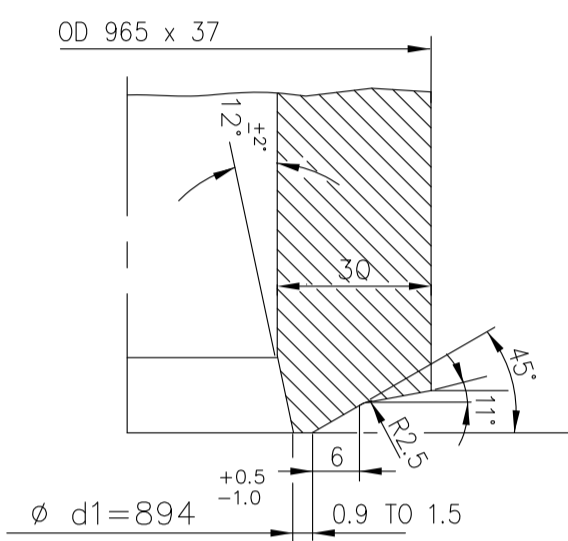
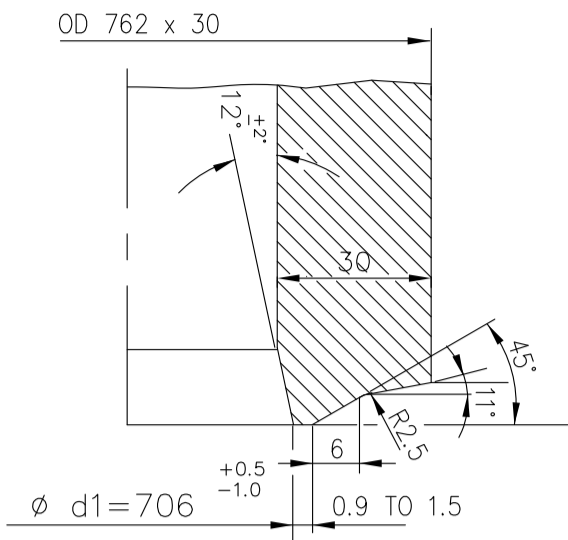
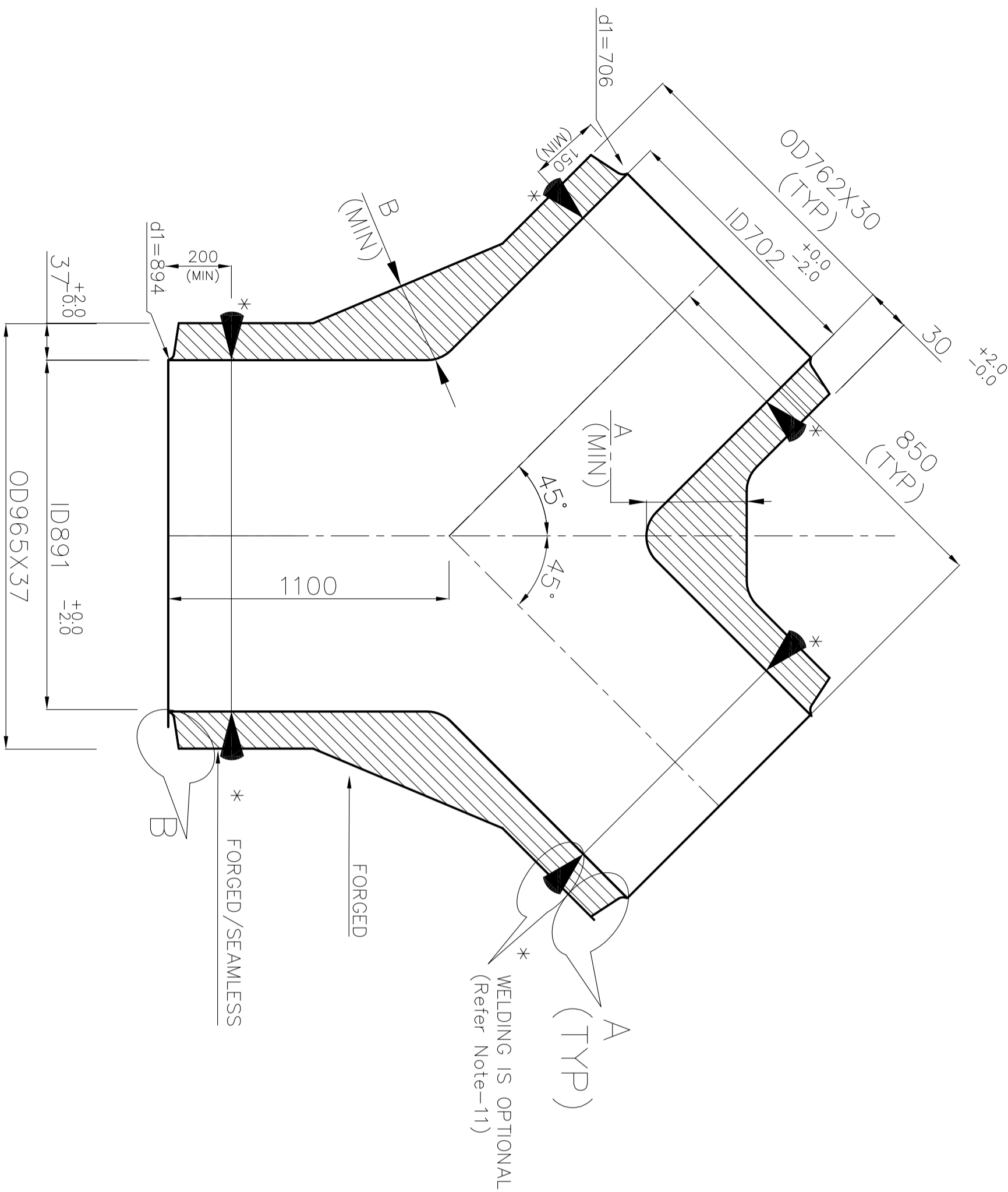


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29531-023-08-2

DRAWING No.

