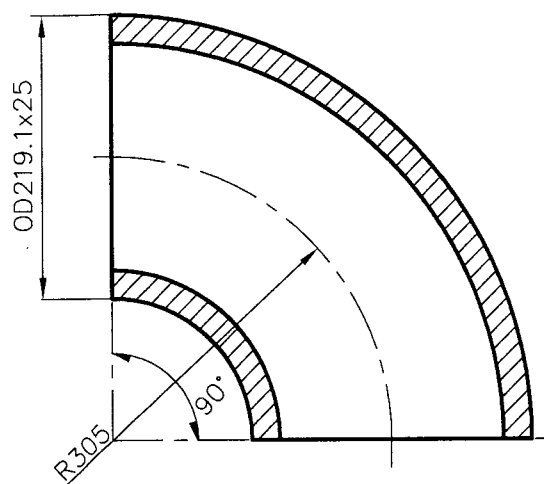


CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

ALL DIMENSIONS ARE IN MILLIMETRES

REV	DATE	ALTERED
01		APPROVED

DESIGN PRESSURE AT 540°C : 226 Kg/sq.cm(g)
RAW MATL SPECN.: SA 335 P91 (A).
FITTING SPECN. : SA 234 WP91 (A).
FINISHED FITTING MATERIAL CODE:
WEIGHT OF FINISHED FITTING: 57kg.



NOTES: -

01. ALL DIMENSIONS ARE FINISHED DIMENSIONS.
02. FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
03. MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
04. EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No: 3-80-300-19825
STYLE X d1=175.5
05. O.D AT ANY SECTION SHALL BE WITHIN 216.9 TO 221.3mm.
06. ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS (21.88 to 28.13).
07. ALTERNATE RAW MATERIAL CAN ALSO BE USED.

STANDARD

PIPE OD 219.1 x 28 L=880	15 958 106 4150	A	116.000
	SA 335 P91		
DESCRIPTION	RAW MATL. CODE	A	UNIT WT.
	MATL. SPECN.	C	QTY



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

	NAME	SIGN	DATE
DRN	R.ANANTH		24-11-08
CHD	R.ANANTH		24-11-08
APPD	M.N.VASUDEVAN		24-11-08

DEPT	GRADE OF UNTOL. DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.
CODE	C / M / F		116.000	

TITLE
BW LR 90 DEG. ELBOW
OD219.1x25 WP91

CARD
CODE
U 01

DRAWING NO.
4-80-999-93177

REV
00

REV	DATE	ALTERED
01		APPROVED

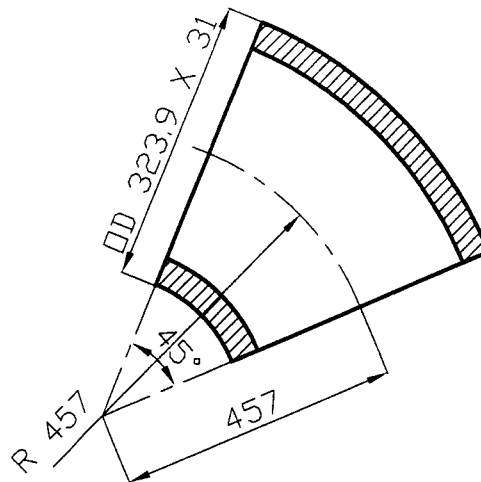
ALL DIMENSIONS ARE IN MILLIMETRES

DESIGN PRESSURE AT 540°C : 198.5 Kg/sq.cm(g)

RAW MATL SPECN.: SA 335 P91 (A)

FITTING SPECN. : SA 234 WP91 (A)

FINISHED FITTING MATERIAL CODE:



NOTES: —

01. ALL DIMENSIONS ARE FINISHED DIMENSIONS.
02. FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
03. MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
04. EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No: 3-80-300-19825
FIG X d1=266
05. O.D AT ANY SECTION SHALL NOT VARY MORE THAN 3mm(320.9 to 326.9)
06. ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS. (27.13 to 34.88)
07. ALTERNATE RAW MATERIAL CAN ALSO BE USED.

