

MASTER GENERAL ASSEMBLY

BHEL, Bhopal

Transformer Engg. Department

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W. O. No. **68001A51201** Year Code: **2018** MGES\_No: **14529904266** MID NO: **406400006**  
 Customer: **M/S MSPGCL** Rating: **275 MVA, 21/420//3 KV, 1PH, GT** Prod\_GR: **452** QA\_NO:  
 Elec. Spec. **601425** Trfr\_SI\_Nos **6007934, 6007935, 6007936, 6007937** No\_Units **4**  
 Design Group **SHRI MILIND KULKARNI** Elec. DO **SHRI LALIT KUMAR** Mech.DO **SHRI UMESH MEENA** Ent Dt : **8/20/2020 8:43:24 AM**

[>> Engg PI List](#) [>> Engg Status](#) [>> Engg.PI](#) [>> Imported Engg.PI](#) [>> GSOS PI](#) [>> All.PI](#) [>> MBox Shiplist](#) [>> DCA](#)  
[Between Dates](#)

[Instruction Booklet](#)[CTSO](#)[Mechanical Test Instructions](#)[Tap Changer Data](#)[Cooler Control Cabinet Data](#)Manufacturing Plan : [6007934](#) [6007935](#) [6007936](#) [6007937](#)

## Shipping List :

Sl. No.	Description	Drg. no.	Rev No.	Var. No	Qty	Issue dt.	Choose	Remarks	Trm_dt	Docket
<a href="#">1</a>	<a href="#">CORE AND END FRAME ASSY</a>	<a href="#">04527000027</a>	<a href="#">02</a>	00	1	8/20/2020	Y	OMIT IT.001 TO 014, B.O. ITEMS ARE 15,16,22,32,35,50,62,63,72-74,77-80,82-85,87,88		<a href="#">1</a>
<a href="#">2</a>	<a href="#">CORE LAMINATION</a>	<a href="#">34527000287</a>	<a href="#">01</a>	00	1	8/20/2020	Y			
<a href="#">3</a>	<a href="#">CORE STEEL PARTS</a>	<a href="#">34527000274</a>	<a href="#">03</a>	00	1	8/20/2020	Y			
<a href="#">6</a>	<a href="#">COIL ASSY</a>	<a href="#">04527700058</a>	<a href="#">01</a>	00	1	12/10/2020	Y			<a href="#">1</a>
<a href="#">7</a>	<a href="#">LV WINDING ASSY</a>	<a href="#">14527200024</a>	<a href="#">01</a>	00	1	12/4/2020	Y			<a href="#">1</a>
<a href="#">8</a>	<a href="#">HV WINDING ASSY</a>	<a href="#">24527400060</a>	<a href="#">00</a>	00	1	12/7/2020	Y			<a href="#">1</a>
<a href="#">15</a>	<a href="#">INSIDE FITTINGS</a>	<a href="#">04528100047</a>	<a href="#">01</a>	00	1	8/20/2020	Y			
<a href="#">16</a>	<a href="#">LV T.G. ASSY</a>	<a href="#">14528300019</a>	<a href="#">01</a>	00	1	12/7/2020	Y			
<a href="#">17</a>	<a href="#">HV T.G. ASSY</a>	<a href="#">14528300020</a>	<a href="#">01</a>	00	1	12/7/2020	Y			
<a href="#">21</a>	<a href="#">OUTSIDE SIDE FITTINGS</a>	<a href="#">14521900077</a>	<a href="#">01</a>	00	1	12/9/2020	Y	RELEASED FOR MECHANICAL PART ONLY VIZ. S.NO.(1-24)		
<a href="#">22</a>	<a href="#">SET OF GASKET FOR TREATMENT</a>	<a href="#">34525000061</a>	<a href="#">00</a>	02	1	1/21/2021	Y			
<a href="#">23</a>	<a href="#">SET OF GASKET FOR ERECTION</a>	<a href="#">34525000061</a>	<a href="#">00</a>	01	1	1/21/2021	Y			
<a href="#">24</a>	<a href="#">SET OF GASKET FOR HEAT RUN</a>	<a href="#">34525000061</a>	<a href="#">00</a>	03	1	1/21/2021	Y			
<a href="#">25</a>	<a href="#">WIRING SYSTEM</a>	<a href="#">14526500041</a>	<a href="#">00</a>	00	1	1/21/2021	Y			
<a href="#">29</a>	<a href="#">TOP TANK ASSY</a>	<a href="#">24521600094</a>	<a href="#">06</a>	00	1	12/5/2020	Y			
<a href="#">31</a>	<a href="#">BOTTOM TANK ASSY</a>	<a href="#">24521700123</a>	<a href="#">03</a>	00	1	12/1/2020	Y			
<a href="#">32</a>	<a href="#">ADDITIONAL PAD WELDING</a>	<a href="#">24521700125</a>	<a href="#">02</a>	00	1	11/25/2020	Y			
<a href="#">34</a>	<a href="#">HV TURRET ASSY. U PHASE</a>	<a href="#">34522100069</a>	<a href="#">01</a>	00	1	12/1/2020	Y			
<a href="#">41</a>	<a href="#">WIRING ARRG. OF COMMON KIOSK</a>	<a href="#">04526500036</a>	<a href="#">00</a>	0	1	1/21/2021	Y			
<a href="#">43</a>	<a href="#">LV TURRET ASSY. V PHASE</a>	<a href="#">34522700114</a>	<a href="#">00</a>	00	1	1/5/2021	Y	c. t. mtg. 2.1		
<a href="#">44</a>	<a href="#">LV TURRET ASSY. W PHASE</a>	<a href="#">34522700114</a>	<a href="#">00</a>	01	1	1/5/2021	Y	c. t. mtg. 2.2		
<a href="#">47</a>	<a href="#">CT MTG IN HV TURRET U PH</a>	<a href="#">34522100083</a>	<a href="#">00</a>	00	1	1/5/2021	Y			
<a href="#">50</a>	<a href="#">CT MTG IN HV TURRET HVN PH</a>	<a href="#">34523000055</a>	<a href="#">00</a>	00	1	1/5/2021	Y			
<a href="#">51</a>	<a href="#">BLANKING I</a>	<a href="#">34528800184</a>	<a href="#">00</a>	00	1	12/9/2020	Y			
<a href="#">54</a>	<a href="#">HEADER PIPE WORK SYSTEM</a>	<a href="#">14694300019</a>	<a href="#">01</a>	00	1	12/11/2020	Y			
<a href="#">56</a>	<a href="#">MAIN CONS. P/W. SYSTEM</a>	<a href="#">14525100022</a>	<a href="#">01</a>	00	1	12/9/2020	Y			
<a href="#">58</a>	<a href="#">RADIATOR/COOLER</a>	<a href="#">44524300026</a>	<a href="#">00</a>	00	1	11/25/2020	Y	20-9-24-3500 VC		
<a href="#">59</a>	<a href="#">BLANKING II</a>	<a href="#">34698800150</a>	<a href="#">00</a>	00	1	12/11/2020	Y			

<a href="#">60</a>	<a href="#">GENERAL ARRANGEMENT OF CONTROL CABINET</a>	<a href="#">34526200371</a>	<a href="#">04</a>	00	1	9/9/2020	Y	
<a href="#">62</a>	<a href="#">GENERAL ARRANGEMENT OF COMMON KIOSK</a>	<a href="#">34526200373</a>	<a href="#">04</a>	00	1	9/9/2020	Y	
<a href="#">79</a>	<a href="#">MAIN CONSERVATOR</a>	<a href="#">34523900052</a>	<a href="#">01</a>	00	1	12/9/2020	Y	
<a href="#">86</a>	<a href="#">MISC</a>	<a href="#">04520000051</a>	<a href="#">00</a>	00	1	2/17/2022	Y	Miscellaneous info
<a href="#">88</a>	<a href="#">INSIDE FITTING (WALL SHUNT ASSY)</a>	<a href="#">34528100233</a>	<a href="#">03</a>	00	1	2/12/2021	Y	also call var. 01 for barrier and spacers
<a href="#">94</a>	<a href="#">NEUTRAL GROUNDING ARRGT.</a>	<a href="#">14526100065</a>	<a href="#">00</a>	00	1	1/11/2021	Y	
<a href="#">112</a>	<a href="#">PAINTING DETAILS FOR TANK,E/F ASSY AND ACCESSORIES</a>	<a href="#">TR10005P</a>	<a href="#">21</a>	00	1	8/20/2020	Y	SHADE AS PER RAL 7032. SI. NO. 22 OF TR10005P
<a href="#">133</a>	<a href="#">COMPLETE HOUSING DRG. OF CONTROL CABINET</a>	<a href="#">14996200325</a>	<a href="#">01</a>	00	1	9/9/2020	Y	
<a href="#">134</a>	<a href="#">BOM OF HOUSING DRG. OF CONTROL CABINET</a>	<a href="#">24996200353</a>	<a href="#">00</a>	00	1	9/9/2020	Y	
<a href="#">136</a>	<a href="#">SCHEMATIC DIAGRAM OF CONTROL CABINET</a>	<a href="#">34526200370</a>	<a href="#">05</a>	00	1	9/9/2020	Y	
<a href="#">138</a>	<a href="#">ANNEXURE-I FOR CONTROL CABINET</a>	<a href="#">44526300054</a>	<a href="#">00</a>	00	1	9/9/2020	Y	
<a href="#">139</a>	<a href="#">COMPLETE HOUSING DRG. OF COMMON KIOSK</a>	<a href="#">14996200324</a>	<a href="#">01</a>	00	1	9/9/2020	Y	
<a href="#">140</a>	<a href="#">BOM OF HOUSING DRG. OF COMMON KIOSK</a>	<a href="#">24996200352</a>	<a href="#">01</a>	00	1	9/9/2020	Y	
<a href="#">142</a>	<a href="#">SCHEMATIC DIAGRAM OF COMMON KIOSK</a>	<a href="#">34526200372</a>	<a href="#">05</a>	00	1	9/9/2020	Y	
<a href="#">144</a>	<a href="#">ANNEXURE-I FOR COMMON KIOSK</a>	<a href="#">44526300055</a>	<a href="#">00</a>	00	1	9/9/2020	Y	







BILL OF MATERIAL	DEP NO	NO OF IT	VAR	TYPE OF PRODUCT	WORK ORDER 65001A51201	DRG NO 04527000027	CORE CODE 65170262	REV 02	
	406	94	0	275 MVA 1PH GT TANGEDCO	TITLE CORE AND END FRAME ASSY.      BANDING OF CORI				SHT NO 3      OF 8