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)



DETAIL-A

DETAIL-B

NOTES

1. DESIGN PRESSURE: 73.1 kg/cm (g)
2. DESIGN TEMPERATURE : 380 °C
3. FOLLOW TDC: AS APPLICABLE
4. DESIGN, MANUFACTURING, INSPECTION, TOLERANCES AND TESTING SHALL BE AS PER IBR & EN-13480-3
5. CONSTRUCTION SHALL BE SEAMLESS / FORGED
6. MATERIAL SPECIFICATION SHALL BE SA105
7. CONNECTING PIPE SIZES OD965X37/OD762X30/OD762X30
8. AVERAGE INSIDE DIAMETER ON FITTING BODY TO GUARANTEE FLOW AREA MIN 90% OF THE CIRCULATION AREA OF THE CONNECTING PIPE
9. VENDOR SHALL BE RESPONSIBLE FOR THE DESIGN OF Y-PIECE FOR THE SPECIFIED DESIGN PARAMETERS. DESIGN CALCULATION AND VENDOR DRAWINGS SHALL BE SUBMITTED FOR APPROVAL AFTER PLACEMENT OF PURCHASE ORDER
10. WEIGHT MENTIONED IN THE DRAWING IS INDICATIVE ONLY
- *11. THE WELDING OF Y-PIECE TO RING SHALL BE WELDED TO MAINTAIN THE OVERALL DIMENSIONS. WPS AND NDT DETAILS SHALL BE SUBMITTED FOR BHEL APPROVAL
12. DIMENSION A&B SHALL BE MENTIONED BY VENDOR BASED ON CALCULATION AND SAME SHALL BE SUBMITTED
13. FINISHED MATERIAL CODE FOR THE Y-PIECE IS 92 505 113 0000

REV	DATE	ALTD	BY	APPD	CHK	ZONE
02	11.09.15		APPD		CKN	OPTIONAL JOINT AND NOTE-12&13 ADDED
03	15.12.15		APPD		SRM	DELETED ASPER REVISED PEM PID
01	29.07.15		APPD		SRM	METAL TEMP STUB ADDED

