^\circ$  FOR WALL THICKNESS  $\leq 30$  mm  
 03.  $\alpha = 10^\circ$  FOR WALL THICKNESS  $> 30$  mm  
 04.  $t =$  THK OF CONNECTING PIPE (STRAIGHT)

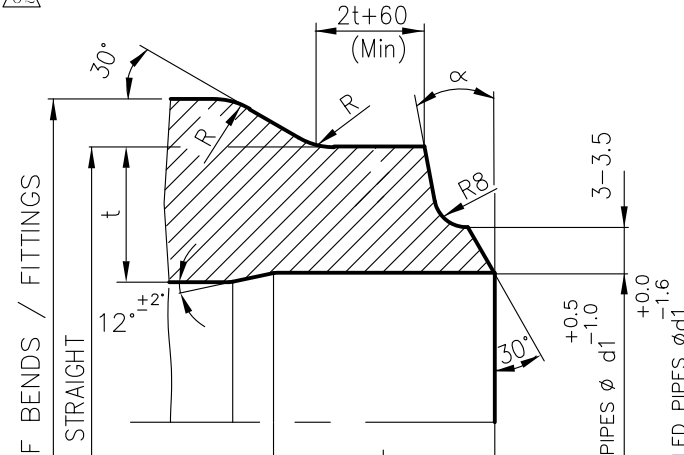
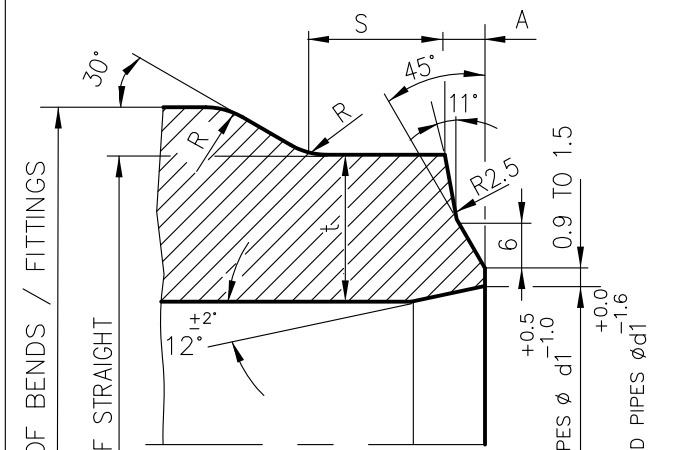


FIGURE - Xa

**MATCHING EDGE PREPARATION FOR MISMATCH OD DIAMETRICALLY GREATER THAN 8 mm (ie OD1 - OD2 > 8mm) APPLICABLE FOR BENDS/FITTINGS OTHER THAN P91/P92 MATERIALS**

NOTES: -

01. OD OF STRAIGHT TO BE PHYSICALLY MEASURED/VERIFIED.  
 02. WHEN  $t < 65$ ,  $S+A = 65$  Min. &  $t > 65$ ,  $S=65$  Min. WHERE  $t =$  THK OF CONN. PIPE (STRAIGHT).



STYLE - Pa

**MATCHING EDGE PREPARATION FOR MISMATCH OD DIAMETRICALLY GREATER THAN 8 mm (ie OD1 - OD2 > 8mm) APPLICABLE FOR ELBOWS OTHER THAN P91/P92 MATERIALS**

NOTES: -

01. OD = OUTSIDE DIA OF CONN. PIPE (STRAIGHT) TO BE PHYSICALLY MEASURED/VERIFIED.  
 02.  $t =$  THK OF CONN. PIPE (STRAIGHT)