PIPE OD 323.9 x 38 L=759	15 958 114 3550	A	203.336
	SA 335 P91		
DESCRIPTION	RAW MATL CODE	A	UNIT WT.
	MATL SPECN.	C	QTY

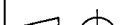
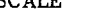
STANDARD



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

NAME	SIGN	DATE
DRN M.C.SEKARAN		12-06-08
CHD C.SARAVANAN		12-06-08
APPD S.JAYAKUMAR		12-06-08

DEPT	GRADE OF UNTOL DIM		SCALE		WEIGHT (KG).	REF. TO ASSY./OLD DRG.	
CODE	C / M / F		203.336				
TITLE					CARD CODE	DRAWING NO.	REV
BW LR 45 DEG. ELBOW					U 01	4-80-999-93094	00
OD 323.9 x 31							

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

REV	DATE	ALTERED
01		APPROVED

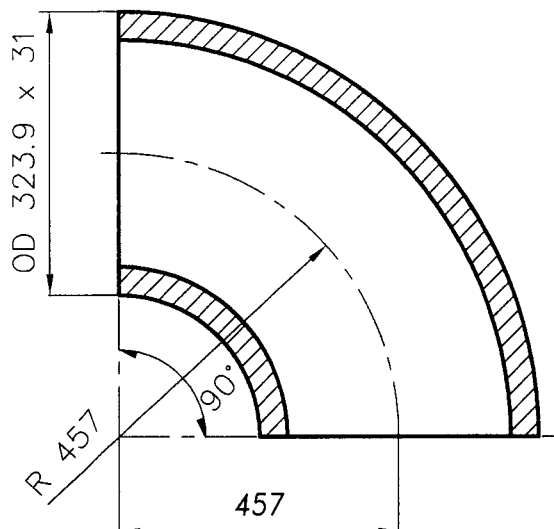
ALL DIMENSIONS ARE IN MILLIMETRES

DESIGN PRESSURE AT 540°C : 198.5 Kg/sq.cm(g)

RAW MATL SPECN.: SA 335 P91 (A)

FITTING SPECN. : SA 234 WP91 (A)

FINISHED FITTING MATERIAL CODE:



NOTES: —

01. ALL DIMENSIONS ARE FINISHED DIMENSIONS.
02. FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
03. MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
04. EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No: 3-80-300-19825
FIG X d1=266
05. O.D AT ANY SECTION SHALL NOT VARY MORE THAN 3mm(320.9 to 326.9)
06. ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS. (27.13 to 34.88)
07. ALTERNATE RAW MATERIAL CAN ALSO BE USED.

DESCRIPTION	PIPE OD 323.9 x 38 L=1118	15 958 114 3950	A	299.512
		SA 335 P91		
		RAW MATL. CODE	A	UNIT WT.
		MATL. SPECN.	C	QTY

STANDARD



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

NAME	SIGN	DATE
DRN M.C.SEKARAN		12-06-08
CHD C.SARAVANAN		12-06-08
APPD S.JAYAKUMAR		12-06-08

DEPT	GRADE OF UNTOL.DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	
CODE	C / M / F		299.512		
TITLE	BW LR 90 DEG. ELBOW OD 323.9 x 31			CARD CODE U 01	DRAWING NO. 4-80-999-93093 REV 00

REV	DATE	ALTERED
01		APPROVED

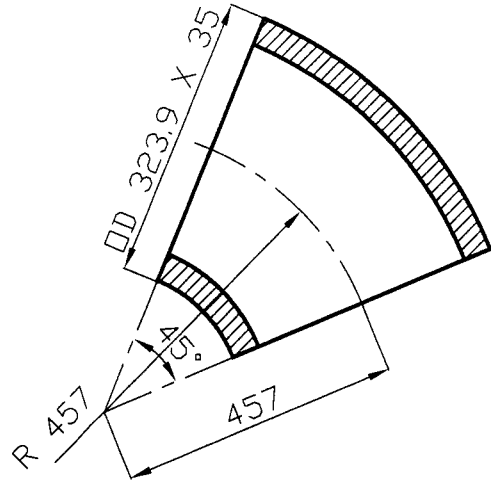
ALL DIMENSIONS ARE IN MILLIMETRES

DESIGN PRESSURE AT 540° : 227.5 Kg/sq.cm(g)

RAW MATL SPECN.: SA 335 P91 (A)

FITTING SPECN. : SA 234 WP91 (A)

FINISHED FITTING MATERIAL CODE:



NOTES: —

01. ALL DIMENSIONS ARE FINISHED DIMENSIONS.
02. FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
03. MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
04. EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No:3-80-300-19825
FIG X d1=261
05. O.D AT ANY SECTION SHALL NOT VARY MORE THAN 3mm(320.9 to 326.9)
06. ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS. (30.63 to 39.25)
07. ALTERNATE RAW MATERIAL CAN ALSO BE USED.

