

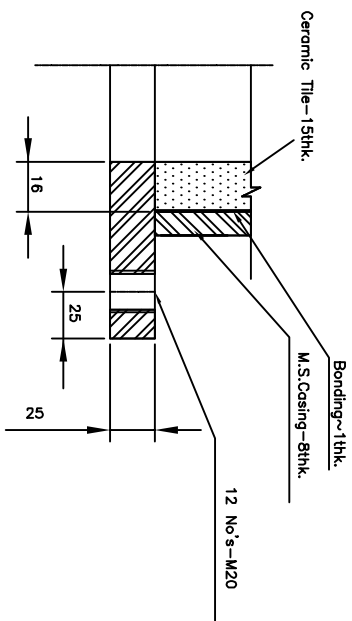
DRG.NO. 3-19-3 ON.DRGD

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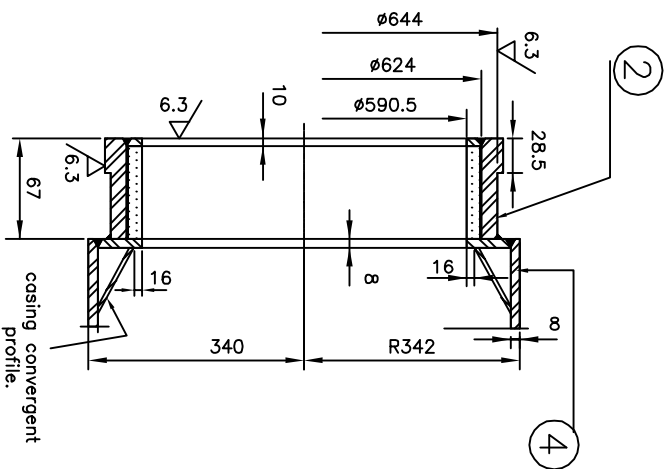
36102953 DRG.  
FILE NAME

REF.DRG.NO.

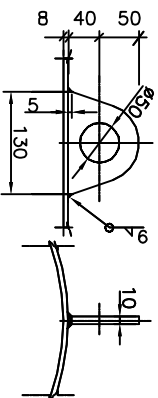
INVENTORY NO.



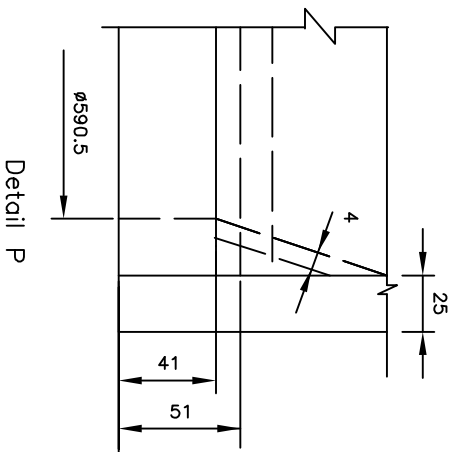
Section A-A



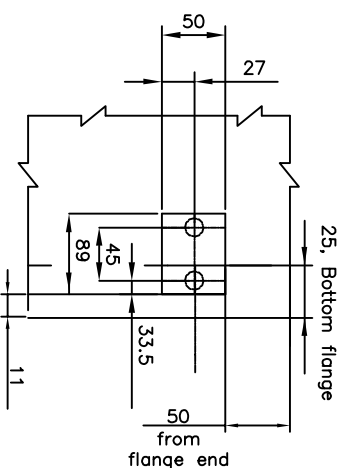
Section B-B



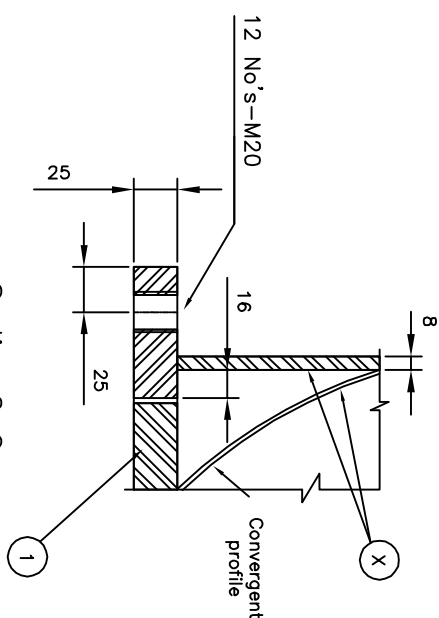
Lug Detail - N



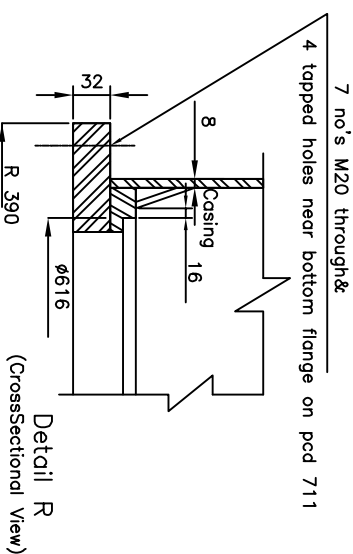
Detail P



Detail Q



Section C-C



Detail R (CrossSectional View)

ITEM NO.	DESCRIPTION	DRAWING NO.	VAR. NO.	RAW MATERIAL SIZE OR CASTING DRG.NO. OR FORGING DRG.NO.	MATERIAL SPECN.	NET WT.	GROSS WT.	QUANTITY
01								
					BA9110321500			
					BA55047			

THE FOLLOWING CONDITIONS APPLY EXCEPT OTHERWISE STATED...  
 1. REF.TO HY0230261 FOR UNSPECIFIED TOLERANCES.  
 2. CHAMFER M/CD SHARP EDGES 1.2 TO 1.0 AT 45°.  
 3. INTERNAL M/CD CORNER RADII 1 TO 0.7.  
 4. THE SURFACE ROUGHNESS WHEREVER NOT SHOWN SHALL BE TAKEN FROM THE SURFACE ROUGHNESS SHOWN OUT SIDE BACK SLASHES GIVEN AT THE TOP MOST RIGHT CORNER OF THE DRG.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT  
**XRP 1003 BOWL MILL**



BHARAT HEAVY ELECTRICALS LTD.  
 HYDERABAD

DRN.	NAME	SIGN.	DATE	NO.OF VAR.
CHD.	R.JAGANATH		10.5.93	
APPD.	J.G.K		13.5.93	

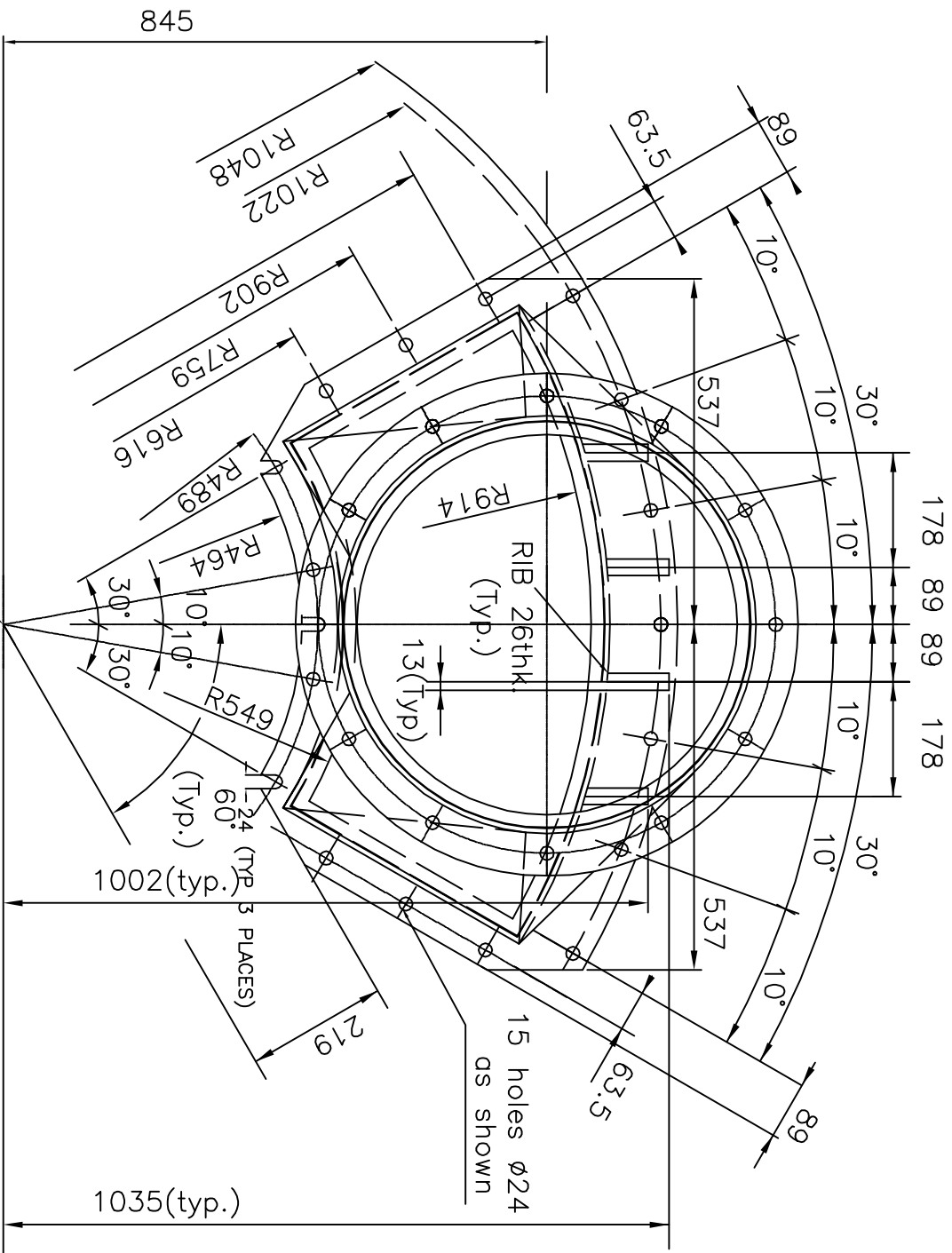
DEPT.	PULVE.ENG	SCALE	WEIGHT (KG)	REF. TO ASSY DRG.	ITEM NO.	NO.OF ITEMS
CODE	446	1:1.5	SH#1			

