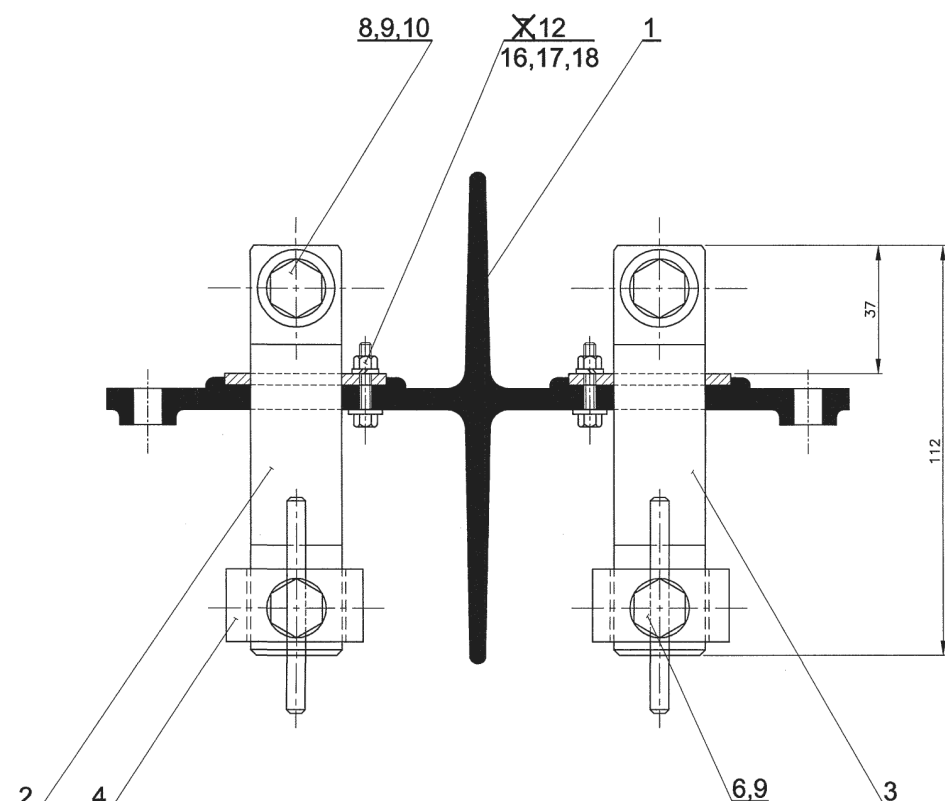
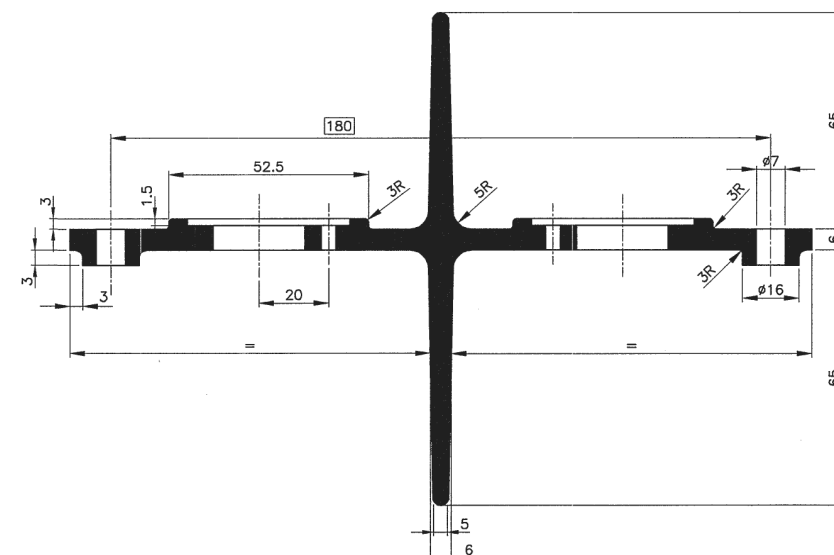


