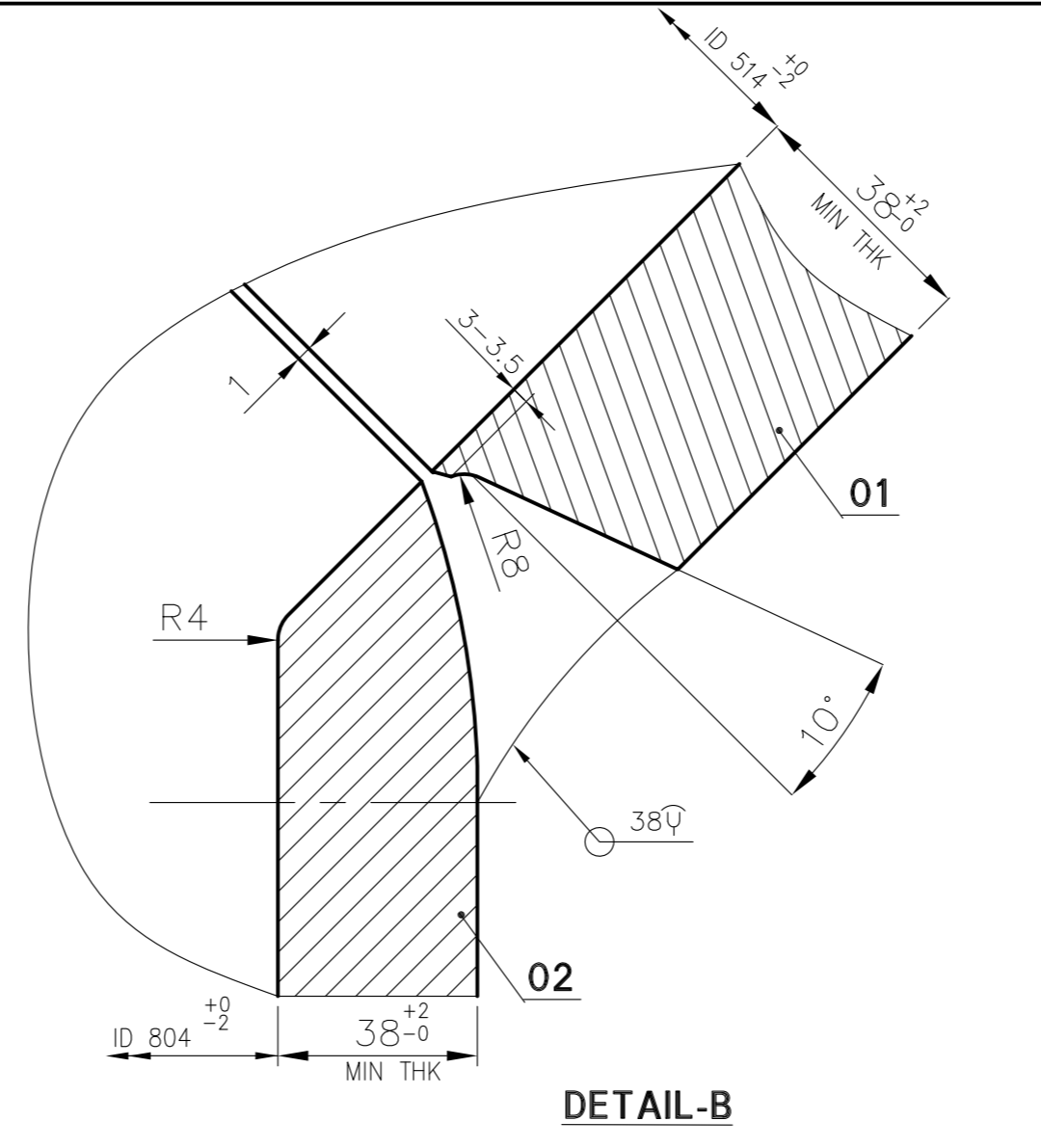
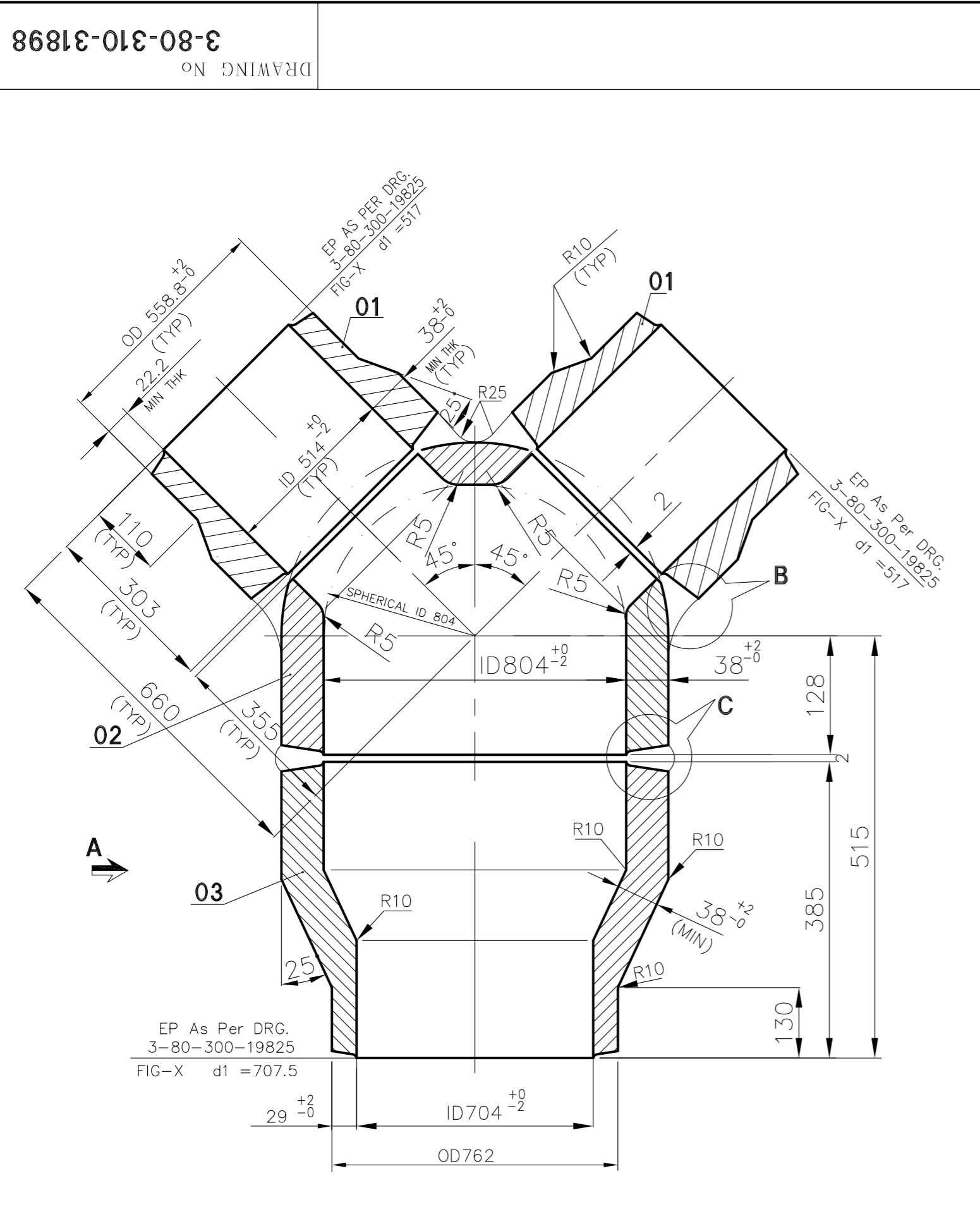
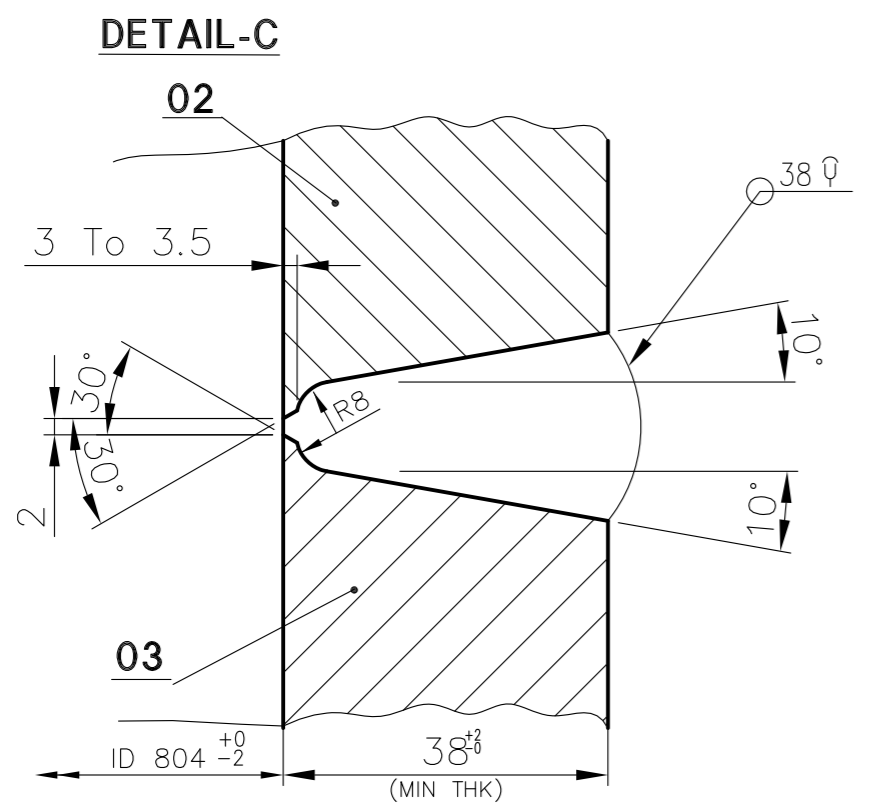


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- ALL DIMENSIONS ARE IN MILLIMETRES
- NOTES :-**
- DESIGN PRESSURE : 55.0 Kg/Cm² (g)
 - DESIGN TEMPERATURE : 573° C
 - FOLLOW TDG:108.
 - PIPE SA335P91(A) CAN ALSO BE USED IN PLACE OF SA182F91(A).
 - ELECTRODES TO BE USED ARE (FOR WELDING OF -F91 WITH F91 ONLY)
 - a) GTAW : ER90S-B9 (A)
 - b) SMAW : E9015-B9 (A)
 ELECTRODES GIVEN ABOVE ARE INDICATIVE. VENDOR TO GIVE WPS FOR BHEL'S APPROVAL.



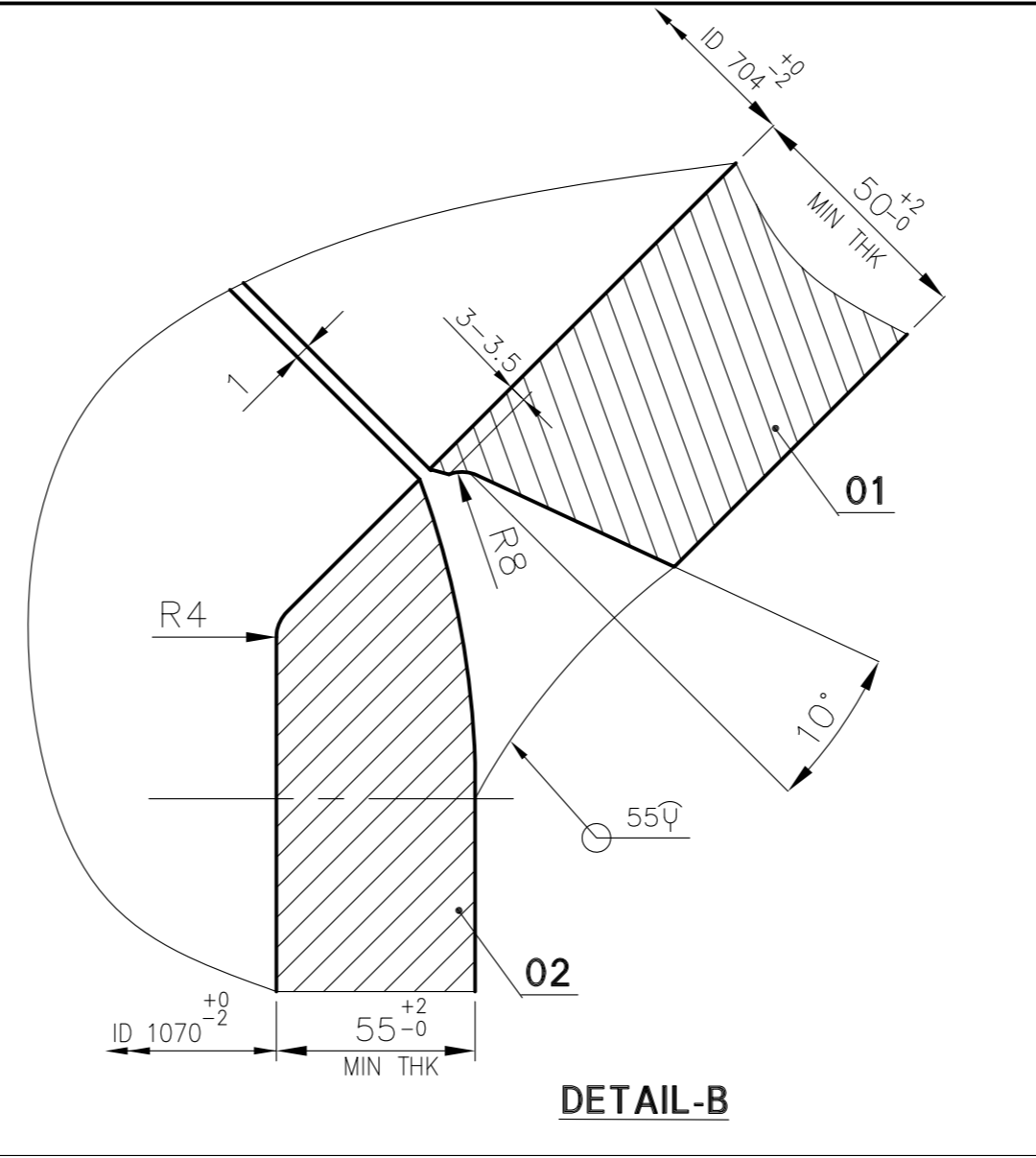
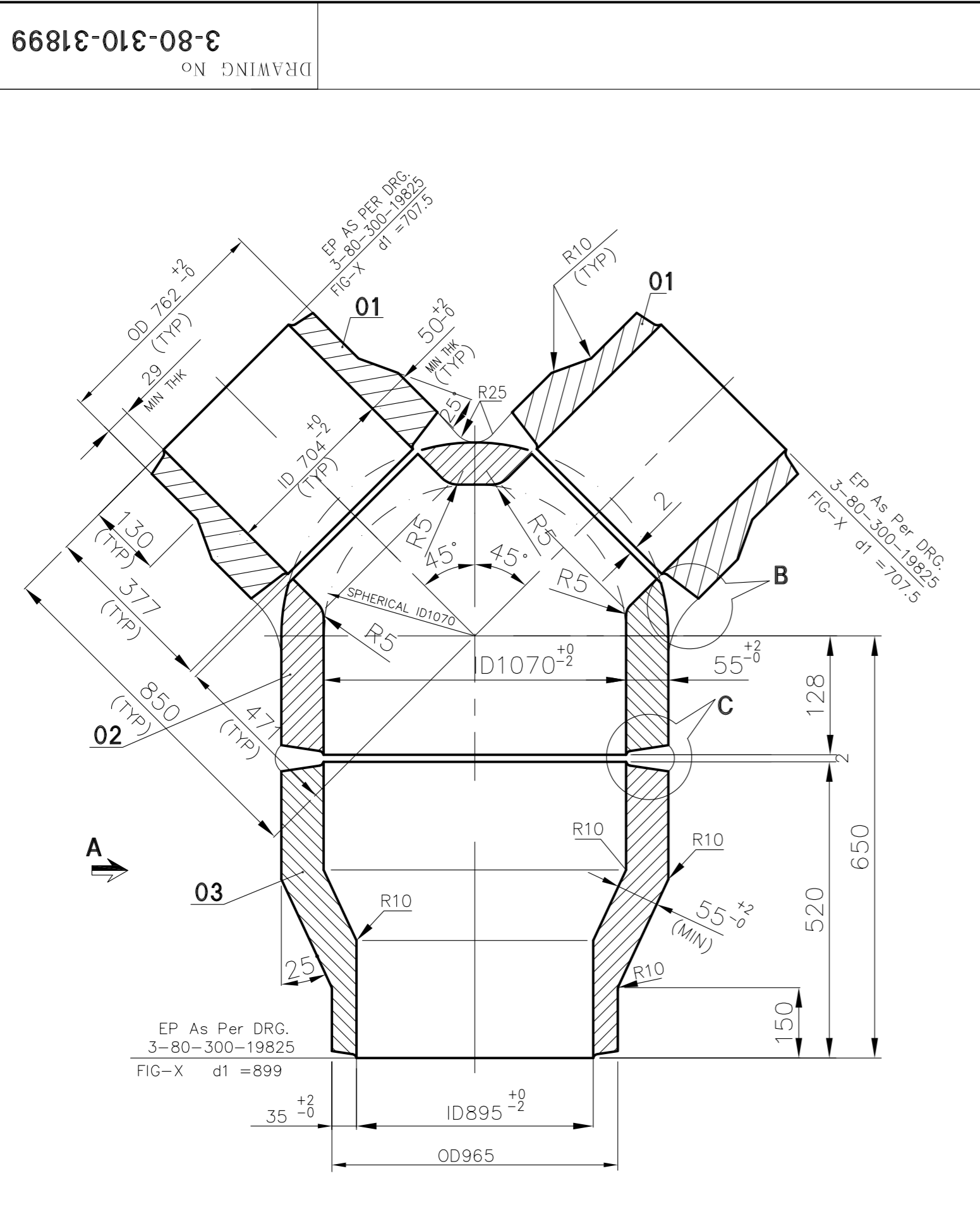
ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO. / VAR. NO.	MATERIAL CODE / MATERIAL SPEC.	A / C	UNIT WT. / QTY.
03	OUTLET FORGING ID804XTHK 38 MIN/ ID704X29THK	3-80-310-31898	-	SA 182 F91	A	260 500 1
02	BODY FORGING ID804XTHK 38 MIN	3-80-310-31898	-	SA 182 F91	A	310 000 1
01	INLET FORGING ID514XTHK 38 MIN	3-80-310-31898	-	SA 182 F91	A	128 300 2