TITLE  
**CERAMIC LINED VALVE BODY**

DRAWING NO.	REV.
3-61-400-02953	01
SHEET NO. 02	NO OF SHEETS 03

45620-004-19-3 ON GRD  
DRG.NO. 3 ON GRD

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View - V

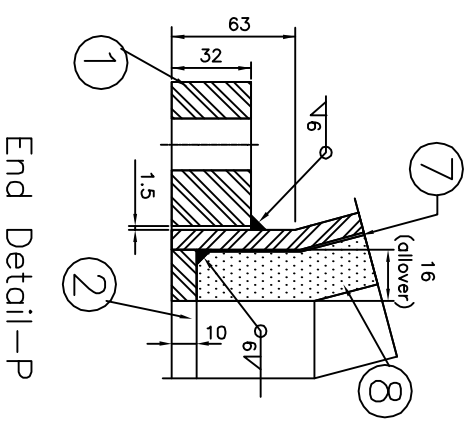
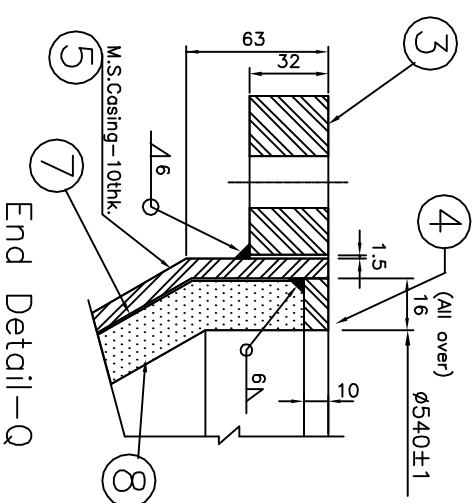
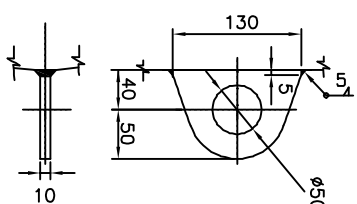
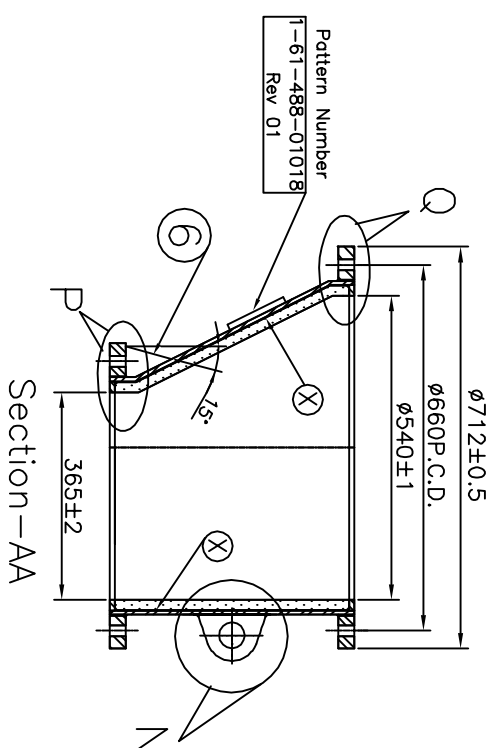
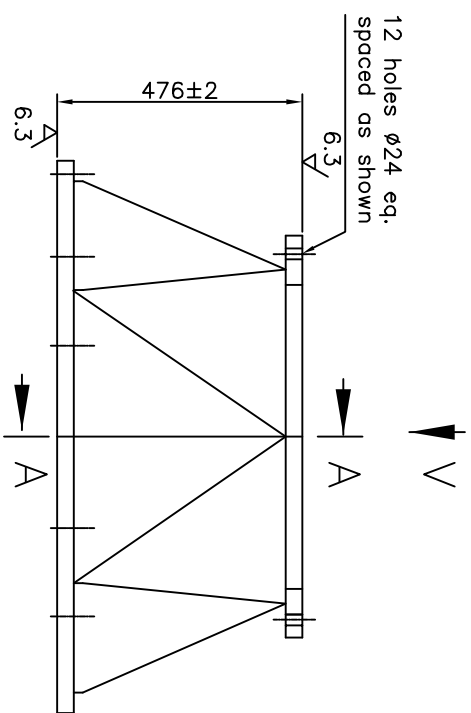
INVENTORY NO.	REF.DRG.NO.	36102954 DRG.	FILE NAME
REV. 02	DATE 22.9.09	CHD. APPD. V.KUMAR	REV. 01
ZONE	PARALLELITY AND FLATNESS TOL. ADDED FOR FLANGE SURFACES. NOTE-04 ADDED	CHD. AMAN	APPD. SG
REV. 01	DATE 14.3.06	CHD. AMAN	APPD. SG
ZONE	7 HOLES Ø24 WERE Ø21. 24 mm SLOT ADDED AT THREE PLACES. (12 HOLES Ø24 WERE Ø21 SH 1/2)		

ITEM NO.	DESCRIPTION	DRAWING NO.	VAR. NO.	RAW MATERIAL SIZE OR CASTING DRG.NO. OR FORGING DRG.NO.	MATERIAL CODE	NET WT.	GROSS WT.	QUANTITY
01					BA9715251021 BA55047			

THE FOLLOWING CONDITIONS APPLY EXCEPT OTHERWISE STATED...  
 1. REF. TO HY0230261 FOR UNSPECIFIED TOLERANCES.  
 2. CHAMFER M/CD SHARP EDGES 1.2 TO 1.0 AT 45°.  
 3. INTERNAL M/CD CORNER RADII 1 TO 0.7.  
 4. THE SURFACE ROUGHNESS WHEREVER NOT SHOWN SHALL BE TAKEN FROM THE SURFACE ROUGHNESS SHOWN OUT SIDE BACK SLASHES GIVEN AT THE TOP MOST RIGHT CORNER OF THE DRG.

TYPE OF PRODUCT		XRP 883 BOWL MILL	
NAME OF CUSTOMER/PROJECT		BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	
DEPT. PULVE. ENGG	SCALE 1:1.5	WEIGHT (KG)	245
CODE 446			
TITLE		CERAMIC LINED MPO (XRP 1003 BOWL MILL)	
DRAWING NO.		3-61-400-02954	
SHEET NO. 02		NO OF SHEETS 02	

95620-884-19-3 ON GRD  
DRG.NO. 3



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36102956 DRG.  
FILE NAME

REF.DRG.NO.

INVENTORY NO.

REV.	DATE	ALTERED	REV.	DATE	ALTERED
02	9.3.06	CHD. AMAN APPD. GK	01	1.9.05	CHD. AMAN APPD.GK
ZONE	24mm SLOT ADDED AT THREE PLACES IN SH 2 OF 2. M/C 6.3 ADDED ON TOP AND BOTTOM.		ZONE	12 HOLES Ø24 WAS Ø22.	

- NOTE:-
1. Paint the following:-  
**FRAGILE MATERIAL  
HANDLE WITH CARE  
DO NOT DROP DOWN**
  2. Casing, Lifting Lug, Flanges material M.S. should conform to IS:2062 Gr.A.
  3. Tolerance on Untolerenced dimension is  $\pm 1$  mm
  4. Refer Page.No. 2 for Details on View - V

ITEM NO.	DESCRIPTION	DRAWING NO.	VAR. NO.	RAW MATERIAL SIZE OR CASTING DRG.NO. OR FORGING DRG.NO.	MATERIAL CODE	NET WT.	GROSS WT.	QUANTITY
01					BA9715251013 BA55047	250		

THE FOLLOWING CONDITIONS APPLY EXCEPT OTHERWISE STATED...  
 1. REF.TO HY0230261 FOR UNSPECIFIED TOLERANCES.  
 2. CHAMFER M/CD SHARP EDGES 1.2 TO 1.0 AT 45°.  
 3. INTERNAL M/CD CORNER RADII 1 TO 0.7.  
 4. THE SURFACE ROUGHNESS WHEREVER NOT SHOWN SHALL BE TAKEN FROM THE SURFACE ROUGHNESS SHOWN OUT SIDE BACK SLASHES GIVEN AT THE TOP MOST RIGHT CORNER OF THE DRG.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT  
**XRP 883 BOWL MILL**

DEPT. PULVE. ENGG  
CODE 446  
SCALE 1:1.5  
WEIGHT (KG) 250

**BHARAT HEAVY ELECTRICALS LTD.**  
HYDERABAD

DRN. Y. PHANI  
CHD. RAJESH RANJAN  
APPD. G.K

NAME SIGN. DATE NO. OF VAR.  
REF. TO ASSY DRG. ITEM NO. NO. OF ITEMS

TITLE  
**CERAMIC LINED MPO**  
**XRP 883 BOWL MILL**

DRAWING NO. 3-61-488-02956  
SHEET NO. 01 NO OF SHEETS 02

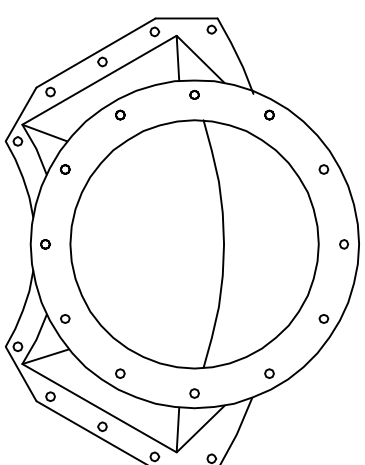
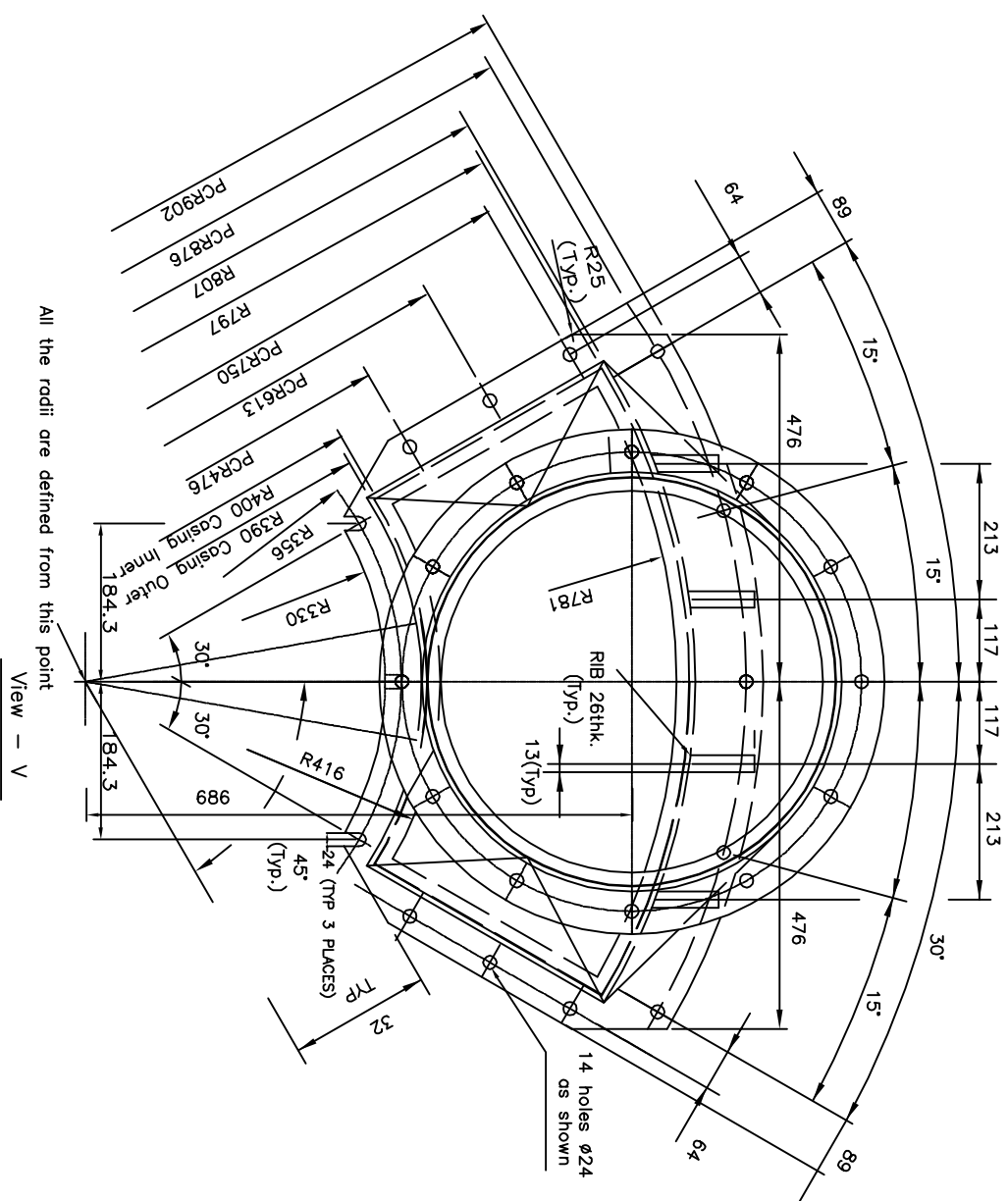
95620-884-19-3 ON GRD

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36102956 DRG.  
FILE NAME

REF.DRG.NO.


INVENTORY NO.