DU	VAR03	VAR02	VAR01	VAR00	REMARKS	IT NO	DESCRIPTION	DRAWING NO	IT.	MATCODE	A / C	UT	UNIT	WT	G / S	
							MAT SIZE	DETAILS		MAT SPEC			QTY	ZONE		
				00005	FOR END TIE PLATE ISOLATION	025	P"BD INSULATION (2TK)	34527000283	002			KG	0.020			
				00005	FOR MAIN & AUX. TOP CROSS BEAM H.V. SIDE	026	INSULATION P"BD	34527000283	007			KG	0.498			
				00001	40 ROLLS OF RESIGLASS TAPE REQD.	027	BANDING OF CORE	14527000032				KG	153.500			
													00			
				00004	FOR MAIN LEG PIN ARRGT.	028	HEX. BOLT M16			AA7121123606		KG	0.068			
									90							
				00004	FOR MAIN LEG PIN ARRGT.	029	SPRING WASHER SCB 16.2			AA7164002088		KG	0.009			
				00004	FOR MAIN LEG PIN ARRGT.	030	PLAIN WASHER MCD 17			AA7161001080		KG	0.011			
				00002	FOR END TIE PLATE	031	INSULATION(14TK)	34527000283	011			KG	7.960			
				00009	FOR MAIN CROSS BEAM ISOL.H.V. SIDE - RHS	032	EPOXY TUBE			BP2241097098		KG	0.014			
													BP22497			
									45	31	35					
				00004	FOR FOOT PACKING AT BOTTOM	033	INSULATION P"BD (14 TK)	34527000283	010			KG	5.380			
				00016	FOR END TIE PLATE BOT.	034	WASHER MCD SCB13			AA7161001072		KG	0.006			
				00006	FOR AUX CROSS BEAM ISOLATION, L=40	035	EPOXY TUBE (I/D 31, O/D 35)			BP2241097098		KG	0.269			
													BP22497			
									1000							
				00032	L=70, ZPP FOR FOOT MTG.	037	HEX SCR M24	44997000015	001			KG	0.400			

DISTRIBUTION DETAILS					REV NO. 2	PREP BY	CKD BY	APPD BY	DATE 29 JAN 2018	
TRE	TRM	TRX	FTM		PREP BY	CKD BY	APPD BY	DATE		
1	3	1	6		SKU	AS	AKP	06 JUL 2017	DRG NO 04527000027	SHT 3 OF 8

BILL OF MATERIAL				DEP NO	NO OF IT	VAR	TYPE OF PRODUCT	WORK ORDER 65001A51201	DRG NO 04527000027	CORE CODE 65170262	REV 02	
				406	94	0	275 MVA 1PH GT TANGEDCO	TITLE CORE AND END FRAME ASSY.    BANDING OF CORI				SHT NO 4    OF 8

DU	VAR03	VAR02	VAR01	VAR00	REMARKS	IT NO	DESCRIPTION	DRAWING NO	IT.	MATCODE	A / C	UT	UNIT	WT	G / S
							MAT SIZE	DETAILS		MAT SPEC			QTY		ZONE
				00032	FOR FOOT MTG.	038	WASHER SPRING SC B-24 ST TK      WDT      LEN      ID      OD      DIM1			AA7164002100		KG		0.020	
				00024	FOR END TIE PLATE BOTTOM & AUX PIN	039	SPG.WASHER M12 TK      WDT      LEN      ID      OD      DIM1			AA7164002070		KG		0.004	
				00008	L=1800	040	TIE ROD M 36 (THREAD LG 160) TK      WDT      LEN      ID      OD      DIM1	44997000052	001			KG		14.400	
				00009	FOR MAIN TOP CROSS BEAM ISOLATION H.V. SIDE	041	HEX BOLT M30 TK      WDT      LEN      ID      OD      DIM1	44997000015	002			KG		0.022	
				00030	FOR TOP CROSS BEAM	042	WASHER SPRING SCB30 TK      WDT      LEN      ID      OD      DIM1			AA7164002118		KG		0.044	
				00001	QTY OF IT 002 REQD. 7 NOS	043	EARTHING OF CORE TK      WDT      LEN      ID      OD      DIM1	24997000051				KG		0.175	
				53860	QTY. = 53860	044	CERAMIC SPACER FOR CORE ASSY. TK      WDT      LEN      ID      OD      DIM1	34997000065	001			KG		0.001	
				00006	ZPP, L=90 CUT FROM STOCK H.V. SIDE FOR AUX.CROSS BEAM ISOLATION	045	HEX.BOLT M 30 TK      WDT      LEN      ID      OD      DIM1	44997000015	002			KG		0.307	
				00042	FOR CROSS BEAM	046	MCD WASHER MCD 31 TK      WDT      LEN      ID      OD      DIM1			AA7161001110		KG		0.052	
				00001	CUT TO SUITE	047	EPOXY SCREWED ROD M16 TK      WDT      LEN      ID      OD      DIM1	TR20043S	005			KG		0.056	
				00001	FOR TOP YOKE INSUL. CUT TO SUITE	048	EPOXY SCREWED ROD M12 TK      WDT      LEN      ID      OD      DIM1	TR20043S	004			KG		0.072	
				00008	FOR TOP YOKE INSUL.	049	EPOXY SQUARE NUT M12 TK      WDT      LEN      ID      OD      DIM1	TR20030N	003	ST604125		KG		0.009	

DISTRIBUTION DETAILS					REV NO. 2		PREP BY		CKD BY		APPD BY		DATE 29 JAN 2018		
TRE	TRM	TRX	FTM		PREP BY	CKD BY	APPD BY	DATE							
1	3	1	6		SKU	AS	AKP	06 JUL 2017							
DRG NO 04527000027														SHT 4 OF 8	





BILL OF MATERIAL				DEP NO	NO OF IT	VAR	TYPE OF PRODUCT	WORK ORDER 65001A51201	DRG NO 04527000027	CORE CODE 65170262	REV 02	
				406	94	0	275 MVA 1PH GT TANGEDCO	TITLE				
								CORE AND END FRAME ASSY.      BANDING OF CORI				

DU	VAR03	VAR02	VAR01	VAR00	REMARKS	IT NO	DESCRIPTION	DRAWING NO	IT.	MATCODE	A / C	UT	UNIT	WT	G / S
							MAT SIZE	DETAILS		MAT SPEC			QTY		ZONE
				00012	B.O. FOR INNER BAND AT TOP (I/D38, O/D44, 71 LG.)	074	EPOXY TUBE FOR M 30 TK      WDT      LEN      ID      OD      DIM1	34527000207	003			KG		0.030	
										BP22497					
				00004	FOR INNER BAND AT TOP (HOLE DIA 48)	075	INSULATION P"BD (25TK) FOR M30 TK      WDT      LEN      ID      OD      DIM1	34527000212	002			KG		0.280	
				00004	FOR INNER BAND AT TOP (DOUBLE HOLE DIA 48)	076	INSULATION P"BD (25 TK) TK      WDT      LEN      ID      OD      DIM1	34527000213	001			KG		0.460	
				00024	B.O. FOR INNER BAND AT TOP (I/D29 X O/D35 X 10 LG)	077	EPOXY TUBE FOR M30 TK      WDT      LEN      ID      OD      DIM1	34527000215	001			KG		0.006	
										BP22497					
				00012	B.O. FOR INNER BAND AT TOP (LENGHT = 170)	078	STUD BOLT PROP CLASS 8.8 (M30) TK      WDT      LEN      ID      OD      DIM1	34527000216	002			KG		0.940	
				00012	B.O. FOR INNER BAND AT TOP ( TK = 24)	079	SPECIAL NUT PROP.CLASS 8.8(M30 TK      WDT      LEN      ID      OD      DIM1	34527000217	002			KG		0.577	
				00012	B.O. FOR INNER BAND AT TOP (TK = 24)	080	SPECIAL NUT PROP.CLASS 8.8(M30 TK      WDT      LEN      ID      OD      DIM1	34527000218	002			KG		0.350	
				00024	FOR INNER BAND AT TOP & END TIE ROD (6 TK)	081	SPRING WASHER SCB 30.5 TK      WDT      LEN      ID      OD      DIM1			AA7164002118		KG		0.044	
				00010	FOR OUTER BAND AT TOP	082	STEP BLOCK (C2R) TK      WDT      LEN      ID      OD      DIM1	34527000280				KG		4.220	
									01						
				00008	B.O. FOR TOP OUTER BAND (40 TK)	083	SPECIAL NUT PROP.CLASS 8.8(M36 TK      WDT      LEN      ID      OD      DIM1	34527000218	001			KG		0.870	
				00016	B.O. FOR TOP OUTER BAND (I/D35, O/D41, 10LG)	084	EPOXY TUBE (FOR M 36) TK      WDT      LEN      ID      OD      DIM1	34527000215	002			KG		0.008	
										BP22497					
				00008	B.O. FOR TOP OUTER BAND (1/D44 X O/D 50, 65 LG.)	085	EPOXY TUBE (FOR M36) TK      WDT      LEN      ID      OD      DIM1	34527000207	002			KG		0.008	
										BP22497					

DISTRIBUTION DETAILS					REV NO. 2		PREP BY		CKD BY		APPD BY		DATE 29 JAN 2018	
TRE	TRM	TRX	FTM		PREP BY		CKD BY		APPD BY		DATE			
1	3	1	6		SKU		AS		AKP		06 JUL 2017		DRG NO 04527000027	
													SHT 7 OF 8	