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

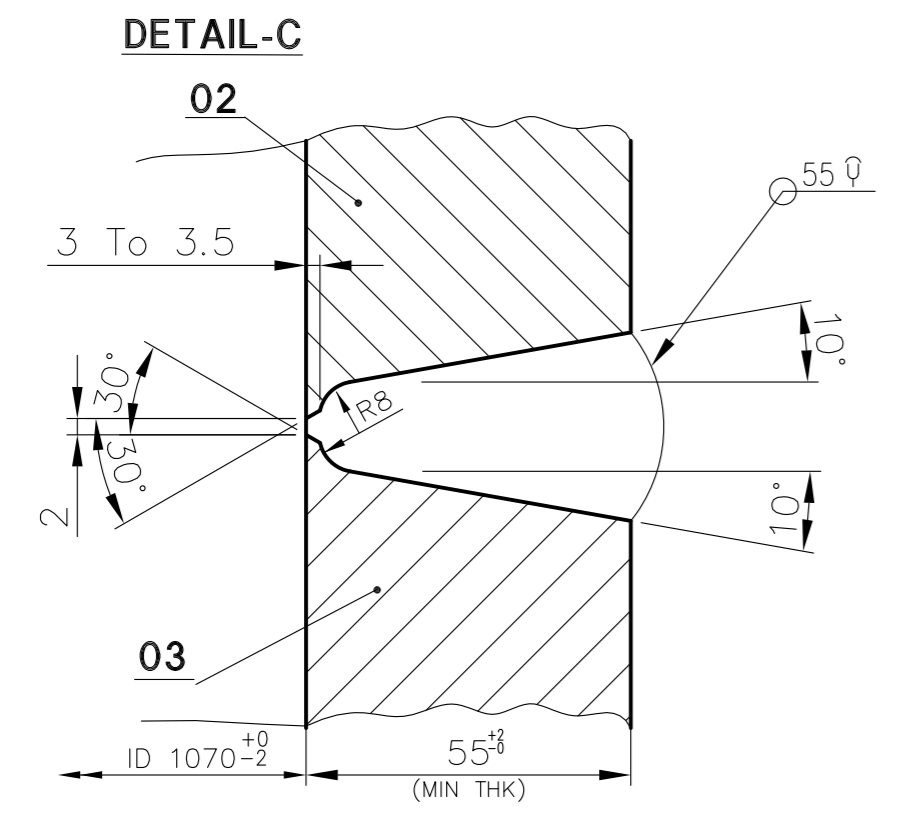
	BHARAT HEAVY ELECTRICALS LTD.,		DRN	NAME	SIGN	DATE	NO OF ITEMS
	PIPING CENTRE,		CHD	EZHIL		01.12.14	
	CHENNAI 600 017		APPD	R.SESHAGIRI		01.12.14	

REV 01	DATE	ALTERED / APPROVED	DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DRG	ITEM No.
ZONE				C / M / F		827.00		
TITLE						CARD CODE	DRAWING No.	REV
Y-PIECE (OD762X29/OD558.8X22.2)						U 01	3-80-310-31898	00

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- ALL DIMENSIONS ARE IN MILLIMETRES
- NOTES :-**
- DESIGN PRESSURE : 55.0 Kg/Cm² (g)
 - DESIGN TEMPERATURE : 573° C
 - FOLLOW TDG:108.
 - PIPE SA335P91(A) CAN ALSO BE USED IN PLACE OF SA182F91(A).
 - ELECTRODES TO BE USED ARE (FOR WELDING OF -F91 WITH F91 ONLY)
 - a) GTAW : ER90S-B9 (A)
 - b) SMAW : E9015-B9 (A)
 ELECTRODES GIVEN ABOVE ARE INDICATIVE. VENDOR TO GIVE WPS FOR BHEL'S APPROVAL.



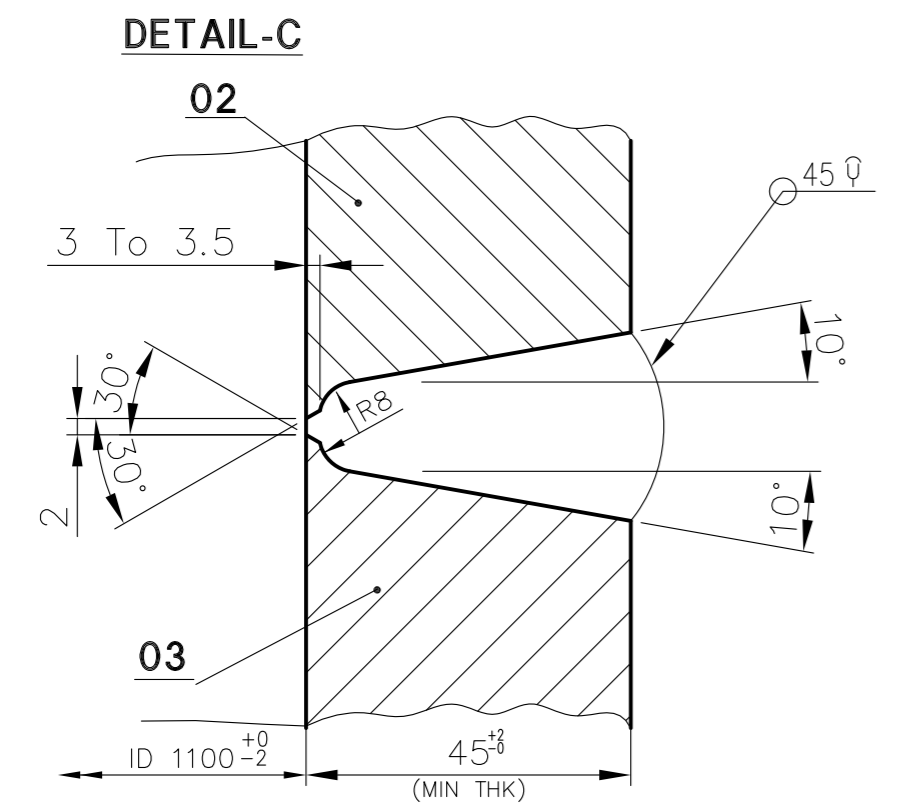
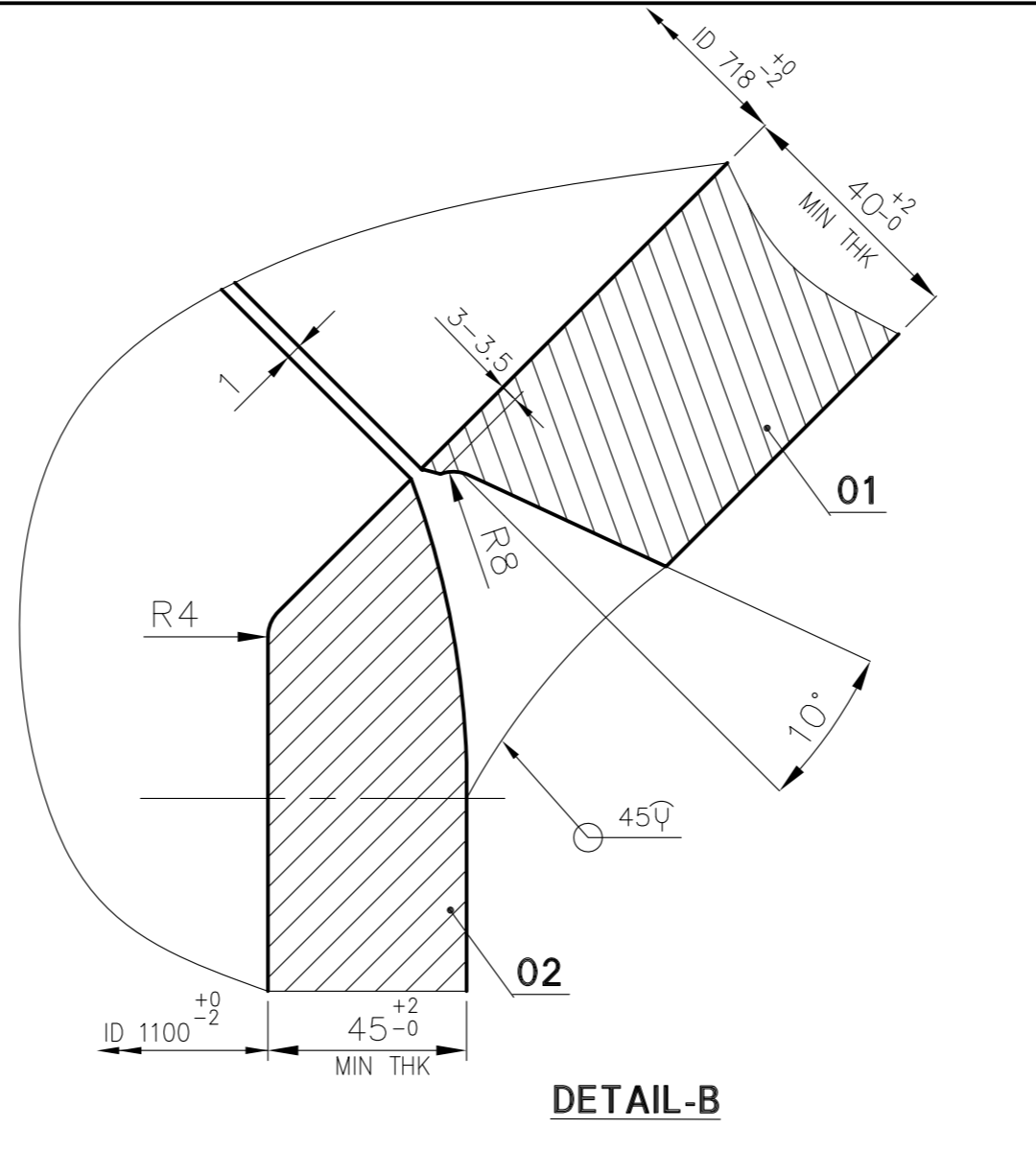
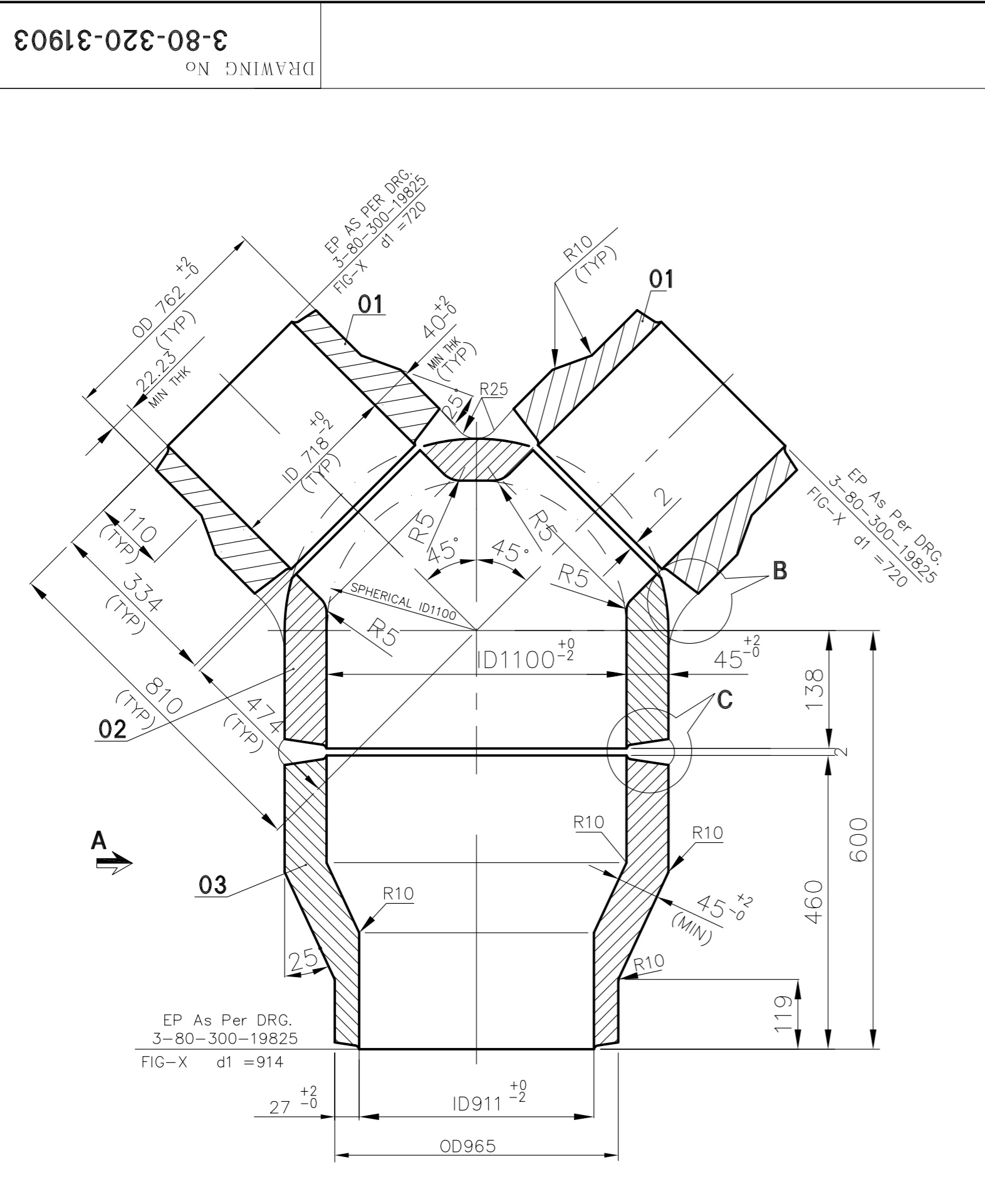
ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO. / VAR. NO.	MATERIAL CODE / MATERIAL SPEC.	A / C	UNIT WT. / QTY.
03	OUTLET FORGING ID1070XTHK 55 MIN/ID895X35THK	3-80-310-31899	-	SA 182 F91	A	642 060 1
02	BODY FORGING ID1070XTHK 55 MIN	3-80-310-31899	-	SA 182 F91	A	718 386 1
01	INLET FORGING ID704XTHK 50 MIN	3-80-310-31899	-	SA 182 F91	A	288 600 2

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017	DRN	NAME	SIGN	DATE	NO OF ITEMS
	CHD	EZHIL		01.12.14	
	APPD	R.SESHAGIRI		01.12.14	

REV 01	DATE	ALTERED / APPROVED	DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DRG	ITEM No.
ZONE				C / M / F		1938.00		
TITLE						CARD CODE	DRAWING No.	REV
Y-PIECE (OD965X35/OD762X29)						U 01	3-80-310-31899	00

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- ALL DIMENSIONS ARE IN MILLIMETRES
- NOTES :-**
- DESIGN PRESSURE : 58.1 Kg/Cm² (g)
 - DESIGN TEMPERATURE : 360° C
 - FOLLOW TDG:108.
 - PIPE SA106GRC(A) CAN ALSO BE USED IN PLACE OF SA105(A).
 - ELECTRODES TO BE USED ARE (FOR WELDING OF -SA105 WITH SA105 ONLY)
 - a) GTAW : ER 70S-A1 (A)
 - b) SMAW : E 7018 A1 (A)
 ELECTRODES GIVEN ABOVE ARE INDICATIVE. VENDOR TO GIVE WPS FOR BHEL'S APPROVAL.