SECTION- BB



SECTION- AA

NOTE:

- * 1. FIBRE GLASS REINFORCED PLASTIC FROM SHEET MOULDING COMPOUND OF 25% GLASS CONTENT WITH SELF EXTINGUISHING GRADE HAVING THE FOLLOWING PROPERTIES.
2. TEST METHODS FOR PROPERTIES SHALL BE CONFORMING TO SPECIFICATION IS:1998-62 TRACKING INDEX & ARC RESISTANCE SHALL BE TESTED AS PER SPEC.IEC-122 ASTM D-495 RESPECTIVELY. TEST SPECIMEN SIZE FOR CONDUCTING TENSILE STRENGTH SHALL BE 100x10mm.
- ~~3. TEST FOR FLAMMABILITY SHALL BE AS CLAUSE 3 OF ICF/SPECN.NO.ICF/M/D/SPECN.014.~~
4. DIMENSIONS IS ☐ THUS SHOWN ARE STRICTLY ADHERED TO.
- ~~5. 8mm LETTERS TO BE ENGRAVED & SHALL BE FILLED WITH RED PAINT FOR 1 BLUE PAINT FOR~~
- ~~6. OUT OF 4 BOARDS FOR BG, 2 BOARDS TO HAVE THE ENGRAVINGS AS SHOWN & REMAINING 2 VICE VERSA.~~
- ~~7. OUT OF 2 BOARDS FOR MG, 1 BOARD TO HAVE THE ENGRAVINGS AS SHOWN & THE REMAINING 1 VICE VERSA.~~
8. MANUFACTURER'S CODE TO BE EMBOSSED IN ITEM-1
9. FOR EMERGENCY FEED TERMINAL WITH HYLAM BOARD REFER DRG.NO.GS-7-5-002
10. NAME PLATE INDICATING MANUFACTURER/SUPPLIER NAME WITH SL.NO, MONTH, & YEAR OF MANUFACTUR SHALL BE RIVETTED/EMBOSSSED AT SUITABLE LOCATION.
11. TEST FOR FLAMMABILITY SHALL BE AS PAGE 2 OF SPECN. ICF/ELEC-862

~~COL-I & IV FOR 24 V. DC. TL SYSTEM.~~~~COL-II FOR 110 V. DC. TL. SYSTEM (END WALL)~~~~COL-III FOR 110 V. DC (BAT. CHARGING SOCKET)~~

④	08/04	③	8/91
DRAWING REDRAWN IN AUTOCAD.		COL.V SPECIFIED FOR MG/WGSCWAC AND RA COACHES.	
Sd/- SSE/D	Sd/- AEE/D	Sd/- SD/ELE	

ALTERATIONS	
(h)	9/01 NOTE-2 MODIFIED. REF. LT. NO. CMT/F-5 DT.13.9.01
Sd/- SSE/D	Sd/- AEE/L
(i)	6/2002 NOTE-10 ADDED
Sd/- SSE/D	Sd/- AEE/L
(k)	05/2009 NOTE-11 ADDED NOTE-3 DELETED
SSE/D	Dy.CEE/L

SL.NO.	PROPERTY	UNITS	SPECIFIC VALUE
1.	SPECIFIC GRAVITY	—	1.75 TO 2.0
2.	TENSILE STRENGTH	MPa	60 (min)
3.	CROSS BREAKING STRENGTH	MPa	150 (min)
4.	COMPRESSIVE STRENGTH	MPa	150 (min)
5.	IZOD IMPACT STRENGTH	JOULE/METERS	450 (min)
6.	WATER ABSORPTION	%	0.2 (max)
7.	INSULATION RESISTANCE AFTER IMMERSION IN WATER	Meg. OHMS	1000
8.	ELECTRICAL STRENGTH	kv/mm	11