PIPE OD 323.9 x 42 L=857	15 958 102 3550	A	254.621
	SA 335 P91		
DESCRIPTION	RAW MATL CODE	A	UNIT WT.
	MATL. SPECN.	C	QTY

STANDARD



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

NAME	SIGN	DATE
DRN M.C.SEKARAN		12-06-08
CHD C.SARAVANAN		12-06-08
APPD S.JAYAKUMAR		12-06-08

DEPT	GRADE OF UNTOL DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	
CODE	C / M / F		254.621		
TITLE			CARD CODE	DRAWING NO.	REV
BW LR 45 DEG. ELBOW			U 01	4-80-999-93087	00
OD 323.9 x 35					

REV	DATE	ALTERED
01		APPROVED

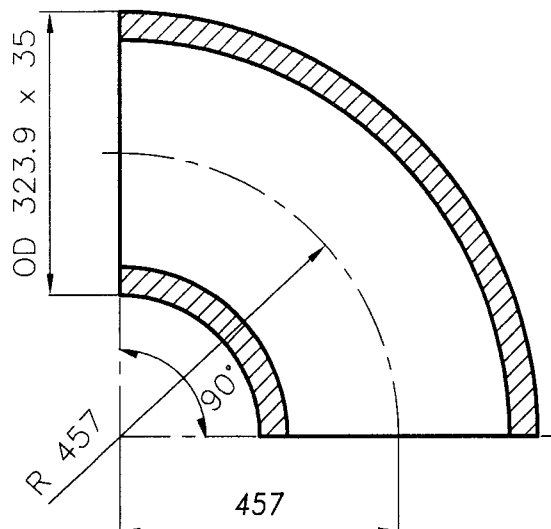
ALL DIMENSIONS ARE IN MILLIMETRES

DESIGN PRESSURE AT 540° : 227.5 Kg/sq.cm(g)

RAW MATL SPECN.: SA 335 P91 (A)

FITTING SPECN. : SA 234 WP91 (A)

FINISHED FITTING MATERIAL CODE:



NOTES: —

01. ALL DIMENSIONS ARE FINISHED DIMENSIONS.
02. FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
03. MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
04. EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No: 3-80-300-19825
FIG X d1=261
05. O.D AT ANY SECTION SHALL NOT VARY MORE THAN 3mm(320.9 to 326.9)
06. ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS. (30.63 to 39.25)
07. ALTERNATE RAW MATERIAL CAN ALSO BE USED.

PIPE OD 323.9 x 42 L=1118	15 958 102 3950	A	375.055
	SA 335 P91		
DESCRIPTION	RAW MATL CODE	A	UNIT WT.
	MATL SPECN.	C	QTY

STANDARD



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

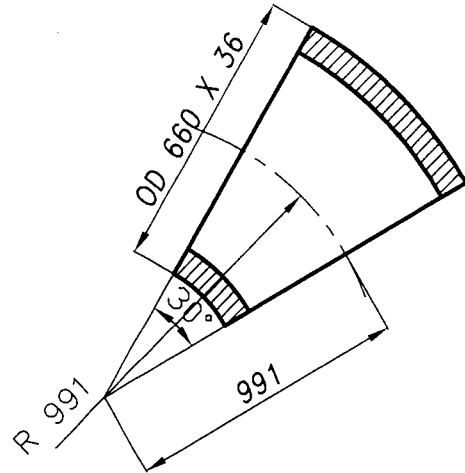
	NAME	SIGN	DATE
DRN	M.C.SEKARAN		12-06-08
CHD	C.SARAVANAN		12-06-08
APPD	S.JAYAKUMAR		12-06-08

DEPT	GRADE OF UNTOL.DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	
CODE	C / M / F		375.055		
TITLE			CARD CODE	DRAWING NO.	REV
BW LR 90 DEG. ELBOW			U 01	4-80-999-93084	00
OD 323.9 x 35					

REV	DATE	ALTERED: MCS
01	23.06.08	APPROVED: CS
NOTE NO. 06 REVISED.		

ALL DIMENSIONS ARE IN MILLIMETRES

DESIGN PRESSURE AT 540°C : 52.5 Kg/sq.cm(g)
 RAW MATL SPECN.: SA 335 P22 (A).
 FITTING SPECN. : SA 234 WP22 (A).
 FINISHED FITTING MATERIAL CODE:



NOTES: —

01. ALL DIMENSIONS ARE FINISHED DIMENSIONS.
02. FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
03. MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
04. EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No: 3-80-300-19825
STYLE P d1=595
05. O.D AT ANY SECTION SHALL NOT VARY MORE THAN 4mm(656 to 664)
06. ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS. (31.5 to 40.5)
07. ALTERNATE RAW MATERIAL CAN ALSO BE USED.