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO. / VAR. NO.	MATERIAL CODE / MATERIAL SPEC.	A / C	UNIT WT. / QTY.
03	OUTLET FORGING ID1100XTHK 45 MIN/ID911X27THK	3-80-320-31903	-	SA105	A	469 500 1
02	BODY FORGING ID1100XTHK 45 MIN	3-80-320-31903	-	SA105	A	649 054 1
01	INLET FORGING ID718XTHK 40 MIN	3-80-320-31903	-	SA105	A	223 500 2

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

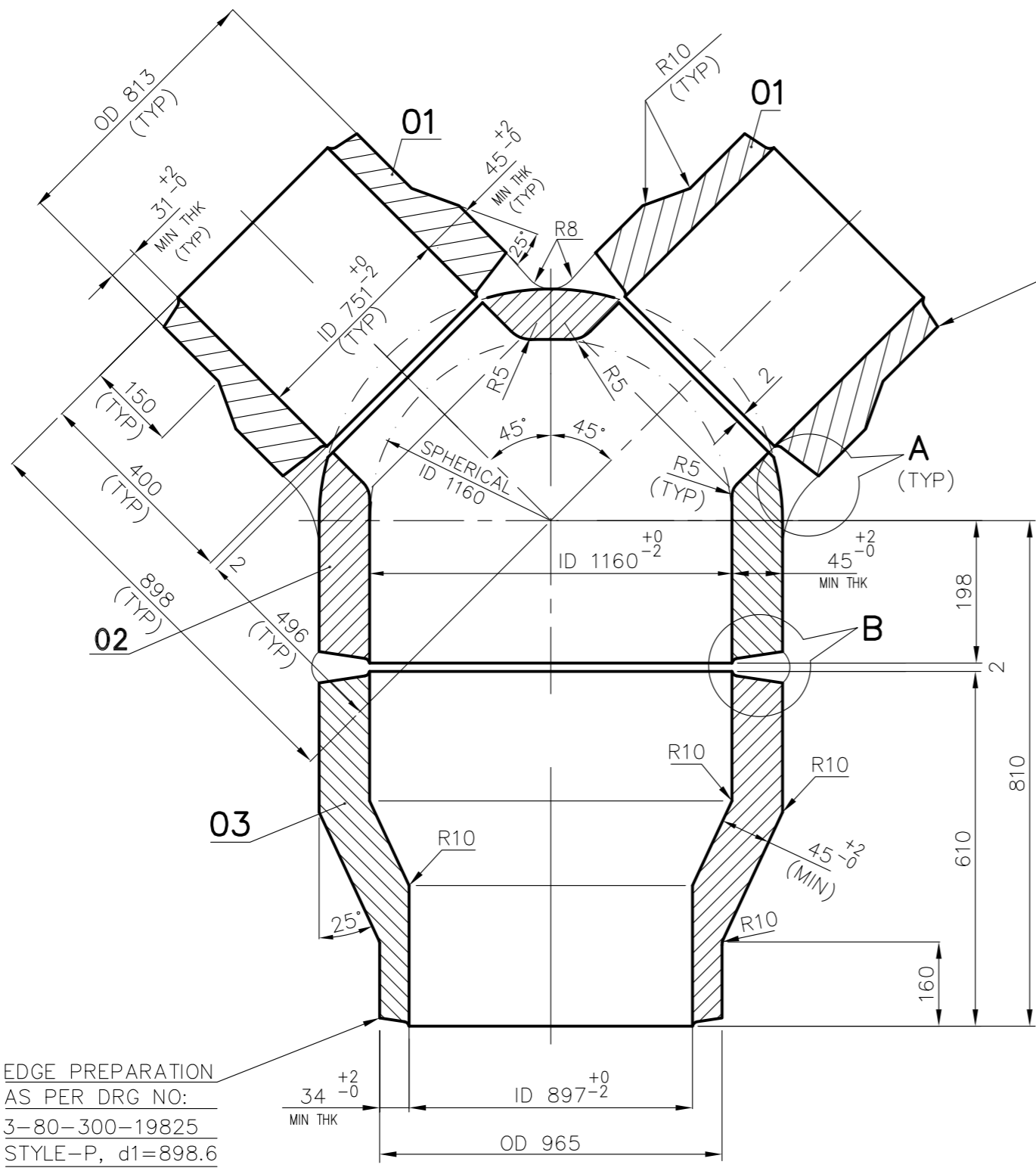
BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017	DRN	NAME	SIGN	DATE	NO OF ITEMS
	CHD	EZHIL		01.12.14	
	APPD	R.SESHAGIRI		01.12.14	

REV 01	DATE	ALTERED / APPROVED	DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DRG	ITEM No.
ZONE				C / M / F		1566.00		
TITLE						CARD CODE	DRAWING No.	REV
Y-PIECE (OD965X27/OD762X22.23)						U 01	3-80-320-31903	00

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2-80-320-10813

ALL DIMENSIONS ARE IN MILLIMETRES

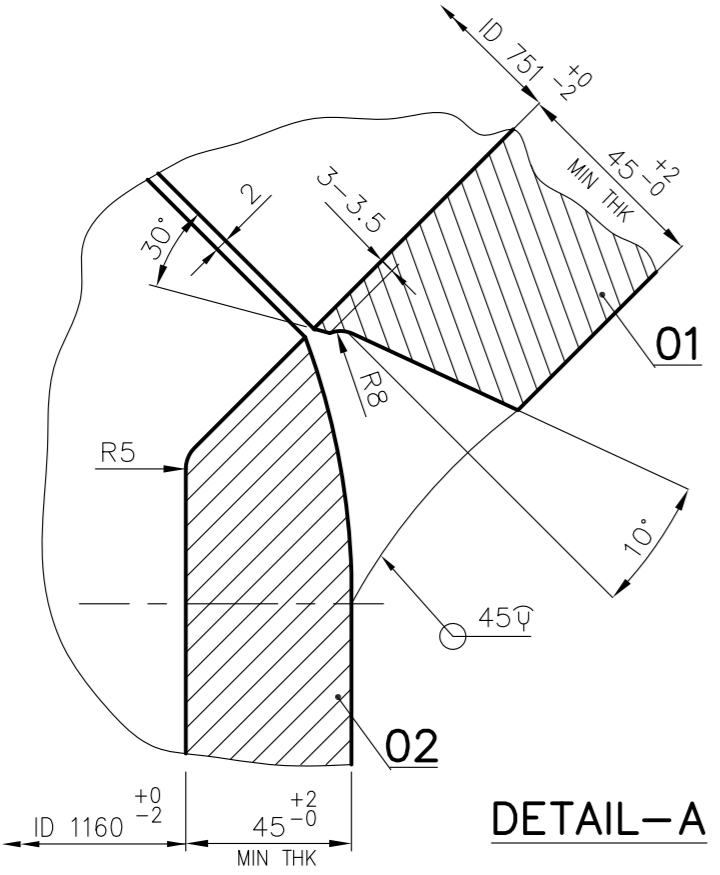


EDGE PREPARATION
AS PER DRG NO:
3-80-300-19825
STYLE-P, d1=753.7
(TYP)

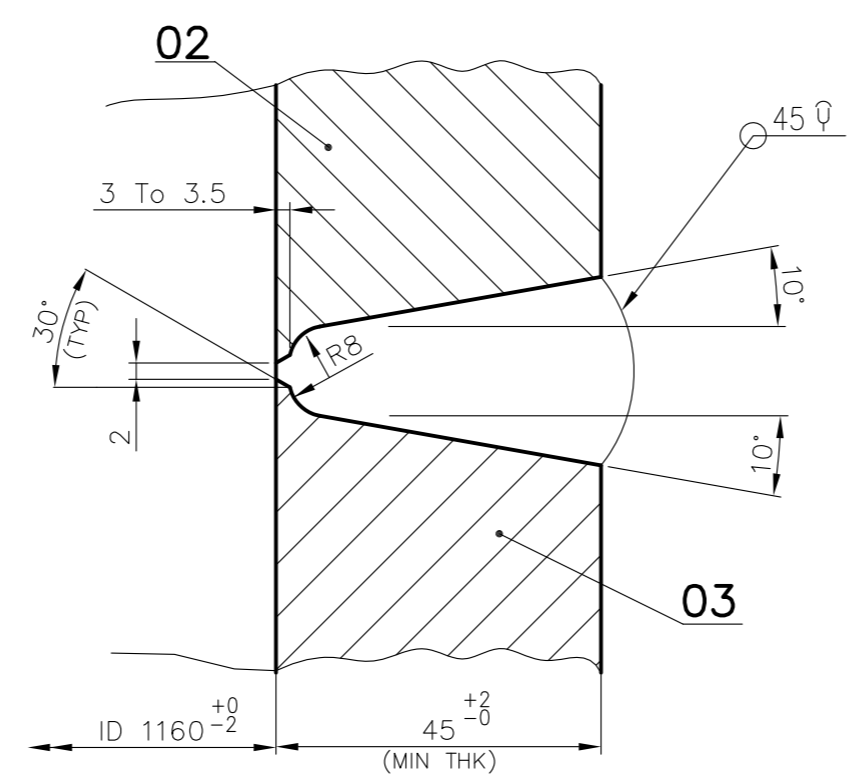
EDGE PREPARATION
AS PER DRG NO:
3-80-300-19825
STYLE-P, d1=898.6

NOTES

- 01. DESIGN PRESSURE : 73.5 Kg/Cm²(g)
- 02. DESIGN TEMPERATURE : 370 °C
- 03. FOLLOW TDC No. : TDG-108 (LATEST REVISION)
- 04. PIPE SA106GRC(A) CAN ALSO BE USED IN PLACE OF 'SA 105'(A)
- 05. THE FINISHED MATERIAL SPECIFICATION IS 'SA 105'(A)
- 06. THE FINISHED MATERIAL CODE IS '92 505 995 0000'



DETAIL-A



DETAIL-B

VAR NO	ITEM NO	DESCRIPTION	DRAWING NO	MATERIAL CODE	MATERIAL SPECN	UNIT WEIGHT	QUANTITY
	03	OUTLET FORGING ID 1160 x THK 45 MIN / ID 897 x THK 34 min	2-80-320-10813	-	SA 105	845 000	1
	02	BODY FORGING ID 1160 x THK 45 MIN	2-80-320-10813	-	SA 105	1565 000	1
	01	INLET FORGING ID 751 x THK 45 MIN	2-80-320-10813	-	SA 105	310 000	2

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



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

NAME	SIGN	DATE	NO OF ITEMS
DRN POONGKODI.V	..sd..	07/06/2011	
CHD S.RAMAMURTHY	..sd..	07/06/2011	
APPD C.V.NATHAN	..sd..	07/06/2011	

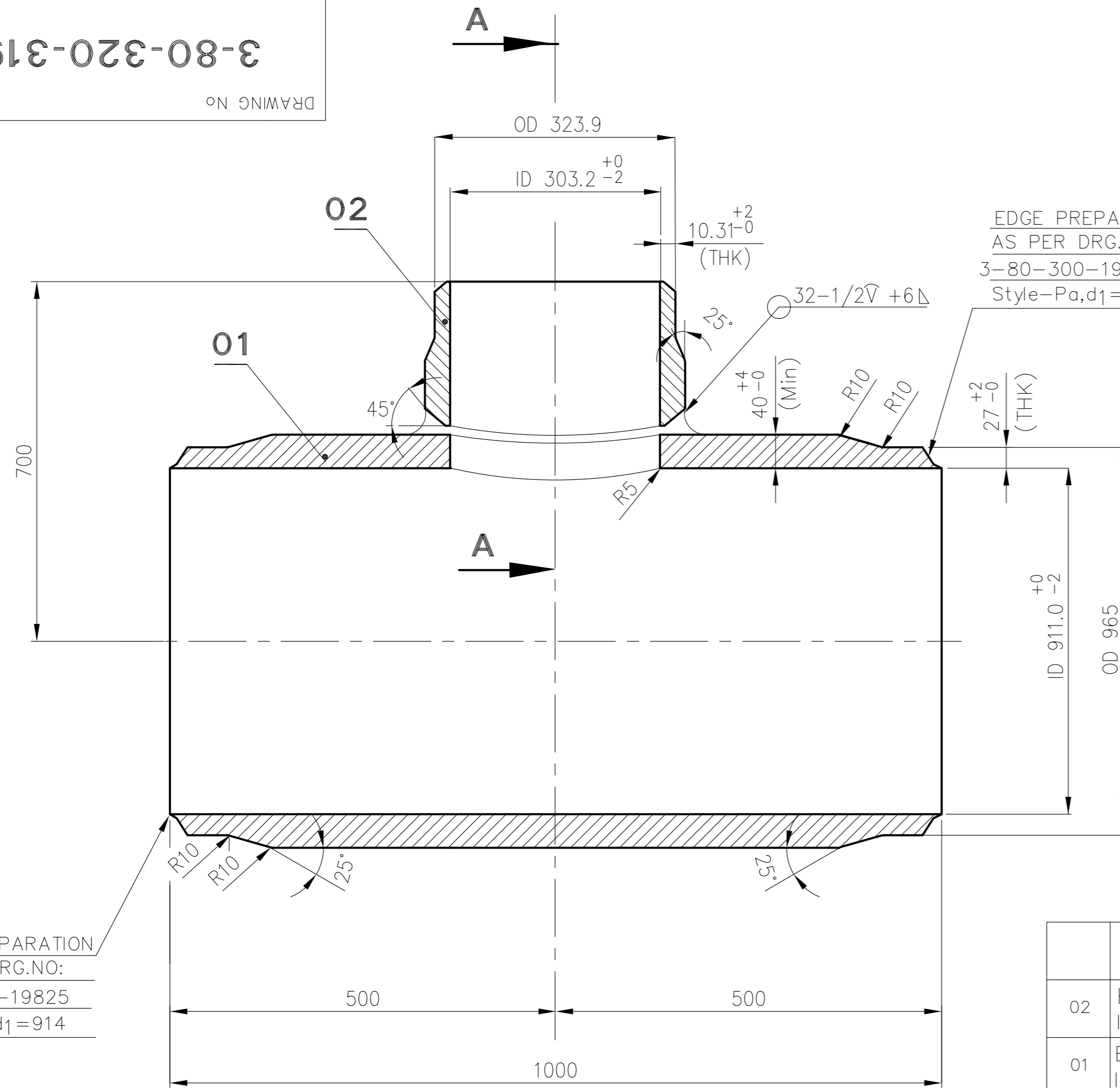
REV 01	DATE 24.09.2012	ALTD : POONGKODI.V
		APPD : PANDA.S
	DESIGN PARAMETER REVISED.	
	REVISION MARKED AS 01	

DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg).	BHEL PO REF. NO.	ITEM No.
	C/M/F	N.T.S.	2720.000	-	-
TITLE			CARD CODE	MSE DRAWING NO.	REV
FABRICATED Y-PIECE (OD965x34/OD813x31)			U 01	2-80-320-10813	01

3-80-320-31904

DRAWING No

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EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
Style-Pa,d1=914

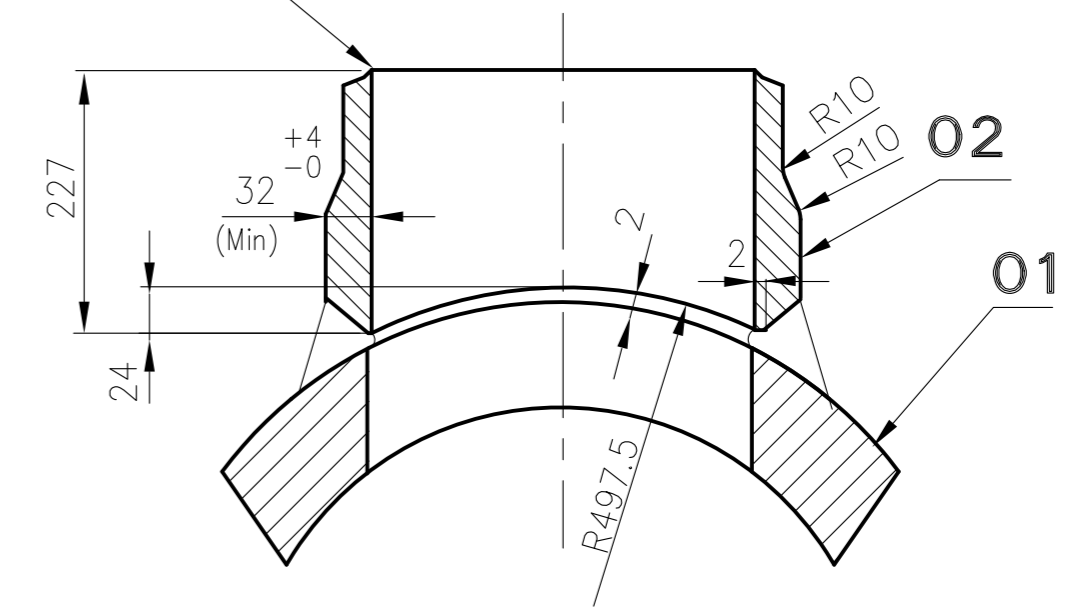
EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
Style-Pa,d1=914

EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
Style-D, d1=303.2

NOTES :-

- DESIGN PRESSURE : 58.1 Kg/Sq.Cm (g)
- DESIGN TEMPERATURE : 360° C
- FOLLOW TDG : 108
- PIPE SA106GrC(A) CAN ALSO BE USED IN PLACE OF SA105(A).

12.5/



SECTION-AA

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO. / VAR NO.	MATERIAL CODE / MATERIAL SPEC.	A / C	UNIT WT. / QTY.
02	BRANCH NOZZLE L=227 ID 303.2 x Thk 32.0 Min	3-80-320-31904		SA 105	A	40,875 1
01	BASE PIPE L = 1000 ID 911.0 x Thk 40.0 Min	3-80-320-31904		SA 105	A	823,800 1

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



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

DRN	NAME	SIGN	DATE	NO OF ITEMS
EZHIL KUMAR			05.02.09	
KONDAPPA			05.02.09	
R.SESHAGIRI			05.02.09	

REV	DATE	ALTD
		APPD
ZONE		

DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg).	BHEL PO REF.NO:	ITEM No.
	C/M/F	N.T.S.	865.00		
TITLE			CARD CODE	DRAWING No.	REV
FABRICATED UNEQUAL TEE (OD965x27.0/OD323.9x10.31)			U 01	3-80-320-31904	00

DESIGN TEMP: 510 °C
DESIGN PRESSURE: 60 Kg/cm²

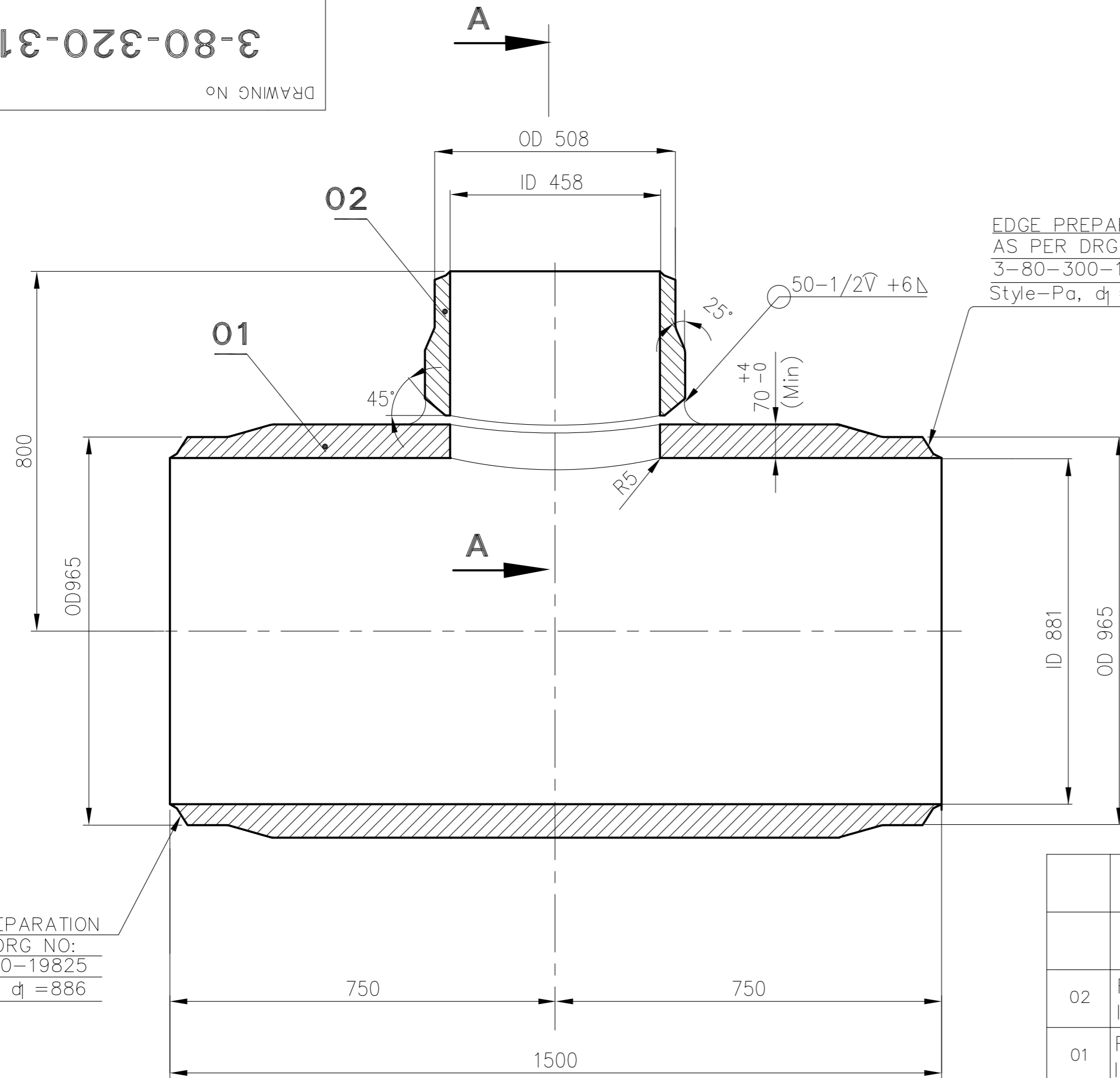
12.5

NOTES
1.FOLLOW APPLICABLE TDG

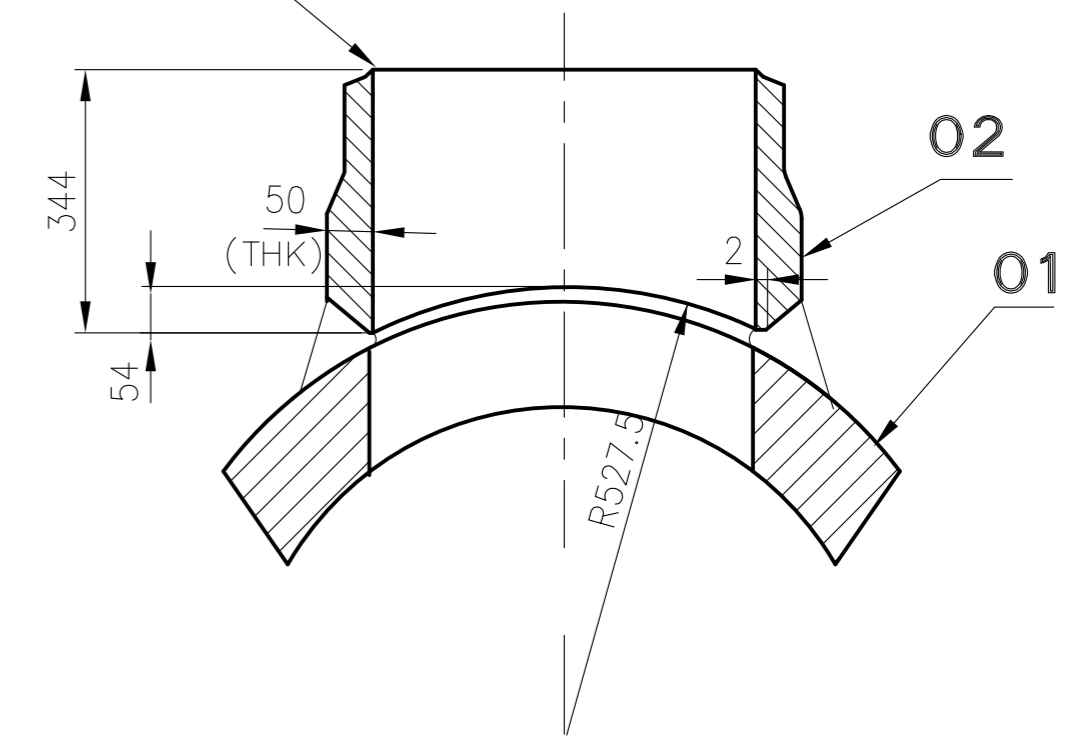
3-80-320-31913

DRAWING No

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EDGE PREPARATION
AS PER DRG NO:
3-80-300-19825
Style-Pa, d_i =463



SECTION-AA

EDGE PREPARATION
AS PER DRG NO:
3-80-300-19825
Style-Pa, d_i =886

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	A	UNIT WT.
VAR NO.			VAR NO.	MATERIAL SPEC.	C	QTY.
02	FORGING L=344 ID 448 x Thk 50 Min	3-80-320-31913		SA 182 F 11 CL2	A	187,830 1
01	FORGING L = 1200 ID 881 x Thk 70 Min	3-80-320-31913		SA 182 F 11 CL2	A	2249,384 1

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



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

DRN	NAME	SIGN	DATE	NO OF ITEMS
EZHILKUMAR			11.12.14	
CHD	KONDAPANAI DU		11.12.14	
APPD	R.SESHAGIRI		11.12.14	

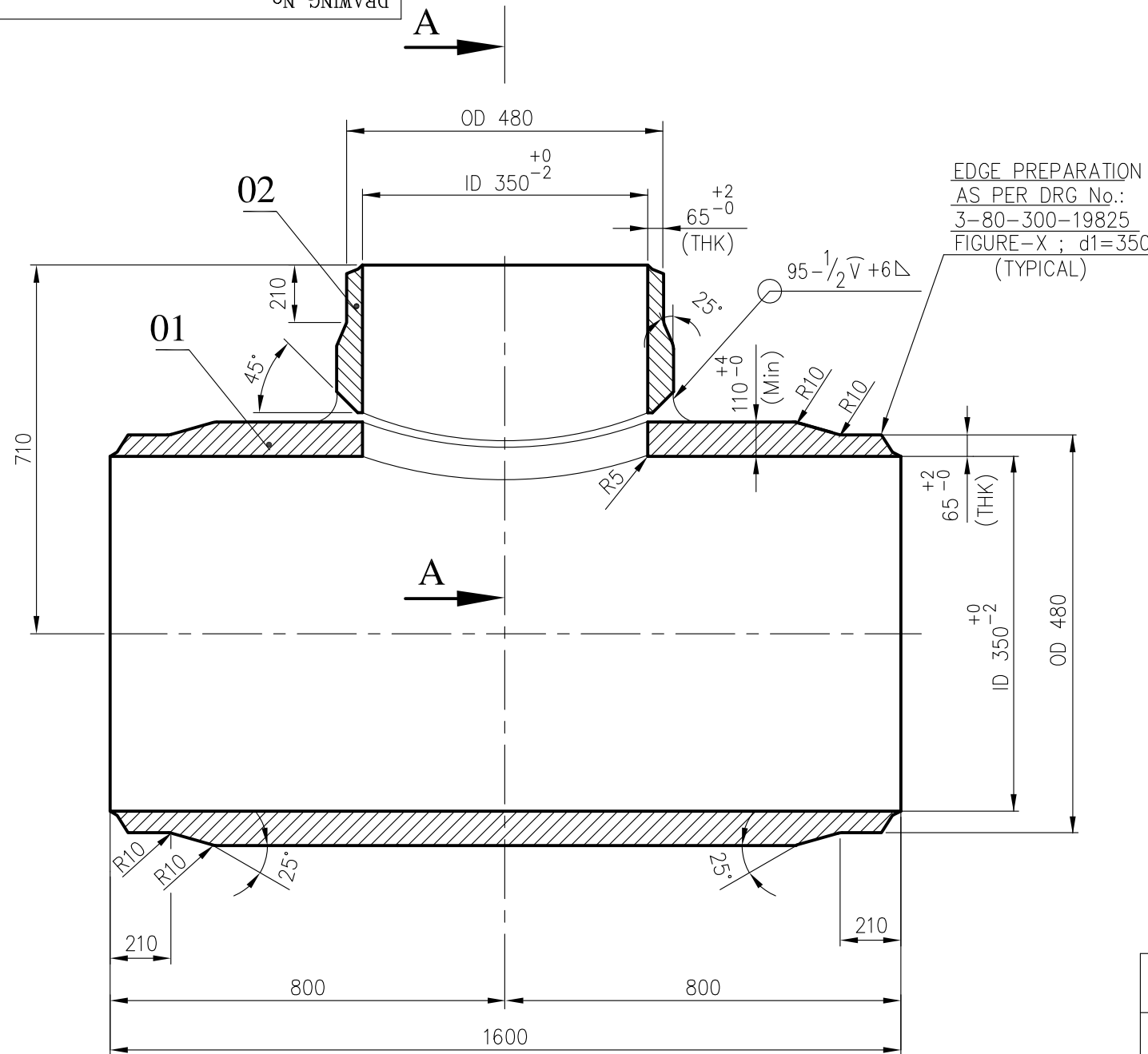
REV	DATE	ALTD:
01		APPD:
ZONE		

DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg).	BHEL PO REF.NO:	ITEM No.
	C/M/F	N.T.S.	2437.21		
TITLE	FABRICATED UNEQUAL TEE (OD965X42/OD508X25)			CARD CODE	REV
				U 01	00
				DRAWING No.	
				3-80-320-31913	