View - V  
(without dimension,schematic)

ITEM NO	DESCRIPTION	DRAWING NO.	VAR. NO.	RAW MATERIAL SIZE OR CASTING DRG.NO. OR FORGING DRG.NO.	MATERIAL CODE	NET WT.	GROSS WT.	QUANTITY
01					BA9715251013			
					BA55047			

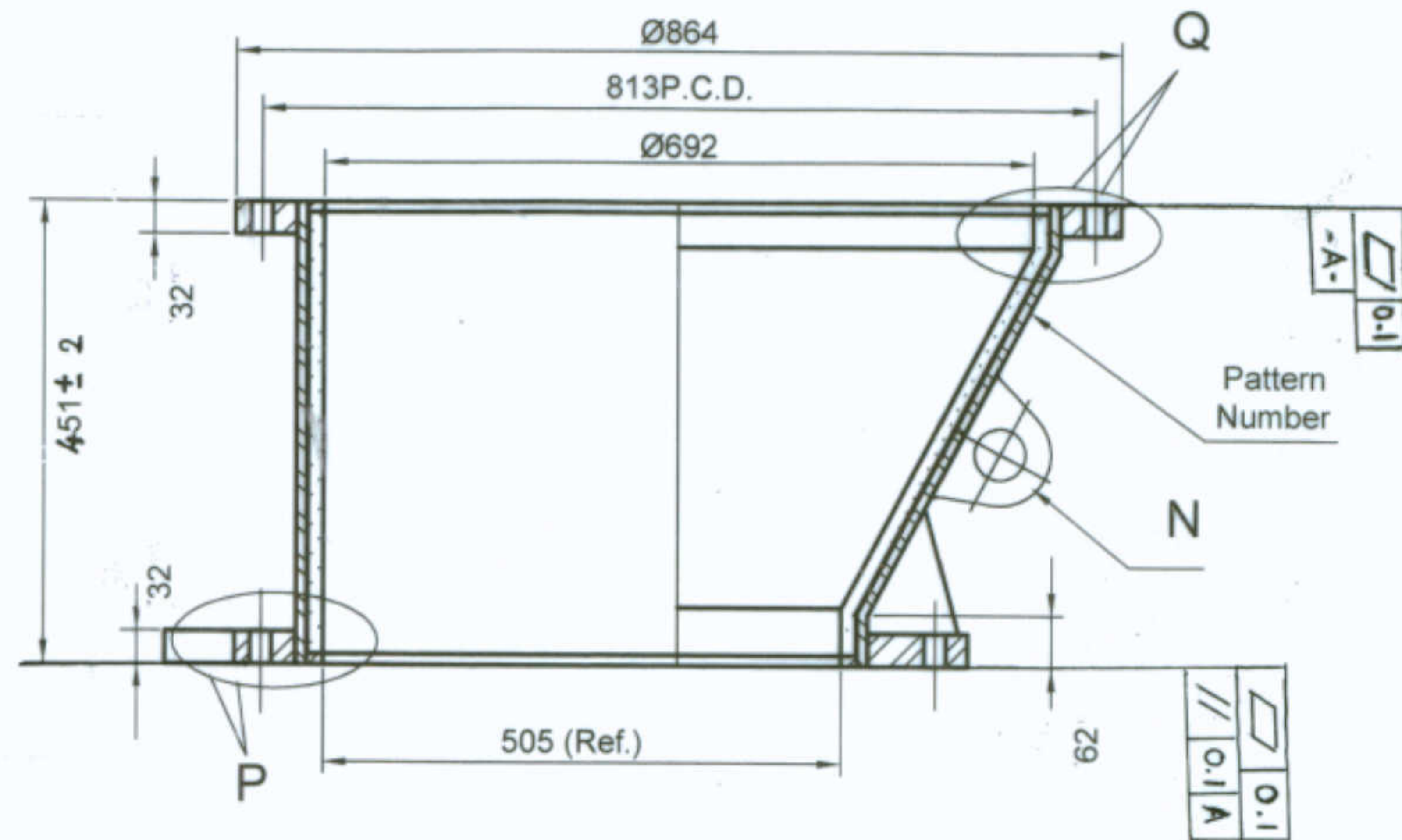
THE FOLLOWING CONDITIONS APPLY EXCEPT OTHERWISE STATED...  
 1. REF.TO HY0230261 FOR UNSPECIFIED TOLERANCES.  
 2. CHAMFER M/CD SHARP EDGES 1.2 TO 1.0 AT 45°.  
 3. INTERNAL M/CD CORNER RADII 1 TO 0.7.  
 4. THE SURFACE ROUGHNESS WHEREVER NOT SHOWN SHALL BE TAKEN FROM THE SURFACE ROUGHNESS SHOWN OUT SIDE BACK SLASHES GIVEN AT THE TOP MOST RIGHT CORNER OF THE DRG.

TYPE OF PRODUCT		XRP 883 BOWL MILL	
OR NAME OF CUSTOMER/PROJECT		XRP 883 BOWL MILL	
 BHARAT HEAVY ELECTRICALS LTD. HYDERABAD			
DEPT. PULVE. ENGG	SCALE 1:1.5	WEIGHT (KG) REF SH#1	REF. TO ASSY DRG.
CODE 446			
TITLE		DRAWING NO.	
CERAMIC LINED MPO		3-61-488-02956	
XRP 883 BOWL MILL		SHEET NO. 02 NO OF SHEETS 02	

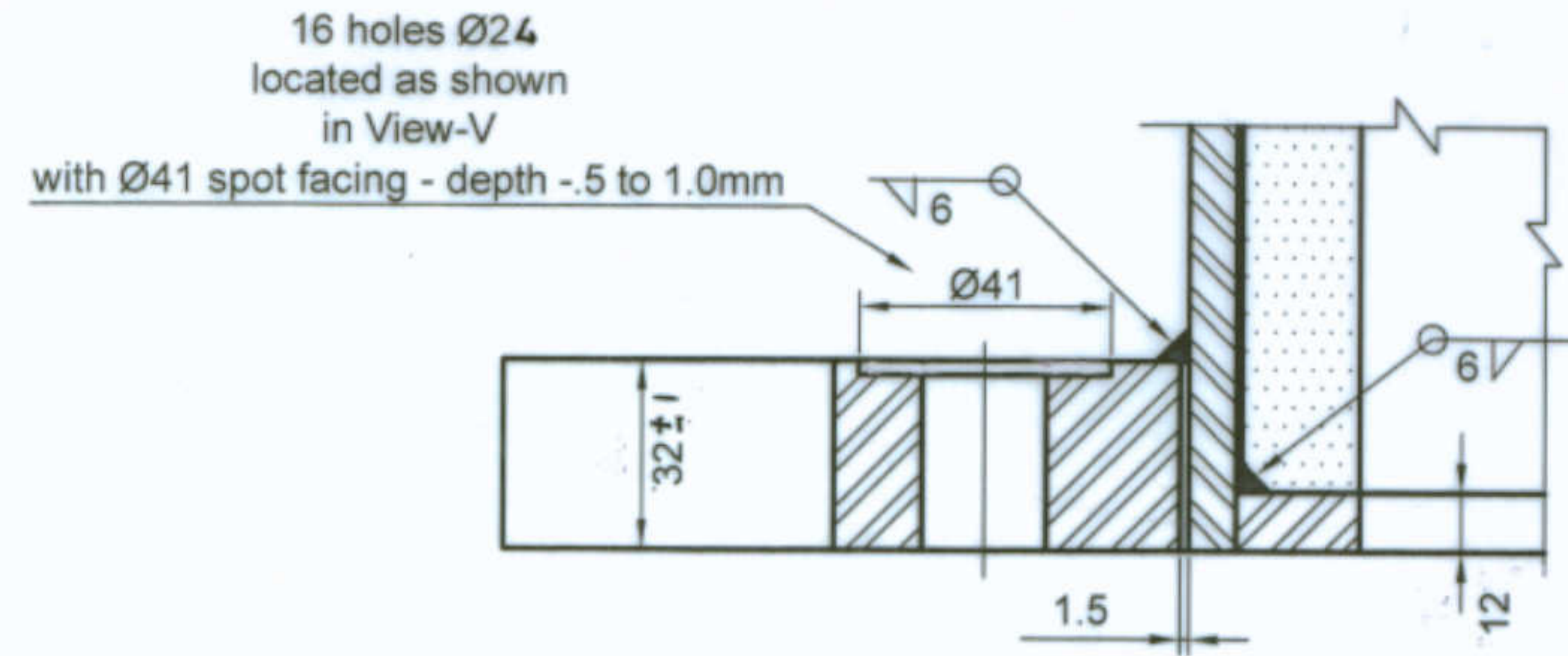
DRN. Y. PHANI	NAME	SIGN.	DATE	NO. OF VAR.
CHD. RAJESH			10.08.05	
APPD. G.K			10.08.05	

REV 02 EL-DG-3-986-05-00190 DRG No.

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Section-AA



End Detail-P

NOTE:-

1. Paint the following:-

FRAGILE MATERIAL  
HANDLE WITH CARE  
DO NOT DROP DOWN

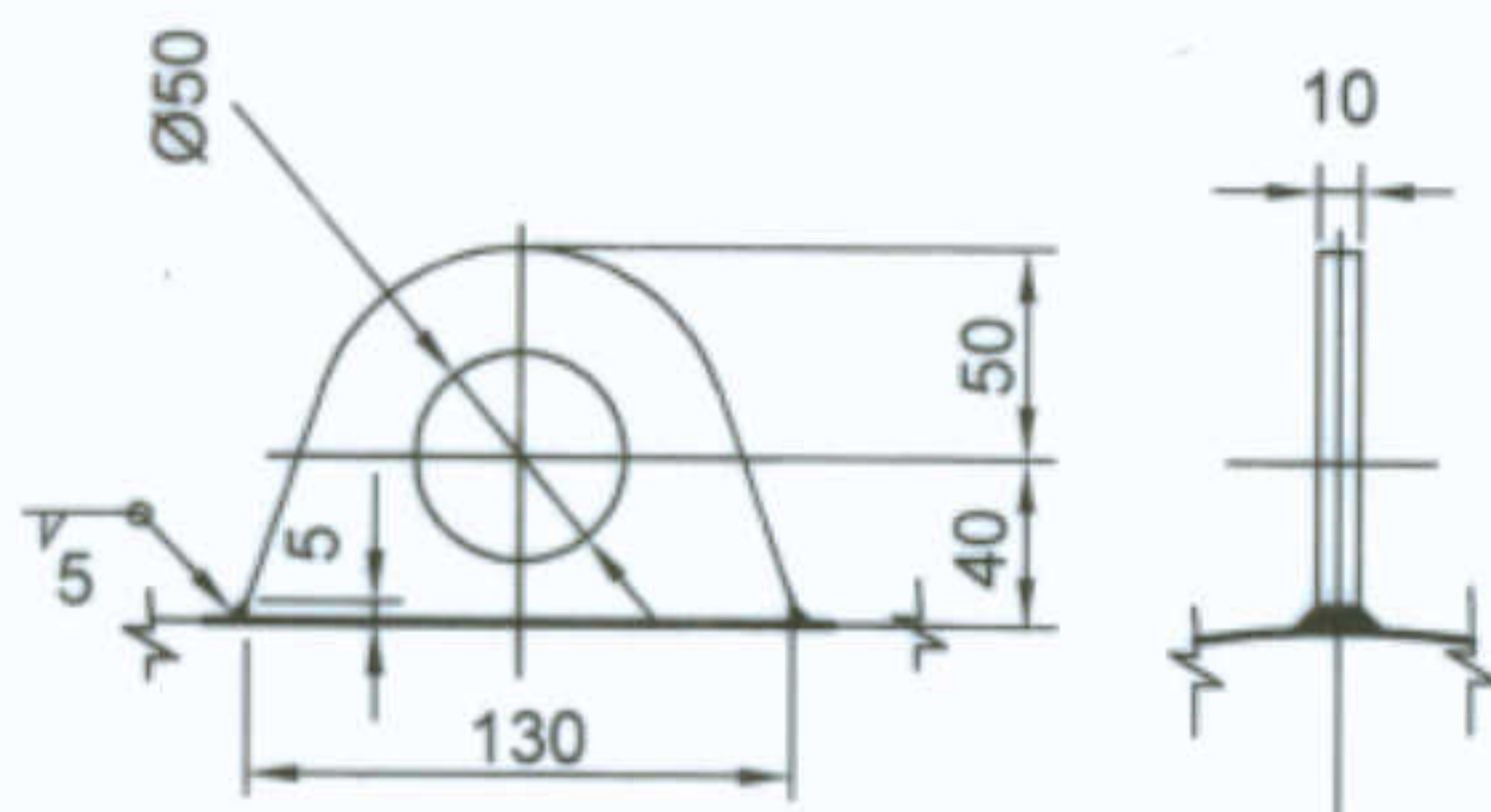
2. Casing, Lifting Lug, Flanges material M.S. should conform to IS:2062 Gr.A/B.