PIPE OD 660 x 45 L=919	15 991 707 4200	A	627.218
	SA 335 P22		
DESCRIPTION	RAW MATL CODE	A	UNIT WT.
	MATL SPECN.	C	QTY

STANDARD



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

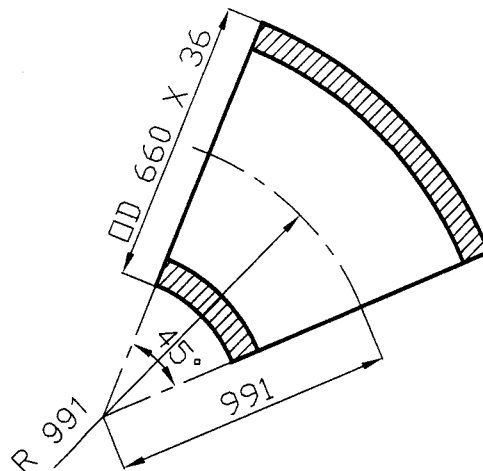
NAME	SIGN	DATE
DRN M.C.SEKARAN	-SD.-	12-06-08
CHD C.SARAVANAN	-SD.-	12-06-08
APPD S.JAYAKUMAR	-SD.-	12-06-08

DEPT	GRADE OF UNTOL DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	
CODE	C / M / F		627.218		
TITLE			CARD CODE	DRAWING NO.	REV
BW LR 30 DEG. ELBOW			U 01	4-80-999-93092	01
OD 660 x 36					

REV	DATE	ALTERED: MCS
01	23.06.08	APPROVED: CS
NOTE NO. 06 REVISED.		

ALL DIMENSIONS ARE IN MILLIMETRES

DESIGN PRESSURE AT 540°C : 52.5 Kg/sq.cm(g)
 RAW MATL SPECN.: SA 335 P22 (A).
 FITTING SPECN. : SA 234 WP22 (A).
 FINISHED FITTING MATERIAL CODE:



NOTES: —

01. ALL DIMENSIONS ARE FINISHED DIMENSIONS.
02. FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
03. MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
04. EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No: 3-80-300-19825
STYLE P d1=595
05. O.D AT ANY SECTION SHALL NOT VARY MORE THAN 4mm(656 to 664)
06. ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL
THICKNESS. (31.5 to 40.5)
07. ALTERNATE RAW MATERIAL CAN ALSO BE USED.

PIPE D 660 x 45 L=1178	15 991 707 4450	A	803.985
	SA 335 P22		
DESCRIPTION	RAW MATL. CODE	A	UNIT WT.
	MATL. SPECN.	C	QTY

STANDARD



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

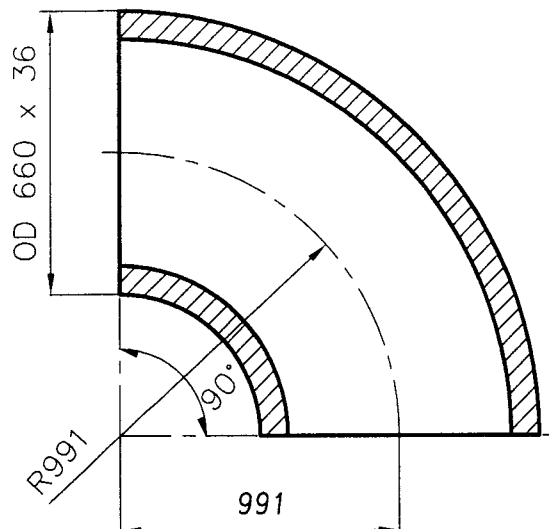
NAME	SIGN	DATE
DRN M.C.SEKARAN	-SD.-	12-06-08
CHD C.SARAVANAN	-SD.-	12-06-08
APPD S.JAYAKUMAR	-SD.-	12-06-08

DEPT	GRADE OF UNTOL DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	
CODE	C / M / F		803.985		
TITLE			CARD CODE	DRAWING NO.	REV
BW LR 45 DEG. ELBOW			U 01	4-80-999-93088	01
OD 660 x 36					

REV	DATE	ALTERED
01		APPROVED

ALL DIMENSIONS ARE IN MILLIMETRES

DESIGN PRESSURE AT 540° : 52.5 Kg/sq.cm(g)
 RAW MATL SPECN.: SA 335 P22 (A).
 FITTING SPECN. : SA 234 WP22 (A).
 FINISHED FITTING MATERIAL CODE:



NOTES: —

01. ALL DIMENSIONS ARE FINISHED DIMENSIONS.
02. FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
03. MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
04. EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No:3-80-300-19825
STYLE P d1=595
05. O.D AT ANY SECTION SHALL NOT VARY MORE THAN 4mm(656 to 664)
06. ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS. (31.5 to 40.5)
07. ALTERNATE RAW MATERIAL CAN ALSO BE USED.