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3-80-301-32156

DRAWING No

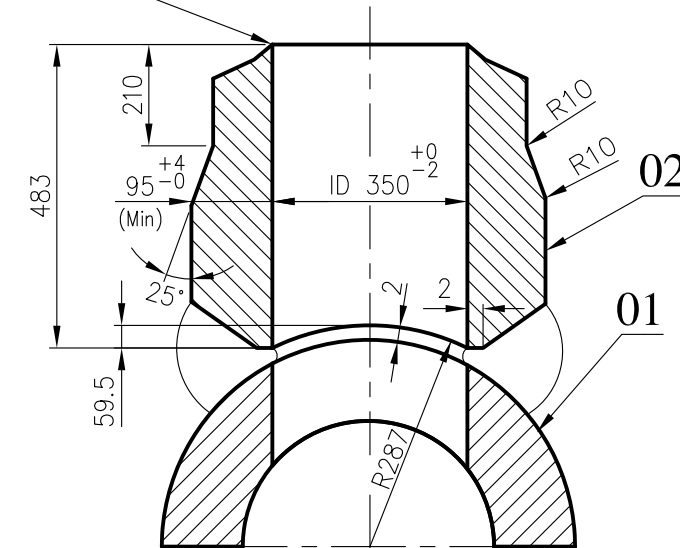
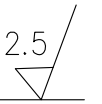


EDGE PREPARATION
AS PER DRG No.:
3-80-300-19825
FIGURE-X ; d1=350
(TYPICAL)

EDGE PREPARATION
AS PER DRG No.:
3-80-300-19825
FIGURE-X; d1=350

NOTES :-

1. DESIGN PRESSURE : 271 Kg/Sq.Cm (g)
2. DESIGN TEMPERATURE : 573° C
3. FOLLOW TDG : 108 LATEST
4. ELECTRODES TO BE USED ARE,
a) GTAW : ER90S-B9 (A)
b) SMAW : E9015-B9 (A)
ELECTRODES GIVEN ABOVE ARE INDICATIVE. VENDOR TO GIVE WPS FOR BHEL's APPROVAL.
5. PIPE SA335P91(A) CAN ALSO BE USED IN PLACE OF SA182F91(A).
6. WEIGHT INDICATED IS FOR FINISHED EQUAL TEE.
7. FINISHED MATERIAL CODE FOR EQT IS 92 505 036 0000.



SECTION-AA

02	BRANCH NOZZLE L=483 ID 350.0 x Thk 95.0 Min	3-80-301-32156		SA 182 F91	A	413,000 1
01	BASE PIPE L = 1600 ID 350.0 x Thk 110.0 Min	3-80-301-32156		SA 182 F91	A	1627,000 1
ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	A	UNIT WT.
			VAR NO.	MATERIAL SPEC.	C	QTY.

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



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

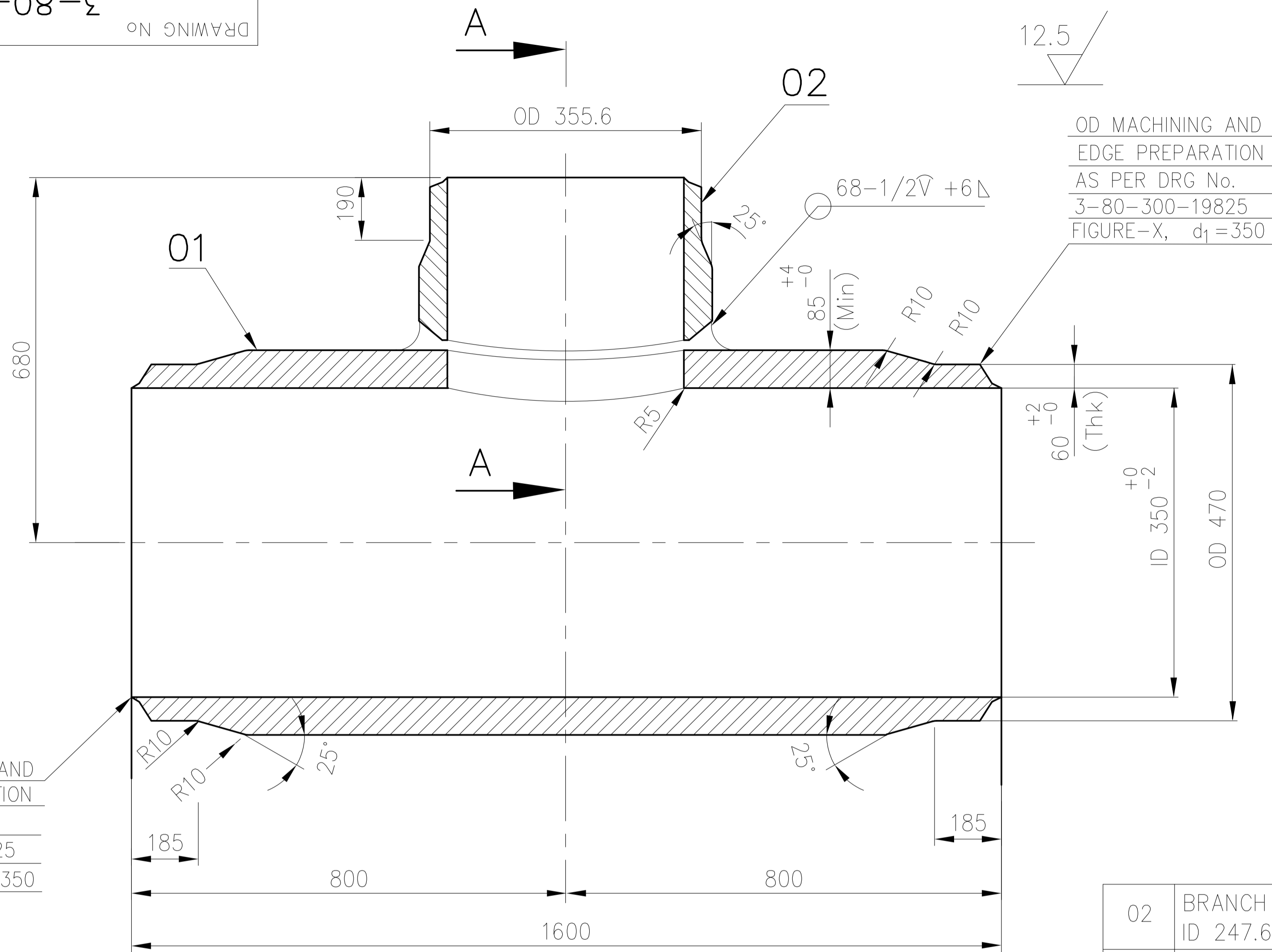
DRN	NAME	SIGN	DATE	NO OF ITEMS
CHD	I.BISWAS	Sd/-	02.05.15	
APPD	S.RAMAMURTHY	Sd/-	02.05.15	

REV	DATE	ALTD
01		APPD
ZONE		

DEPT.	GRADE OF UN TOL DIM	SCALE	WEIGHT (Kg).	BHEL PO REF.NO:	ITEM No.
CODE	C/M/F	N.T.S.	2040.000		
TITLE	FABRICATED EQUAL TEE ID 350 x 60 SA182 F91			CARD CODE	REV
				U 01	00
				DRAWING No.	
				3-80-301-32156	

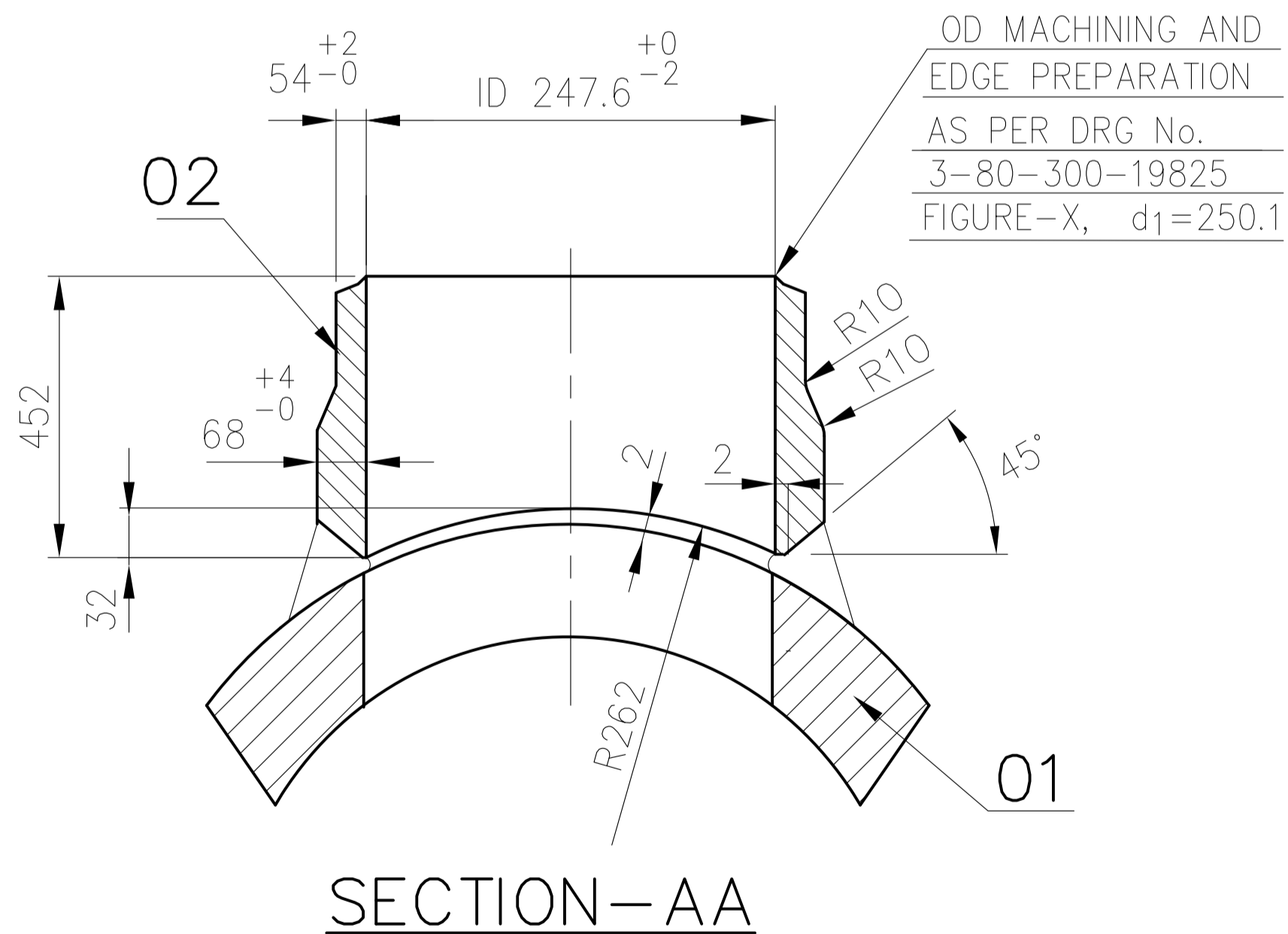
DRAWING No. 3-80-301-31142

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OD MACHINING AND
EDGE PREPARATION
AS PER DRG.No.
3-80-300-19825
FIGURE-X, d1=350

OD MACHINING AND
EDGE PREPARATION
AS PER DRG No.
3-80-300-19825
FIGURE-X, d1=350



OD MACHINING AND
EDGE PREPARATION
AS PER DRG No.
3-80-300-19825
FIGURE-X, d1=250.1

NOTES

- DESIGN PRESSURE : 275 Kg/Cm²(g)
- DESIGN TEMPERATURE : 568 °C
- FOLLOW TDC No. : TDG-108 (LATEST REVISION)
- ELECTRODES TO BE USED ARE,
a) GTAW : ER90S-B9 (A)
b) SMAW : E9015-B9 (A)
ELECTRODES GIVEN ABOVE ARE INDICATIVE. VENDOR TO GIVE WPS FOR BHEL's APPROVAL.
- PIPE 'SA 335 P91'(A) CAN ALSO BE USED IN PLACE OF 'SA 182 F91'(A)
- THE FINISHED MATERIAL SPECIFICATION IS 'SA 182 F91'(A)

02	BRANCH FORGING L=450 ID 247.6 x Thk 68 Min	3-80-301-31142		-	A	200,000
01	BASE FORGING L=1600 ID 350 x Thk 85 Min	3-80-301-31142		-	A	1320,000
ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO. / VAR NO.	MATERIAL CODE / MATERIAL SPEC.	A / C	UNIT WT. / QTY.

SPACE FOR IBR APPL.

	BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017		NAME	SIGN	DATE	NO OF ITEMS
	DRN	KONDAPA			07.12.2013	-
	CHD	KONDAPA			07.12.2013	
APPD	R.SESHAGIRI			07.12.2013		

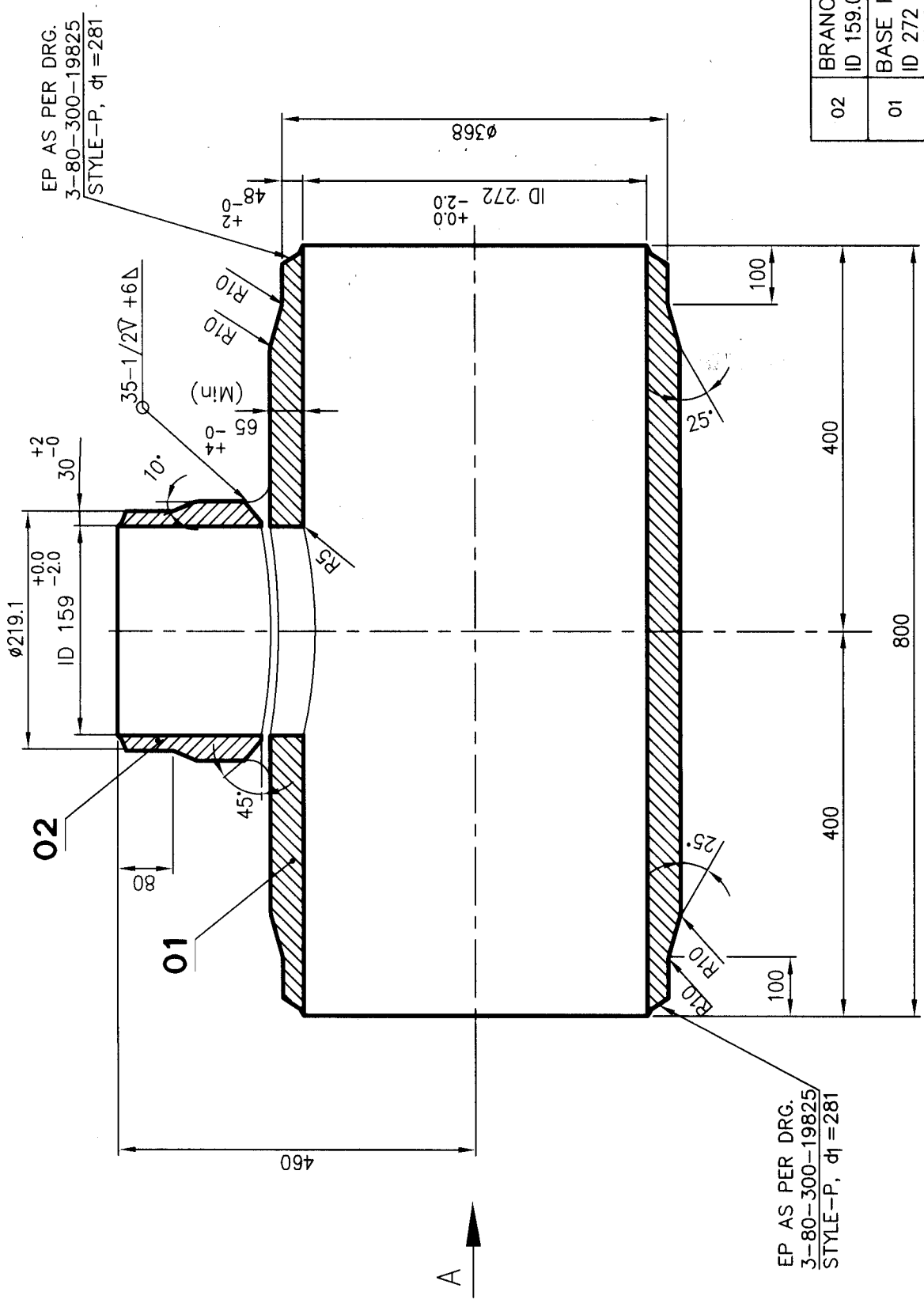
DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg)	BHEL PO REF.NO:	ITEM No.
CODE	C/M/F	N.T.S.	1520.00	-	-
TITLE	FABRICATED UNEQUAL TEE (ID350X60/OD355.6x54)		CARD CODE	DRAWING No.	REV
			U 01	3-80-301-31142	00