3. Tolerance on Untoleranced dimension is ± 1 mm

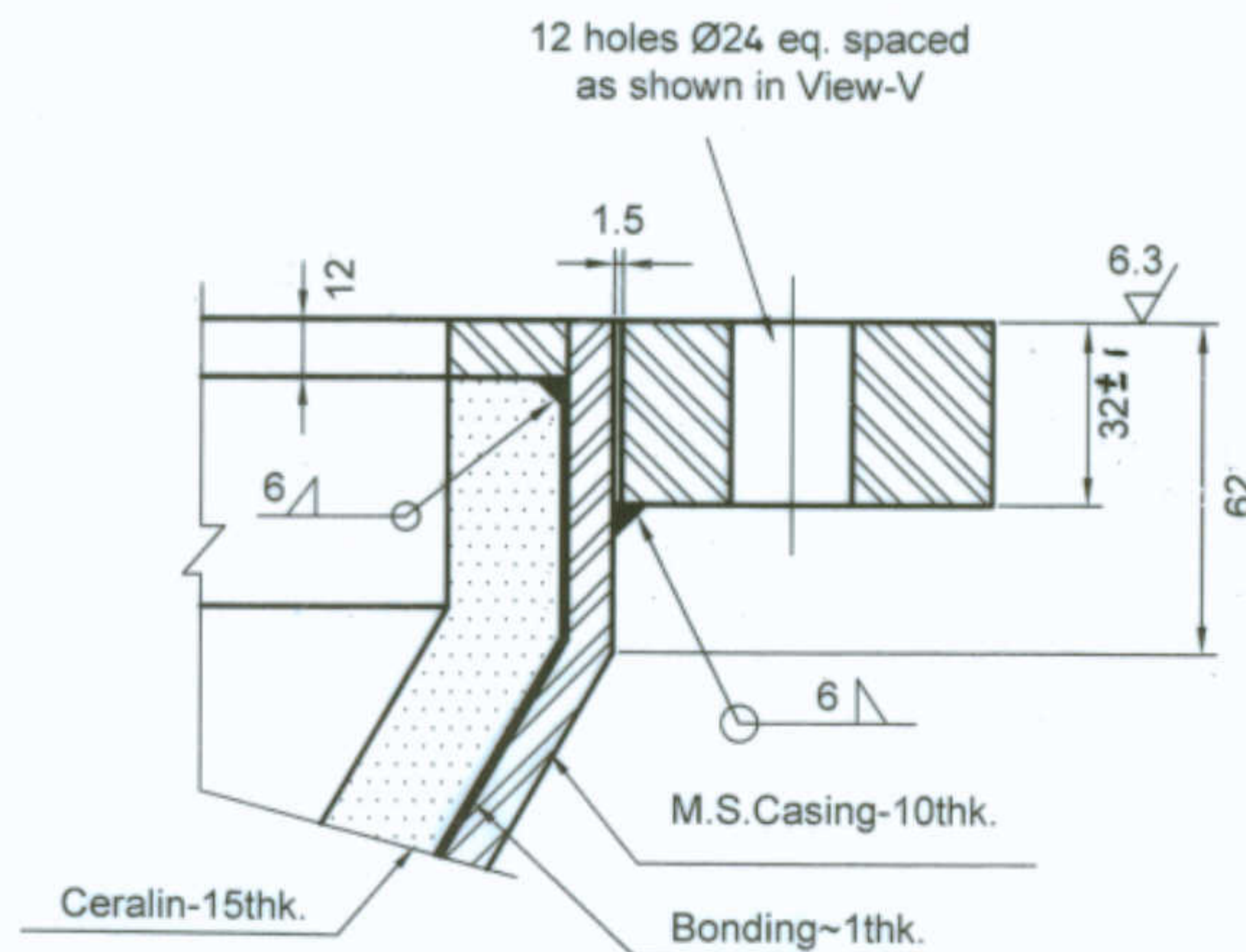
4. Refer Page.No. 2 for Details on View - V

5. Pattern No. " 1-61-404-01171-HYD" to be weld deposited on casing.

6. Machining allowance of 3mm provided on Top and Bottom flanges for final machining. with final machining total height 451 and thickness of flanges to be maintained. On finished product flatness & parallelism to be maintained within tolerance indicated.



LUG DETAIL-N



End Detail-Q

NAME OF CUSTOMER/PROJECT



**BHARAT HEAVY ELECTRICALS LTD.,**  
ELECTROPORCELAINS DIVISION  
BANGALORE - 560 012

	NAME	SIGN	DATE
DRN	S.Murali	[Signature]	03-10-2008
CHD	J.Felix	[Signature]	03-10-2008
APPD	Ravi Mullur	[Signature]	03-10-2008

DEPT	GRADE OF TOL DIM	SCALE	WEIGHT (kg)	REF TO ASSY.DRG	ITEM No.	No.OF ITEMS
	C/M/F	N.T.S.	271.0 (Approx)	BHEL Hyd. Drg. No. 1-61-404-01171 Rev.02		
TITLE			CARD CODE	DRAWING No.	REV.	
CERAMIC LINED M.P.O.				EL-DG-3-986-05-00190	02	
FOR 1103 XRP MILL				SHEET No. 1 of 2	No.OF SHEETS : 2	

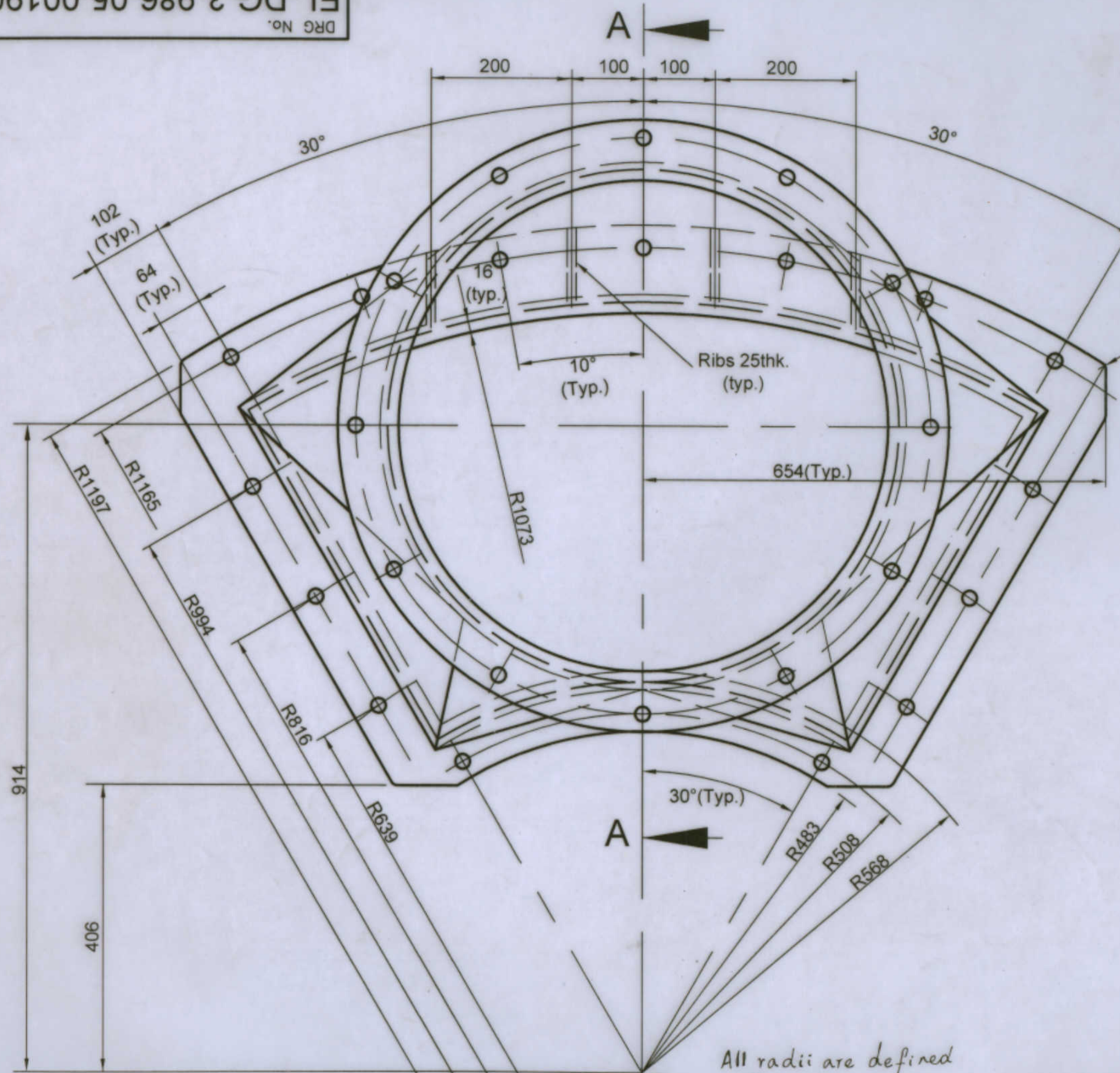
REV	DATE	ALTERED	S.R	REV	DATE	ALTERED	S.F
02	16.6.10	CHECKED	J.F	01	19.9.9.	CHECKED	J.F

Drill holes  $\phi$  24 was  $\phi$  21 in both Top and Bottom flanges.  
Refer RR 1685.

Flatness & Parallelism of 0.1 Shown for Top & Bottom flanges.  
HT: 451 was 457. Thickness of flanges 32 was 35. 'HYD' added to pattern No. Note 6 modified. Ref RR 1617. Wt: corrected.

REV 02  
EL-DG-3-986-05-00190  
DRG No.

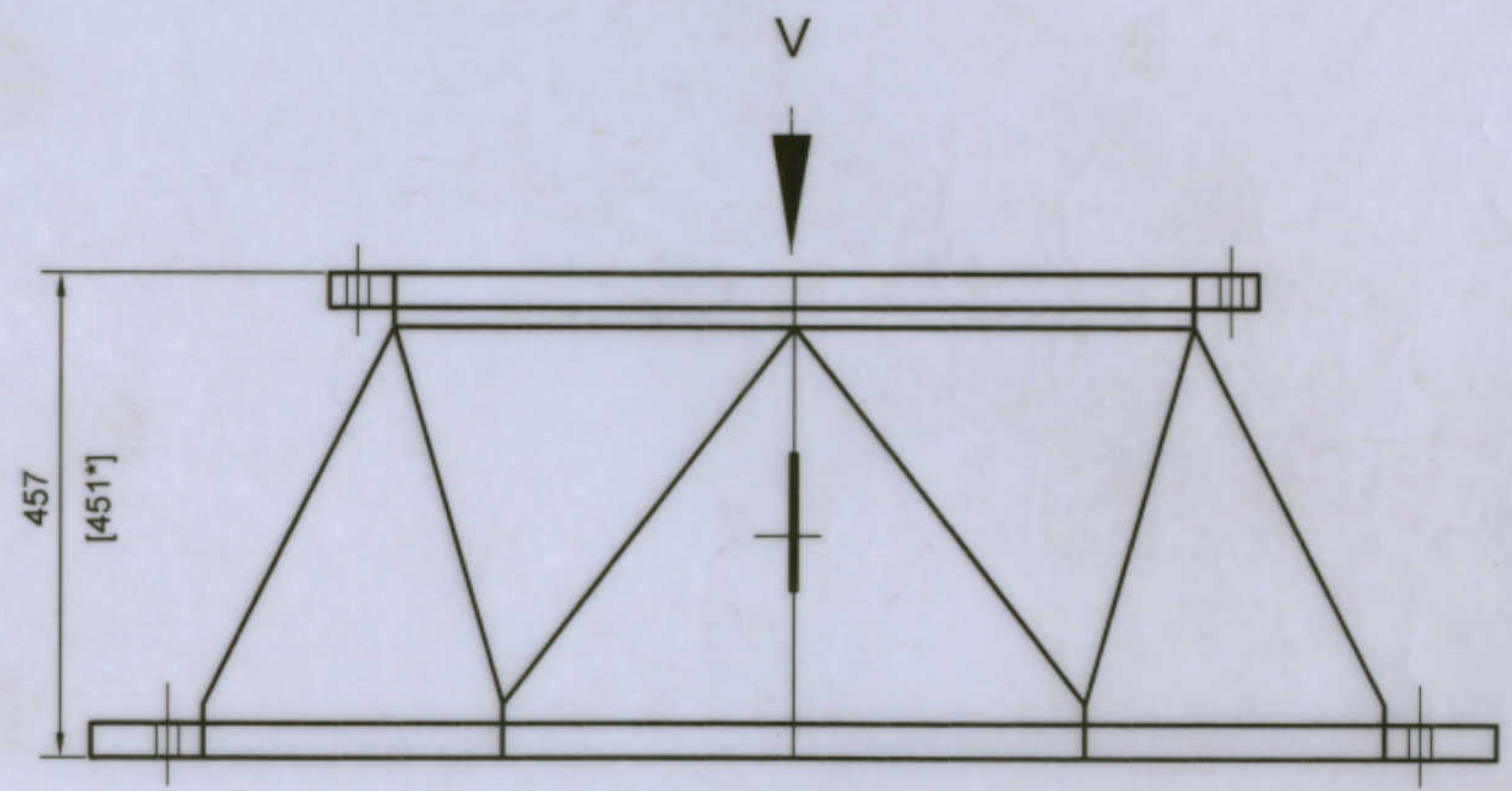
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R30 Typ. (approx.)

All radii are defined from this point.

View-V



REF. DRG. No.  
SIGN AND DATE

INVENTORY No.