PIPE D 660 x 45 L=1957	15 991 707 5300	A	1335.653
	SA 335 P22		
DESCRIPTION	RAW MATL CODE	A	UNIT WT.
	MATL SPECN.	C	QTY

STANDARD



BHARAT HEAVY ELECTRICALS LTD

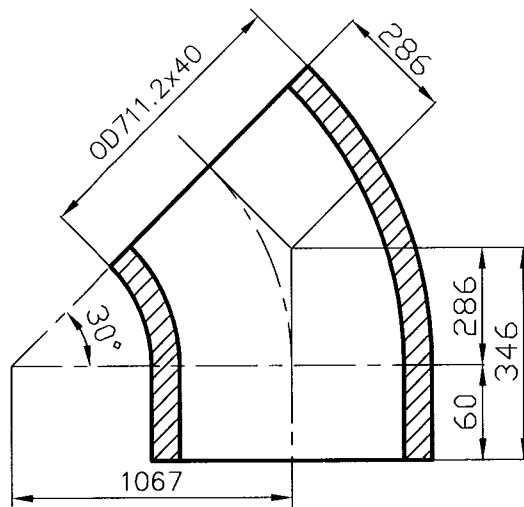
PIPING CENTRE
CHENNAI 600 017

	NAME	SIGN	DATE
DRN	M.C.SEKARAN		12-06-08
CHD	C.SARAVANAN		12-06-08
APPD	S.JAYAKUMAR		12-06-08

DEPT	GRADE OF UNTOL DIM		SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	
CODE	C / M / F		1335.653			
TITLE				CARD CODE	DRAWING NO.	REV
BW LR 90 DEG. ELBOW OD 660 x 36				U 01	4-80-999-93085	00

REV	DATE	ALTERED
01		APPROVED

DESIGN PRESSURE AT 540° : 54 Kg/sq.cm(g)
 RAW MATL SPECN.: SA 335 P22 (A).
 FITTING SPECN. : SA 234 WP22 (A).
 FINISHED FITTING MATERIAL CODE:
 WEIGHT OF FINISHED FITTING: 410kg.



NOTES: —

- ALL DIMENSIONS ARE FINISHED DIMENSIONS.
- FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
- MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
- EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No: 3-80-300-19825
FIGURE P d1=635mm.
- O.D. AT ANY SECTION SHALL NOT VARY MORE THAN 4mm(707.2 to 715.2)
- ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS. (35 to 45mm)
- ALTERNATE RAW MATERIAL CAN ALSO BE USED.
- A STRAIGHT ARM LENGTH OF 60mm IS REQUIRED AT ONE END OF ELBOW.

STANDARD

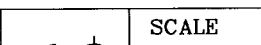
PIPE D 720 x 49 L=960	15 991 708 4250	A	778 000
	SA 335 P22		
DESCRIPTION	RAW MATL. CODE	A	UNIT WT.
	MATL. SPECN.	C	QTY



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

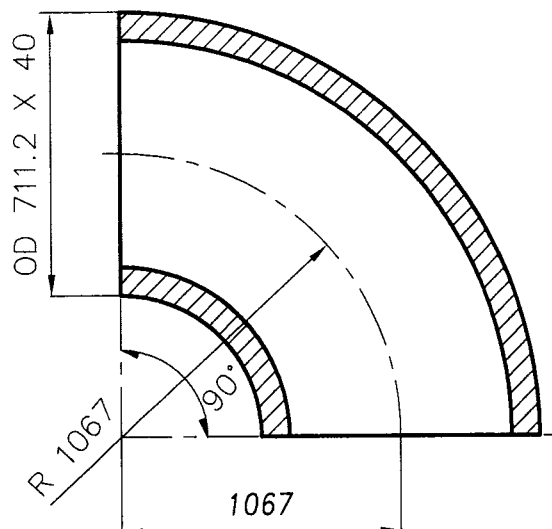
	NAME	SIGN	DATE
DRN	R.ANANTH		14-11-08
CHD	R.ANANTH		14-11-08
APPD	M.N.VASUDEVAN		14-11-08

DEPT	GRADE OF UNTOL.DIM		SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	
CODE	C / M / F			778		
TITLE				CARD CODE	DRAWING NO.	REV
BW LR 30DEG ELBOW WP22 OD711.2x40 (with extended arm)				U 01	4-80-999-93174	00

REV	DATE	ALTERED
01		APPROVED

ALL DIMENSIONS ARE IN MILLIMETRES

DESIGN PRESSURE AT 540° : 54 Kg/sq.cm(g)
 RAW MATL SPECN.: SA 335 P22 (A).
 FITTING SPECN. : SA 234 WP22 (A).
 FINISHED FITTING MATERIAL CODE:



NOTES: —

- ALL DIMENSIONS ARE FINISHED DIMENSIONS.
- FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
- MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
- EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No: 3-80-300-19825
STYLE P d1=635
- O.D AT ANY SECTION SHALL NOT VARY MORE THAN 4mm(707.2 to 715.2)
- ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS. (35 to 45)
- ALTERNATE RAW MATERIAL CAN ALSO BE USED.