FIRST ANGLE PROJECTION(ALL DIMENSIONS IN MILLIMETRES)

2076-666-08-3

DRAWING No

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EP AS PER DRG.
3-80-300-19825
STYLE-P, d1=281

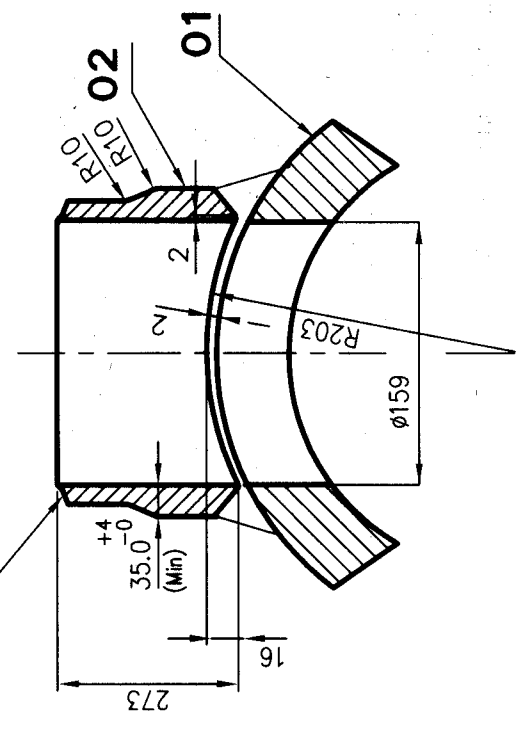
EP AS PER DRG.
3-80-300-19825
STYLE-P, d1=281

EP AS PER DRG.
3-80-300-19825
STYLE-P, d=164.9

NOTES :-

- DESIGN PRESSURE : 320.0 Kg/Sq.Cm (g)
- DESIGN TEMPERATURE : 260° C
- FOLLOW TDG : 108
- PIPE SA106GRC(A) CAN ALSO BE USED IN PLACE OF SA105(A).

12.5



VIEW-A

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	UNIT WT.
02	BRANCH NOZZLE L=273 ID 159.0 x Thk 35.0 min	3-80-999-97702	A	SA 105	50.200
01	BASE PIPE L = 800 ID 272 x Thk 65.0 min	3-80-999-97702	A	SA 105	442.900
			A	MATERIAL SPEC.	
			C		QTY.

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



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

DEPT.	GRADE OF UN TOL DIM	SCALE	WEIGHT (Kg)	DRN	NAME	SIGN	DATE	NO OF ITEMS
	C/M/F	N.T.S.	493.100		UBAITHULLAH	Ubaith	07.02.08	1
CODE				CHD	R.ANANTH	Ran	07.02.08	442.900
REV	DATE	ALTERED		APPD	S.JAYAKUMAR	SJK	07.02.08	1
01		APPROVED						
ZONE								
TITLE			CARD CODE	DRAWING No.	REV			
FABRICATED UNEQUAL TEE (OD 368.0x48.00/OD 219.1x30.0)			U 01	3-80-999-97702	00			

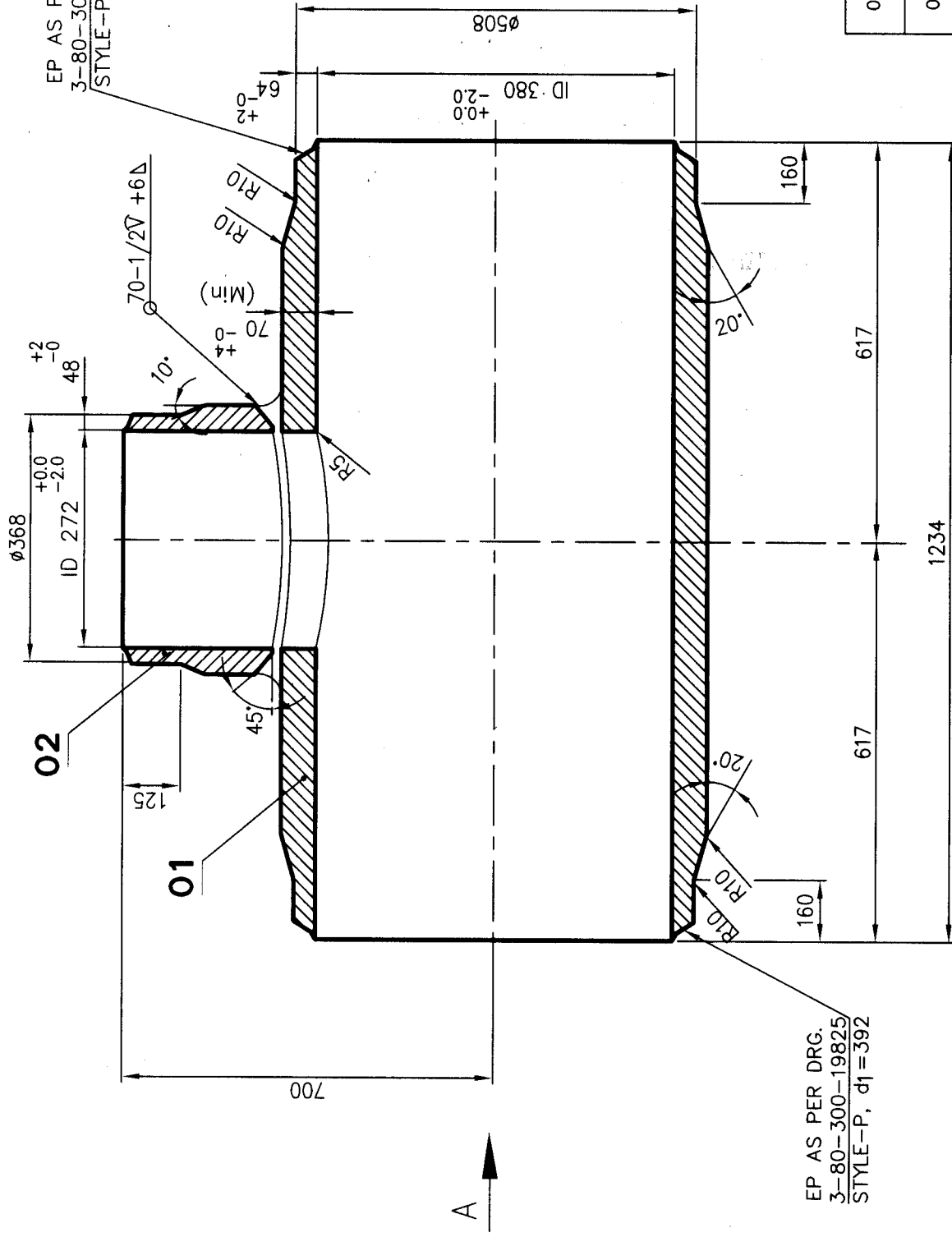
SIZE A3

FIRST ANGLE PROJECTION(ALL DIMENSIONS IN MILLIMETRES)

3076-666-08-3

DRAWING No

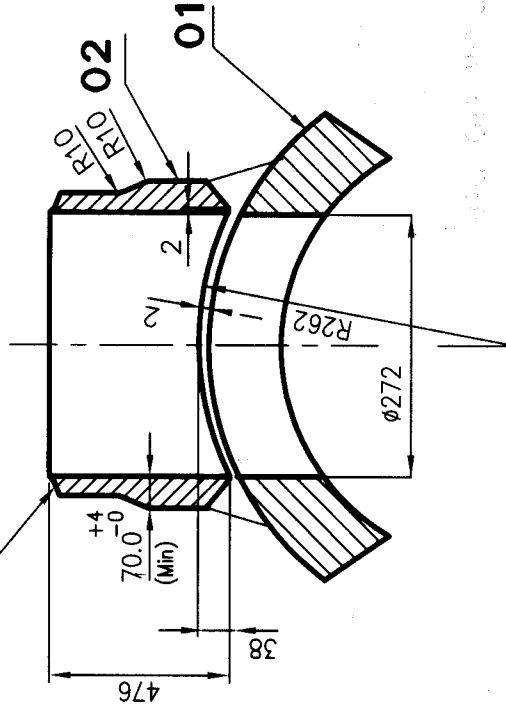
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EP AS PER DRG.
3-80-300-19825
STYLE-P, dt=392

EP AS PER DRG.
3-80-300-19825
STYLE-P, dt=392

EP AS PER DRG.
3-80-300-19825
STYLE-P, dt=281



VIEW-A

NOTES :-

1. DESIGN PRESSURE : 320.0 Kg/Sq.Cm (g)
2. DESIGN TEMPERATURE : 260° C
3. FOLLOW TDG : 108
4. PIPE SA106GRC(A) CAN ALSO BE USED IN PLACE OF SA105(A).

12.5

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	UNIT WT.	QTY.
02	BRANCH NOZZLE L=476 ID 272 x Thk 70.0 min	3-80-999-97703	A	SA 105	295.200	1
01	BASE PIPE L = 1234 ID 380 x Thk 70.0 min	3-80-999-97703	A	SA 105	978.800	1

STANDARD

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT



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

DRN	NAME	SIGN	DATE	NO OF ITEMS
CHD	UBAITHULLAH	<i>Ubaithullah</i>	07.02.08	1
APPD	R. ANANTH	<i>R. Ananth</i>	07.02.08	1
	S. JAYAKUMAR	<i>S. Jayakumar</i>	07.02.08	1

DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (KG)	REF TO MSE DRG. No.	ITEM No.
C/M/F	N.T.S.	N.T.S.	1273.980	3-80-423-23672/00	

REV	DATE	ALTERED	APPROVED
01			

TITLE	CARD CODE	DRAWING No.	REV
FABRICATED UNEQUAL TEE (OD 508.0X64.0/OD 368.0x48.0)	U 01	3-80-999-97703	00

SIZE A3

FIRST ANGLE PROJECTION(ALL DIMENSIONS IN MILLIMETRES)

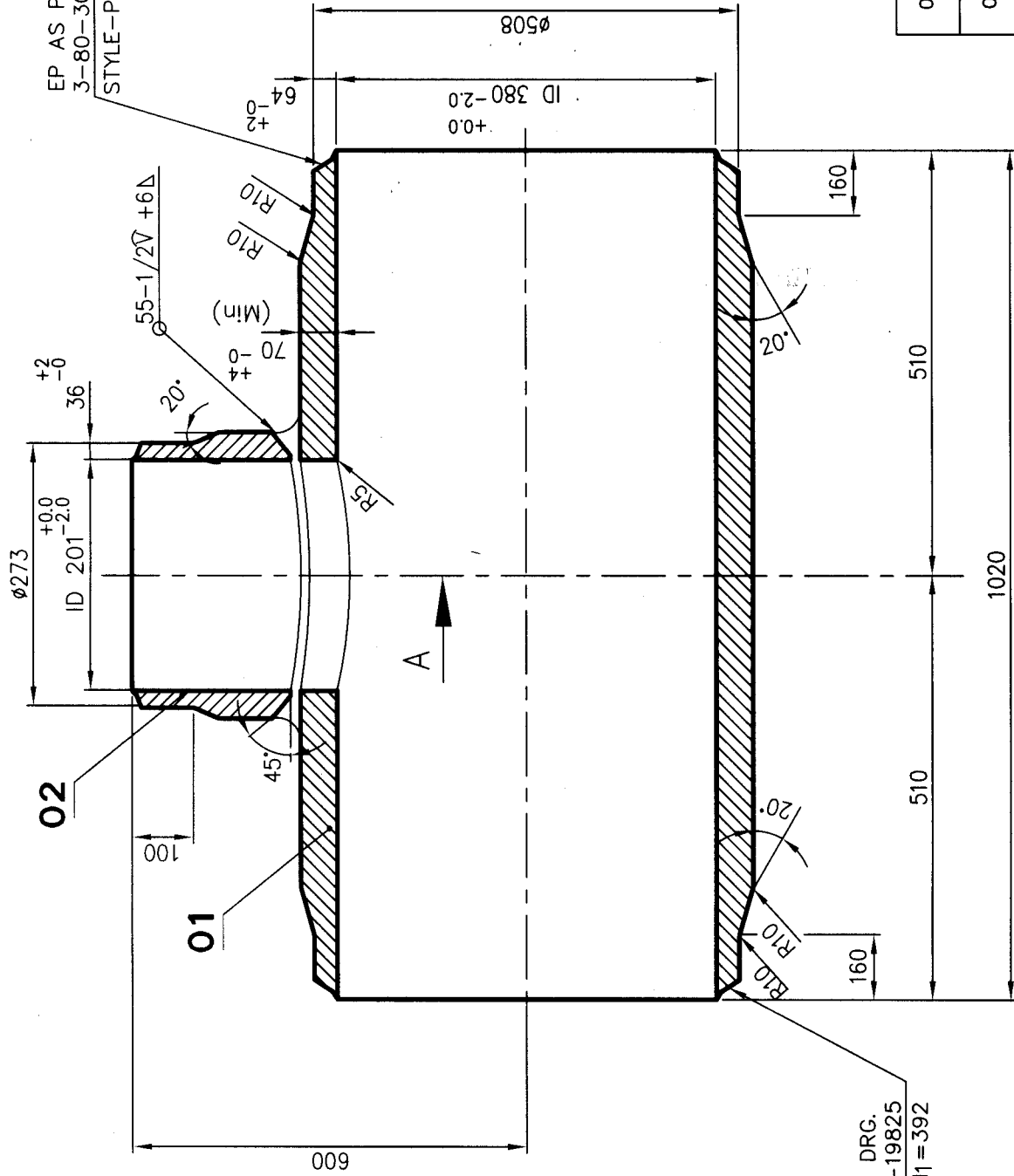
0076-666-08-3

DRAWING No

12.5

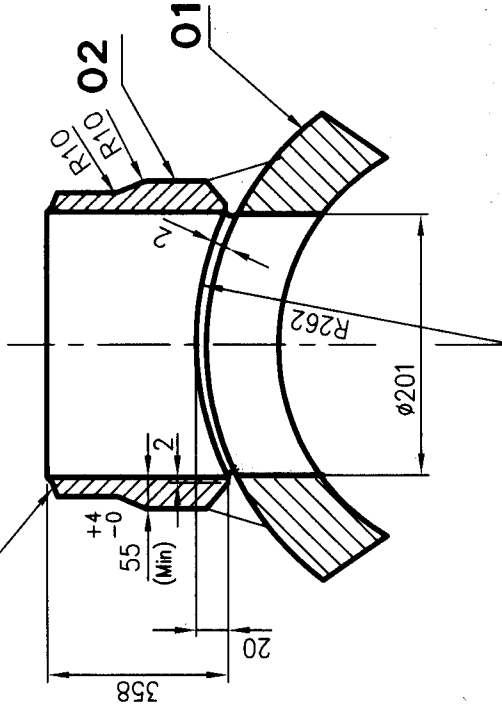
NOTES :-

- DESIGN PRESSURE : 320.0 Kg/Sq.Cm (g)
- DESIGN TEMPERATURE : 260° C
- FOLLOW TDG : 108
- PIPE SA106GRC(A) CAN ALSO BE USED IN PLACE OF SA105(A).