REV	DATE	ALTERED	REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED			CHECKED

Name of Customer/Project

**BHARAT HEAVY ELECTRICALS LTD.,**  
ELECTROPORCELAINS DIVISION  
BANGALORE - 560 012

DRN	NAME	SIGN	DATE
	S.Murali		03-10-2008
	J.Felix		03-10-2008
	Ravi Mullur		03.10.2008

DEPT	GRADE OF TOL DIM	SCALE	WEIGHT (kg)	REF TO ASSY.DRG	ITEM No.	No.OF ITEMS
	C/M/F	N.T.S.	Refer Sheet 1/2 (Approx)	BHEL Hyd. Drg. No. 1-61-404-01171 Rev.02		

TITLE: **CERAMIC LINED M.P.O.**  
FOR 1103 XRP MILL

CARD CODE

DRAWING No. **EL-DG-3-986-05-00190** REV. **02**

SHEET No. 2 of 2 No.OF SHEETS : 2

66100-90-986-C

NO. /DRAWING/

प्रथम कोण प्रक्षेपण /FIRST ANGLE PROJECTION

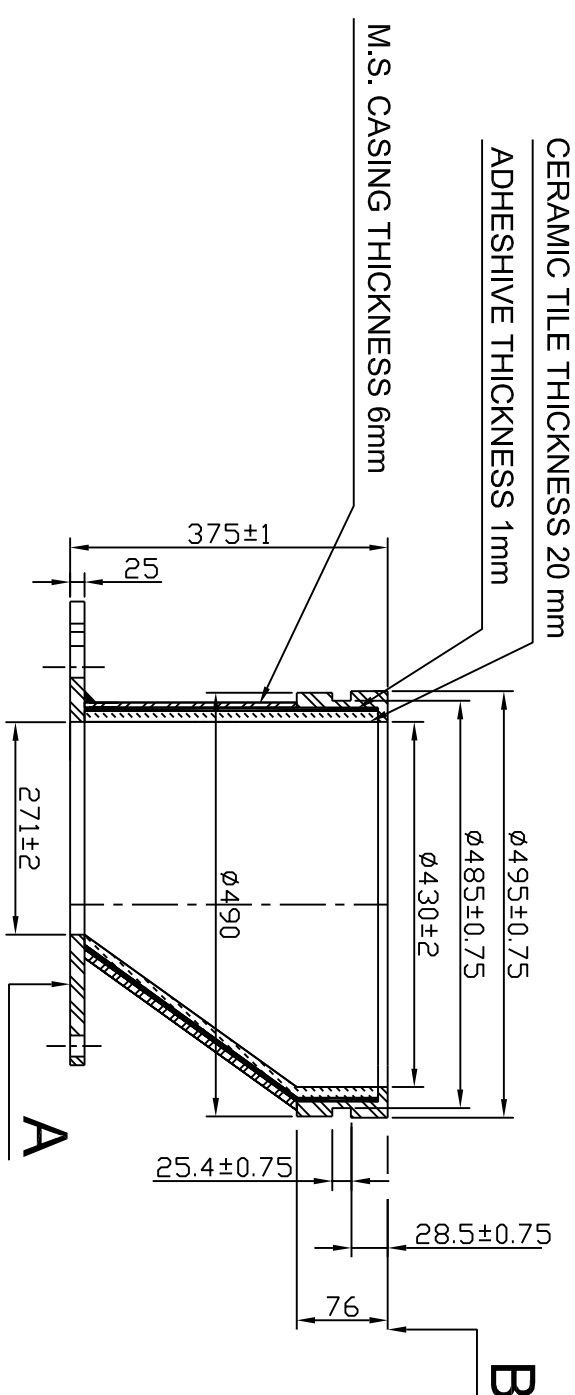
सभी विमाएं मिलीमीटर में हैं /ALL DIMENSIONS ARE IN mm.

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INTEREST OF THE COMPANY.

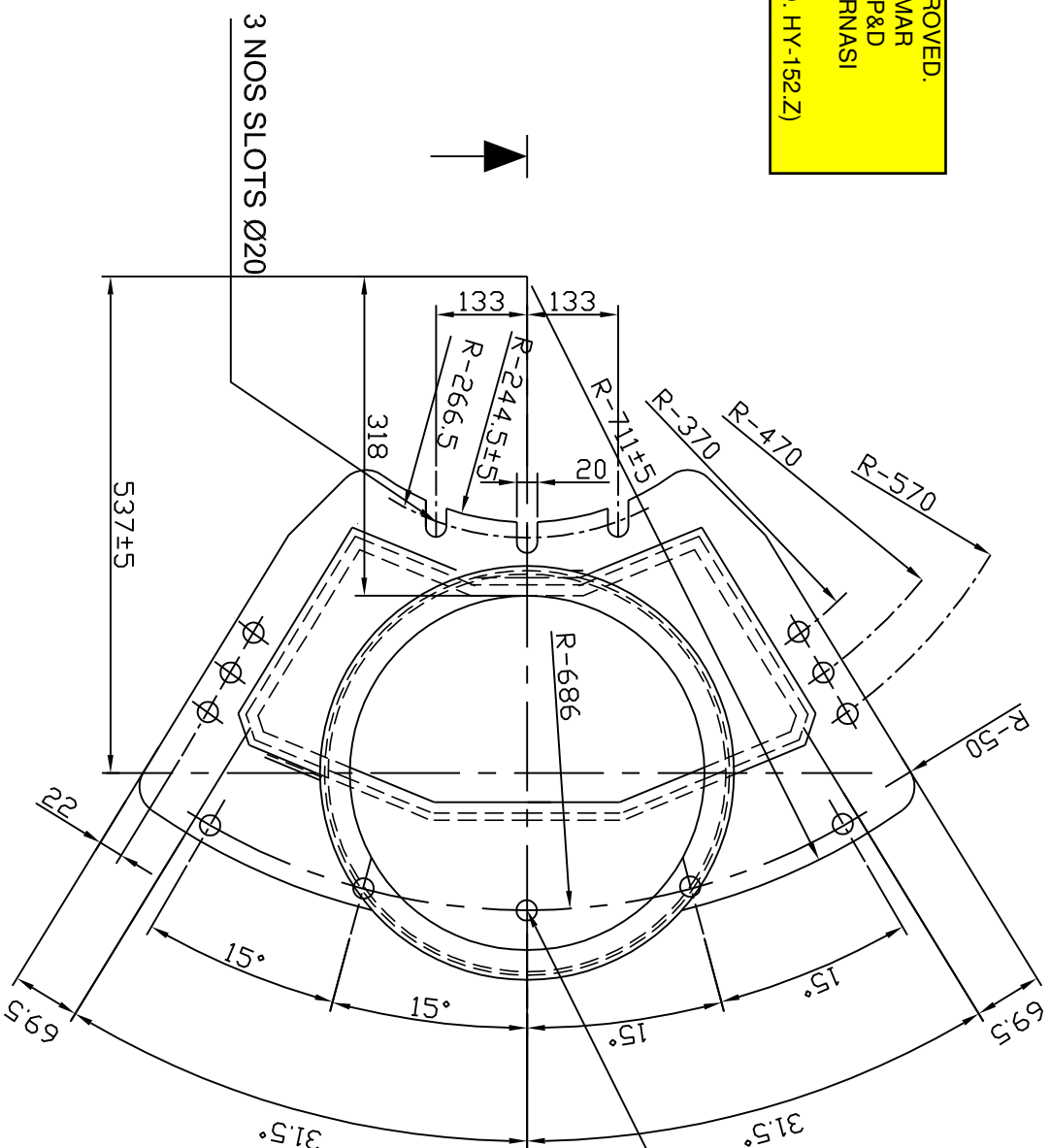
स्वत्वाधिकार एवं गोपनीय

इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स लिमिटेड की  
सम्पत्ति है। इसका प्रत्यक्ष या अप्रत्यक्ष रूप में किसी भी तरह  
प्रयोग नहीं किया जाए जो कंपनी के हित में हानिकर हो।

DRAWING APPROVED.  
VIRENDRA KUMAR  
DY. MANAGER-P&D  
BHEL HERP VARANASI  
DTD. 05.01.08  
(HERP REF. NO. HY-152.Z)

**NOTES :-**

- 01 MATERIAL M.S. CONFORM TO IS:2062 Gr.-A.
- 02 TOLERANCE ON THICKNESS OF CASING AS PER IS:1852 CLAUSE 7.3.
- 03 D.P. TEST TO BE CARRIED OUT AS PER E&D:331.
- 04 ALL SEGMENT TO BE FULL WELDED.
- 05 PARALLELISM BETWEEN SURFACE A & B TO BE WITH IN 1 mm.



सामग्री सूची संख्या INVENTORY NO.	हस्ताक्षर और दिनांक/SIGN & DATE	संदर्भित अभिकल्प संख्या REFERENCE DRG. NO.
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संशोधन REV. 02	दिनांक DATE 06.10.06	संशोधक ALTERED BY CHD	संशोधन REV. 01	दिनांक DATE 01.09.04	संशोधक ALTERED BY Sd/=
REF. NO.- 1846			REF. NO.- 1685		

विभाग DEPTT. कोड /CODE 400	अभि. विभाग ENGG.	वैमाना/SCALE N.T.S.	भार कि.ग्रा. WEIGHT (KG)	अभिकल्प संख्या/DRAWING NO. 3-986-06-00199	कार्ड कोड CARD CODE	पृष्ठ संख्या/Sheets No.	पृष्ठों की संख्या/No. of Sheets
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भारत हेवी इलेक्ट्रिकल्स लिमिटेड, जगदीशपुर, मुल्तानपुर  
BHARAT HEAVY ELECTRICALS LIMITED,  
JAGDISHPUR, SULTANPUR

उत्पाद का प्रकार या ग्राहक/परियोजना का नाम

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

**HERP VARANASI**

संशोधक DRN.	नाम/NAME C.S.JOSHI	संशोधक/SGN	दिनांक/DATE 18.08.04	संशोधक CHD	नाम/NAME S.M.S.	संशोधक/SGN	दिनांक/DATE 18.08.04	संशोधक APPD	नाम/NAME T.L. PAI	संशोधक/SGN	दिनांक/DATE 18.08.04	संशोधक APPD	नाम/NAME T.L. PAI	संशोधक/SGN	दिनांक/DATE 18.08.04
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अभिकल्प संख्या/DRAWING NO.  
3-986-06-00199