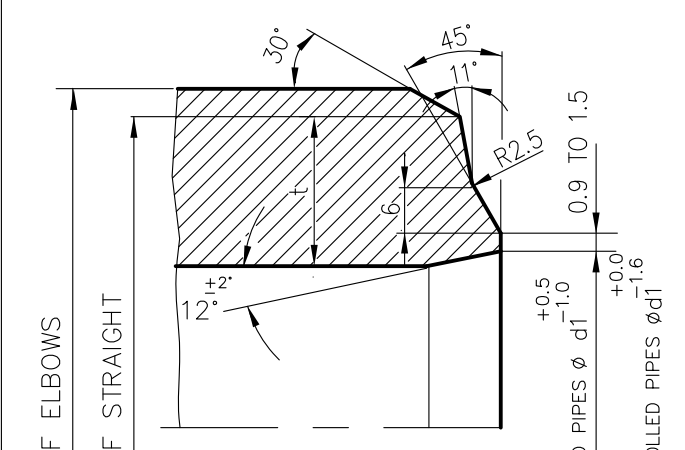


FIGURE - Z

NOTES: -

- 01. APPLICABLE FOR P91 PIPE BEND WELDED WITH P91 STRAIGHT PIPE FOR THICKNESS  $\leq 30$  mm AND OD  $\geq 558$  mm.**  
 02.  $\alpha = 6^\circ$  FOR WALL THICKNESS  $\leq 30$  mm  
 03. FOR OD MISMATCH, REFER THE OD MACHINING ONLY SHOWN IN FIGURE-Xa  
 04. FIGURE-Xb AND FIGURE-Xc ARE NOT APPLICABLE FOR P92 MATERIALS.

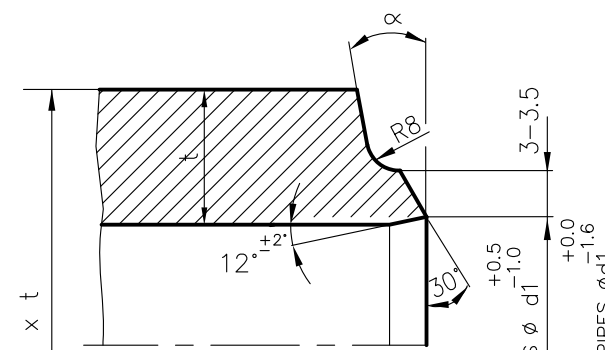


FIGURE - Xb  
(BEND END)

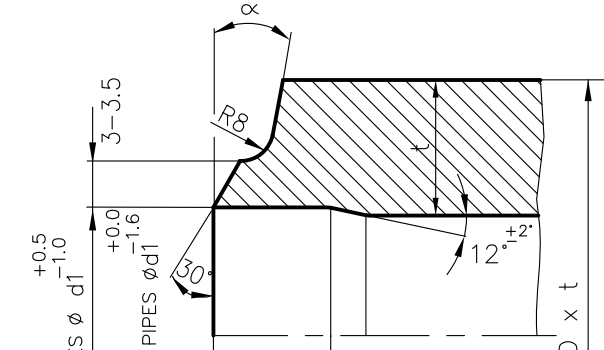
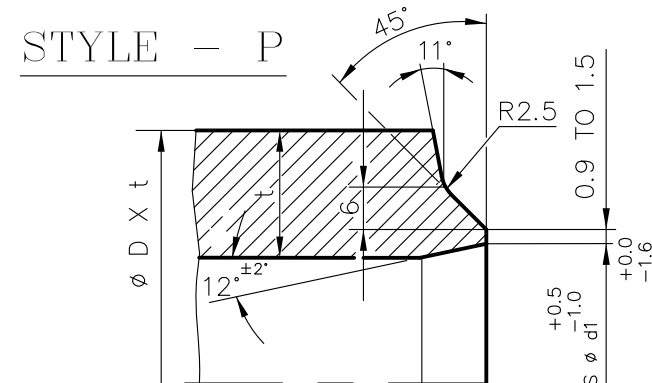


FIGURE - Xc  
(STRAIGHT END)