	-	-	-	-	2	HEX.NUT M5	IS:1364-83 P-3IT-1		GALVD
	-	-	-	-	2	SPRING WASHER M5	IS:3063-72 T-1,TY-B	IS:4072-75 Gr-3	GALVD
	-	-	-	-	2	HEX.HD.SCREW M5x20	IS:1364-83 P-2,TY-1&2		GALVD
	2	-	-	-	-	CRIMPING SOCKET	ICE/SK-7-2-166		TYPE W7/39
				3		CRIMPING SOCKET	IRS.E-301 CSG-2		FOR 7/2.5 ALU CABLE
				3		CRIMPING SOCKET	IRS.E-301 CSG-1		FOR 7/1.7 ALU CABLE
2	2	2	2	2	2	PLAIN WASHER 5.5	IS:2016-67 T.2 TY-A	IS:737-74 31000 H ₂	
2	2	2	2	2	2	PLAIN WASHER 9	IS:2016-67 T.2 TY-A	IS:1977-75 Fe 310.0	GALVD
2	2	2	2	2	2	PLAIN WASHER 11	IS:2016-67 T.2 TY-A	IS:1977-75 Fe 310.0	GALVD
4	4	4	4	4	4	SPRING WASHER M10	IS:3063-72 T.1 TY.B	IS:4072-75 Gr.3	GALVD
2	2	2	2	2	2	HEX.HD.SCREW M10x25	IS:1363-67 T.2 & 5		GALVD
2	2	2	2	2	2	SNAPE HD.RIVET #5x16	IS:2155-62 T.2, FIG-1	IS:1148-73	
2	2	2	2	2	2	SPECIAL SCREW	GS-7-5-003		COL III
	2	-	-	-	3	CRIMPING SOCKET	IRS.F.301 CSG-4		FDR 19/2-14 AL. CABLE
2	2	2	2	2	2	CLAMP	GS-7-5-003		ITEM-4
	1	1	1	1	1	TERMINAL POST	GS-7-5-003		COL-II
	1	1	1	1	1	TERMINAL POST	GS-7-5-003		COL-I
	1	1	1	1	1	F.R.P BASE			*

NO. OFF		DESCRIPTION & DIMENSIONS		ITEM	REF.DRGS.	MAT. SPEC.	WEIGHT/UNIT	REMARKS
VI		GROUP:— 7-5					SUPERSEDED BY:	
VI		GROUP:— 7-5					SUPERSEDES:GS-7-5-004 ALT. 1.	
VI		GROUP:— 7-5					SCALE	
VI		GROUP:— 7-5					SSE/B	
VI		GROUP:— 7-5					CHD	
VI		GROUP:— 7-5					ALT	
VI		GROUP:— 7-5					DRN	
VI		GROUP:— 7-5					V.D.JAGADISH	
VI		GROUP:— 7-5					ALT.	
VI		GROUP:— 7-5					h	
VI		GROUP:— 7-5					j	
VI		GROUP:— 7-5					k	
VI		GROUP:— 7-5					INTEGRAL COACH FACTORY CHENNAI-38	
VI		GROUP:— 7-5					GS-7-5-004	

2299002020230/CE/MD/001gn/DMW/PTA

SPECIFICATION No. : ICF/ELEC/862

NO. OF PAGES : 1

SPECIFICATION FOR
FIBRE GLASS REINFORCED PLASTIC
MANUFACTURED FROM
SHEET MOULDING COMPOUND (SMC) PROCESS

ISSUED BY
INTEGRAL COACH FACTORY, CHENNAI - 38

CORRECTION SLIP NO.	-					
REVISION	01					
PREPARED BY :	SMSR SSE/D					
APPROVED BY :	SPV CDE/E					
DATE :	10.4.14					

Subject; Specification for Fibre glass reinforced plastic manufactured from sheet moulding compound (SMC) process

Date: 10. 4.14

Page 1 of 1

The mechanical and electrical properties of fibre glass reinforced plastics manufactured from sheet moulding compound (SMC) with 25% TO 35% glass content and self extinguishing grade shall conform to following requirements:

SN	Property	Units	Specific values	Method of test	Prototype test	Acceptance Test	Routine test
1	Specific gravity		1.75 to 2	BS:2782(OR) IS: 1998-1962	Y/N	Y/N	Y/N
2	Tensile strength	Mpa	60(min)	-do-	Y	N	N
3	Cross breaking strength(flexural strength)	-do-	150(min)	-do-	Y	N	N
4	Compressive strength	-do-	150 (min)	-do-	Y	N	N
5	Izod impact strength	Joules per meter	450 (min)	-do-	Y	N	N
6	Water absorption	%	0.2 (max)	-do-	Y	N	N
7	Dielectric strength	KV/mm	11	-do-	Y	Y	N
8	Tracking index	Volts	>1000	IEC: 112	Y	N	N
9	Arc resistance	Sec.	180	ASTM-D-495	Y	N	N
10	Visual test			As per drg.	Y	Y	Y
11	Dimensional verification			As per drg.	Y	Y	Y
12	Flammability	Sec.	Self extinguishing	as given below	Y	Y	N

The material shall be tested for resistance to spread of flame in the manner given below:

The piece of material measuring about 150 x 25mm shall be subjected to the luminous bat swing flame, preferably supplied by Bunsen burner. The specimen shall be held with the flat side up at an angle of 45 deg. to the horizontal. The flame shall be 25mm in width across the tips.

The flame shall be applied to the specimen at the lower end for 30 seconds and removed for a similar period and then applied again to the same and for a second period of 30 seconds and then again removed. This test shall be carried out with the decorative surface facing upward as also the decorative surface facing downwards.

Should the specimen get ignited, it shall not continue to burn for more than 50 seconds after the flame has been finally removed.

		
PREPARED BY	VERIFIED BY	APPROVED BY

229900202023ED/CB/MD/001gn/DMW/PTA

SPECIFICATION No. : ICF/ELEC/862

NO. OF PAGES : 1

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FIBRE GLASS REINFORCED PLASTIC
MANUFACTURED FROM
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5	Izod impact strength	Joules per meter	450 (min)	-do-	Y	N	N
6	Water absorption	%	0.2 (max)	-do-	Y	N	N
7	Dielectric strength	KV/mm	11	-do-	Y	Y	N
8	Tracking index	Volts	>1000	IEC: 112	Y	N	N
9	Arc resistance	Sec.	180	ASTM-D-495	Y	N	N
10	Visual test			As per drg.	Y	Y	Y
11	Dimensional verification			As per drg.	Y	Y	Y
12	Flammability	Sec.	Self extinguishing	as given below	Y	Y	N