EP AS PER DRG.
3-80-300-19825
STYLE-P, d1=392

EP AS PER DRG.
3-80-300-19825
STYLE-P, d1=208



VIEW-A

STANDARD

02	BRANCH NOZZLE	L=358	3-80-999-97700	A	131900
	ID 201 x Thk 55.0 Min			SA 105	1
01	BASE PIPE	L = 1020	3-80-999-97700	A	807862
	ID 380 x Thk 70.0 Min			SA 105	1
ITEM NO.	DESCRIPTION	DRAWING NO.		MATERIAL CODE	UNIT WT.
					QTY.

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



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

DEPT.	GRADE OF UN TOL DIM	SCALE	WEIGHT (Kg)	REF TO MSE DRG. No.	ITEM No.
	C/M/F	N.T.S.	939.762	3-80-423-23669/00	
REV	DATE	ALTERED	APPROVED		
ZONE					
TITLE	FABRICATED UNEQUAL TEE (OD 508.0x64.0/OD 273.0x36.0)		CARD CODE	DRAWING No.	REV
			U 01	3-80-999-97700	00

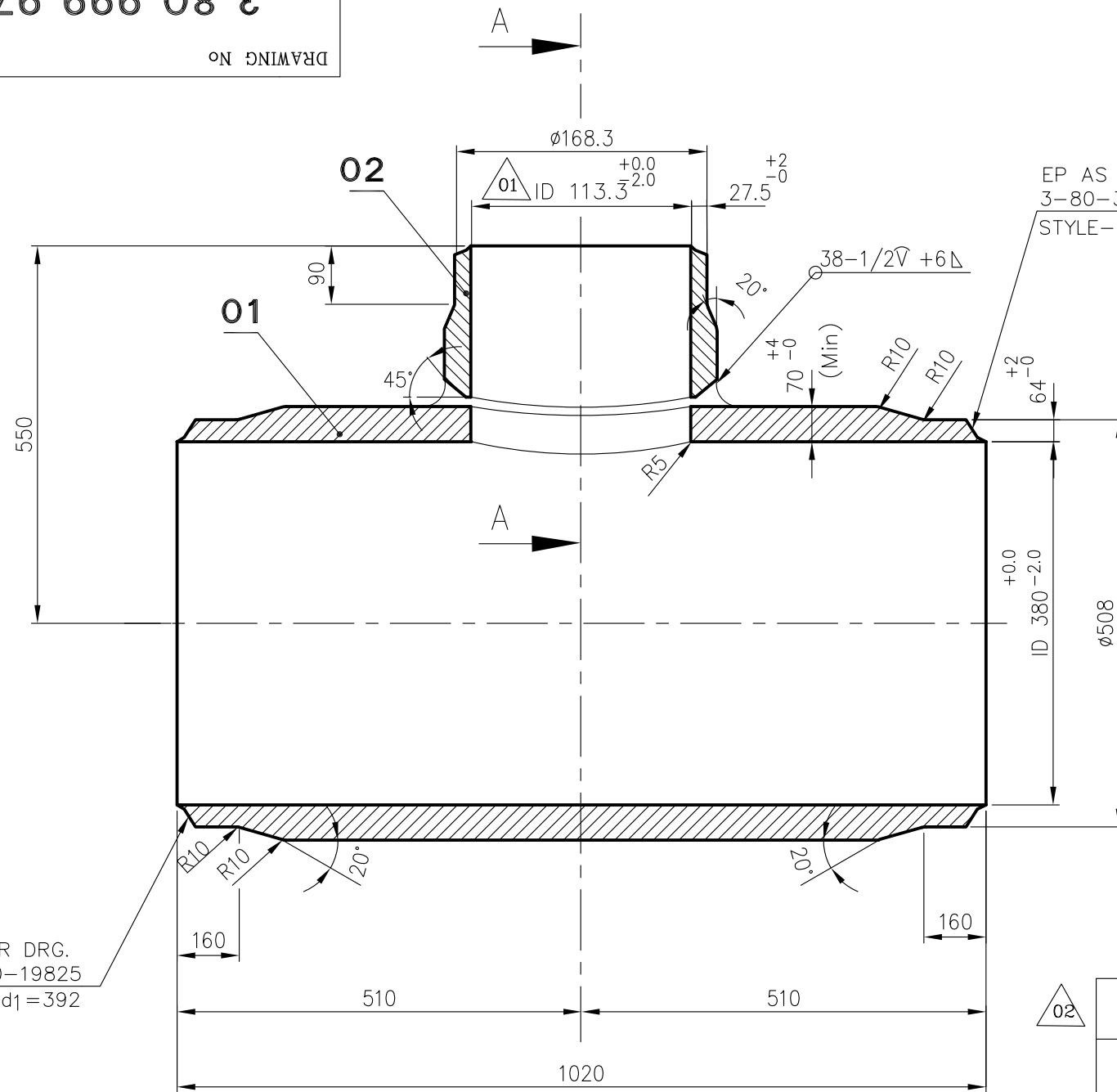
SIZE A3

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80776-666-08-C

DRAWING No

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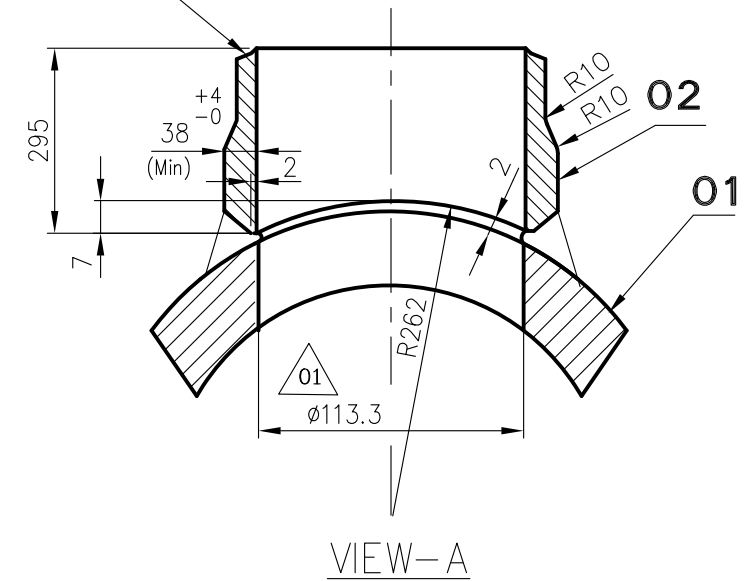
NOTES :-

- DESIGN PRESSURE : 320.0 Kg/Sq.Cm (g)
- DESIGN TEMPERATURE : 260° C
- FOLLOW TDG : 108
- PIPE SA106GRC(A) CAN ALSO BE USED IN PLACE OF SA105(A).

12.5

EP AS PER DRG. 3-80-300-19825 STYLE-P, d1=392

EP AS PER DRG. 3-80-300-19825 STYLE-P, d1=121.5



EP AS PER DRG. 3-80-300-19825 STYLE-P, d1=392

STANDARD

02	BRANCH NOZZLE L=295 ID 113.3 x Thk 38.0 Min	3-80-999-97708		SA 105	A	45.1000 1
01	BASE PIPE L = 1020 ID 380 x Thk 70.0 Min	3-80-999-97708		SA 105	A	807.862 1
ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	A	UNIT WT.
			VAR NO.	MATERIAL SPEC.	C	QTY.

REV	DATE	ALTERED MRK
02	31.1.13	APPROVED CKN
ZONE BOM REVISED AND MARKED AS 02		
REV	DATE	ALTERED P.JUDEANTONE
01	29.03.11	APPROVED A.P.M.K
ZONE DIMENSION REVISED AND MARKED AS 01		

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT



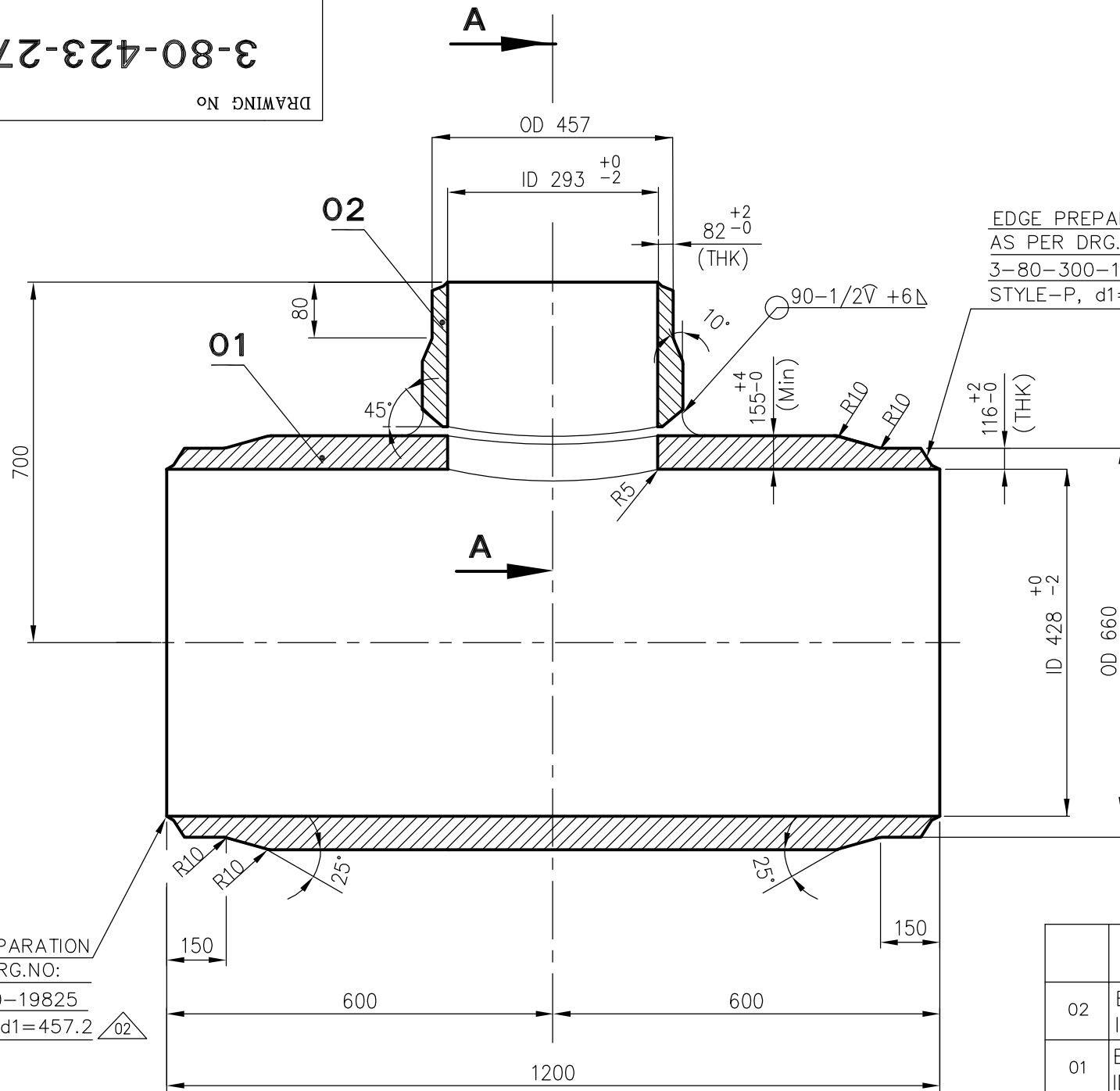
BHARAT HEAVY ELECTRICALS LTD.,
PIPING CENTRE,
CHENNAI 600 017

DRN	NAME	SIGN	DATE	NO OF ITEMS
CHD	UBAITHULLAH		07.02.08	
APPD	R.ANANTH		07.02.08	
	S.JAYAKUMAR		07.02.08	

DEPT.	GRADE OF UN TOL DIM	SCALE	WEIGHT (Kg).	REF TO MSE DRG. No.	ITEM No.
CODE	C/M/F	N.T.S.	852.862	3-80-425-24562/00	
TITLE			CARD CODE	DRAWING No.	REV
FABRICATED UNEQUAL TEE (OD 508.0x64.0/OD 168.3x27.5)			U 01	3-80-999-97708	02

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DRAWING No 3-80-423-27271



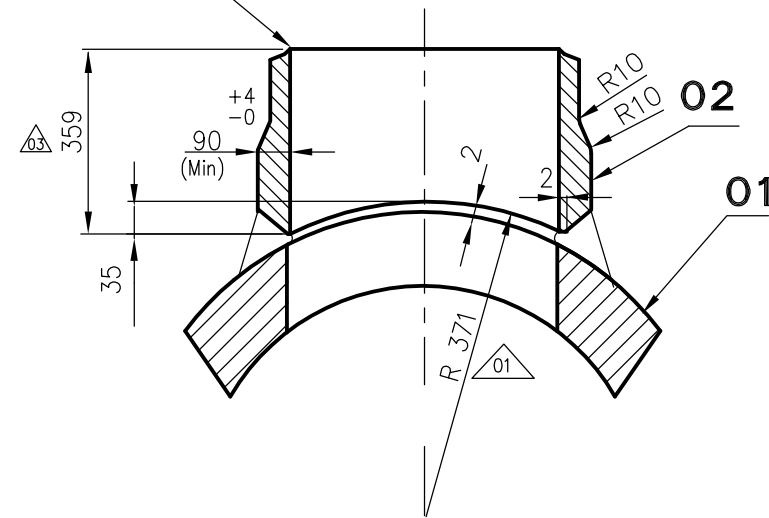
NOTES :-

- DESIGN PRESSURE : 480 Kg/Sq.Cm (g)
- DESIGN TEMPERATURE : 200° C
- FOLLOW TDG : 108 LATEST
- PIPE SA106GRC(A) CAN ALSO BE USED IN PLACE OF SA105(A)
- THE STOCK CODE FOR THE FINISHED UEQ. TEE:925058690000

12.5

EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
STYLE-P, d1=457.2

EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
STYLE-P, d1=314



SECTION-AA

EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
STYLE-P, d1=457.2

ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	A	UNIT WT.
VAR NO.				MATERIAL SPEC.	C	QTY.
02	BRANCH NOZZLE L=402 ID 293X Thk 90 Min	3-80-423-27271		SA 105	A	339,860 1
01	BASE PIPE L = 1200 ID 428 X Thk 155 Min	3-80-423-27271		SA 105	A	2672,888 1