अभिकल्प संख्या/DRAWING NO.  
02

61C00-90-986-E

ON DRAWING/ड्राइंग पर लक्ष्य

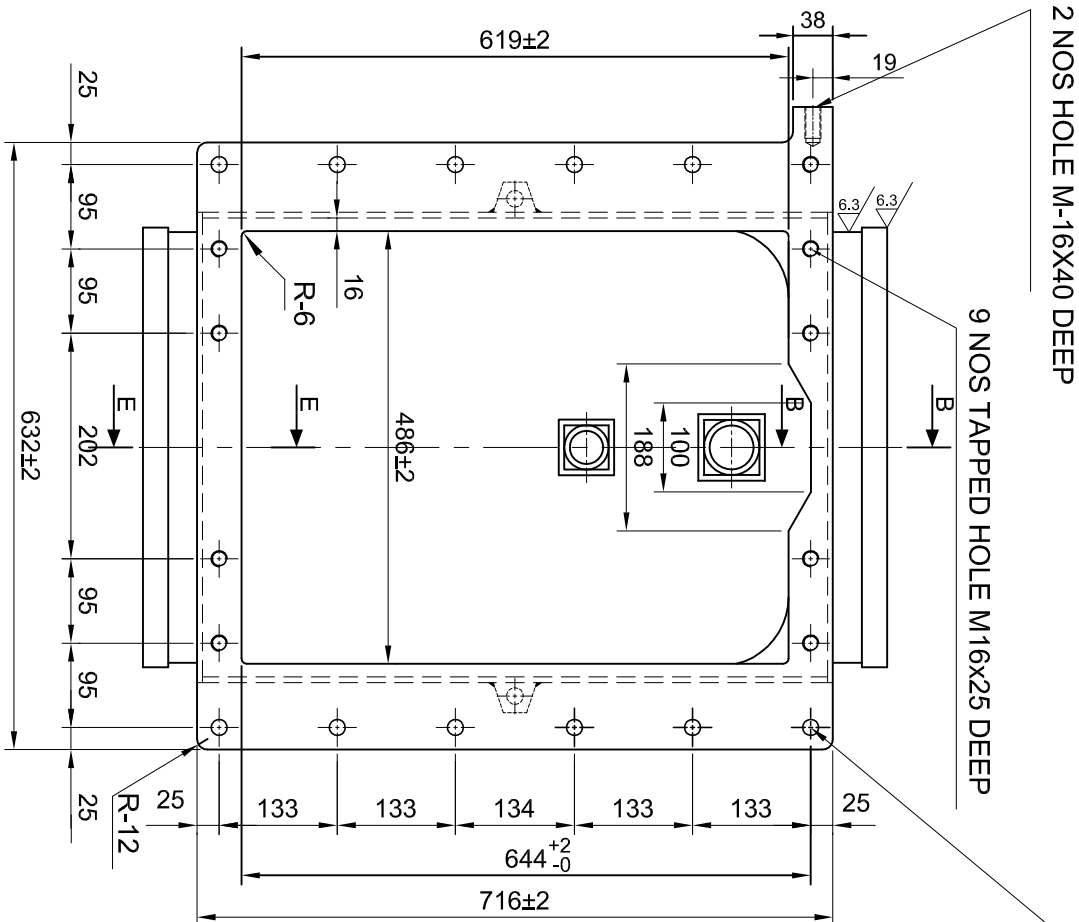
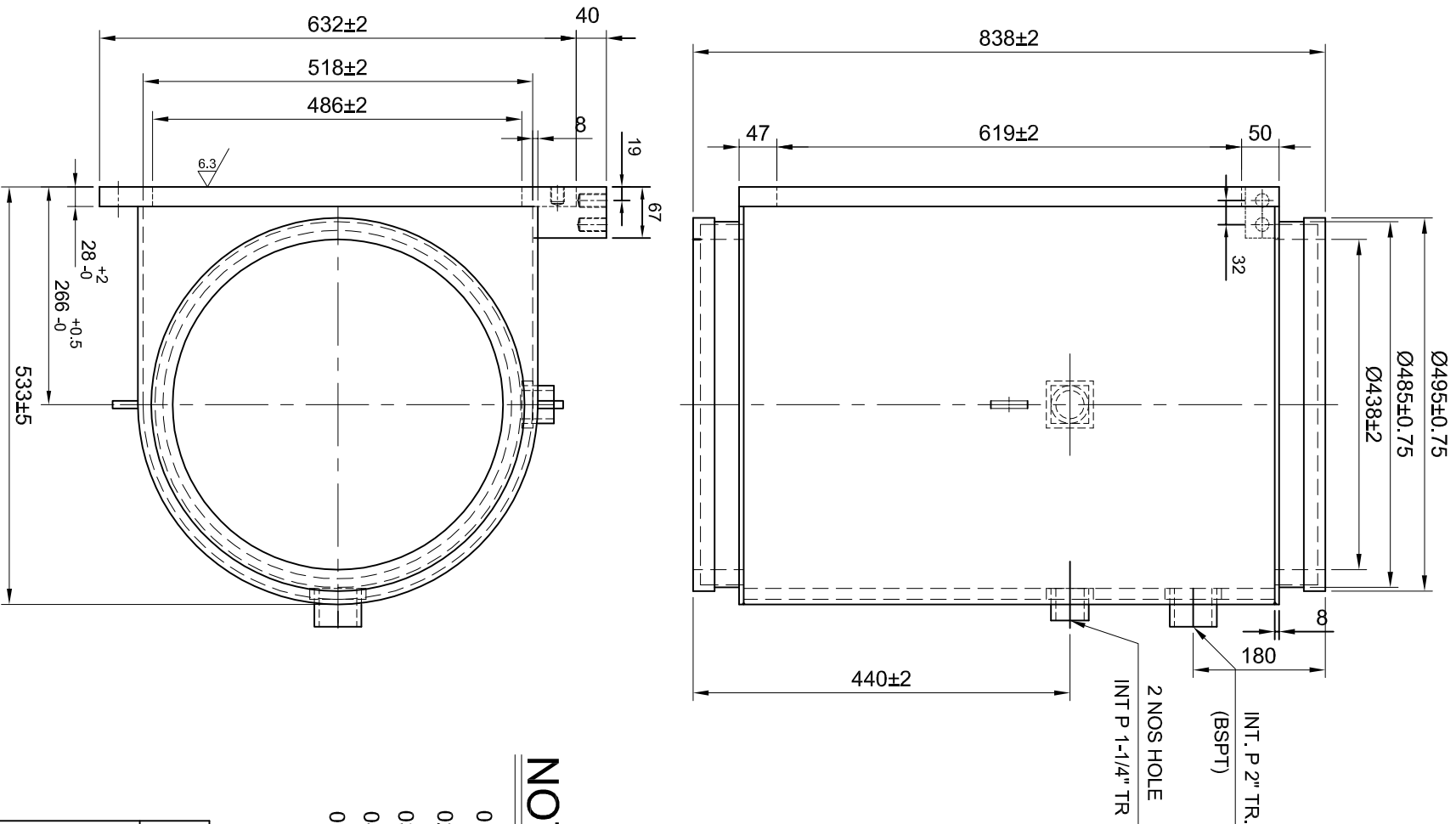
प्रथम कोण प्रक्षेपण / FIRST ANGLE PROJECTION

सभी विमाएं मिलीमीटर में हैं / ALL DIMENSIONS ARE IN mm.

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स्ववाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स लिमिटेड की सम्पत्ति है। इसका प्रत्यक्ष या अप्रत्यक्ष रूप में किसी भी तरह प्रयोग नहीं किया जाए जो कंपनी के हित में हानिकर हो।

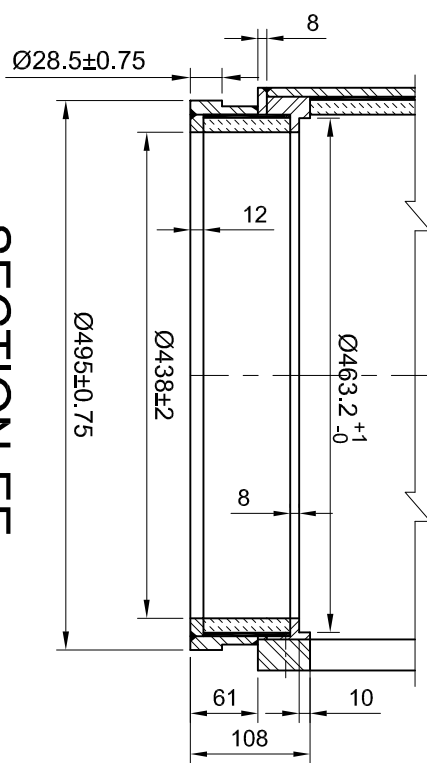
DIMENSIONS TO BE CONTROLLED WITHIN LIMITS AS SHOWN MACHINING TOLERANCE  $\pm 0.25$  mm UNLESS OTHERWISE SHOWN NON-MACHINING TOLERANCE  $\pm 0.5$  mm



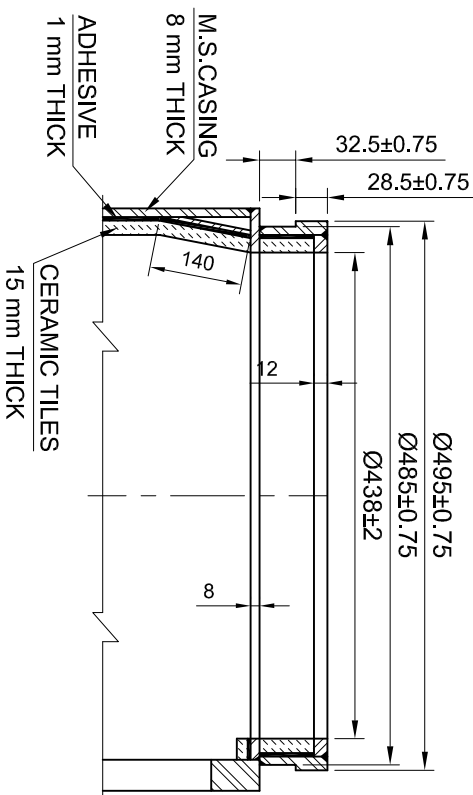
**NOTES :-**

- 01 MATERIAL M.S. CONFORM TO IS:2062 Gr.-A
- 02 CASING TO BE CLEANED & PAINTED WITH RED-OXIDE ON OUTSIDE ONLY.
- 03 TOLERANCE ON THICKNESS OF CASING AS PER IS:1852-1979 CLAUSE 7.3
- 04 D.P. TEST ON WELDED JOINT TO BE CARRIED OUT AS PER E & D:331
- 05 PATTERN NO. "0-61-480-00077-XRP-803" TO BE DEPOSITED OVER THE CASING.

**SECTION-EE**



**SECTION-BB**



सामग्री सूची संख्या INVENTORY NO.	हस्ताक्षर और दिनांक/SIGN & DATE	संदर्भित अभिकल्प संख्या REFERENCE DRG. NO. 0-61-480-00077/R10
संशोधन REV. 03	दिनांक DATE 30.04.08	संशोधक ALTERED BY Sd/-
संशोधन REV. 02	दिनांक DATE 10.12.07	संशोधक ALTERED BY Sd/-

संशोधन REV. 04	दिनांक DATE 26.07.10	संशोधक ALTERED BY Sd/-
संशोधन REV. 01	दिनांक DATE 28.11.07	संशोधक ALTERED BY Sd/-



भारत हेवी इलेक्ट्रिकल्स लिमिटेड, जगदीशपुर, मुल्तानपुर  
BHARAT HEAVY ELECTRICALS LIMITED,  
JAGDISHPUR, SULTANPUR

उत्पाद का प्रकार या ग्राहक/परियोजना का नाम  
TYPE OF PRODUCT OR NAME OF  
CUSTOMER/PROJECT

**HERP VARANASI**

विभाग DEPTT.	अभियांत्रिकी ENGG.	कॉड / CODE 400	वैमाना/SCALE N.T.S.	भार कि. ग्रा. WEIGHT (KG)
संशोधक/DRN.	संशोधक/CHD	संशोधक/APPD	संशोधक/SIGN	दिनांक/DATE
C.S. JOSHI	S. YADAV	Y. B. R.		

अनुपमती अभिकल्प का संदर्भ  
REFER TO ASSLY. DRG.

शीर्षक/TITLE <b>MILL DISCHARGE VALVE</b>	कार्ड कोड CODE	अभिकल्प संख्या/DRAWING NO. <b>3-986-06-00319</b>	REV. <b>04</b>
XRP-803	पृष्ठ संख्या/Sheets No. 01	पृष्ठों की संख्या/No. of Sheets 01	



82500-90-986-C

ON DRAWING/ड्राइंग ब्लकमिडि

प्रथम कोण प्रक्षेपण / FIRST ANGLE PROJECTION

सभी विमाए मिलीमीटर में हैं / ALL DIMENSIONS ARE IN mm.