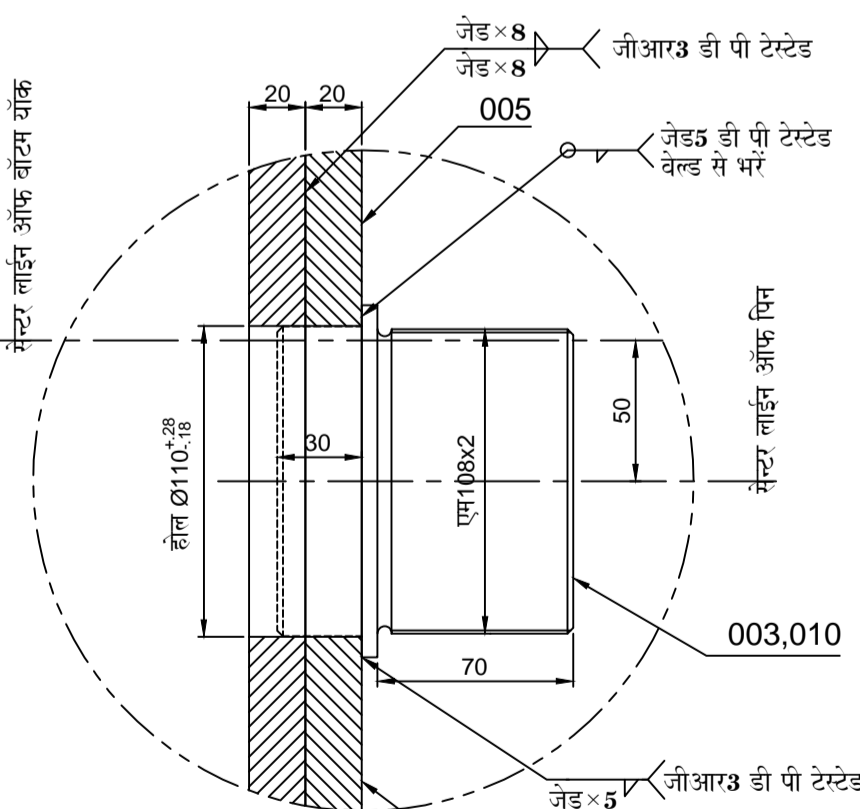
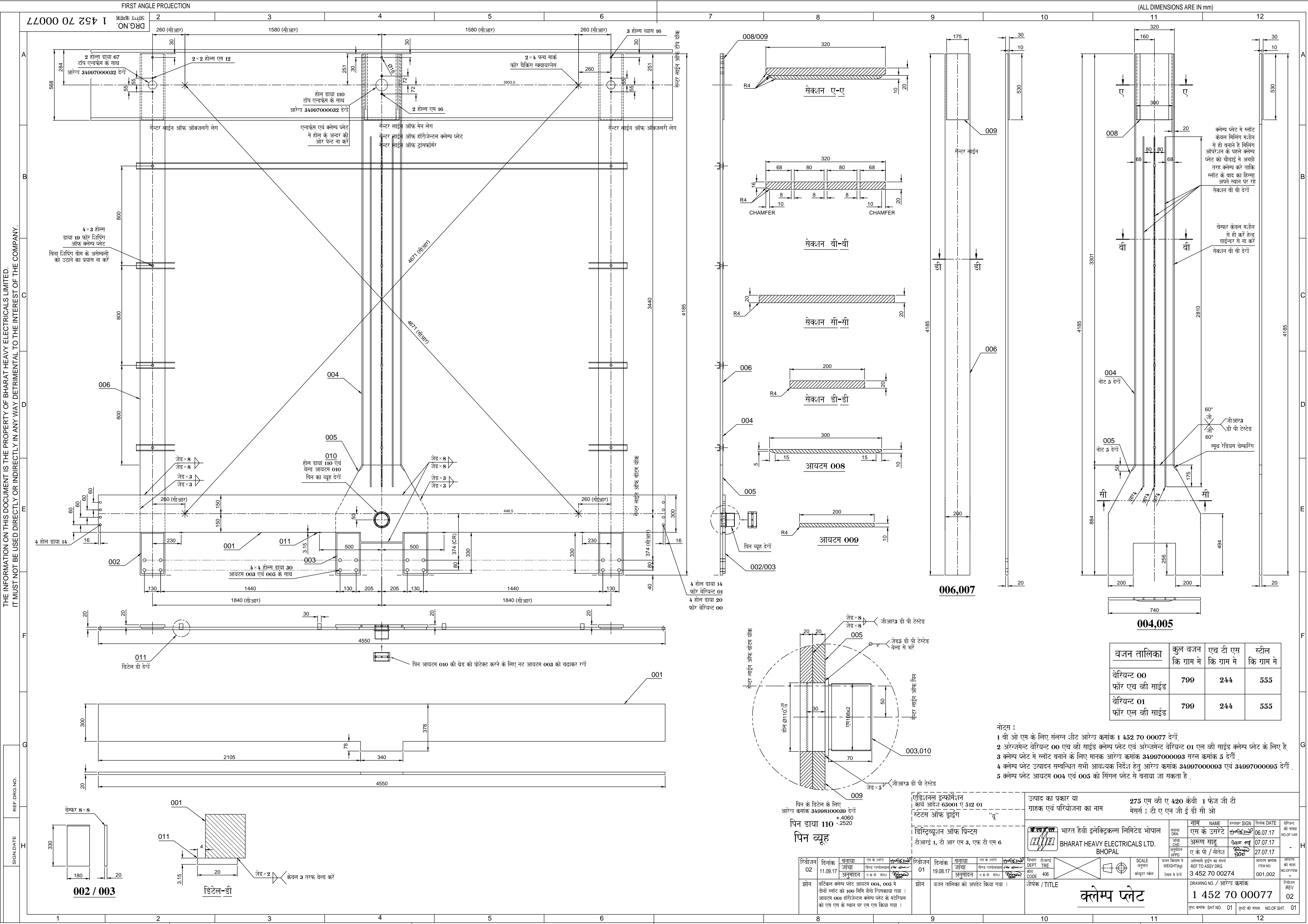


B I L L O F M A T E R I A L				DEP NO	NO OF IT	VAR	TYPE OF PRODUCT	W O R K O R D E R 65001A51201			DRG NO 34527000274		CORE CODE 65170835		REV 03				
				406	14	0	275 MVA 1PH. GEN. TRANS	TITLE STEEL PARTS OF CORE & END FR AUX. FOOT (STEEL PAR							SHT NO 2 OF 2				
DU	VAR03	VAR02	VAR01	VAR00	REMARKS	IT NO	DESCRIPTION					DRAWING NO	IT.	MATCODE	A	UT	UNIT	WT	G / S
							MAT SIZE					DETAILS		MAT SPEC	/			QTY	ZONE
				00006		013	INNER BAND NON MAGNETIC STN ST					34527000275				KG		9.440	
							TK	WDT	LEN	ID	OD	DIM1	00						
				00004		014	OUTER BAND (HTS)					34527000276				KG		18.780	
							TK	WDT	LEN	ID	OD	DIM1	00						

4833.4

DISTRIBUTION DETAILS						REV NO. 3		PREP BY		CKD BY		APPD BY		DATE 24 OCT 2017	
TRM	TRX	TRE	FTM			PREP BY		CKD BY		APPD BY		DATE		SHT 2 OF 2	
3	1	1	6			SKU		ARUN		AKP		21 JUN 2017			

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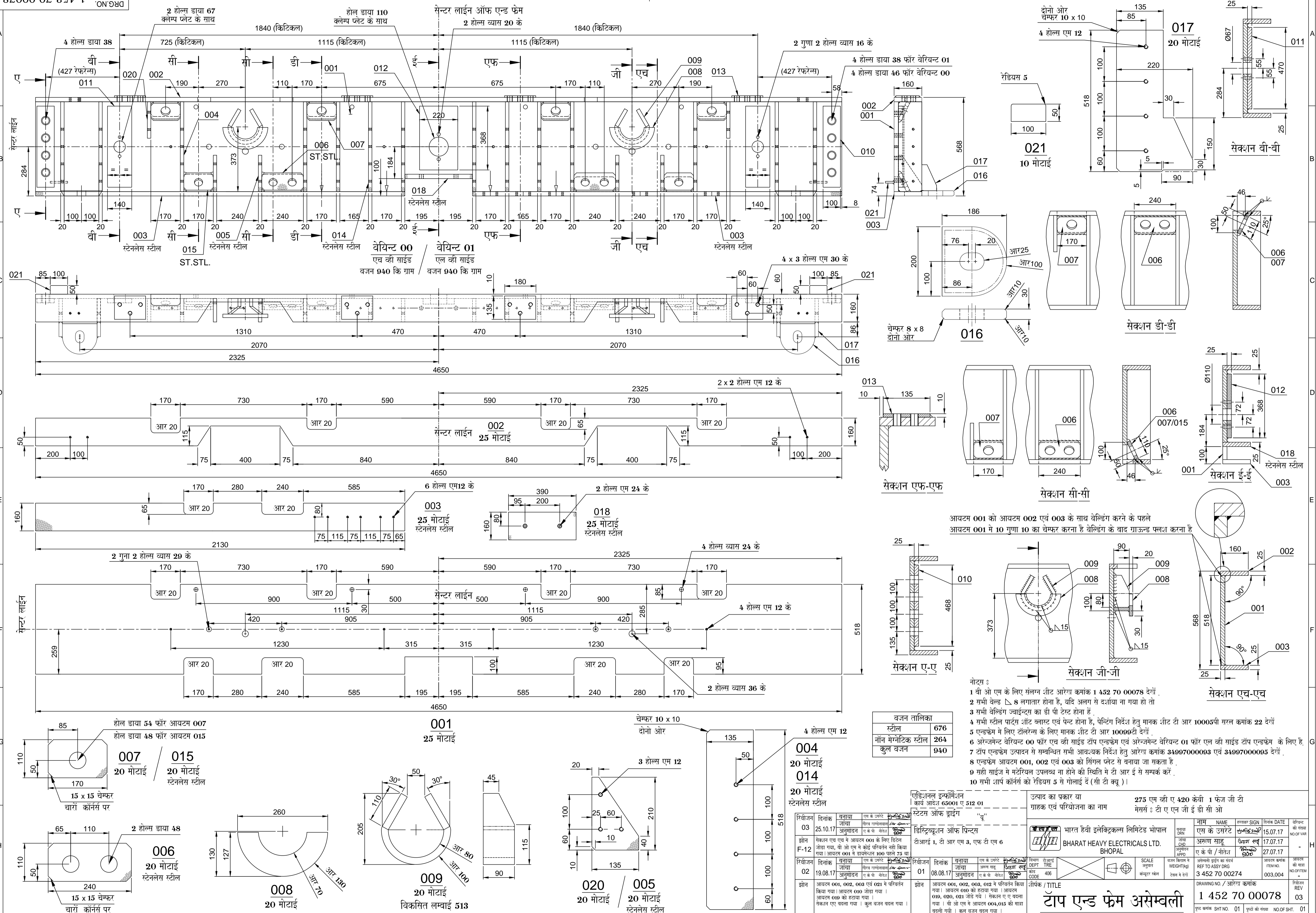


- नोट्स :
- बी ओ एम के लिए संलग्न शीट आरेख क्रमांक 1 452 70 00077 देखें.
  - अरेन्जमेंट वेरियन्ट 00 एच व्ही साईड क्लेम्प प्लेट एवं अरेन्जमेंट वेरियन्ट 01 एल व्ही साईड क्लेम्प प्लेट के लिए है.
  - क्लेम्प प्लेट में स्लॉट बनाने के लिए मानक आरेख क्रमांक 349970000093 सरल क्रमांक 5 देखें.
  - क्लेम्प प्लेट उत्पादन सम्बन्धित सभी आरेख क्रमांक 349970000093 एवं 349970000095 देखें.
  - क्लेम्प प्लेट आयटम 004 एवं 005 को सिंगल प्लेट में बनाया जा सकता है.