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



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

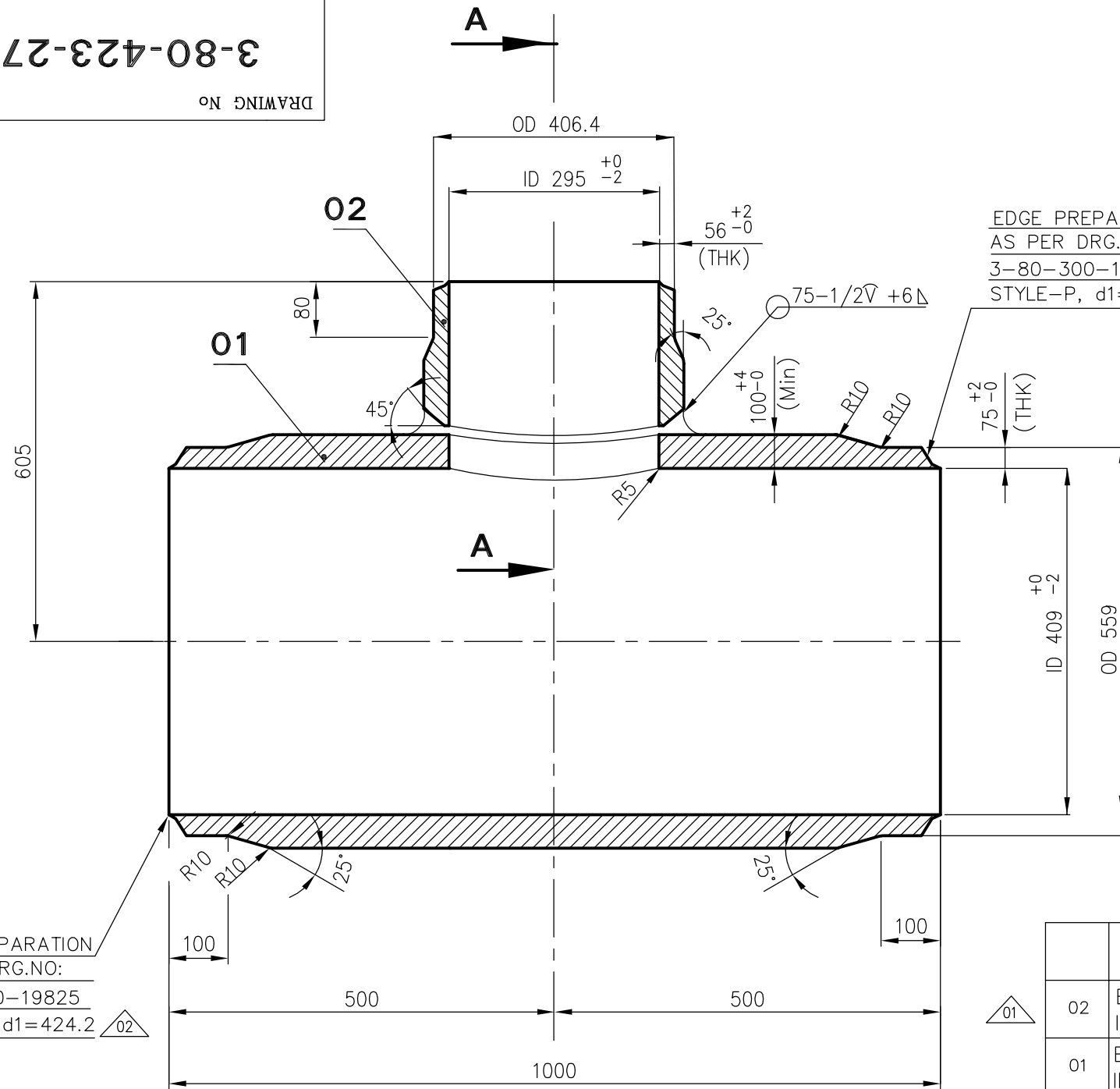
DRN	NAME	SIGN	DATE	NO OF ITEMS
	T.RAJASEKAR	-SD.-	10.05.10	
CHD	LALIT	-SD.-	10.05.10	
APPD	C.SARAVANAN	-SD.-	10.05.10	

REV	DATE	ALTD	REV	DATE	ALTD	REV	DATE	ALTD
03	04.03.11	LALIT -SD.- APPD C.S -SD.-	02	19.02.11	LALIT -SD.- APPD:CS -SD.-	01	21.07.10	LALIT -SD.- APPD C.SARAVANAN-SD.-
ZONE	DIMENSION REVISED IN SECTION -AA. REVISION INDICATED AS 03		ZONE	d1 VALUE REVISED REVISION MARKED AS 02		ZONE	RADIUS OF RUN PIPE REVISED REVISION MARKED AS 01	

DEPT.	GRADE OF UN TOL DIM	SCALE	WEIGHT (Kg).	BHEL PO REF.NO:	ITEM No.
	C/M/F	N.T.S.	3013		
TITLE			CARD CODE	DRAWING No.	REV
FABRICATED UNEQUAL TEE (OD660x116/OD457X82) SA 105			U 01	3-80-423-27271	03

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DRAWING No 3-80-423-27274



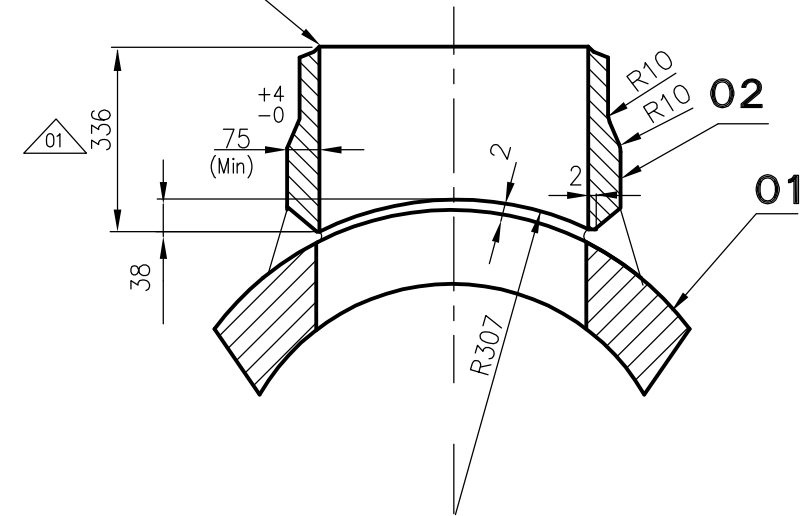
NOTES :-

1. DESIGN PRESSURE : 350 Kg/Sq.Cm (g)
2. DESIGN TEMPERATURE : 300° C
3. FOLLOW TDG : 108 LATEST
4. PIPE SA106GRC(A) CAN ALSO BE USED IN PLACE OF SA105(A)
5. THE STOCK CODE FOR THE FINISHED UEQ. TEE:925058720000

12.5
▽

EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
STYLE-P, d1=424.2

EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
STYLE-P, d1=306.2



SECTION-AA

EDGE PREPARATION
AS PER DRG.NO:
3-80-300-19825
STYLE-P, d1=424.2

01

02	BRANCH NOZZLE L=336 ID 295 X Thk 75 Min	3-80-423-27274		SA 105	A	229,824 1
01	BASE PIPE L = 1000 ID 409 X Thk 100 Min	3-80-423-27274		SA 105	A	1254,630 1
ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO. VAR NO.	MATERIAL CODE MATERIAL SPEC.	A C	UNIT WT. QTY.

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



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

DRN	NAME	SIGN	DATE	NO OF ITEMS
CHD	T.RAJASEKAR	-SD.-	10.05.10	
APPD	LALIT	-SD.-	10.05.10	
	C.SARAVANAN	-SD.-	10.05.10	

REV 02	DATE 19.02.11	ALTD: LALIT -SD.- APPD: CS -SD.-	REV 01	DATE 10.11.10	ALTD: LALIT -SD.- APPD: CS -SD.-
ZONE	d1 VALUE REVISED		ZONE	LENGTH OF BRANCH NOZZLE CORRECTED.	
	REVISION MARKED AS 02			REVISION MARKED AS 01	

DEPT.	GRADE OF UN TOL DIM	SCALE	WEIGHT (Kg).	BHEL PO REF.NO:	ITEM No.
CODE	C/M/F	N.T.S.	1485		
TITLE	FABRICATED UNEQUAL TEE (OD559x75/OD406.4X56) SA 105		CARD CODE	DRAWING No.	REV
			U 01	3-80-423-27274	02

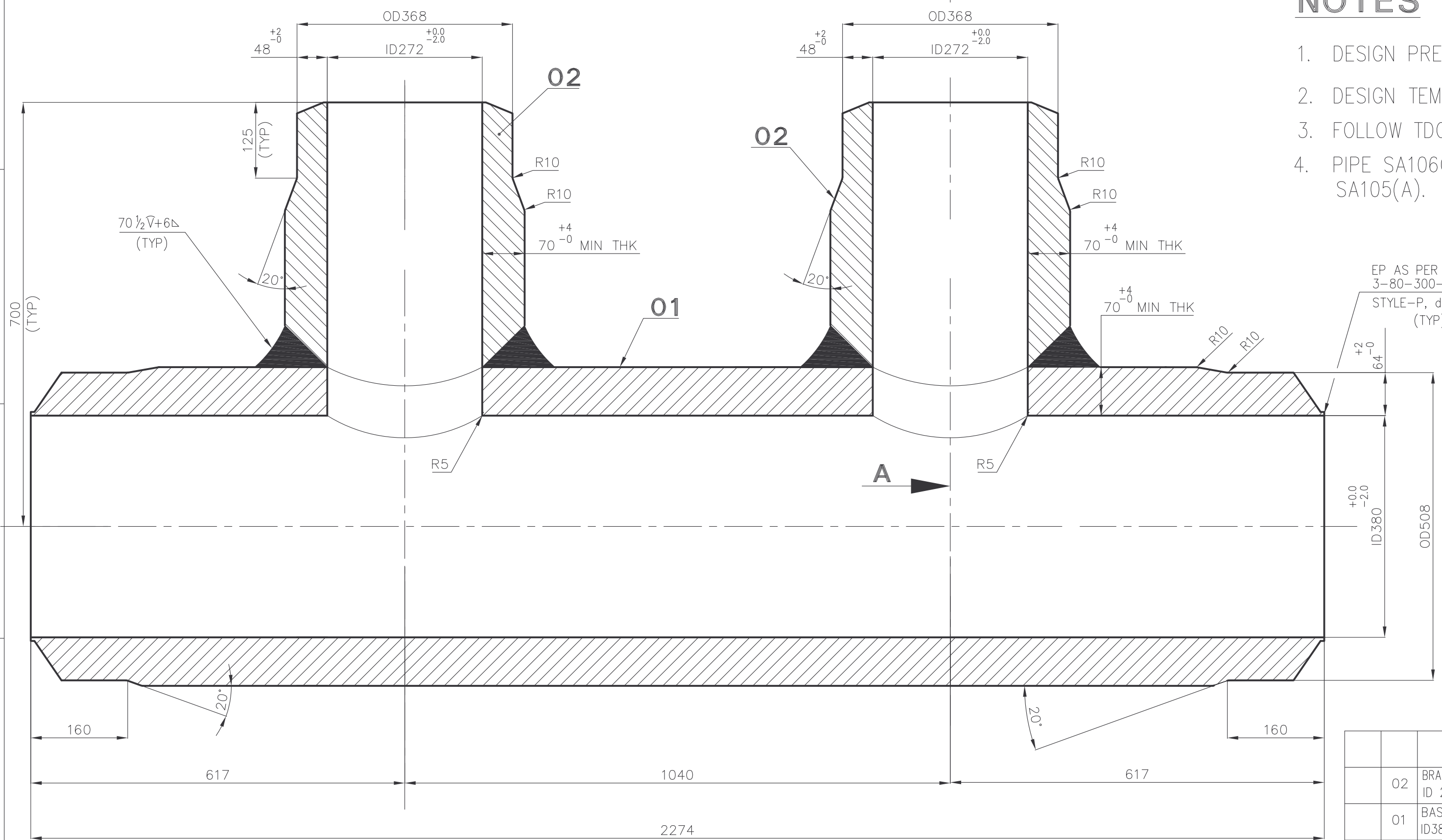
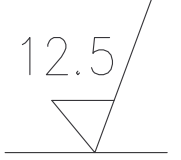
86766-666-08-2

DRAWING No.

ALL DIMENSIONS ARE IN MILLIMETRES

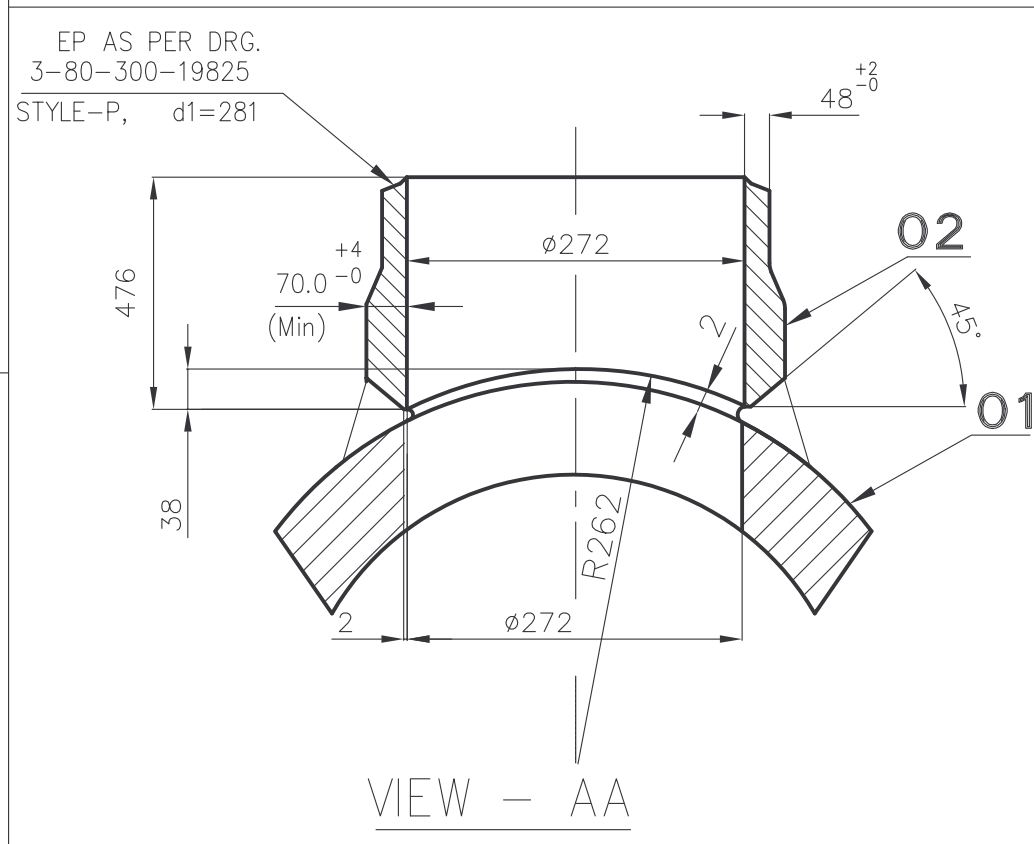
NOTES :-

- DESIGN PRESSURE : 320.0 Kg/Sq.Cm (g)
- DESIGN TEMPERATURE : 260° C
- FOLLOW TDG : 108
- PIPE SA106GRC(A) CAN ALSO BE USED IN PLACE OF SA105(A).



EP AS PER DRG NO
3-80-300-19825
STYLE-P, d1=392
(TYP)

VAR NO	ITEM NO	DESCRIPTION	DRAWING NO	MATERIAL CODE	MATERIAL SPECN	UNIT WEIGHT	QUANTITY
	02	BRANCH NOZZLE L=476 ID 272 x THK 70 min	2-80-999-99498	SA105	A	295	180
	01	BASE PIPE L=2274 ID380 x THK 70 min	2-80-999-99498	SA 105	A	1786	600



STANDARD

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

	BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI 600 017	DRN	NAME UBAITHULLAH	SIGN	DATE 07.02.08	NO OF ITEMS
		CHD	R. ANANTH		07.02.08	
		APPD	S. JAYAKUMAR		07.02.08	

DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DRG	ITEM No.
	C/M/F	N. T. S.	2081.780	2-80-423-07845/00	

TITLE	CARD CODE	DRAWING No.	REV
HEADER L-2274 OD508x64/OD368x48	U 01	2-80-999-99498	00

REV	DATE	ALTD
		APPD
ZONE		

05-228/C

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