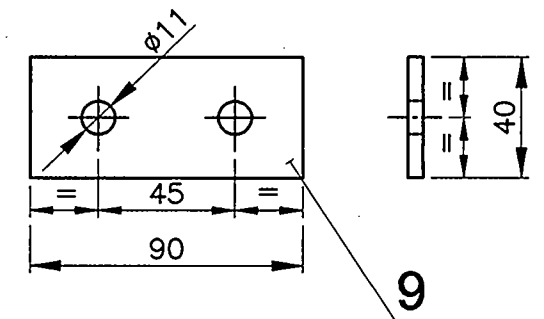
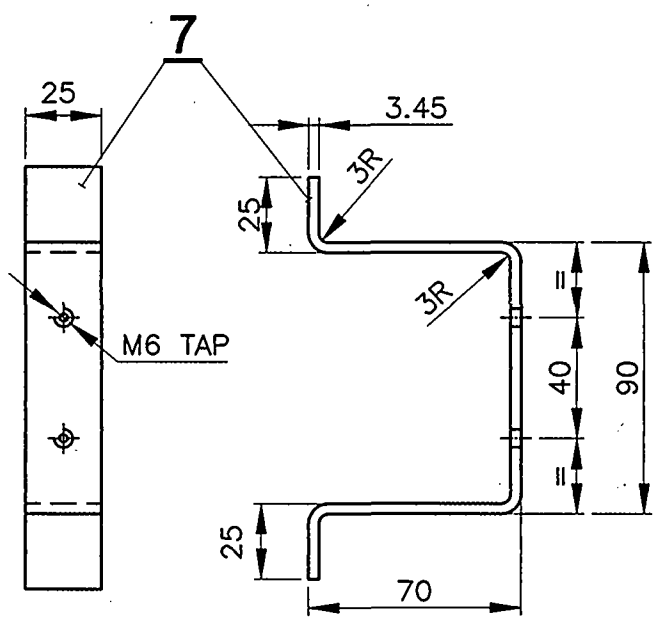
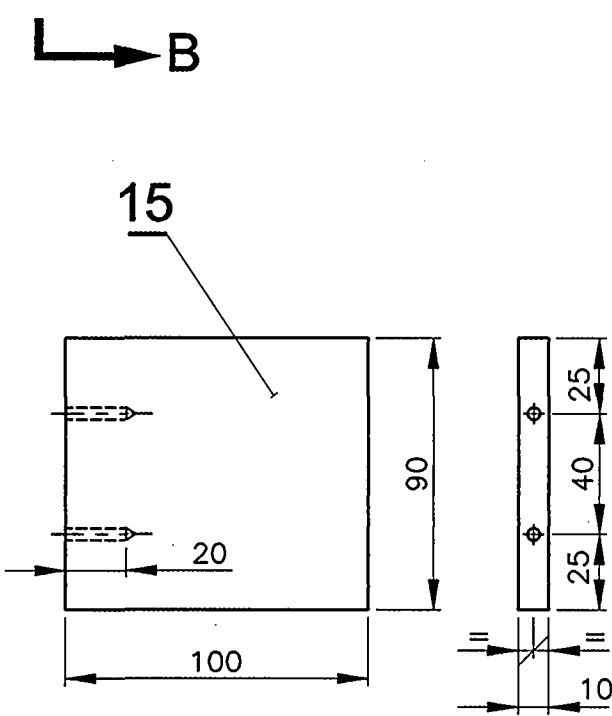
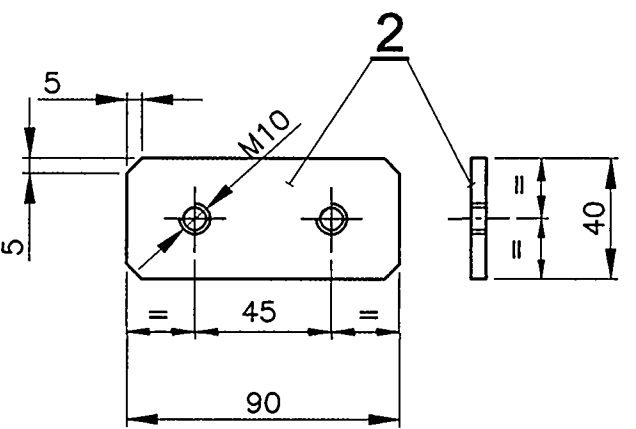
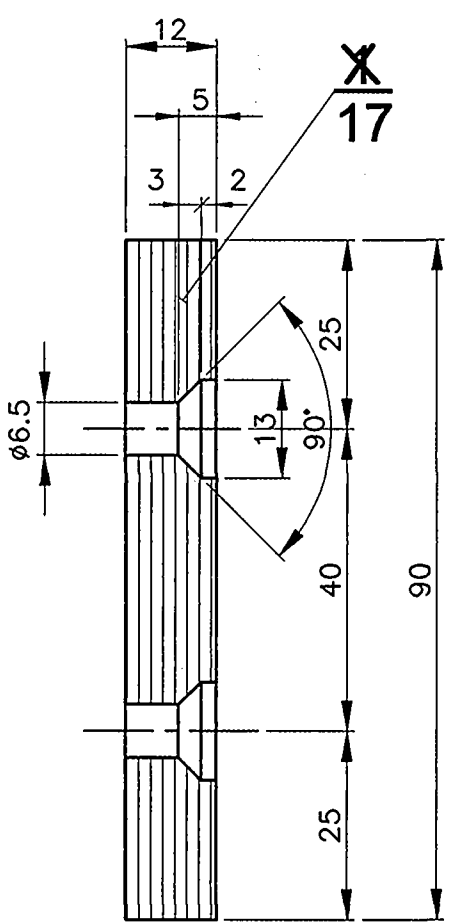