PIPE OD 720 x 49 L=2076	15 991 708 5400	A	1683.221
	SA 335 P22		
DESCRIPTION	RAW MATL CODE	A	UNIT WT.
	MATL. SPECN.	C	QTY

STANDARD



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

	NAME	SIGN	DATE
DRN	M.C.SEKARAN		12-06-08
CHD	C.SARAVANAN		12-06-08
APPD	S.JAYAKUMAR		12-06-08

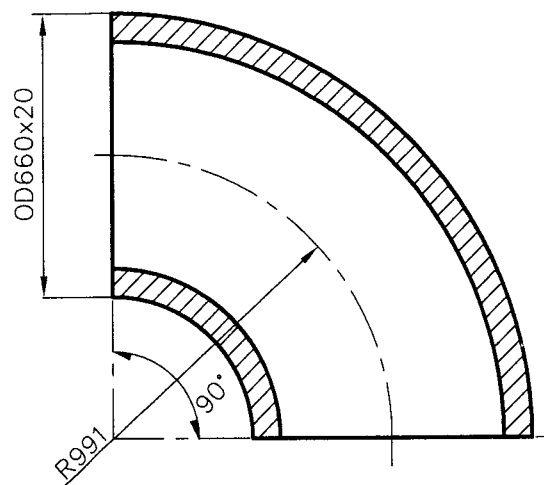
DEPT	GRADE OF UNTOL.DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.
CODE	C / M / F		1683.221.	
TITLE			CARD CODE	REV
BW LR 90 DEG. ELBOW			U 01	
OD 711.2 x 40				
DRAWING NO.				
4-80-999-93086				
				00

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ALL DIMENSIONS ARE IN MILLIMETRES

REV	DATE	ALTERED
01		APPROVED

DESIGN PRESSURE AT 370°C : 60 Kg/sq.cm(g)
RAW MATL SPECN.: SA 106 GRC (A).
FITTING SPECN. : SA 234 WPC (A).
FINISHED FITTING MATERIAL CODE:
WEIGHT OF FINISHED FITTING: 491kg.



NOTES: —

01. ALL DIMENSIONS ARE FINISHED DIMENSIONS.
02. FOR TOLERANCES REFER STANDARD DRG.4-80-301-26192.
03. MANUFACTURING, INSPECTION AND TESTING SHALL BE AS PER IBR, ASME B16.9 & SA234.
04. EDGE PREPARATION DETAIL SHALL BE AS PER DRAWING No: 3-80-300-19825
STYLE P d1=624
05. O.D AT ANY SECTION SHALL NOT VARY MORE THAN 4mm(656 to 664)
06. ACTUAL THICKNESS AT ANY POINT SHALL NOT VARY MORE THAN 12.5% OF THE NOMINAL THICKNESS. (17.5 to 22.5)
07. ALTERNATE RAW MATERIAL CAN ALSO BE USED.

STANDARD

PIPE OD 660 x 22 L=1957	15 983 548 6000	A	677.000
	SA 106 GRC		
DESCRIPTION	RAW MATL CODE	A	UNIT WT.
	MATL. SPECN.	C	QTY



BHARAT HEAVY ELECTRICALS LTD

PIPING CENTRE
CHENNAI 600 017

	NAME	SIGN	DATE
DRN	R.ANANTH		24-11-08
CHD	R.ANANTH		24-11-08
APPD	M.N.VASUDEVAN		24-11-08

DEPT	GRADE OF UNTOL.DIM		SCALE	WEIGHT (KG). 677.000	REF. TO ASSY./OLD DRG.
CODE	C / M / F				

TITLE
BW LR 90 DEG. ELBOW
OD660x20 WPC

CARD
CODE
U 01

DRAWING NO.
4-80-999-93176

REV
00

92861-008-08-3
DRAWING No.