पिन के ड्रिल के लिए आरेख क्रमांक 34998100039 देखें पिन डाय 110 पिन व्यूह				पिडिशनल इन्फार्मेशन कार्य आदेश 65001 ए 512 01 स्टेटस ऑफ ड्राइंग डिस्ट्रिब्यूशन ऑफ पिन्ट्स रीआई 1, टी आर एच 3, एफ टी एच 6				उत्पाद का प्रकार या गाहक एवं परियोजना का नाम भारत हेवी इलेक्ट्रिकल्स लिमिटेड भोपाल BHARAT HEAVY ELECTRICALS LTD. BHOPAL				275 एम व्ही ए 420 केवी 1 फेज जी टी मेसर्स 2 टी ए एन जी ई डी सी ओ			
रिवीजन 02	दिनांक 11.08.17	बनाया जांचा अनुमोदन	एच के उपरर गोविन्द लाल एक से केवल	रिवीजन 01	दिनांक 19.08.17	बनाया जांचा अनुमोदन	एच के उपरर गोविन्द लाल एक से केवल	रिवीजन 01	दिनांक 19.08.17	बनाया जांचा अनुमोदन	एच के उपरर गोविन्द लाल एक से केवल	रिवीजन 01	दिनांक 19.08.17	बनाया जांचा अनुमोदन	एच के उपरर गोविन्द लाल एक से केवल
वैकल्पिक क्लेम्प प्लेट आयटम 004, 005 में मीनो स्लॉट को 100 मिमी नीचे स्थित कराया गया। आयटम 001 होरिजेंटल क्लेम्प प्लेट के मॉडरियल को एस एस के स्थान पर एस एस किया गया।				वजन तालिका को अपडेट किया गया।				वजन तालिका को अपडेट किया गया।				वजन तालिका को अपडेट किया गया।			
ड्राइंग NO. / आरेख क्रमांक 1 452 70 00077				ड्राइंग NO. / आरेख क्रमांक 1 452 70 00077				ड्राइंग NO. / आरेख क्रमांक 1 452 70 00077				ड्राइंग NO. / आरेख क्रमांक 1 452 70 00077			
कुल क्रमांक SHT NO. 01				कुल क्रमांक SHT NO. 01				कुल क्रमांक SHT NO. 01				कुल क्रमांक SHT NO. 01			



SIGN. DATE	REF. DRG. NO.
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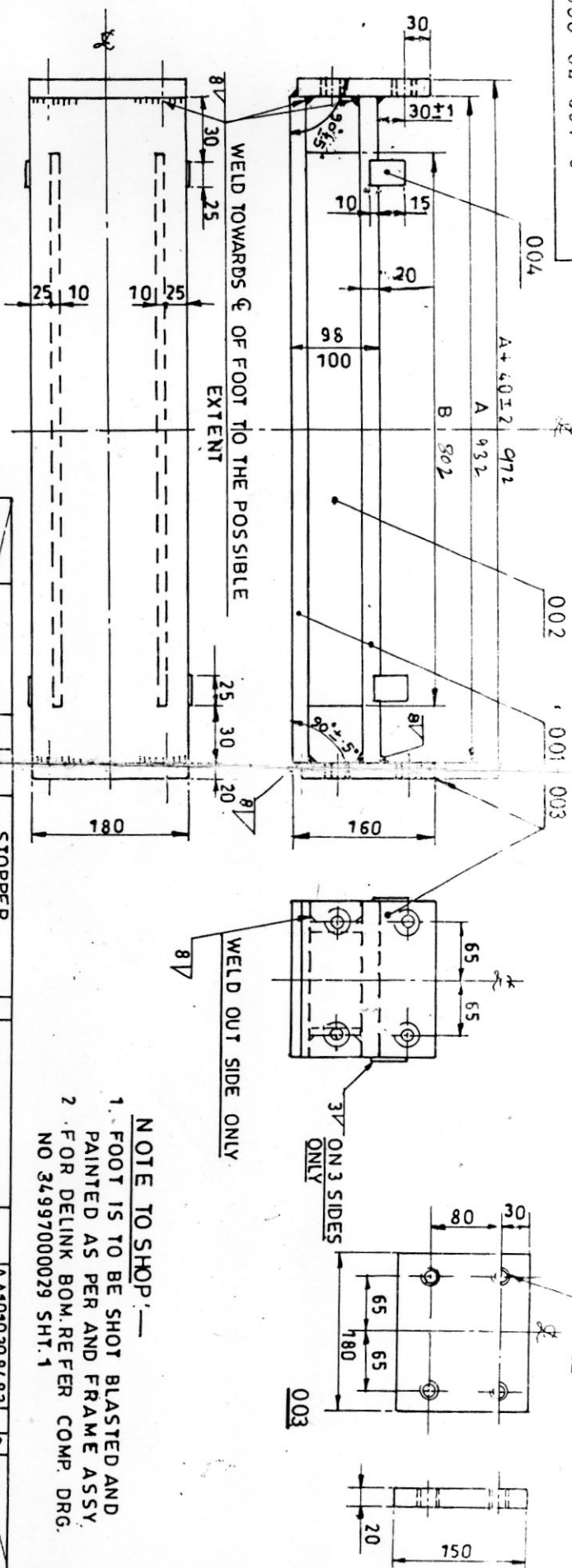
BILL OF MATERIAL	DEP NO	NO OF IT    VAR		TYPE OF PRODUCT	WORK ORDER 65001A51201	DRG NO 14527000078	CORE CODE 65170700	REV 03	
	406	21	1	275 MVA 1PH GEN.TRANSF	TITLE TOP END FRAME HV / LV SIDE    TOP END FRAME F				SHT NO 1    OF 2

DU	VAR03	VAR02	VAR01	VAR00	REMARKS	IT NO	DESCRIPTION	DRAWING NO	IT.	MATCODE	A / C	UT	UNIT WT	G / S
							MAT SIZE	DETAILS	VAR	MAT SPEC			QTY	ZONE
			00001	00001	TO DETAIL	001	BACK PLATE			AA1011808153		KG	441.000	
							TK WDT LEN ID OD DIM1			AA10108				
							25 518 4650							
			00001	00001	TO DETAIL	002	TOP PLATE			AA1011808153		KG	115.500	
							TK WDT LEN ID OD DIM1			AA10108				
							25 160 4650							
			00002	00002	TO DETAIL, YS: 320-350 MPA EQUIVALENT TO J4 GRADE	003	BOT PLATE (NON MAGNATIC)			STAINLESS		KG	61.790	
							TK WDT LEN ID OD DIM1			STEEL				
							25 160 2130							
			00002	00002	TO DETAIL	004	GUSSET PLATE			AA1011808137		KG	10.990	
							TK WDT LEN ID OD DIM1			AA10108				
							20 135 518							
			00004	00004	TO DETAIL, YS: 320-350 MPA EQUIVALENT TO J4 GRADE	005	GUSSET PLATE (NON MAGNETIC)			STAINLESS		KG	5.820	
							TK WDT LEN ID OD DIM1			STEEL				
							20 135 210							
			00002	00002	TO DETAIL, YS: 320-350 MPA EQUIVALENT TO J4 GRADE	006	PLATE (NON MAGNETIC)			STAINLESS		KG	3.320	
							TK WDT LEN ID OD DIM1			STEEL				
							20 110 240							
			00004	00004	TO DETAIL	007	PLATE			AA1011808137		kg	2.520	
							TK WDT LEN ID OD DIM1			AA10108				
							20 110 170							
			00002	00002	TO DETAIL	008	PLATE			AA1011808137		kg	5.810	
							TK WDT LEN ID OD DIM1			AA10108				
							20 127 260							
			00002	00002	TO DETAIL	009	PLATE			AA1011808137		KG	6.470	
							TK WDT LEN ID OD DIM1			AA10108				
							20 90 513							
			00002	00002		010	PAD			AA1011808153		KG	9.190	
							TK WDT LEN ID OD DIM1			AA10108				
							25 100 468							
			00002	00002	TO DETAIL	011	PAD			AA1011808153		KG	2.370	
							TK WDT LEN ID OD DIM1			AA10108				
							25 140 470							
			00001	00001	TO DETAIL	012	PAD			AA1011808170		KG	18.440	
							TK WDT LEN ID OD DIM1			AA10108				
							25 220 368							

DISTRIBUTION DETAILS					REV NO.   3		PREP BY		CKD BY		APPD BY		DATE   25 OCT 2017	
TRE	TRM	TRX	FTM		PREP BY		CKD BY		APPD BY		DATE			
1	3	1	6		SKU		AS		AKP		06 JUL 2017		DRG NO   14527000078	
													SHT 1    OF 2	



ORG. NO. 3-499-70-00029



NOTE TO SHOP:—

1. FOOT IS TO BE SHOT BLASTED AND  
PAINTED AS PER AND FRAME ASSY.  
2. FOR DELINK BOM. REFER COMP. DRG.  
NO 34997000029 SH.T.1

NOTE TO D/MAN :-

1. WT OF VARGO = 2 [0.0047 (6A+B) + 4.5] KG.  
2. CALL DIMENSIONS A & B ON E/F. ASSY  
• DIM A = (MIN CORE BUILT UP)  $\times 2$  - 44 932  
DIM B = A - 130  
(C1 SEP \* Tlc X2)

(C1 SEP\* TLEX2)

[illegible][illegible]

BILL OF MATERIAL	DEP NO	NO OF IT    VAR		TYPE OF PRODUCT	WORK ORDER  TRANSFORMER	DRG NO  34997000029	CORE CODE  65170708	REV  04		
	406	4	1	STD	TITLE  CORE CLAMP FOOT				FOOT ASSY.	
									SHT NO 1	OF 1

DU	VAR03	VAR02	VAR01	VAR00	REMARKS	IT NO	DESCRIPTION	DRAWING NO	IT.	MATCODE	A / C	UT	UNIT	WT	G / S
							MAT SIZE	DETAILS	VAR	MAT SPEC			QTY		ZONE
				00002	FOR WT. SEE NOTE TO D'MAN	001	PLATE 20 TK X 180 X "A" LG TK        WDT        LEN        ID        OD        DIM1			AA1011808137		KG			
										AA10108					
				00002	FOR WT. SEE NOTE TO D'MAN	002	PLATE 10 TK X 58 X "B" LG. TK        WDT        LEN        ID        OD        DIM1			AA1011808072		KG			
										AA10108					
				00002	TO DETAIL FOR WT. SEE NOTE TO D'MAN	003	PLATE TK        WDT        LEN        ID        OD        DIM1			AA1011808137		KG			
							20        150        180			AA10108					
				00004	FOR WT. SEE NOTE TO D'MAN	004	STOPPER TK        WDT        LEN        ID        OD        DIM1		000	AA1010308483		KG		0.000	
							6        25        25		00	AA10108					

0

DISTRIBUTION DETAILS						REV NO. 4		PREP BY		CKD BY		APPD BY		DATE 17 JUL 2004	
TRM	TRX	QC	FTM	TRE		PREP BY		CKD BY		APPD BY		DATE			
3	1	0	6	1		RKS		SDC		MLR		15 NOV 1981		DRG NO 34997000029	
														SHT 1    OF 1	









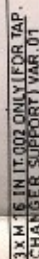
BILL OF MATERIAL	DEP NO	NO OF IT    VAR		TYPE OF PRODUCT	WORK ORDER TRANSFORMER	DRG NO 34997000030	CORE CODE 65370809	REV 04				
	406	5	3	STD	TITLE YOKE CLAMP END TIE PLATE				END TIE PLATE		SHT NO 1	OF 1