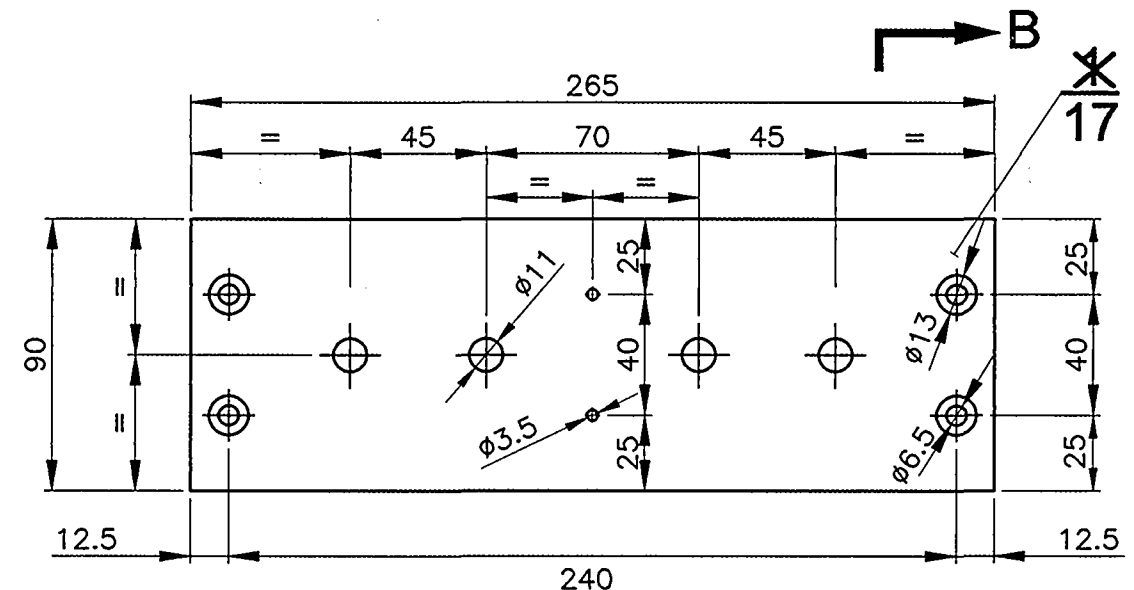
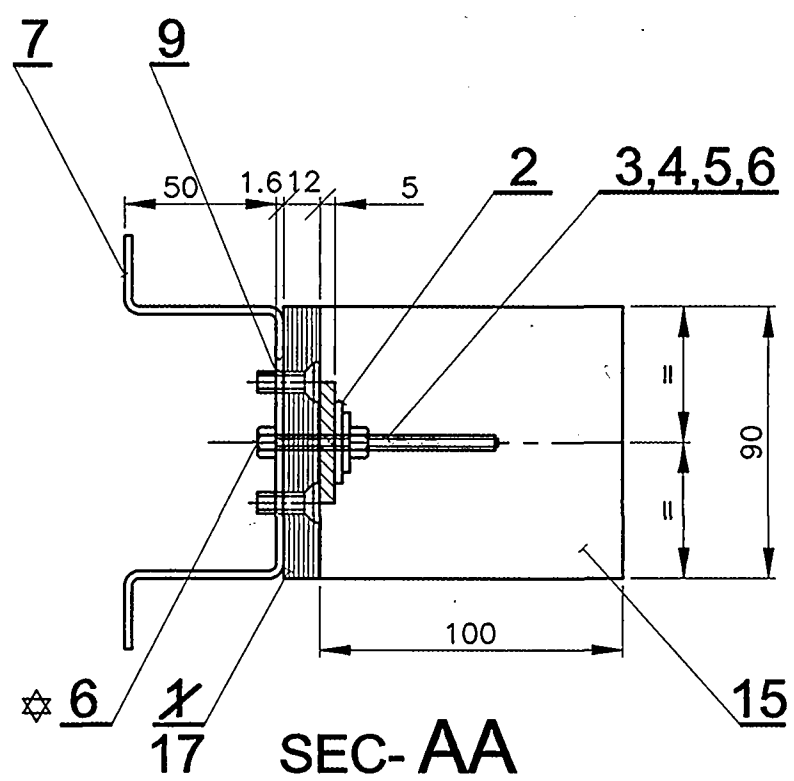
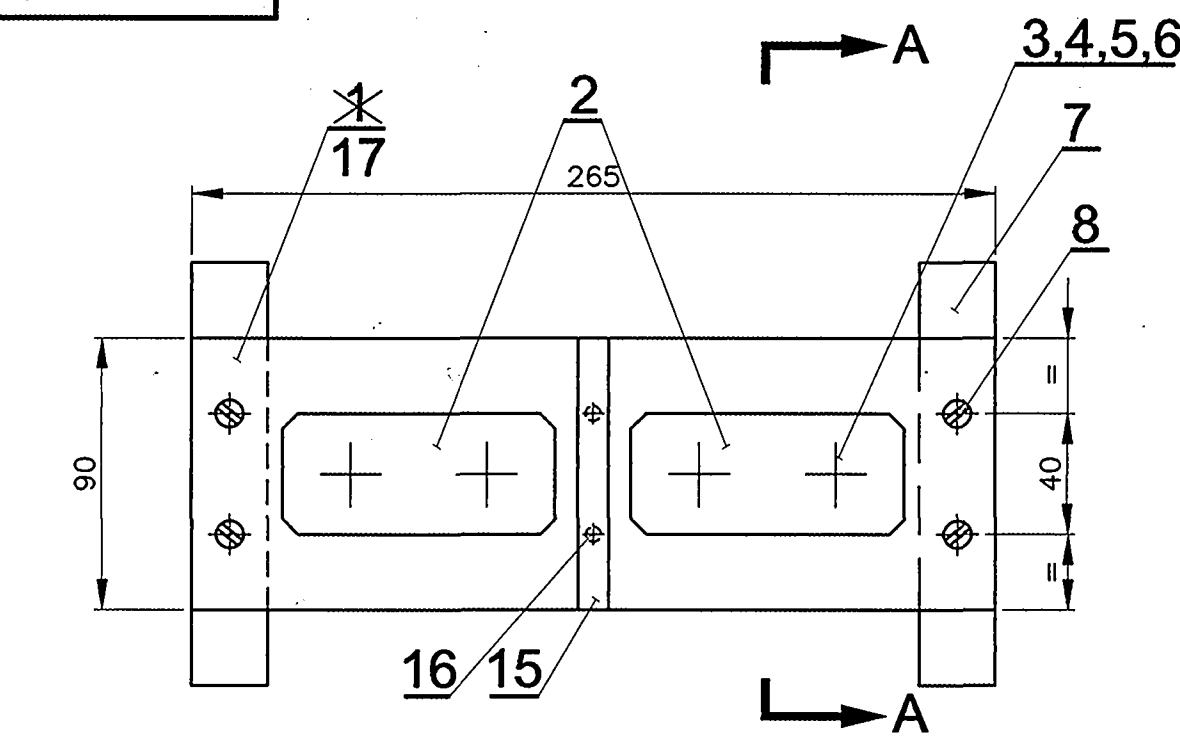
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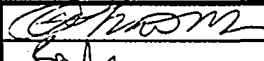
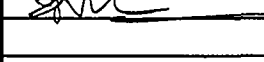
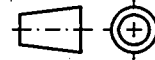
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SM Soudan		
PREPARED BY	VERIFIED BY	APPROVED BY