NOTES:-

01. APPLICABLE FOR P91 MATERIAL
02. FOR OD MISMATCHING REF. FIGURE-Xa.
03. $\alpha = 6^\circ$ FOR WALL THICKNESS ≤ 30 mm
04. $\alpha = 10^\circ$ FOR WALL THICKNESS > 30 mm

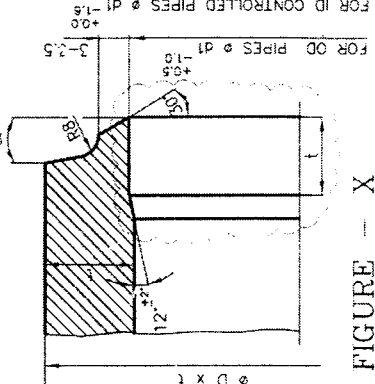


FIGURE - X

MATCHING EDGE PREPARATION FOR MISMATCH OD
DIAMETRICALLY GREATER THAN 8 mm
(ie. 001 - 002 > 8 mm.) APPLICABLE FOR
ELBOWS OTHER THAN P91 MATERIALS

NOTES:-

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

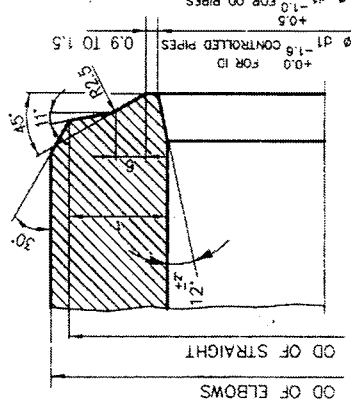


FIGURE - Z

MATCHING EDGE PREPARATION FOR MISMATCH OD
DIAMETRICALLY GREATER THAN 8 mm
(ie. 001 - 002 > 8 mm.) APPLICABLE FOR
BENDS/FITTINGS OF P91 MATERIALS

NOTES:-

01. OD OF STRAIGHT TO BE PHYSICALLY MEASURED/VERIFIED.
02. $\alpha = 6^\circ$ FOR WALL THICKNESS ≤ 30 mm
03. $\alpha = 10^\circ$ FOR WALL THICKNESS > 30 mm

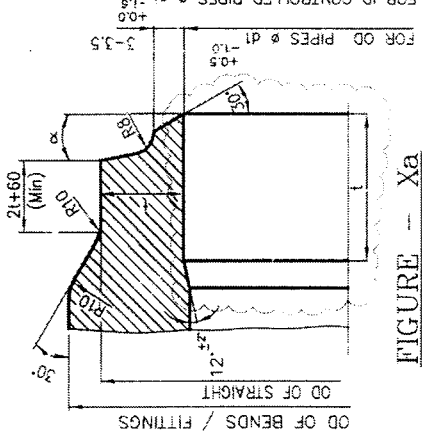
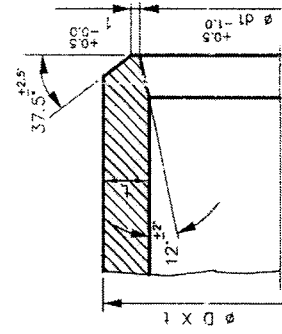


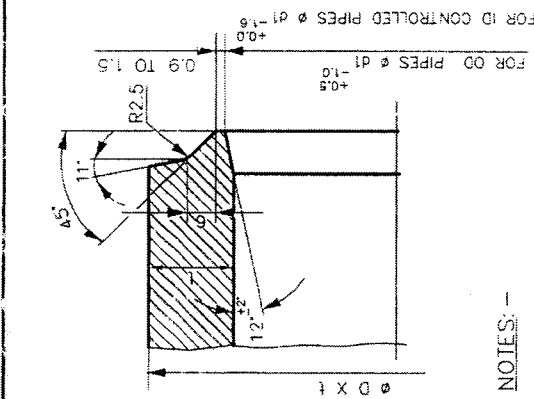
FIGURE - Xa



STYLE - D

NOTES:-

01. USE WHEN $t < 14.2$ mm.



NOTES:-

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

STYLE - P

STYLE - Pa

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.

NOTES FOR WELDING:

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

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

STANDARD

DEPT.	GRADE OF UN TOL DIM	SCALE	WEIGHT (Kg)	NAME	SIGN	DATE	NO OF ITEMS
01	11-05-06	PROJECT NAME REMOVED AND 'STANDARD' INCORPORATED IN TITLE BLOCK.		K. BRAGUNATH		11.10.01	11
02	11-05-06			M. C. SEKARAN		11.10.01	11
03	11-05-06			A. VELAYUTHAM		11.10.01	11
04	11-05-06						
05	11-05-06						
06	11-05-06						
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EDGE PREPARATION
DETAILS