REV	DATE	ALTD	BY	APPD	CHK	ZONE
01	29.07.15		APPD		SRM	METAL TEMP STUB ADDED

REV	DATE	ALTD	BY	APPD	CHK	ZONE
01	29.07.15		APPD		SRM	METAL TEMP STUB ADDED

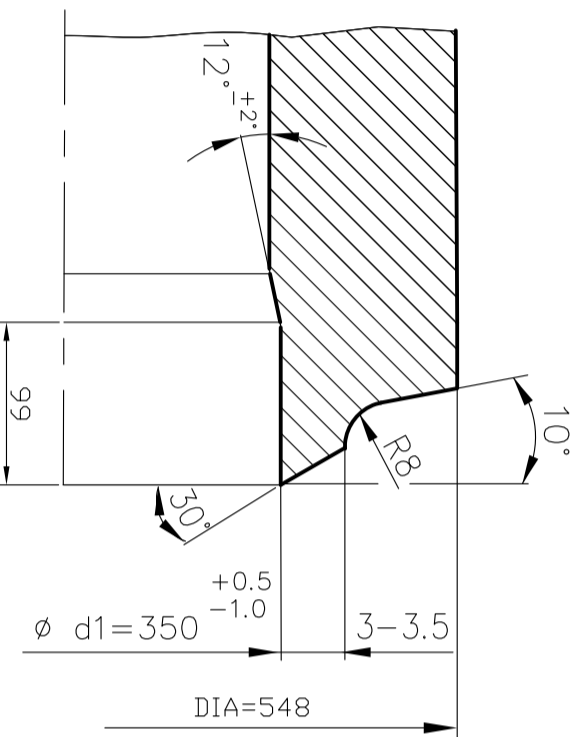
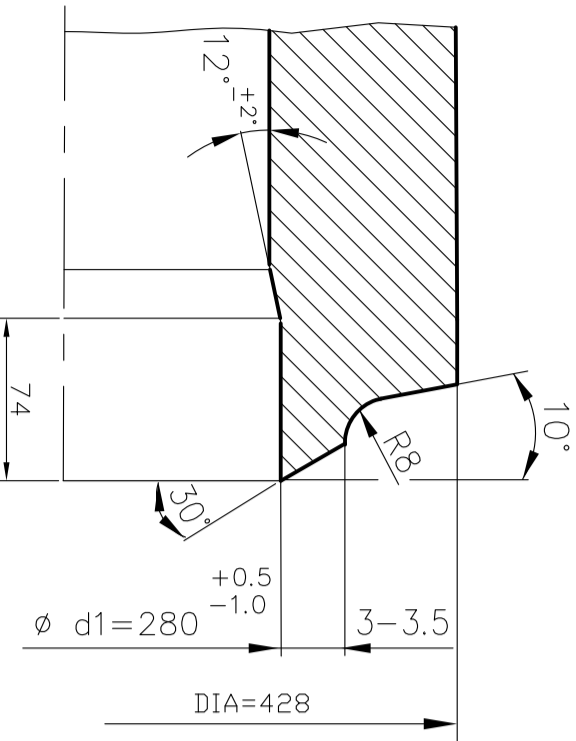
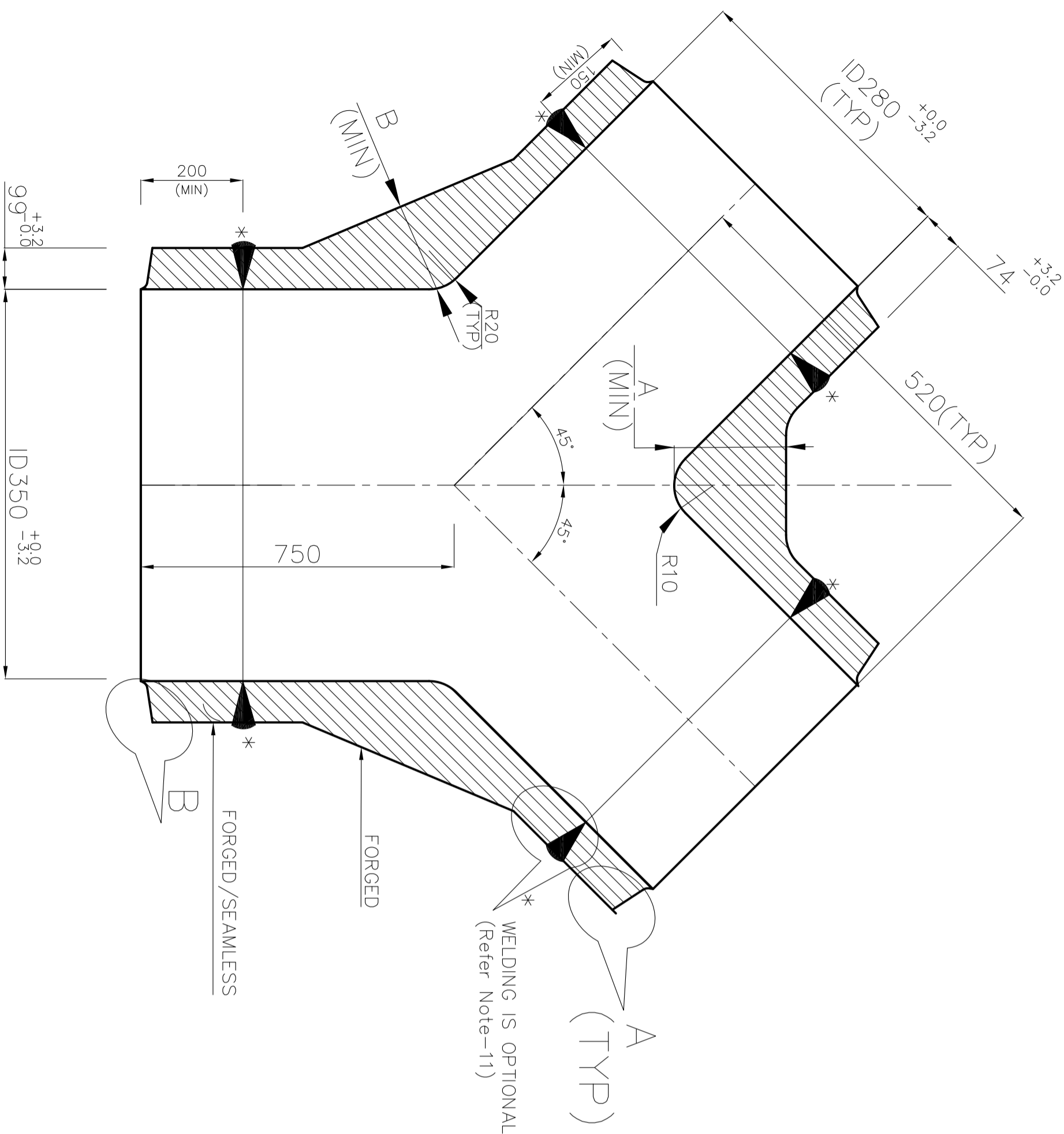
DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg.)	NAME	DATE	NO OF ITEMS
C/M/P	C/M/P	N.T.S.		E.PYRIA	21.04.15	1
BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017				C.K.KARAN	28.05.15	
Y-PIECE (OD965X37/OD762X30)				BHEL PO REF. NO.		
CARD CODE				MATERIAL CODE		
U 01				2-80-320-13562		
REV				MATERIAL SPEC.		
03						

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09531-103-08-2

DRAWING No.

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)



- NOTES**
1. DESIGN PRESSURE: 285.8 Kg/cm (g)
 2. DESIGN TEMPERATURE : 601 °C
 3. FOLLOW TDG: AS APPLICABLE
 4. DESIGN, MANUFACTURING, INSPECTION, TOLERANCES AND TESTING SHALL BE AS PER IBR & EN-13480
 5. CONSTRUCTION SHALL BE SEAMLESS / FORGED
 6. MATERIAL SPECIFICATION SHALL BE SA182F91
 7. CONNECTING PIPE SIZES ID350X99/ID280X74/ID280X74
 8. AVERAGE INSIDE DIAMETER ON FITTING BODY TO GUARANTEE FLOW AREA MIN 90% OF THE CIRCULATION AREA OF THE CONNECTING PIPE
 9. VENDOR SHALL BE RESPONSIBLE FOR THE DESIGN OF Y-PIECE FOR THE SPECIFIED DESIGN PARAMETERS. DESIGN CALCULATION AND VENDOR DRAWINGS SHALL BE SUBMITTED FOR APPROVAL AFTER PLACEMENT OF PURCHASE ORDER
 10. WEIGHT MENTIONED IN THE DRAWING IS INDICATIVE ONLY
 - *11. THE WELDING OF Y-PIECE TO RING SHALL BE WELDED TO MAINTAIN THE OVERALL DIMENSIONS. WPS AND NDT DETAILS SHALL BE SUBMITTED FOR BHEL APPROVAL
 12. DIMENSION A&B SHALL BE MENTIONED BY VENDOR BASED ON CALCULATION AND SAME SHALL BE SUBMITTED
 13. FINISHED MATERIAL CODE FOR THE Y-PIECE IS 92 505 111 0000