STYLE - P

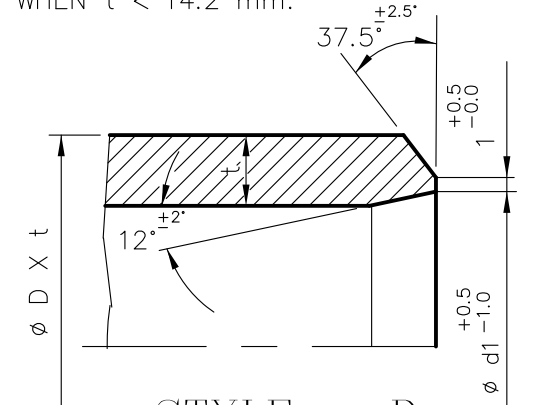


NOTES: -

01. USE WHEN  $t \geq 14.2$  mm.  
 02. FOR OD MISMATCHING REF. FIGURE-Pa

NOTES: -

01. USE WHEN  $t < 14.2$  mm.



STYLE - D

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

STANDARD

	BHARAT HEAVY ELECTRICALS LTD.		DRN	NAME	SIGN	DATE	NO OF ITEMS
	PIPING CENTRE, MADRAS		CHD	K.B.RAGUNATH		11.10.01	
			APPD	M.C.SEKARAN		11.10.01	
				APPD	A.VELAYUTHAM	11.10.01	

DEPT.	GRADE OF UN TOL DIM	SCALE	WEIGHT (Kg)	NAME OF ORIGINAL ORGANISATION	ITEM No.
CODE	C/M/F				

TITLE	CARD CODE	DRAWING No.	REV
EDGE PREPARATION DETAILS	U 01	3-80-300-19825	03

GENERAL NOTES :

01. THE MINIMUM THICKNESS AT WELD END SHALL NOT BE LESS THAN  
 a) 0.875 TIMES  $t$  NOM. FOR OD PIPES.  
 b)  $t$  MIN. FOR ID CONTROLLED PIPES.  
 02.  $t$  NOM &  $t$  MIN SHALL BE AS PER SPECIFIED PIPE SIZE.  
 03. SHARP CORNERS SHALL BE ROUNDED OFF WHEREEVER 'R' IS INDICATED.

NOTES FOR WELDING:

01. WELD REINFORCEMENT TO BE FLUSH GROUND AND MERGED WITH PARENT METAL WITHOUT ANY UNEVENNESS.

REV 03	DATE 10.04.13	ALTERED: M.R.K
APPROVED: C.K.N		
ZONE	FIG.Xb AND FIG.Xc ADDED. IN FIG.X. NOTE 01 MODIFIED. IN FIG.Xa, STY-Pa, FIG.Z. P92 MATERIAL ADDED	
REV 02	DATE 10.01.13	ALTERED: M.R.K
APPROVED: C.K.N		
ZONE	IN FIG.Xa, NOTE 04 ADDED. GENERAL NOTES 03 ADDED. IN FIG.Xa, 8MM OD MISMATCH IS REMOVED	
REV 01	DATE 11.05.04	ALTERED: R.SENDHIL
APPROVED: A.VELAYUTHAM		
ZONE	PROJECT NAME REMOVED AND STANDARD INCORPORATED IN TITLE BLOCK	