DU	VAR03	VAR02	VAR01	VAR00	REMARKS	IT NO	DESCRIPTION	DRAWING NO	IT.	MATCODE	A / C	UT	UNIT	WT	G / S
							MAT SIZE	DETAILS	VAR	MAT SPEC			QTY		ZONE
				00001		001	TIE PLATE 28TK X W X L TK        WDT        LEN        ID        OD        DIM1			AA1011808161				0.000	
										AA10108					
			00001			002	TIE PLATE 28TK X W X L TK        WDT        LEN        ID        OD        DIM1			AA1011808161				0.000	
										AA10108					
		00002				003	LOCKING PLATE TK        WDT        LEN        ID        OD        DIM1			AA1011713110				0.000	
							2        40        47			AA10113					
		00004	00004	00004	CUT FROM 40 WIDTH.	004	STOPPER TK        WDT        LEN        ID        OD        DIM1			AA1010308998					
							6        25        40			AA10108					
		00001				005	TIE PLATE 28TK X W X L TK        WDT        LEN        ID        OD        DIM1		000	AA1011808161				0.000	
									00	AA10108					

0        0        0

DISTRIBUTION DETAILS						REV NO. 4		PREP BY		CKD BY		APPD BY		DATE 27 OCT 2001	
TRM	TRX	QC	FTM	TRE		PREP BY		CKD BY		APPD BY		DATE			
3	1	0	0	1		RKS		KMB		MLR		29 OCT 2001		DRG NO 34997000030	
														SHT 1    OF 1	

COMPANY.



1. SPECIFY DIMENSIONS W, L, D & VART.  
NO. ON CORE AND END FRAME ASSY.

2. 1 = MIN. CORE THK + 20 = 2 X TK OF CLAMP PLATE.  
3. W FOR VAR. 00 = HORIZONTAL CLAMP PLATE WIDTH.  
4. VAR. 00 & 02 FOR BOTTOM YOKE CLAMP END TIE PLATE.  
5. VAR. 01 FOR TOP YOKE CLAMP END TIE PLATE.  
6. WT. OF VAR. 00 IN Kg = WXLX 0.00022 = 0.72 Kg.  
7. WT. OF VAR. 01 IN Kg = WXLX 0.00022 = 0.35 Kg.  
8. WT. OF VAR. 02 IN Kg = WXLX 0.00022 = 1.26 Kg.

1. ALL SHARP CORNERS ARE TO BE REMOVED.  
2. ALL STEEL PARTS ARE TO BE SHOT BLASTED AND PAINTED AS PER STD. SHEET DRAWING-NO. TR 100 SL NO. 2.

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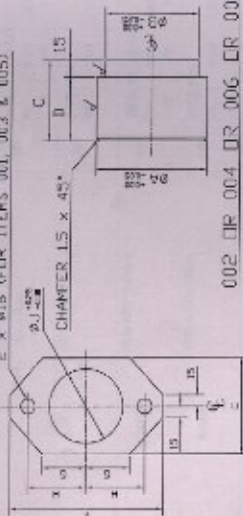
INVENTORY NO.	DATE		NOTES:-		STATUS OF DRAWING		NAME OF CUSTOMER / PROJECT		 भारत भारी इलेक्ट्रिकल्स लिमिटेड योपाल BHARAT HEAVY ELECTRICALS LTD. BHOPAL		PART NO. 001 QTY 1 UNIT 1	"R" NAME RKS QTY 1 UNIT 1	"R" DATE 30-12-82 QTY 1 UNIT 1	"R" NO. 001 QTY 1 UNIT 1	"R" NO. 001 QTY 1 UNIT 1
	04 23-04		1. ALL SHARP CORNERS ARE TO BE REMOVED. 2. ALL STEEL PARTS ARE TO BE SHOT BLASTED AND PAINTED AS PER STD. SHEET DRAWING- NO. TR 10005-R TRM - 3 FBM - 6 SL NO. 2.		DISTRIBUTION OF PRINTS TRC - 1 TRM - 3 FBM - 6	DRG. RETRACED.	Yoke CLAMP END TIE PLATE	3 499 70 00030	3 499 70 00030	3 499 70 00030	3 499 70 00030				

A3 S11



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DRAWING NO. 3 499 70 00032

2 x 600 (FOR ITEMS 007 & 008)  
2 x 615 (FOR ITEMS 001, 003 & 005)

002 DR 004 DR 006 DR 008 DR 010

001 DR 003 DR 005 DR 007 DR 009

002 DR 004 DR 006  
003 DR 003 DR 005  
007 DR 009

001 DR 003 DR 005

007 DR 009

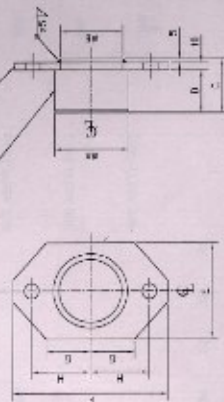


TABLE OF DIMENSIONS

ITEM NOS.	E	F	G	H	W	H	W
001	60	130	50	45	840.5		
003	70	140	50	50	850.5		
005	80	150	50	55	857.5		
007	110	190	60	72	885.5		
009	130	210	60	80	910.5		

TABLE OF DIMENSIONS

ITEM NOS.	W	H	W
002	49.53	4000	
004	59.53	5000	
006	66.53	5700	
008	94.53	8500	
010	105.53	10020	

NOTES TO DIMAN -

1. CALL DIMM C & D ON M.I.D. OR ASSY. DRG.
2. DIMM D = YORE CLAMP WEB THK. + CLAMP PLATE THK. INCLUDING PAD THK. IF PROVIDED.
3. DIMM G = E + 15

NOTES TO SHOP -

1. ALL SHARP CORNERS ARE TO BE ROUNDED OFF.
2. ASSY. TO BE SHET BLASTED & PAINTED AS PER ASSY. DRG.
3. FIT DIMENSIONS C & D REFER M.I.D. OR ASSY. DRG.

FOR BOM. REFER DE - LINKED BOM. DRG. NO. 3 499 70 00032

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## ADDITIONAL INFORMATION

STD.

STATUS OF DRAWING

DISTRIBUTION OF PRINTS

REV. DATE

REV. DATE

REV. DATE

REV. DATE

REV. DATE

REV. DATE

REV. DATE

REV. DATE

REV. DATE

REV. DATE

REV. DATE

## TRANSFORMER

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

BOM. NO.

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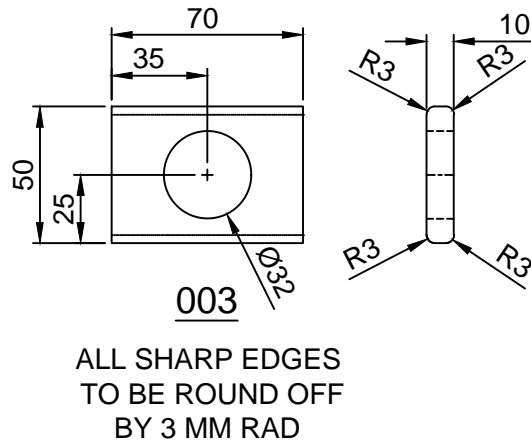
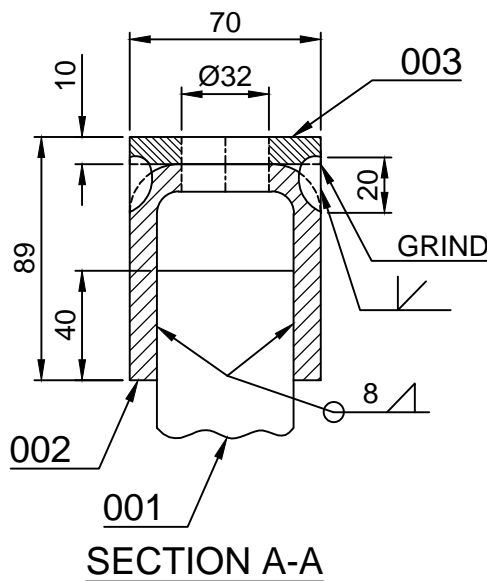
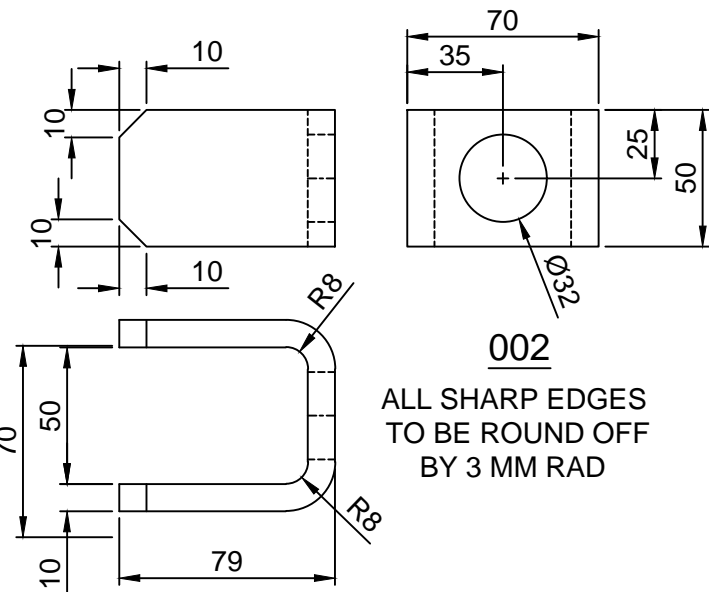
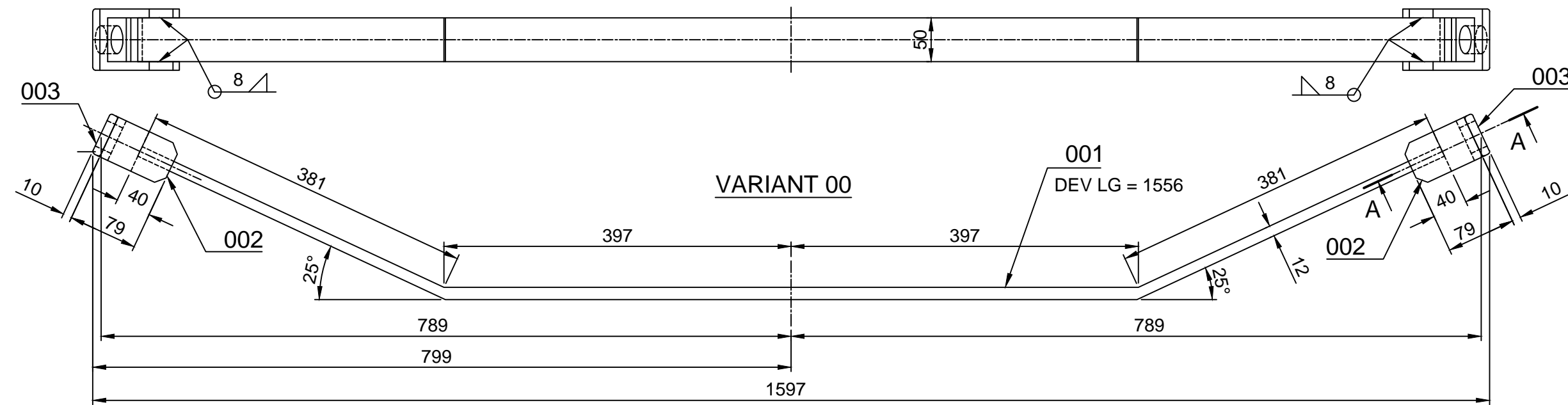
3. 499 70 00032



FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

3 452 70 00275



नोट्स :

- वी ओ एम के लिए संलग्न शीट आरेख क्रमांक 3 452 70 00275 देखें ।
- वेल्ड स्टील की थ्रू स्ट्रेंथ 320 से 340 एम पी ए के बराबर या अधिक होना चाहिए ।
- सभी शार्प एजेंस को रेडियस 3 से राउंड ऑफ करना है ।
- सभी वेल्ड 8 लगातार होना है, यदि अलग से दर्शाया ना गया हो तो
- सभी वेल्डिंग ज्वाइंट्स का डी पी टेस्ट होना है ।
- सभी स्टील पार्ट्स शॉट ब्लास्ट होना है एवं पेन्ट होना है, पेन्टिंग निर्देश हेतु मानक शीट टी आर 10005पी सरल क्रमांक 22 देखें ।
- वेल्ड में टॉलरेन्स के लिए मानक शीट टी आर 10099टी देखें ।

एडिशनल इन्फॉर्मेशन कार्य आदेश 65001 ए 512 01 स्टेटस ऑफ ड्राईंग "यू"		उत्पाद का प्रकार या ग्राहक एवं परियोजना का नाम		275 एम व्ही ए 420 केवी 1 फेज जी टी मेसर्स डी ए एन जी ई डी सी ओ	
डिस्ट्रिब्यूशन ऑफ प्रिन्ट्स टी आर ई 1, टी आर एम 3, एफ टी एम 0		भारत हेवी इलेक्ट्रिकल्स लिमिटेड भोपाल BHARAT HEAVY ELECTRICALS LTD. BHOPAL		नाम NAME एस के उमरेटे	हस्ताक्षर SIGN 25.06.17
रिवीजन 01		दिनांक 17.08.17	वनाया जांचा	अनुमोदन ए के पी / नीतेज	रिवीजन 01
डिप्ट कोड 001		विभाग टी आर ई	SCALE अनुपात 1:1	वजन 9.44	आयटम क्रमांक 013
शीट / TITLE इनर वेल्ड नॉन मैग्नेटिक स्टेनलेस स्टील		आयटम क्रमांक 3 452 70 00274		आयटम 01	
शीट क्रमांक SHEET NO.		01		पृष्ठों की संख्या NO. OF SHEETS	
01		01		01	



FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

3 452 70 00276

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5

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BILL OF MATERIAL				DEP NO	NO OF IT	VAR	TYPE OF PRODUCT	WORK ORDER		DRG NO	CORE CODE		REV		
				406	5	1		TRANSFORMER	STD	24998100017	65381228	02			
								TITLE				SHT NO			
								CLAMPING DETAILS				CLAMP H.TS		1 OF 1	

DU	VAR03	VAR02	VAR01	VAR00	REMARKS	IT NO	DESCRIPTION						DRAWING NO	IT.	MATCODE	A / C	UT	UNIT WT	G / S
							MAT SIZE						DETAILS	VAR	MAT SPEC			QTY	ZONE
				00001	M/C TO DETAIL	001	BAR (HTS)								BP9086055419			3.860	
							TK	WDT	LEN	ID	OD	DIM1			AA10501				
									326		125								
				00001	M/C ALL OVER	002	NUT (HTS)								BP9016055428			1.600	
							TK	WDT	LEN	ID	OD	DIM1			AA10501				
									70		140								
				00001	SEE NOTE TO D/MAN	003	GUIDE PIN (HTS)								AA1050201280			7.200	
					TURN TO DETAIL		TK	WDT	LEN	ID	OD	DIM1			AA10501				
									105		125								
				00001	TO DETAIL	004	BOLT (HTS)								BP9016055436			2.560	
							TK	WDT	LEN	ID	OD	DIM1			AA10501				
									185										
				00001	MACHIN TO DETAIL	005	SPHERICAL WASHER								BP9016055444			0.170	
							TK	WDT	LEN	ID	OD	DIM1			AA10501				
									15		80								

15.39

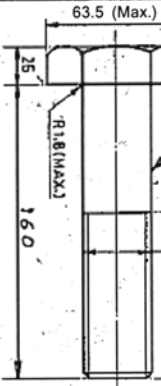
DISTRIBUTION DETAILS					REV NO. 2		PREP BY		CKD BY		APPD BY		DATE 23 AUG 2017	
TRE	TRM	TRX	JHS		PREP BY		CKD BY		APPD BY		DATE			
1	3	1	1		YGV				BSB		06 JUL 1991		DRG NO 24998100017	
													SHT 1 OF 1	

INVENTORY NO.

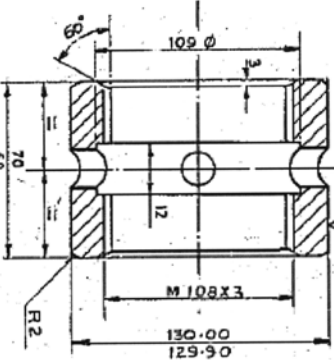
SIGN. & DATE

REF. DRG. NO.

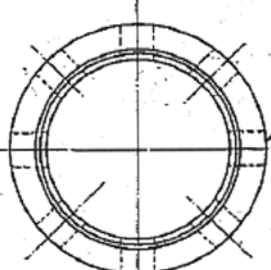
1100018 6672 ON DRG



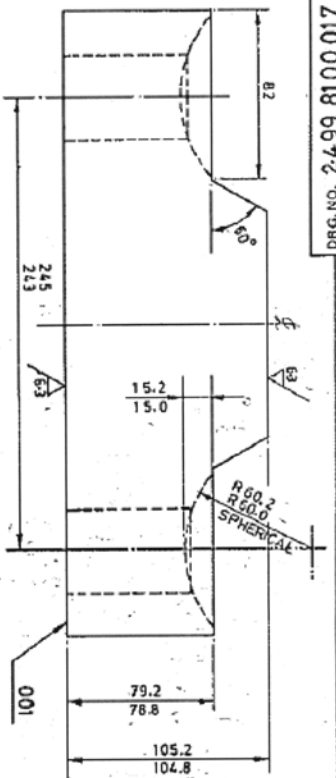
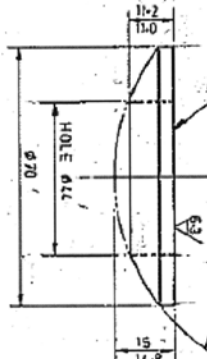
SECTION A-A



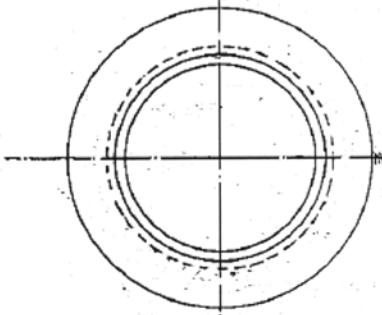
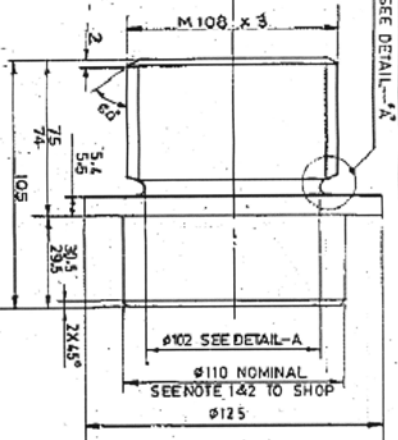
8 HOLES Ø10.5  
EQUALLY SPACED



005



001



DETAIL-A

NOTES TO SHOP (FOR ITEM-003):

1. MACHINED ALL OVER EXCEPT BAR SIZE Ø110.
2. THIS ITEM CAN BE FINISHED FULLY EXCEPT M/C OPERATION OF Ø10x30.5/25.5 LG. STEM. THIS STEM IS TO BE FINISHED BY M/C OPERATION AFTER M/C OF HOLES IN END FRAME/CLAMP PLATE & SIZE ACHIEVED. THE TOLERANCES ON Ø10 PIN TO BE CALCULATED AS FOLLOWS:- BY FBW/TRM
- MAX. PIN DIA = MIN. HOLE ACHIEVED - 0.072
- MIN. PIN DIA = MAX HOLE ACHIEVED - 0.213
- THE MIN & MAX LIMITS OF SIZE HOLE TO BE WITHIN HOLE Ø0.007.

NOTES TO D/MAN:

1. MACHINING OF Ø110 PIN IN TOL. IS TO BE DECIDED BY SHOPS AFTER THE RESPECTIVE HOLE IN THE CLAMP PLATE/END FRAME IS ACHIEVED ACCORDINGLY NOTE TO SHOP NO.2 HAS BEEN GIVEN TO DECIDE THE MAX. MIN. LIMITS ON THIS PIN DIA.
2. ITEM 001 OF THIS DRG. REPLACES DRG. D6279570.
- ITEM 002 OF THIS DRG. REPLACES DRG. D 6279571.
- ITEM 003 OF THIS DRG. REPLACES DRG. D 6279566.
- ITEM 004 OF THIS DRG. REPLACES DRG. B 6401880.
- ITEM 005 OF THIS DRG. REPLACES DRG. B 6401878.

FOR DE-LINKED BOM REF. COMP. DRG. BOM-1499 B1 00017.