REV	DATE	ALTD	JOB	RAJU	SRM	REV	DATE	ALTD	PRVIA	APPD	CKN
02	15.12.15	APPD				01	11.09.15	APPD			

ZONE DELETED AS PER REVISION PER P10

ZONE OPTIONAL JOINT AND NOTE-12&13 ADDED

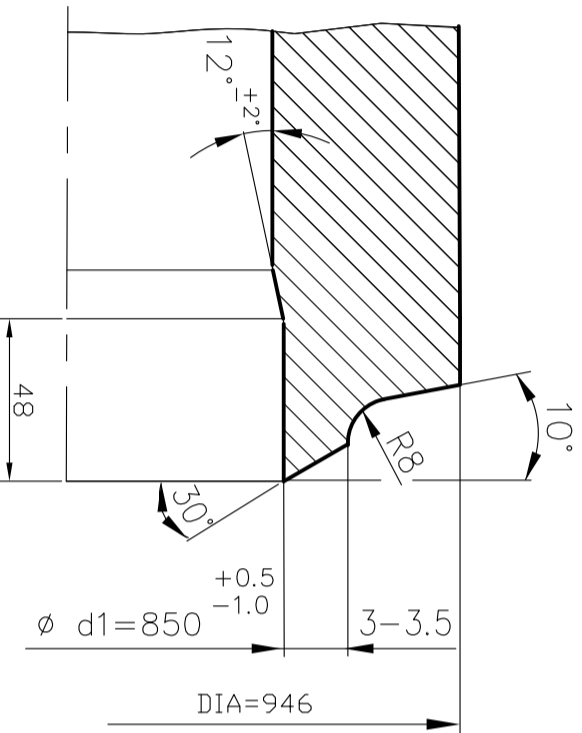
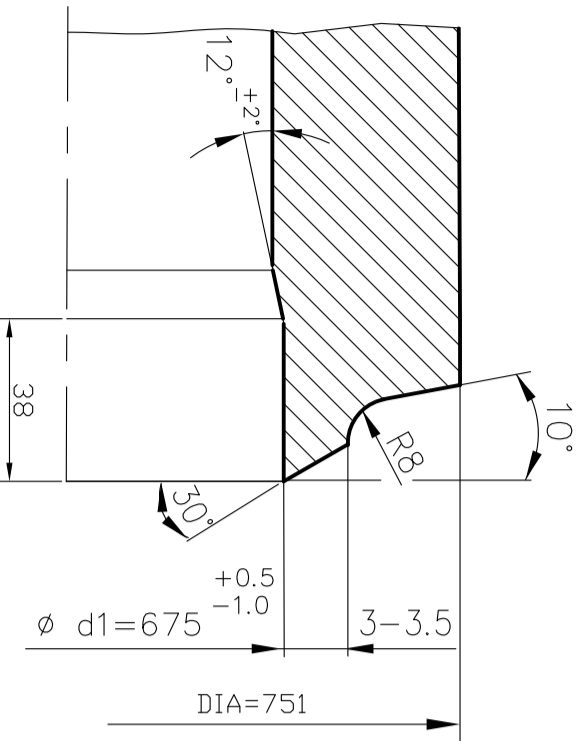
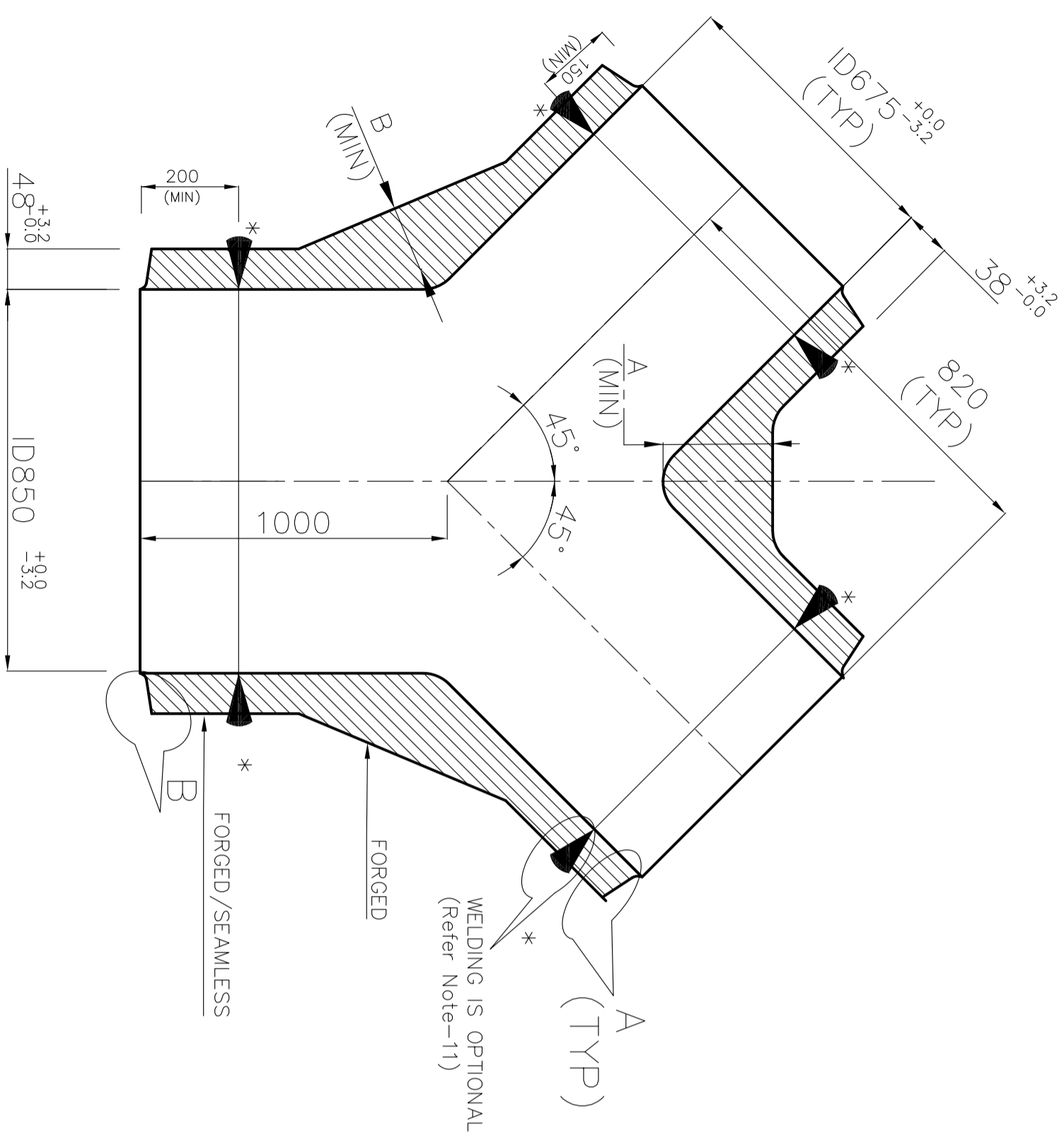
		BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017	
DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg.)
C/M/P	C/M/P	N.T.S.	BHEL PO REF. NO.
TITLE	Y-PIECE	CARD CODE	MSE DRAWING NO.
(ID350X99/ID280X74)	U 01		2-80-301-13560
ITEM NO.	DESCRIPTION	DRAWING NO.	DATE
01.	Y-PIECE ID350X99/ID280X74	2-80-301-13560	21.04.15
ITEM NO.	DESCRIPTION	DRAWING NO.	DATE
			28.05.15
ITEM NO.	DESCRIPTION	DRAWING NO.	DATE
			28.05.15