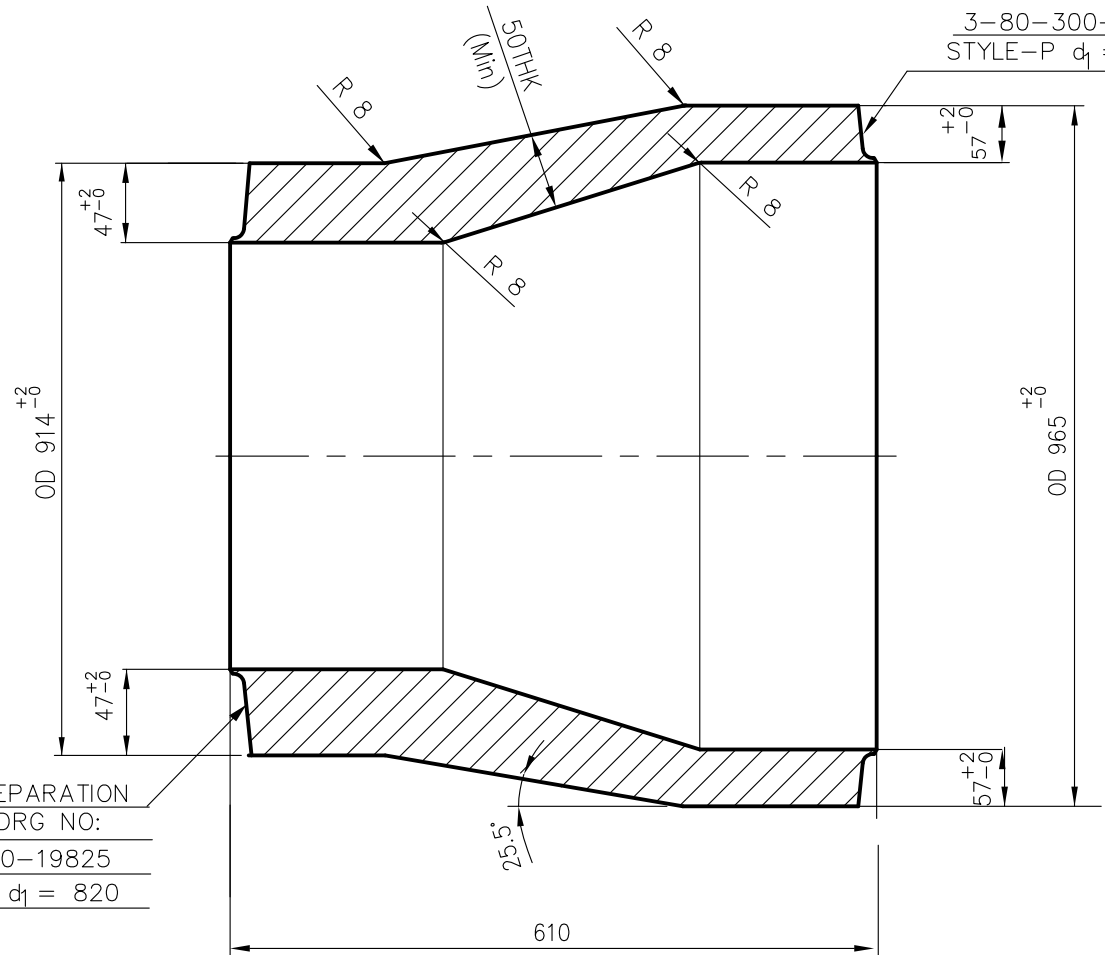
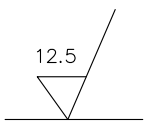
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REV	DATE	ALTERED
01		APPROVED

**NOTES :-** ALL DIMENSIONS ARE IN MILLIMETRES

01. DESIGN PRESSURE : 75.0 Kg/Cm<sup>2</sup> (g)
02. DESIGN TEMPERATURE : 510° C
03. FITTING SHALL CONFORM TO ALL THE REQUIREMENTS OF ASME B16.9 & A 234(LATEST).
04. FOLLOW APPLICABLE TDG
05. THIS DRAWING IS FOR INDICATING THE OVER ALL DIMENSIONS, CONNECTING PIPE SIZE AND MATERIAL SPECIFICATION.

EDGE PREPARATION  
AS PER DRG NO:  
3-80-300-19825  
STYLE-P d<sub>1</sub> = 860



EDGE PREPARATION  
AS PER DRG NO:  
3-80-300-19825  
STYLE-P d<sub>1</sub> = 820

	REDUCER L=610 OD 965 x thk57min/ OD 914X47	92 117 931 0000	A	695	000
VAR NO.	DESCRIPTION	STD	MATL. CODE	UNIT	UNIT.WT.(Kg)
			MATL. SPECN.	DI	QTY.