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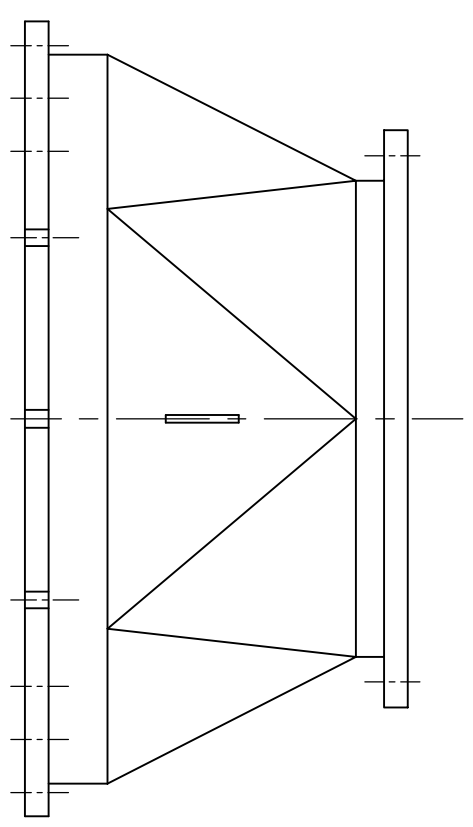
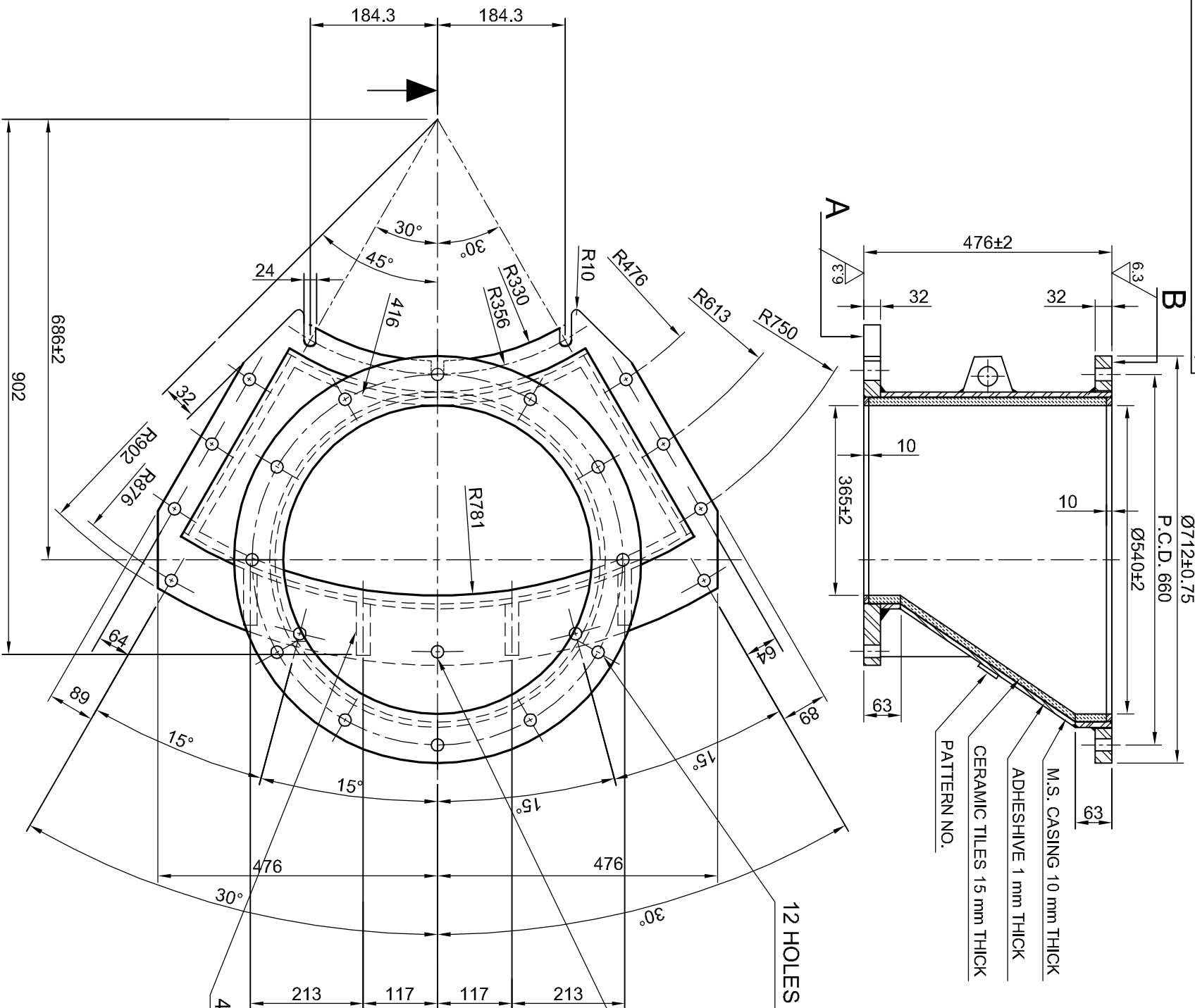
स्वतंत्रता एवं गोपनीय  
इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स लिमिटेड की  
सम्पत्ति है। इसका प्रत्यक्ष या अप्रत्यक्ष रूप में किसी भी तरह  
प्रयोग नहीं किया जाए जो कंपनी के हित में हानिकारक हो।

DIMENSIONS TO BE CONTROLLED  
WITHIN LIMITS AS SHOWN  
MACHINING TOLERANCE  $\pm 0.25$  mm  
UNLESS OTHERWISE SHOWN  
NON-MACHINING TOLERANCE  $\pm 0.5$  mm

सामग्री सूची संख्या  
INVENTORY NO.

हस्ताक्षर और दिनांक/SIGN & DATE

संदर्भित अभिकल्प संख्या  
REFERENCE DRG. NO.  
3-61-488-02956/ 02



11 HOLES  $\varnothing 24$  & 3 NOS SLOT AS SHOWN

12 HOLES  $\varnothing 24$  ON 660 PCD

4 NOS. RIB 26 mm THICK

**NOTES :-**

- 01 MATERIAL M.S. CONFORM TO IS:2062 Gr.-A.
- 02 TOLERANCE ON THICKNESS OF CASING AS PER IS:1852 CLAUSE 7.3.
- 03 D.P. TEST ON WELDING JOINT TO BE CARRIED OUT AS PER E&D:331.
- 04 ALL SEGMENTS TO BE FULL WELDED.
- 05 FLANGES TO BE FULL WELDED ON EACH END.
- 06 PARALLELISM BETWEEN SURFACE A & B IS TO BE WITHIN 1 mm.
- 07 PATTERN NO. TO WELD DEPOSITED AS FOLLOW

**DRAWING APPROVED**  
HYD. DRG. REF : 16148801018 /  
36148802956  
DTD. 29.09.2011  
VIRENDRA KUMAR  
MANAGER-P&D  
BHEL HERRP VARANASI

उत्पाद का प्रकार या ग्राहक/परियोजना का नाम  
TYPE OF PRODUCT OR NAME OF  
CUSTOMER/PROJECT

**HERRP VARANASI**

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, जगदीशपुर, सुल्तानपुर  
BHARAT HEAVY ELECTRICALS LIMITED,  
JAGDISHPUR, SULTANPUR



विभाग DEPTT.	अभियंतिका ENGG.	विभाग DEPTT.	अभियंतिका ENGG.
कोड / CODE	400	कोड / CODE	400
विभाग DEPTT.	अभियंतिका ENGG.	विभाग DEPTT.	अभियंतिका ENGG.
कोड / CODE	400	कोड / CODE	400

शीर्षक/TITLE	कार्ड कोड CARD CODE	अभिकल्प संख्या/DRAWING NO.	REV.
CERAMIC LINED M.P.O.		3-986-06-00528	00

A3 साइज/A3 SIZE

29500-90-986-C

ON DRAWING/ड्राइंग पर लिखें

प्रथम कोण प्रक्षेपण / FIRST ANGLE PROJECTION

सभी विमाएँ मिलीमीटर में हैं / ALL DIMENSIONS ARE IN mm.

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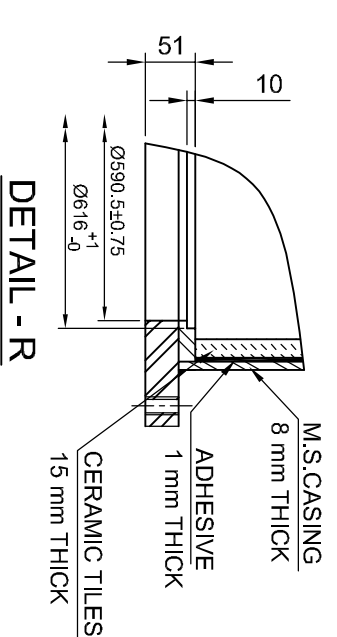
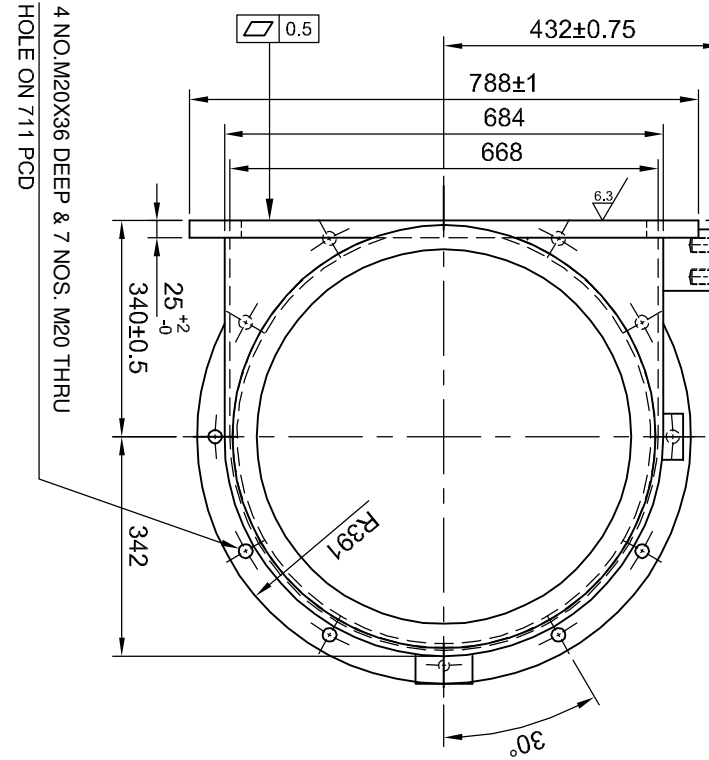
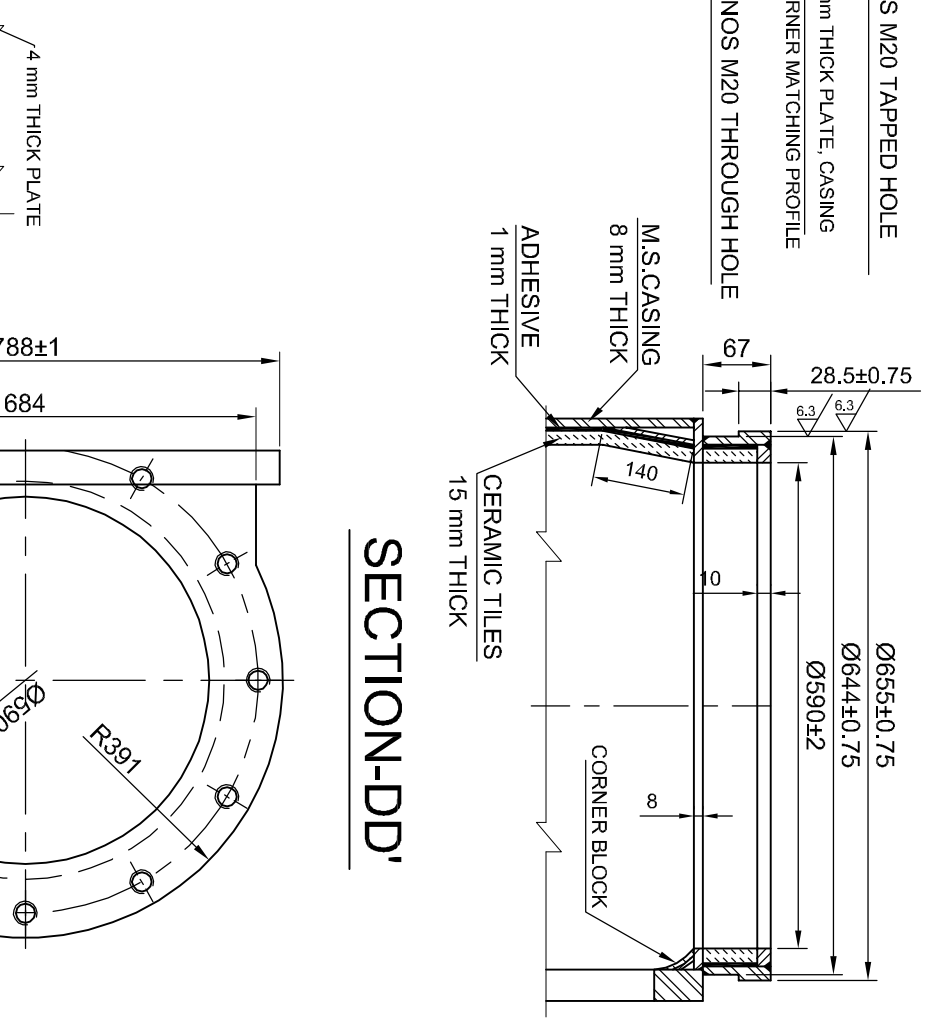
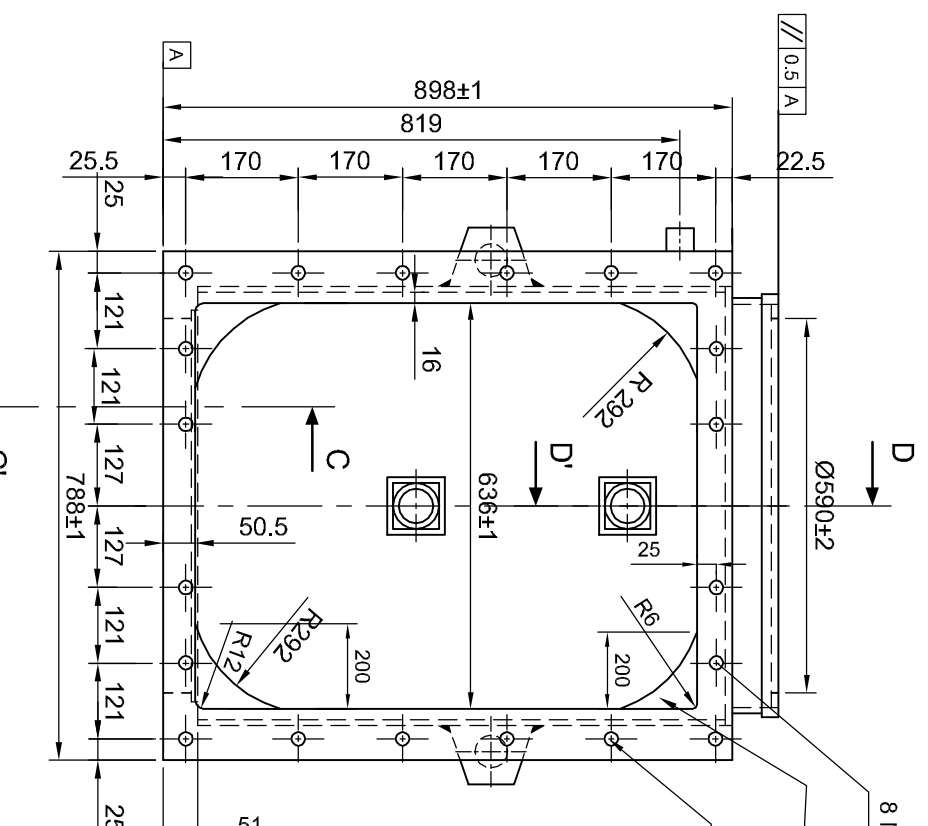
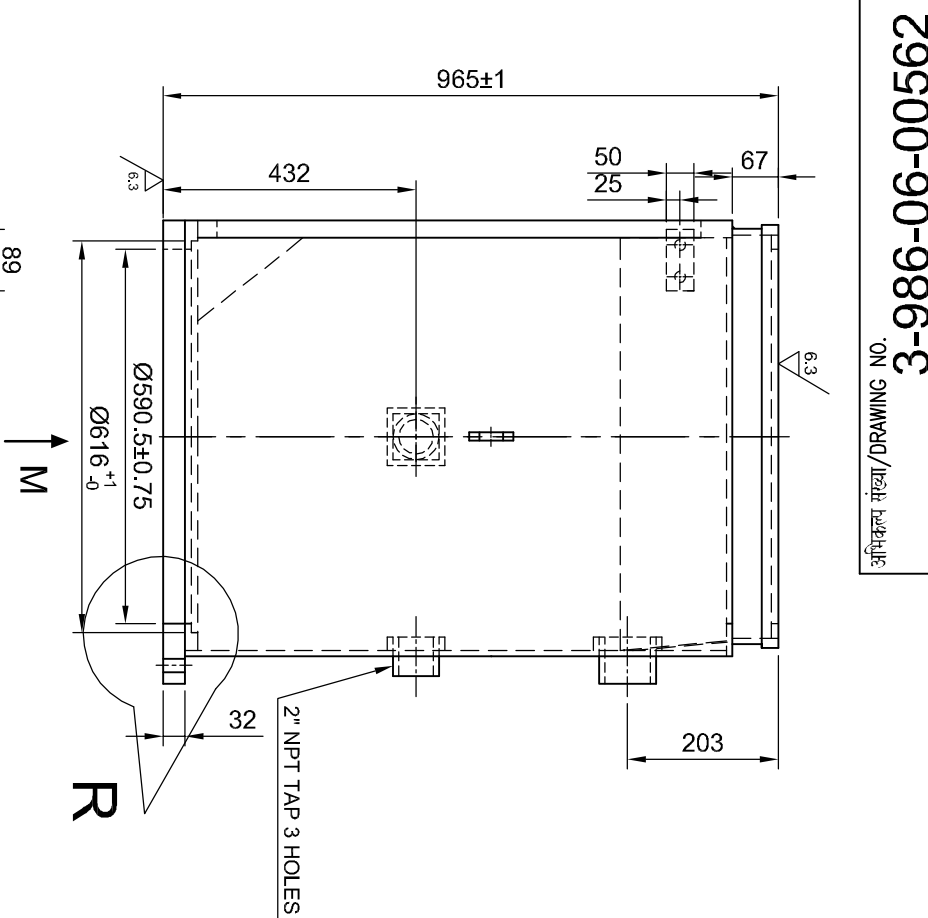
स्वयधिकार एवं गोपनीय  
इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स लिमिटेड की  
सम्पत्ति है। इसका प्रत्यक्ष या अप्रत्यक्ष रूप में किसी भी तरह  
प्रयोग नहीं किया जाए जो कंपनी के हित में हानिकार हो।