NOTE:-

- * 1. ITEM-6 TO BE TACK WELDED WITH ITEM-9
 2. ELECTROLYTIC COPPER TO IS:1897-71 BRIGHT ANNEALED
 CONDITION AND ELECTROTINNED TO IS:1359-68
 TO CLASSIFICATION-Sn 15C
~~3. RELAY WITH CONTACTS 2N/0.12N/C RATED FOR 10A WITH OPERATING
 COIL 24V DC SIMILAR TO TYPE 'MMCO' OF M/S L&T MAKE.~~
 4. ITEM-15 TO BE SCREWED AND PASTED WITH ITEM-1 AT SITE
 SUITABLY.

			1	TERMINAL BOARD 12 x 90 x 265	17		ICF/ELEC-862 LATEST		FRP-SMC							
			2	C.S.K HD.SCREW AM3 x 20	16	IS:1365-78 4.8,TAB 1&2			GALVD.							
			1	BAFFLE 10 x 90 x 100	15		ICF/ELEC-862 LATEST		FRP-SMC							
			2	HEX. NUT M5	14	IS:2389-68 P.4,T-2			GALVD.							
			2	CHEESE HD. SCREW AM5 x 35	13	IS:1366-68 4.6,T.1&3			GALVD.							
			2	PLAIN WASHER 5.5	12	IS:2016-67 1-2,TYPE-A	IS:1977-75 Fe.310-0		GALVD.							
			2	SPRING WASHER M5	11	IS:3063-72 T.1,TYPE-B	IS:4072-75 GRADE-3		GALVD.							
			1	RELAY 24V. DC. [24V.DC.COIL]	10				☒							
			2	LOCKING PLATE 1.6 x 40 x 90	9		IS:1079-73 Gr.St.34-1079									
			4	C.S.K HD.SCREW AM6 x 25	8	IS:1365-78 4.8,TAB 1&2			GALVD.							
			2	BRACKET 3.15 x 25 x 256	7		IS:1079-73 Gr.St.34-1079									
			4	HEX.HD.SCREW M10 x 5	6	IS:1363(PART-2) 84,TAB-1&2			GALVD.							
			4	HEX.NUT(SC) M10-4	5	IS:1363(PART-3) 84,TAB-1			GALVD.							
			4	PLAIN WASHER 11	4	IS:2016-67 T.2,TYPE-A	IS:1977-75 Fe.310-0		GALVD.							
			4	SPRING WASHER M10	3	IS:3063-72 T.1,TYPE-B	IS:4072-75 GRADE-3		GALVD.							
			2	LINK 5 x 40 x 90	2		COPPER		☉							
			1	TERMINAL BOARD 12 x 90 x 380	1		ICF/ELEC-862 LATEST		FRP-SMC							
NO. OFF			DESCRIPTION & DIMENSIONS			ITEM	REF.DRGS.	MAT. SPEC.	WEIGHT/UNIT	REMARKS						
IV	III	II	I	GROUP:- 7-2												
PER ASSEMBLY	TERMINAL PAD COMPLETE										SUPERSEDED BY:					
											SUPERSEDES:WLRRM-7-2-820 ALT. f/-					
											SCALE	SSE/D				
											1:2.5	CHD				
											1:1	CAD				
						DRN	N.V.OUSEPH									
ALT.				a	b	c	d	e	f							
*	DATA CODE No.		INDIAN RAILWAY STANDARDS					SHEET								
	018							1 OF 1								
CAD FILE: ED-CAD\018 7-2-820 1SF02.DWG													INTEGRAL COACH FACTORY CHENNAI-38			
											WLRRM ₈ -7-2-820					