REV.	DATE	BY	CHKD.	APPD.	DESCRIPTION	QTY.	UNIT	WGT.	VAL.	REMARKS
001	11/07/2013	27/03			SPHERICAL WASHER	88	916055449	AA1050201248	0.47	
002	11/07/2013	27/03			BOLT (HIS)	88	916055449	AA10501	2.56	
003	11/07/2013	27/03			GUIDE PIN (HIS)	88	916055449	AA1050201280	7.2	
004	11/07/2013	27/03			NUT (HIS)	88	916055449	AA10501	1.6	
005	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
006	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
007	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
008	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
009	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
010	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
011	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
012	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
013	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
014	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
015	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
016	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
017	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
018	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
019	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	
020	11/07/2013	27/03			CLAMP PLATE (HIS)	88	916055449	AA10501	3.86	

ADDITIONAL INFORMATION

NAME OF CUSTOMER / PROJECT

BHOPAL

DATE

14/998100006

2 499 8100017

STATUS OF DRAWING

CLAMPING DETAILS

BHOPAL

DATE

14/998100006

2 499 8100017

REVISION

CLAMPING DETAILS

BHOPAL

DATE

14/998100006

2 499 8100017

REVISION

CLAMPING DETAILS

BHOPAL

DATE

14/998100006

2 499 8100017

REVISION

CLAMPING DETAILS

BHOPAL

DATE

14/998100006

2 499 8100017

BILL OF MATERIAL	DEP NO	NO OF IT    VAR		TYPE OF PRODUCT	WORK ORDER 65001A51201	DRG NO 34527000279	CORE CODE 65170255	REV 00	
	406	3	0	275 MVA 1 PH TANGEDCO	TITLE BRACKET    BOLTING DEVICE				SHT NO 1    OF 1

DU	VAR03	VAR02	VAR01	VAR00	REMARKS	IT NO	DESCRIPTION						DRAWING NO	IT.	MATCODE	A / C	UT	UNIT	WT	G / S
							MAT SIZE						DETAILS	VAR	MAT SPEC			QTY	ZONE	
				00002	TO DETAIL	001	PLATE								AA1011808137		KG	2.358		
							TK	WDT	LEN	ID	OD	DIM1								
							20	100	150											
				00001	TO DETAIL	002	PLATE								AA1011808137		KG	35.000		
							TK	WDT	LEN	ID	OD	DIM1								
							20	150	1486											
				00002	TO DETAIL	003	PLATE								AA1011808137		KG	18.680		
							TK	WDT	LEN	ID	OD	DIM1								
							20	80	1486											

77.076

DISTRIBUTION DETAILS				REV NO. 0	PREP BY		CKD BY		APPD BY		DATE
TRE	TRM	TRX		PREP BY	CKD BY	APPD BY		DATE			
1	3	1		SKU	AS	AKP		19 JUL 2017			
										DRG NO 34527000279	
										SHT 1 OF 1	

(ALL DIMENSIONS ARE IN mm)

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1486

2 होल्स व्यास 40 के

002  
20 मोटार्ड

150

1486

**2 होल्स व्यास 40 के**

003  
20 मोटार्ड

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04

**20 मोटाई**

नोट्स :

- 1 वी ओ एम के लिए संलग्न शीट आरेख क्रमांक **3 452 70 00279** देखें .
- 2 सभी वेल्ड  $\nabla$  8 लगातार होना है, यदि अलग से दर्शाया ना गया हो तो
- 3 सभी वेल्डिंग ज्वाइन्ट्स का डी पी टेस्ट होना हैं .
- 4 सभी स्टील पार्ड्स शॉट ब्लास्ट होना है एवं पेन्ट होना है, पेन्टिंग निर्देश हेतु मानक शीट टी आर **10005**पी सरल क्रमांक **22** देखें
- 5 ब्रेकेट मे टॉलरेन्स के लिए मानक शीट टी आर **10099**टी देखें .

REV	DATE	ALTERED	
		CHECKED	
		APPROVED	



REV	DATE	ALTERED	
		CHECKED	
		APPROVED	

ZONE	

REV	DATE	ALTERED	
		CHECKED	
		APPROVED	




ZONE

 भारत हेवी इलेक्ट्रिकल्स लिमिटेड  
भोपाल  
BHARAT HEAVY ELECTRICALS LTD.  
BHOPAL

विभाग टीजर DEPT TRE			SCALE अनुपात	भार WGT
कोड CODE 406			1:1	77

शीर्षक / TITLE

ब्रेकेट

नाम NAME	हस्ता SIGN	दि. DATE	वेरिफ संख्या NO. OF VAR
एम् के उमरेटे		19.07.17	01
अरुण साहू		20.07.17	
ए के पी / नीतेश		27.07.17	

क.ग्रा. IT(kg) 00	उसे. डाई ग का संदर्भ REF TO ASSY DRG 0 452 70 00027	मद कं. ITEM NO. 010	मद सं. NO.OF ITEM 4
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DRAWING NO. <b>3 452 70 00279</b>		पुन. REV <b>00</b>
पृष्ठ क्र. SHT NO. 01	पृष्ठों की सं. NO. OF SHT. 01	

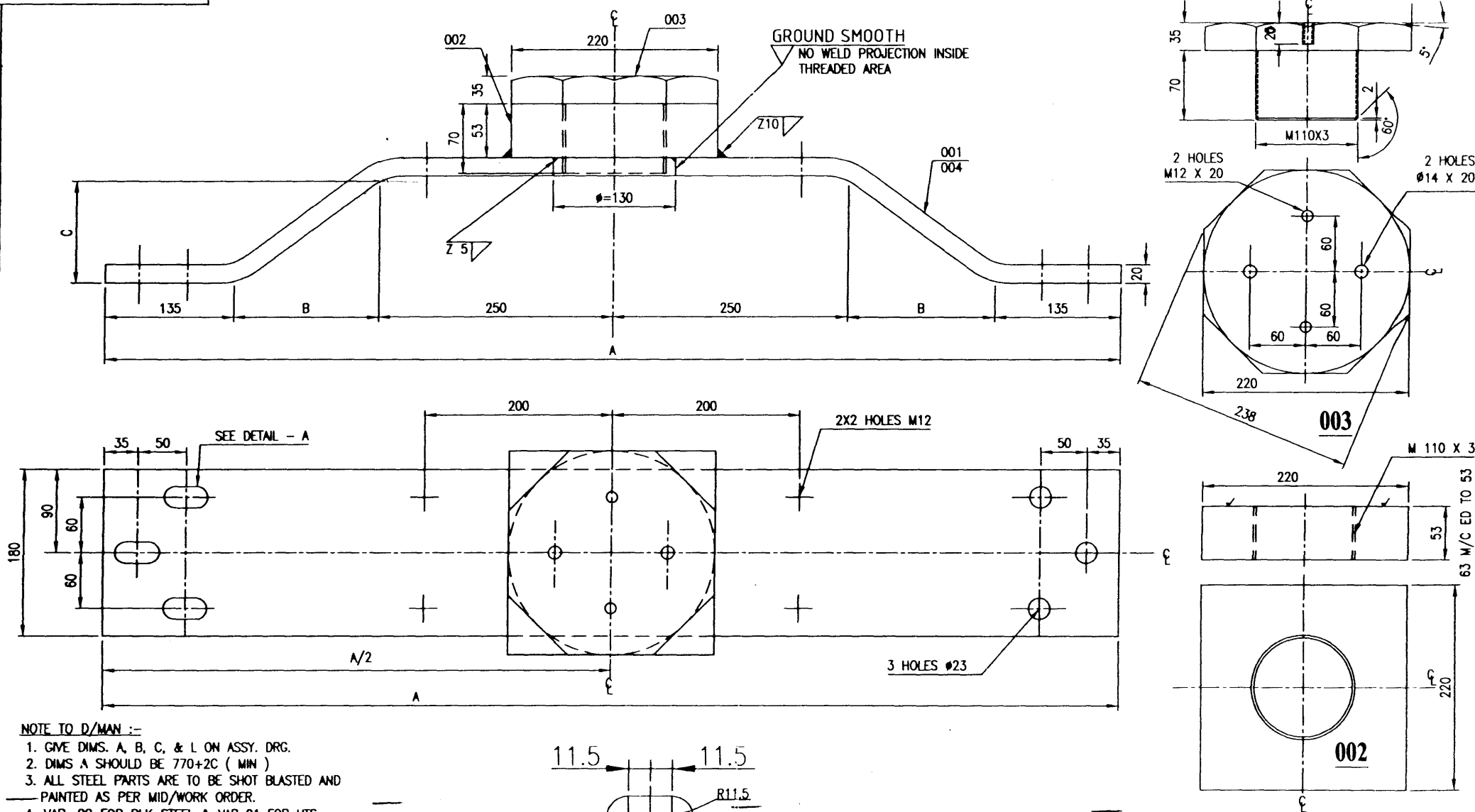
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ENTRANCE NO. 1012007  
REV. DATE 25/10/10  
BOM 3 499 70 00080

FIRST ANGLE PROJECTION

DRG. NO. 3 499 70 00080

(ALL DIMENSIONS ARE IN mm)

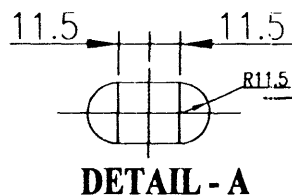


**NOTE TO D/MAN :-**

1. GIVE DIMS. A, B, C, & L ON ASSY. DRG.
2. DIMS A SHOULD BE  $770+2C$  (MIN)
3. ALL STEEL PARTS ARE TO BE SHOT BLASTED AND PAINTED AS PER MID/WORK ORDER.
4. VAR. 00 FOR BLK STEEL & VAR 01 FOR HTS.
5. FOR DELINKED BOM REFER DRG. NO. BOM 3 499 70 00080.
6. WEIGHT OF IT. 001 IS  $[0.028296 \times L - 2]$  KG.  
WT OF VAR 00 OR 01 =  $[34.7 + (0.028 \times L) - 2]$  KG.

**NOTE TO SHOP :-**

1. DRILL & TAP OF M110 ON ITEM 002 SHALL BE DONE BEFORE WELDING TO ITEM 001/004
2. MATCHING & MOVEMENT OF THREADS OF ITEM 002 & 003 TO BE ENSURED
3. ALL SHARP CORNERS TO BE ROUNDED OFF.



REV	DATE	ALTERED	
		CHECKED	
		APPROVED	
ZONE			

DATE	ALTERED	S.K.G.	
25/10/10	CHECKED	A.D.	
	APPROVED	S.C.B.	
ITEM 2 MODIFIED & ITEM 3 ADDED.			

ADDITIONAL INFORMATION									
STANDARD									
STATUS OF DRAWING									
V									
DISTRIBUTION OF PRINTS									
TRE		TRM		TRX					
1		3		1					
REV.		DATE		ALTERED		G.F.D.		Sd.	
01		17-01-2003		CHG. CKD.		AD.		Sd.	
				APPROVED		S.C.B.		Sd.	
DRG. COMPUTERISED, IT									
002.003 MODIFIED.									