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19531-01C-08-2

DRAWING No.

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)



NOTES

1. DESIGN PRESSURE: 67.6 kg/cm (g)
2. DESIGN TEMPERATURE : 601 °C
3. FOLLOW TDC: AS APPLICABLE
4. DESIGN, MANUFACTURING, INSPECTION, TOLERANCES AND TESTING SHALL BE AS PER IBR & EN-13480-3
5. CONSTRUCTION SHALL BE SEAMLESS / FORGED
6. MATERIAL SPECIFICATION SHALL BE SA182F91
7. CONNECTING PIPE SIZES ID850X48/ID675X38/ID675X38
8. AVERAGE INSIDE DIAMETER ON FITTING BODY TO GUARANTEE FLOW AREA MIN 90% OF THE CIRCULATION AREA OF THE CONNECTING PIPE
9. VENDOR SHALL BE RESPONSIBLE FOR THE DESIGN OF Y-PIECE FOR THE SPECIFIED DESIGN PARAMETERS. DESIGN CALCULATION AND VENDOR DRAWINGS SHALL BE SUBMITTED FOR APPROVAL AFTER PLACEMENT OF PURCHASE ORDER
10. WEIGHT MENTIONED IN THE DRAWING IS INDICATIVE ONLY
- *11. THE WELDING OF Y-PIECE TO RING SHALL BE WELDED TO MAINTAIN THE OVERALL DIMENSIONS. WPS AND NDT DETAILS SHALL BE SUBMITTED FOR BHEL APPROVAL
12. DIMENSION A&B SHALL BE MENTIONED BY VENDOR BASED ON CALCULATION AND SAME SHALL BE SUBMITTED
13. FINISHED MATERIAL CODE FOR THE Y-PIECE IS 92 505 112 0000

REV	DATE	ALTD	BY	REV	DATE	ALTD	BY
02	11.09.15	APPD	CKN	01	29.07.15	APPD	SRM
ZONE 02 OPTIONAL JOINT AND NOTE-12&13 ADDED				ZONE 01 METAL TEMP STUB ADDED			

REV	DATE	ALTD	BY	REV	DATE	ALTD	BY
03	15.12.15	APPD	SRM	02	15.12.15	APPD	SRM
ZONE 03 DET-X & ITEM-02 DELETED ASPER REVISED PEM PID				ZONE 02 METAL TEMP STUB ADDED			

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	UNIT WT.	QTY.
01.	Y-PIECE ID850X48/ID675X38	2-80-301-13561	92 505 112 0000	SA 182 F91	3423.000	1

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017	NAME	DATE
DEPT.	GRADE OF UN TOL. DIM C/M/F	DIRN	21.04.15
SCALE	N.T.S.	CHK	28.05.15
WEIGHT (Kg.)	BHEL PO REF. NO.	APPD	28.05.15