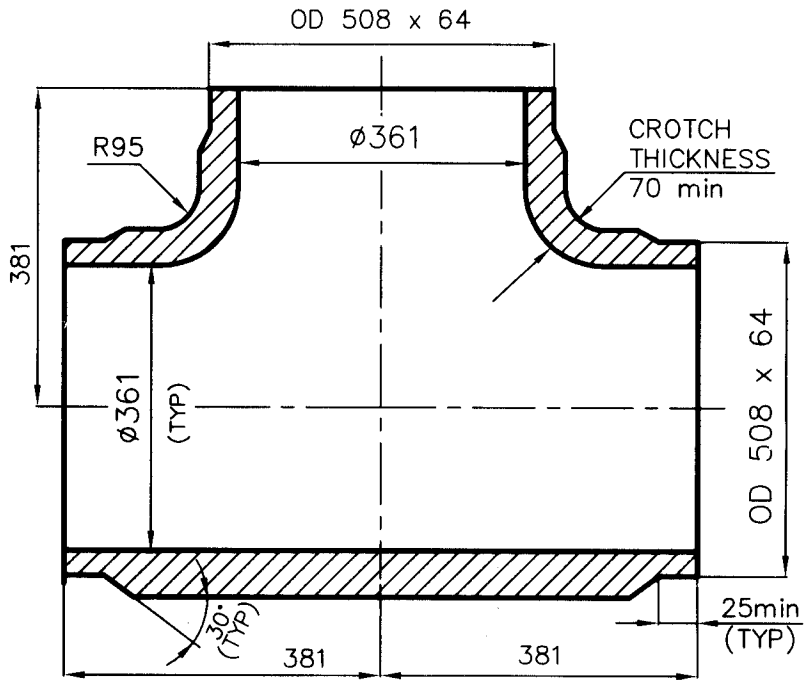
		<b>BHARAT HEAVY ELECTRICALS LIMITED</b> PIPING CENTRE CHENNAI 600 017		DRN	NAME	SIGN	DATE	NO.OF VAR
DEPT	GRADE OF UNTOL.DIM		SCALE	CHD	S.R.MURTHY	-sd-	31.12.13	
CODE	C / M / F		N.T.S	APPD	S.R.MURTHY	-sd-	31.12.13	
TITLE			WEIGHT (KG).	BHEL PO REF.NO:		ITEM NO.	NO. OF ITEMS	
<b>REDUCER</b> (OD965Xthk57min/OD914X47)SA234WP22CL1			CARD CODE	DRAWING NO.		REV		
			U 01	<b>4-80-320-77640</b>		<b>00</b>		

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REV	DATE	ALTERED
		APPROVED

ALL DIMENSIONS ARE IN MILLIMETRES

RAW MATL SPECN: SA106Gr.C(A)  
 FITTING SPECN : SA234WPC(A)  
 FITTING SPECN : SA234WPC(A)  
 FITTING MATERIAL CODE : 92 505 779 0000





NOTES:

- 1) ALL DIMENSIONS ARE FINISHED DIMENSIONS.
- 2) FOR TOLERANCES REFER STD. DRG. NO. 4-80-301-26192.
- 3) MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
- 4) MINIMUM THICKNESS FOR MAIN & BRANCH SHALL NOT BE LESS 56 mm
- 5) BORE TO  $\phi 361$  AFTER FORMING, ON RUN AND BRANCH ENDS.
- 6) EDGE PREPARATION SHALL BE AS PER DRG. No.3-80-300-19825  
 STY. P d1=392.00
- 7) HIGHER THICKNESS RAW MATERIAL PIPE CAN ALSO BE USED IN VIEW OF NOTE 5.
- 8) TEE SHALL BE MACHINED ON THEIR OUTSIDE DIAMETER BOTH RUN OF BRANCH ENDS FOR A MINIMUM LENGTH OF 25mm AS SHOWN IN THE DRG

PIPE OD 812.8 x 75 NOM L=1200	15 983 567 1200	A	1635.000
	SA 106 GRC		
RAW MATL SIZE	MATL. CODE	A	UNIT WT
	MATL. SPECN.	C	QTY

STANDARD

 <b>BHARAT HEAVY ELECTRICALS LTD.</b> PIPING CENTRE MADRAS 600 017		NAME	SIGN	DATE
		DRN	K.R.BALA	21.07.06
		CHD	T.N.ELANGOVAN	21.07.06
		APPD	T.N.ELANGOVAN	21.07.06
DEPT	GRADE OF UNTOL. DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.
CODE	C / M / F		1635.000	
TITLE		CARD CODE	DRAWING NO.	REV
EQUAL TEE OD 508 x 64		U 01	4-80-423-6260800	