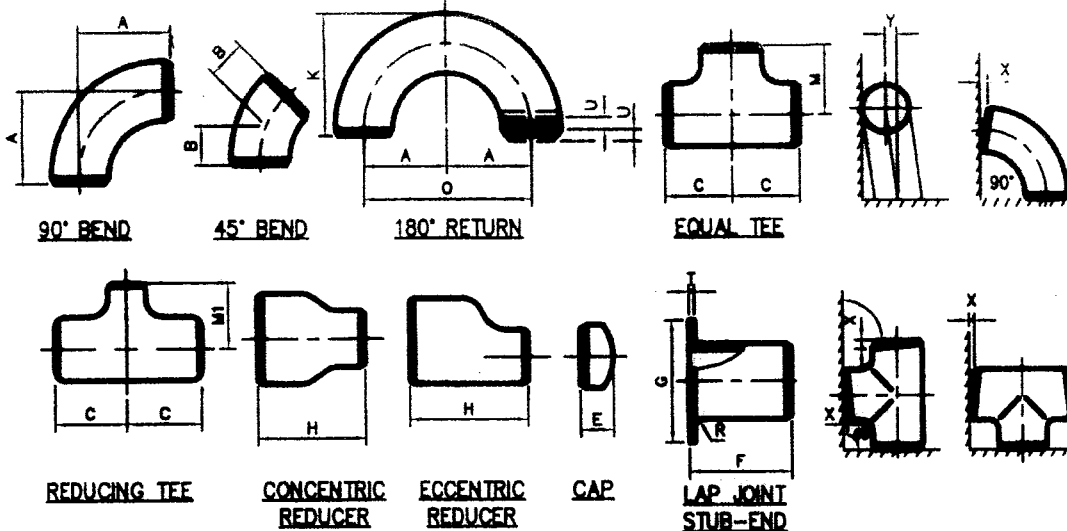
U 01

3-80-300-19825 01

REV	DATE	ALTERED
01	05.02.05	APPROVED <i>[Signature]</i> APMK

TITLE BLOCK AND DRAWING ALTERED

(REFERENCE : IBR ,REG.NO 361(A) INCLUDED IN AMENDMENT)



ALL FITTINGS				90°&45° ELBOWS AND TEES	REDUCER	180° RETURNS			CAPS	LAP-JOINT		STUB END	
DN.	O.D AT BEVEL	I.D AT END	WALL THICKNESS	CENTER TO END A,B,C,M,M1	OVERALL LENGTH H	CENTER TO CENTER O	BACK TO FACE K	ALIGNMENT OF END U	OVER ALL LENGTH E	END TO END F	RADIUS R	DIA OF LAP G	THICKNESS OF LAP
15 TO 85	+1.6 -0.8	±0.8	NOT LESS THAN 87 1/2% OF NOMINAL THICKNESS	±1.6	±1.6	±6.4	±6.4	±0.8	±3.2	±1.6	+ 0 -0.8	+ 0 -0.8	+1.6 - 0
90 TO 90	±1.6	±1.6		±1.6	±1.6	±6.4	±6.4	±0.8	±3.2	±1.6	+ 0 -0.8	+ 0 -0.8	+1.6 - 0
100	±1.6	±1.6		±1.6	±1.6	±6.4	±6.4	±0.8	±3.2	±1.6	+ 0 -0.8	+ 0 -0.8	+1.6 - 0
125 TO 200	+2.4 -1.6	±1.6		±1.6	±1.6	±6.4	±6.4	±0.8	±6.4	±1.6	+ 0 -0.8	+ 0 -0.8	+1.6 - 0
250 TO 400	+4.0 -3.2	±3.2		±2.4	±2.4	±9.5	±6.4	±1.6	±6.4	±2.4	+ 0 -1.6	+ 0 -1.6	+1.6 - 0
500 & ABOVE	+6.4 -4.8	±4.8		±2.4	±2.4	±9.5	±6.4	±1.6	±6.4	±2.4	+ 0 -1.6	+ 0 -1.6	+1.6 - 0

OFF-SQUARE TOLERANCES		
NOMINAL SIZE OF FITTING	OFF SQUARE TOLERANCE, X	OFF SQUARE TOLERANCE, Y
UP TO AND INCLUDING 100	0.8	1.6
125 TO 150	1.2	2.4
200 TO 550	1.6	3.2
600 & ABOVE	3.2	6.4

NOTES : 1. ALL DIMENSIONS ARE IN MILLIMETRES

STANDARD

BHARAT HEAVY ELECTRICALS LIMITED PIPING CENTRE CHENNAI 600 017		DEN	NAME	SIGN	DATE	NO. OF VAR	
		CHD	R.ANANTH	Sd	15.10.1986		
		APPD	J.JUDE	Sd	15.10.1986		
DEPT	GRADE OF UNTOL DIM		SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	ITEM NO.	NO. OF ITEMS
CODE	C / M / F		N.T.S	-	-	-	-
TITLE				CARD CODE	DRAWING NO.	REV	
TOLERANCES ON FITTINGS				U 01	4-80-301-26192	01	