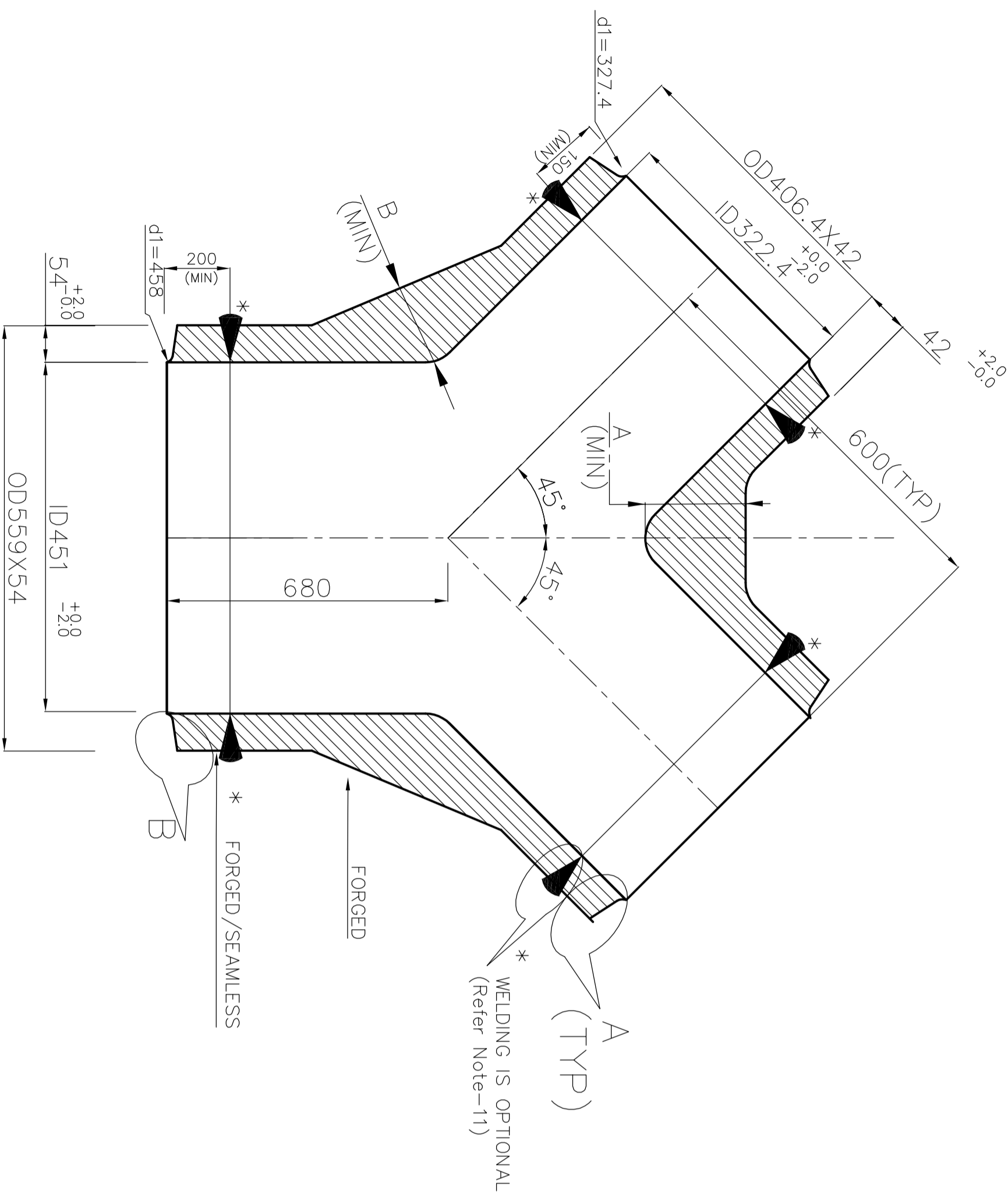
TITLE	Y-PIECE (ID850X48/ID675X38)	CARD CODE	U 01	MSE DRAWING NO.	2-80-310-13561	REV	03
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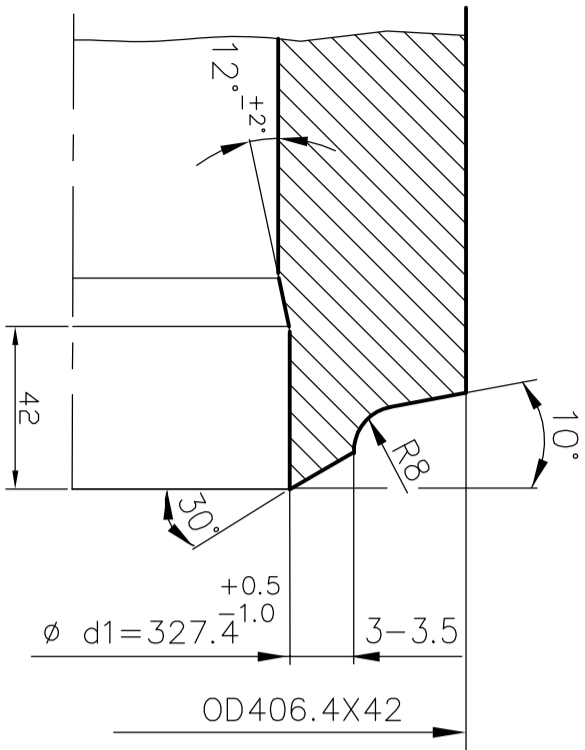
60931-003-08-2

DRAWING NO.

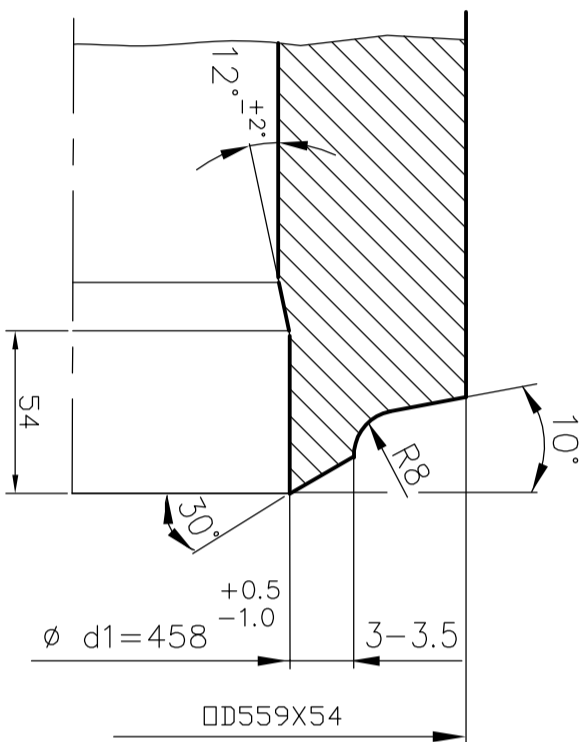
FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)