DIMENSIONS TO BE CONTROLLED  
WITHIN LIMITS AS SHOWN  
MACHINING TOLERANCE  $\pm 0.25$  mm  
UNLESS OTHERWISE SHOWN  
NON-MACHINING TOLERANCE  $\pm 0.5$  mm

संदर्भित अभिकल्प संख्या  
REFERENCE DRG. NO.  
3-61-400-02953/01

हस्ताक्षर और दिनांक / SIGN & DATE

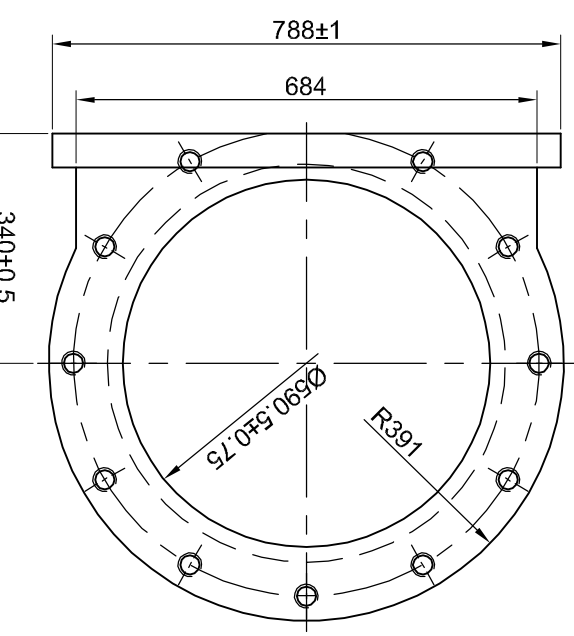
सामग्री सूची संख्या  
INVENTORY NO.



**NOTES :-**

- 01 MATERIAL M.S. CONFORM TO IS:2062 Gr. E250 QUALITY A.
- 02 CASING TO BE CLEANED & PAINTED WITH RED-OXIDE ON OUTSIDE ONLY.
- 03 TOLERANCE ON THICKNESS OF CASING AS PER IS:1852-1979 CLAUSE 7.3
- 04 D.P. TEST ON WELDED JOINT TO BE CARRIED OUT AS PER E & D:331
- 05 PATTERN NO. "M-67-140-1003-XRP" TO BE DEPOSITED OVER THE CASING.
- 06 FLANGE TO BE FULL WELDED ON EACH END OF CASING.

**SECTION C-C'**



**VIEW - M**

उत्पाद का प्रकार या ग्राहक/परियोजना का नाम  
TYPE OF PRODUCT OR NAME OF  
CUSTOMER/PROJECT

**HERP VARANASI**

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, जगदीशपुर, सुल्तानपुर  
BHARAT HEAVY ELECTRICALS LIMITED,  
JAGDISHPUR, SULTANPUR

नाम / NAME	हस्ताक्षर / SIGN	दिनांक / DATE	संख्या / No. of
ड्राफ्ट्समैन / DRAFTER	C.S. JOSHI	11.03.11	11
चेक / CHECKER	S. YADAV	11.03.11	11
अनुमोदक / APPROVED	S. YADAV	11.03.11	11

विभाग / DEPT.	अभियंता / ENGR.	कोड / CODE	400
विभाग / DEPT. <td>अभियंता / ENGR.</td> <td>कोड / CODE</td> <td>400</td>	अभियंता / ENGR.	कोड / CODE	400
वैमाना / SCALE	N.T.S.	भारत कि. ग्रा. / WEIGHT (KG)	
कार्ड कोड / CARD CODE	अभिकल्प संख्या / DRAWING NO.	3-986-06-00562	REV. 01
पृष्ठ संख्या / Sheets No.	01	पृष्ठों की संख्या / No. of Sheets	01

शीर्षक / TITLE  
**CERAMIC LINED VALVE BODY**  
XRP-1003

संशोधन / REV.	दिनांक / DATE	संशोधक / ALTERED BY
01	24.06.13	CHD

25<sup>+2</sup> WAS 28<sup>+2</sup> AND 340±0.5 WAS 343±0.5  
DIM. 32 & 51 WAS 35 & 54 RESPECTIVELY.  
REF. NO. 2393

TD-106-1 Rev No. 5	Form No.		<b>PRODUCT STANDARD</b> <b>PULVERISERS</b> <b>HYDERABAD</b>		Product STD NO.	BA55047
					Rev No 03	
					Page	1 of 3

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**SPECIFICATION FOR CERAMIC LINED MDV BODIES & MPO**

This specification is for procurement of ceramic tiled Mill Discharge Valve Body (MDV Body) and Multiple Port Outlet (MPO) used in Mill Discharge Valve assembly of Bowl Mills supplied to Coal Fired Thermal Power Station.

**SCOPE OF SUPPLY:**

Mill Discharge Valve Body with top and bottom liner and Multiple Port Outlet fitted with ceramic tiles internally as per drawings referred herewith.

**DESCRIPTION:**

The MDV Bodies and MPOs shall be fabricated from mild steel plate material with Ceramic Liners of minimum 15MM thickness fixed on the internal surface. These liners will be subjected to turbulent flow of air and pulverized coal mixture with the coal having an ash content of 60% maximum. The Air + Coal mixture velocity will be around 30 M/Sec. and the temperature around 125°C.

**MATERIAL OF CERAMIC TILES:**

Ceramic with minimum 90% alumina, Dynawear of M/s. Combustion Engg. USA, CERAVAM of B & W or CERALIN of EPD BHEL Bangalore.

**CRITICAL DIMENSIONS:**

- 1.0 The internal dimension of the MDV Bodies and MPOs after fixing the tiles shall be maintained as per the drawing.
- 2.0 The interface dimensions, like flange holes, their PCD etc shall be maintained as per the drawing.

<b>Revisions:</b>	<b>Prepared:</b> S.Ghatge	<b>Approved:</b> JGKulkarni	<b>Date:</b> 30.11.2004
<b>Refer to record of revisions:</b>			



# PRODUCT STANDARD

## PULVERISERS

### HYDERABAD

Product  
STD no.

BA 55047

Rev No. 03

Page 2 of 3

### COMPONENTS:

Var. No.	Description	Ref. Drg. No.	Matl. Code.
01	Ceramic Lined Valve Body of XRP 883 Bowl Mill.	0-61-488-00507	BA9755047018
02	Ceramic Lined MPO of XRP 883 Bowl Mill.	1-61-488-01018	BA9715251013
03	Ceramic Lined Valve Body of XRP 1003 Bowl Mill.	0-61-400-00618	BA9710480014
04	Ceramic Lined MPO of XRP 1003 Bowl Mill.	1-61-400-01278	BA9715251021
05	Ceramic Lined Valve Body of XRP 803 Bowl Mill.	0-61-480-00077	BA9710480022
06	Ceramic Lined MPO of XRP 803 Bowl Mill.	2-61-478-00058	BA9715252028
07	Ceramic Lined Valve Body of XRP 623 Bowl Mill.	0-61-462-00105	BA9710480030
08	Ceramic Lined MPO of XRP 623 Bowl Mill.	1-61-462-00254	BA9715251030
09	Ceramic Lined Valve Body of XRP1043 Bowl Mill.	0-61-404-00572	BA9755047093
10	Ceramic Lined MPO of XRP1043 Bowl Mill.	1-61-404-01171	BA9755047107
11	Ceramic Lined Valve Body of XRP 703 Bowl Mill.	0-61-470-00183	BA9755047115
12	Ceramic Lined MPO of XRP 703 Bowl Mill.	1-61-470-00390	BA9755047123

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TD-106-1 Rev No. 5 Form No.		<b>PRODUCT STANDARD</b> <b>PULVERISERS</b> <b>HYDERABAD</b>		Product STD no.	BA 55047
				Rev No. 03	
				Page 3 of 3	

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**QUALITY PLAN:**

The Supplies shall be as per approved Quality Plan. The vendor to submit drawings and QPs for approval along with the offer.

**GUARANTEE:**

Vendor shall guarantee a minimum wear life expectancy of 25000 hrs. for the ceramic lined MPO and MDV Bodies.

**PACKING:**

The components shall be packed in crates to avoid damage during transit and handling.



TD-106-1  
Rev No. 5

Form No.



# PRODUCT STANDARD

## PULVERISERS

### HYDERABAD

Product  
STD no.

BA 55047

Rev No. 03

Page 5 of 3

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