ADDITIONAL INFORMATION		STATUS OF DRAWING		DISTRIBUTION OF PRINTS		REVISION		SCALE		WEIGHT		DRAWING NO.		REV.	
BOM 3 499 70 00080		17		17-01-2003		01		1:1		0.001		3 499 70 000 80		02	

DRG.NO. 34997000093

NOTES:-

- 1- BEFORE SHIPPING CORE CLAMPING STRUCTURE FROM FTM/ANCILLARY INSPECTION SHOULD BE DONE TO MAKE SURE THAT THE OVERALL DIMENSIONS ARE NOT EXCEEDING THE DIMENSIONS GIVEN ON ASSEMBLY.
- 2- FOR WELDING DETAILS REFER DRG. 34997000095. ALL OTHER WELDS TO BE 28X CONTINUOUS UNLESS OTHERWISE SPECIFIED.
- 3- BUTT WELD IF PROVIDED IN DRAWING TO BE TESTED BY ULTRASONIC TESTING AS PER BP0850176 AND ACCEPTANCE TO BE DONE AS PER AA622101, GRADE-3 AND ALL OTHER WELD TO BE DP TESTED.
- 4- TOLERANCE IN CLAMPING STRUCTURE IS AS PER TR101901 AND TR101901.
5. SLOTS GIVEN IN CORE CLAMP PLATE IS TO BE DONE BY MACHINING PROCESS ONLY (WATER JET , MILLING OPERATION ETC) .
- 6- SHARP EDGES SHOULD BE REMOVED PROPERLY. MINIMUM RADIUS OF CHAMFERING TO BE R3.
- 7- ALL THE HOLES IN THE CLAMP PLATE AND END FRAME MUST BE DONE BY BORING PROCESS ONLY. FLAME CUT IS NOT ALLOWED.
- 8- DURING MATCHING OF CLAMPING STRUCTURE, CLAMP PLATE AND END FRAME SHOULD HAVE COMPLETE SURFACE CONTACT AT PIN POSITION.
- 9- INSIDE AREA OF HOLE IN CLAMP PLATE FOR LOCKING PIN IS NOT TO BE PAINTED.
- 10- ALL PLATES EQUAL TO 16 mm THICKNESS AND ABOVE SHALL BE ULTRASONIC TESTED AS PER BHEL SPEC. AA0850120/ASTMA4.35 . FABRICATOR HAS TO PRODUCE CO-RELATED TEST CERTIFICATE FROM MILL OR TO CARRY OUT UT TEST AT THEIR WORKS BY BHEL APPROVED NDT AGENCY. BHEL/TPIA SHALL RECORD REVIEW THE TEST CERTIFICATES.
- 11- DIMENSION OF PIN PAD ASSEMBLY SHOULD BE MEASURED AND CHECKED. APPROVAL FROM TRE IS REQUIRED.
- 12- CLAMPING STRUCTURE AND END FRAME TO BE PAINTED AS PER TR100005P SERIAL NO. 22 CALLED ON RESPECTIVE DRAWING/WORK ORDER. ADHESION OF PAINT IS VERY CRITICAL AND SHALL BE CHECKED & WITNESSED BY QIX/TPIA.
- 13- SIZE OF PLATE MENTIONED IN BOM FOR DEVELOPED LENGTH OF ROLLED AND BEND ITEMS ARE BASED ON MEAN DIMENSIONS. FTM TO NOTE THAT BENDING AND ROLLING ALLOWANCES ARE TO BE ADDED IF REQUIRED.
14. FOR CUT OUTS ON END FRAME AND CLAMPING STRUCTURE, REFER RESPECTIVE DETAIL DRAWING.
- 15- MATERIAL TO AA10119 MAY BE USED AS AN ALTERNATE TO AA10108 AND VICE VERSA FOR MS PLATES.
- 16- CRITICAL DIMENSIONS MARKED AS (CR) ON THE DRAWINGS ARE IMPORTANT AND ARE TO BE ENSURED BY QC.
- 17- EARTHING PAD TOP FACE SHOULD NOT BE PAINTED DURING PAINTING OF END FRAME AND CLAMPING STRUCTURE.
- 18- MATERIAL TO SPEC AA101740 CAN BE USED AS AN ALTERNATIVE TO AA101739 AND VICE VERSA FOR STAINLESS STEEL PARTS.
- 19- FOR INSPECTION OF END FRAME CHECKLIST QC/TCB/EF/01 & QC/TCB/EF/02 AND ANY SPECIFIED CHECKLIST APPLICABLE FOR END FRAME SHALL BE FOLLOWED.
20. ALL OTHER ITEMS WHICH ARE UNAPPROACHABLE AFTER ASSEMBLY LIKE DASHPOT GUIDE ETC. SHALL BE NECESSARILY SHOT BLASTED BEFORE ASSEMBLY.
21. THREAD OF THE PIN WELDED ON HV AND LV SIDE OF CLAMP PLATE SHOULD MATCH WITH RESPECTIVE NUT. IT SHOULD BE CHECKED.
22. THREAD OF DASHPOT GUIDE SHOULD MATCH WITH RESPECTIVE LOCKING NUT. IT SHOULD BE CHECKED.

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DRG. NO. 34997000095

1. **WELDING BETWEEN END FRAME & PAD FOR END TIE ROD**

2. **WELDING BETWEEN END FRAME & PAD FOR GUIDE PIN**

3. **WELDING OF END FRAME PART & BACK COVER**

4. **WELDING BETWEEN END FRAME & LIFTING LUG**

5. **WELDING BETWEEN END FRAME & PAD FOR CROSS/LOCKING BEAM**

6. **WELDING BETWEEN END FRAME & R.S. ANGLE**

7. **WELDING BETWEEN HORIZONTAL CLAMP PLATE & AUX CLAMP PLATE**

8. **WELDING BETWEEN PLATE OF END FRAME**

9. **WELDING BETWEEN LIFTING LUG**

10. **WELDING BETWEEN HORIZONTAL CLAMP PLATE & INSULATION SUPPORT PLATE**

11. **WELDING BETWEEN END FRAME & DASHPOT GUIDE.**

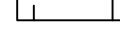
12. **WELDING BETWEEN END FRAME & DASHPOT GUIDE.**

13. **WELDING BETWEEN HORIZONTAL CLAMP PLATE & MAIN CLAMP PLATE**

14. **WELDING BETWEEN CLAMP PLATE & LOCKING PIN**

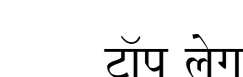
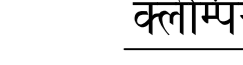
**NOTE TO SHOP :-**  
1-WELD TO BE FREE FROM BLOW HOLES, CREVICES, UNDERCUT & OTHER WELDING DEFECT.  
2-CHECK ALL THE GAPS INSIDE THE END FRAME WHERE SHOTS CAN BE ENTRAPPED. IT SHOULD BE FILLED BY WELD BEFORE WELDING COVERING PLATE.

ADDITIONAL INFORMATION					TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				
STANDARD					TRANSFORMER/REACTOR				
STATUS OF DRAWING					U				
DISTRIBUTION OF PRINTS					BHARAT HEAVY ELECTRICALS LTD. DRN				
TRE	TRX	TRM	FTM	QC	Bhopal				
1	1	3	6	1	CHD NM				
REV	DATE	ALTERED	SKG	APPROVED	APPD AKD				
01	12/09/18	CHECKED	NM	AKD	REF TO ASSY DRG				
DEPT TRE					ITEM NO.				
CODE 408					NO. OF				
TITLE					DRAWING NO.				
WELDING DETAILS FOR CORE CLAMPING STRUCTURE					34997000095				
SHT NO.					NO. OF SHT.				



Technical drawing showing the assembly of a door handle. The main part shows a cross-section of the door handle with dimensions: 200 mm total length, 10 mm hole diameter, 25 mm hole depth, 25 mm hole width, and 25 mm hole height. A detail view shows the handle being inserted into a door frame with dimensions: 013 mm, 014 mm, 028 mm, 029 mm, 030 mm, 034 mm, 039 mm, and 066 mm.

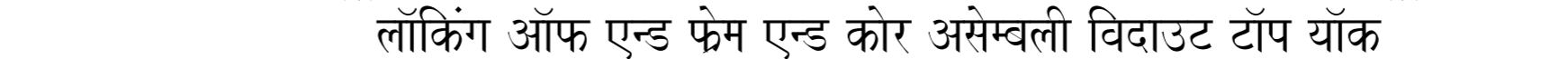
टॉप लेग

कलाम्पःकलाभ्याम्

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बैतन अंगेगो

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पिंपरी चिंच

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- 2 असम्बन्धा के बाद कोर असम्बन्धा को बीच टैर अनुसूची 10 के वी ओएस मिनिटर के लिए टेस्ट करना है ।  
 3 कोर एवं एडम्बन के बीच , कोर एवं आउटर और इनर वेन्ड के बीच ,  
 एडम्बन एवं आउटर और इनर वेन्ड के बीच एवं एडम्बन और वॉयस टेन्ड के बीच करना है ।  
 3 इनर एवं आउटर वेन्ड के लिए टाईमिंग योग के लिए टेन्ड का अनुपात करें ।  
 4 अग्रिम कनेक्तर के लिए कोन्स्ट्रक् एरिया का पेन्ड पूरी तरह में स्ट्रॉ में सभी कोन्स्ट्रक् करें ।  
 5 गमी स्टील पट्टी को टाई ब्लास्टर कान के बाद टीआर 10005 पी सरल कम्पाक 22 के अनुपात करना है ।  
 6 वीओएस में दी मात्रा केवल एक ट्रांसफॉर्मर के लिए है ।  
 7 गमी तरह की चीज एडमो को मिलाना है ।  
 8 ट्रांसफॉर्मर के डिपॉजिट के पहले टीआर क्रमांक 1 में लिए गमी टेस्ट के अतिरिक्त निम्न 10 के वी टी टेस्ट एक मिनिटर के लिए करना है ।  
 1 कोर एवं एडम्बन के बीच 2 एडम्बन एवं टेन्ड कम्पाक के बीच  
 3 गमी हाईवेन्ड को मानक टीआर टीआर 10017 पी सरल कम्पाक के 3 अनुपात सीपीपी या जेडपीपी करना है ।  
 10 गमी इन्सुलेंटिंग पेन बाई आउटर असम्बन्धा में सगाते के पहले पूरी तरह में म्यूजा होना चाहिए ।  
 10 गमी इन्सुलेंटिंग पेन बाई आउटर को 10 के वी टी टेस्ट के पहले अनुसूची में इम्पान्ट करना है ।  
 कोर असम्बन्धा को कोर एरिया में असम्बन्धा तक बिना बांधे लाने पर धुन्डाने के लिए आउटर 010 वेन्ड मात्रा 4 , आउटर 001 से 004 एवं दोनों और आउटर 067 पेन बाई जीन सरल कम्पाक के बाद ही असम्बन्धा के लिए करना है , उपायोग के बाद इसे हटाना है ।  
 13 टेन्ड वलन का उपायोग नोट 10 के स्थिति के साथ न करना है , उपायोग के बाद असम्बन्धा में इसे हटाना करना है ।  
 14 मने लिन्थ में 21 स्टील वेन्ड के अलावा 5 टेन्ड क्षमता वाले 10 जीन वेन्ड का उपायोग करना है ।  
 15 आकालनी लिन्थ में 21 स्टील वेन्ड के अलावा 5 टेन्ड क्षमता वाले 10 जीन वेन्ड का उपायोग करना है ।

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