DETAIL-A



DETAIL-B



NOTES

1. DESIGN PRESSURE: 200 Kg/sq.cm (g)
2. DESIGN TEMPERATURE : 540 °C
3. FOLLOW TDC: AS APPLICABLE
4. DESIGN, MANUFACTURING, INSPECTION, TOLERANCES AND TESTING SHALL BE AS PER IBR & EN-13480-3
5. CONSTRUCTION SHALL BE SEAMLESS / FORGED
6. MATERIAL SPECIFICATION SHALL BE SA182F91
7. CONNECTING PIPE SIZES OD559X54/OD406.4X42/OD406.4X42
8. AVERAGE INSIDE DIAMETER ON FITTING BODY TO GUARANTEE FLOW AREA MIN 90% OF THE CIRCULATION AREA OF THE CONNECTING PIPE
9. VENDOR SHALL BE RESPONSIBLE FOR THE DESIGN OF Y-PIECE FOR THE SPECIFIED DESIGN PARAMETERS. DESIGN CALCULATION AND VENDOR DRAWINGS SHALL BE SUBMITTED FOR APPROVAL AFTER PLACEMENT OF PURCHASE ORDER
10. WEIGHT MENTIONED IN THE DRAWING IS INDICATIVE ONLY
11. THE WELDING OF Y-PIECE TO RING SHALL BE WELDED TO MAINTAIN THE OVERALL DIMENSIONS. WPS AND NDT DETAILS SHALL BE SUBMITTED FOR BHEL APPROVAL
12. DIMENSION A&B SHALL BE MENTIONED BY VENDOR BASED ON CALCULATION AND SAME SHALL BE SUBMITTED
13. FINISHED MATERIAL CODE FOR THE Y-PIECE IS 92 505 113 0000

REV	DATE	ALTD	APPD	REV	DATE	ALTD	APPD
02				01	14.12.15		APPDR.SESHAGIRI

ZONE
OPTIONAL JOINT AND NOTE-12&13 ADDED

		BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017	
DEPT.	GRADE OF UN TOL. DIM C/M/P	SCALE	N.T.S.
TITLE	Y-PIECE (OD559X54/OD406.4X42)		CARD CODE
			U 01
			MSR DRAWING NO.
			2-80-300-13609
			REV
			01

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	UNIT WT.	QTY.
01.	Y-PIECE (OD559X54/OD406.4X42)	2-80-300-13609	92 505 113 0000	A	1800.000	1

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	DRN	NAME	SIGN	DATE	NO OF ITEMS
	APPD	C.K.KARAN		28.05.15	

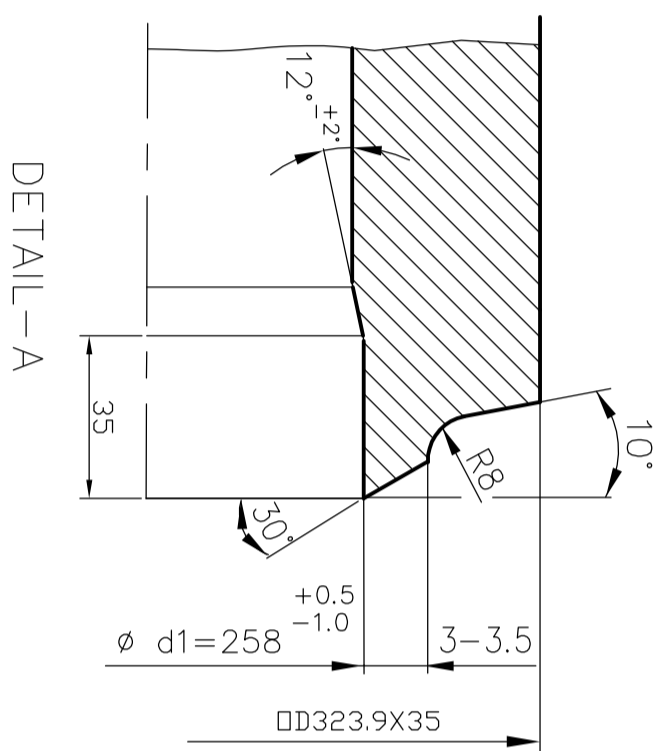
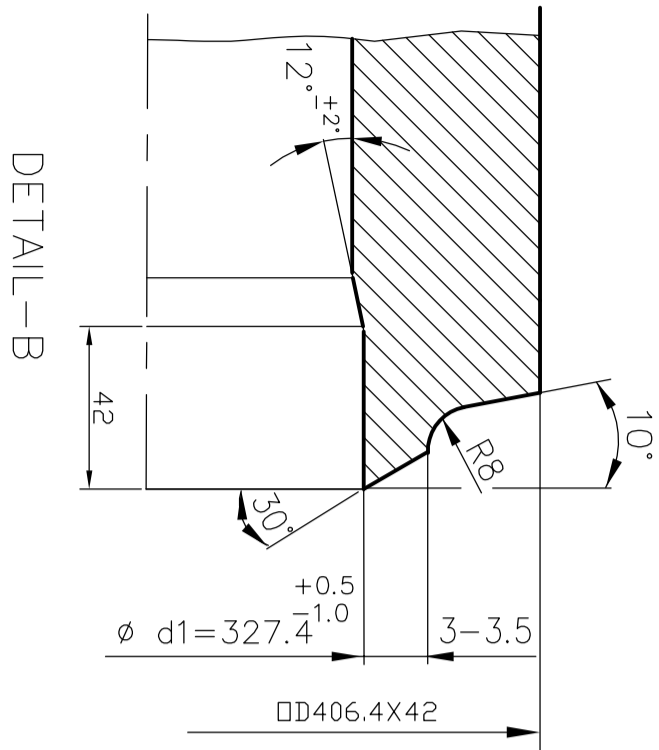
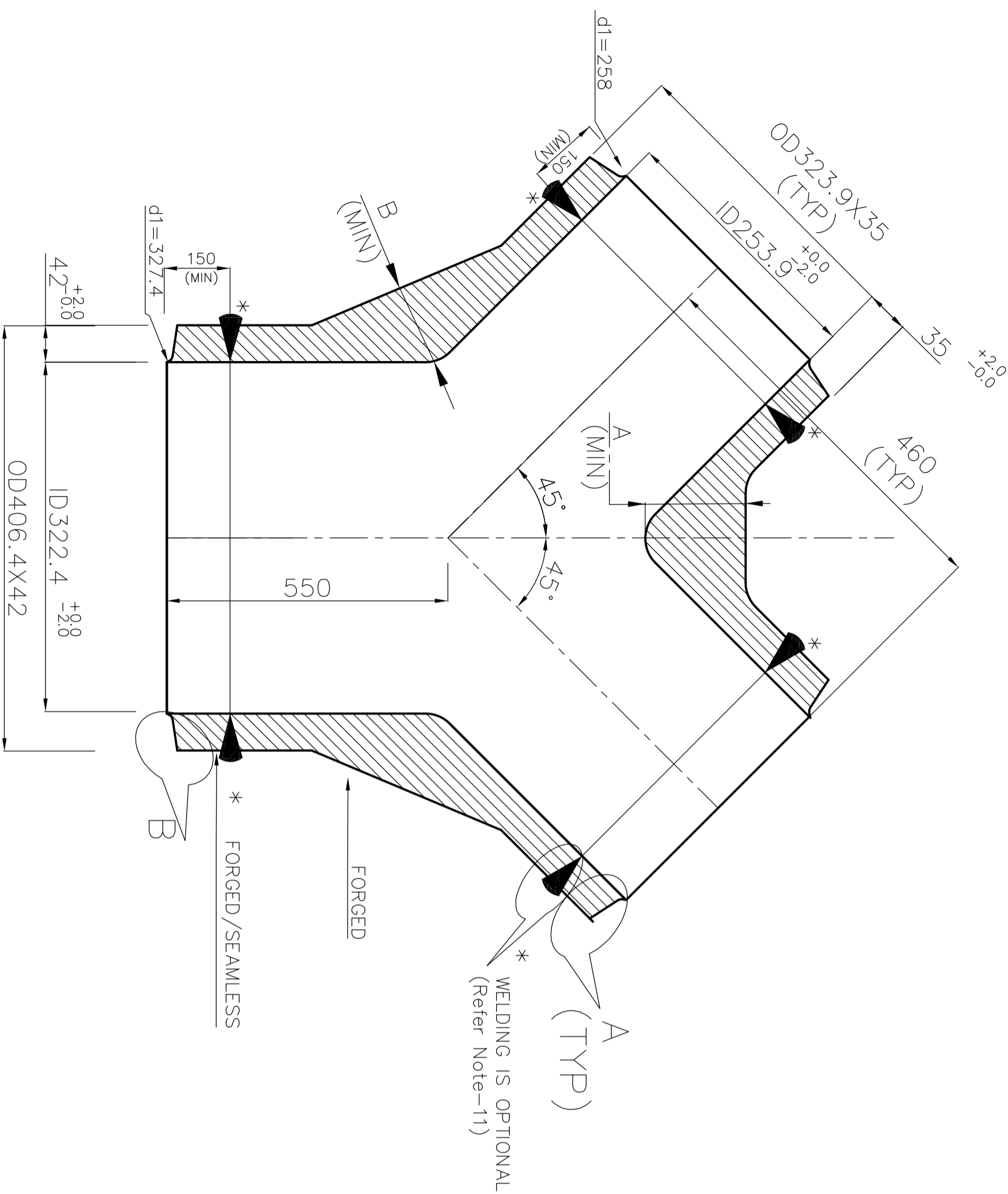
DRN	NAME	SIGN	DATE	NO OF ITEMS
APPD	C.K.KARAN		28.05.15	

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80931-003-08-2

NO. DRAWING

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)



NOTES

1. DESIGN PRESSURE: 200 Kg/sq.cm (g)
2. DESIGN TEMPERATURE : 540 °C
3. FOLLOW TDC: AS APPLICABLE
4. DESIGN, MANUFACTURING, INSPECTION, TOLERANCES AND TESTING SHALL BE AS PER IBR & EN-13480-3
5. CONSTRUCTION SHALL BE SEAMLESS / FORGED
6. MATERIAL SPECIFICATION SHALL BE SA182F91
7. CONNECTING PIPE SIZES OD406.4X42/OD323.9X35/OD323.9X35
8. AVERAGE INSIDE DIAMETER ON FITTING BODY TO GUARANTEE FLOW AREA MIN 90% OF THE CIRCULATION AREA OF THE CONNECTING PIPE
9. VENDOR SHALL BE RESPONSIBLE FOR THE DESIGN OF Y-PIECE FOR THE SPECIFIED DESIGN PARAMETERS. DESIGN CALCULATION AND VENDOR DRAWINGS SHALL BE SUBMITTED FOR APPROVAL AFTER PLACEMENT OF PURCHASE ORDER
10. WEIGHT MENTIONED IN THE DRAWING IS INDICATIVE ONLY
11. THE WELDING OF Y-PIECE TO RING SHALL BE WELDED TO MAINTAIN THE OVERALL DIMENSIONS. WPS AND NDT DETAILS SHALL BE SUBMITTED FOR BHEL APPROVAL
12. DIMENSION A&B SHALL BE MENTIONED BY VENDOR BASED ON CALCULATION AND SAME SHALL BE SUBMITTED
13. FINISHED MATERIAL CODE FOR THE Y-PIECE IS 92 505 114 0000

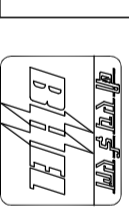
REV	DATE	ALTD	APPD	REV	DATE	ALTD	APPD
02				01	14.12.15		

OPTIONAL JOINT AND NOTE-12&13 ADDED

		BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017	
DEPT.	GRADE OF UN TOL. DIM C/M/F	SCALE	WEIGHT (Kg.)
		N.T.S.	
TITLE (OD406.4X42/OD323.9X35)		CARD CODE	MSE DRAWING NO.
		U 01	2-80-300-13608
REV	DATE	NO OF ITEMS	
01	28.05.15	1	

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	UNIT WT.	QTY.
01.	Y-PIECE OD406.4X42/OD323.9X35	2-80-300-13608	92 505 114 0000	A	1600.000	
			SA182F91	A		

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT



BHARAT HEAVY ELECTRICALS LTD.,
PIPING CENTRE,
CHENNAI 600 017

DRN E.P.V.RIA
CHKRAN
APPD CKRAN
BHEL PO REF. NO.
28.05.15

NAME E.P.V.RIA
SIGN
DATE 21.04.15