

**RAIL COACH FACTORY, KAPURTHALA**  
**(Coach Alteration Instruction)**  
**CAI/RCF/MECH/LHB/089**

**MD46161**

**Date: 20/01/2024**

SN	Description	Details				
1.	Description	REPLACEMENT OF EMERGENCY WINDOW IN LSCN, LGS AND LSLRD COACHES				
2.	Coach type affected	LSCN, LGS AND LDSLR COACHES				
3.	Reason for Modification	Provision of bar shutter and locking pin arrgt. in EOW for safety of passengers as per the instructions of Railway Board.				
4.	Drawing No.	SrNo	Existing Drg. No.	New Drg. No.	QPC	Description
		1.	LS54125	MI008130	04	Emergency Window for LSCN & LDSLR coach
		2.	LJ54125	MI008176	04	Emergency Window for LGS coach
5.	Modification	<p><b>GS COACHES</b></p> <ol style="list-style-type: none"> <li>1. Removal of window cowl (inner side panel) of existing Emergency Window.</li> <li>2. Removal of existing Emergency Window and dismantling it from the coach.</li> <li>3. Welding of additional back pieces in sidewall as per drawing no. LG14303 alt 'g' item no.16 &amp; 17 &amp; LG14304 alt 'c' item no.18 &amp; 19 for fixing of window.</li> <li>4. Cleaning of pasting surface by grinding and proper surface preparation for pasting of new emergency window.</li> <li>5. Pasting of new emergency window as per drawing no. MI008176 with the help of Sikaflex as indicated in drawing.</li> <li>6. Screwing of window on the backpieces with the hardware provided in MI008176.</li> <li>7. Placement of new window cowl MI008179 for transverse side &amp; MI008180 for longi side and drilling of 7mm hole in the window cowl for locking pin at location shown in drawing MI008130.</li> <li>8. Installation of emergency locking pin arrangement and emergency notice to drawing no. MI008175 and CC64377 respectively over the window cowl at the location shown in drawing MI008130 with the hardware provided.</li> </ol> <p><b>SCN &amp; LDSLR COACHES</b></p> <ol style="list-style-type: none"> <li>1. Removal of window cowl (inner side panel) of existing Emergency Window.</li> <li>2. Removal of pasting of existing Emergency Window and dismantling it from the coach.</li> <li>3. Cleaning of pasting surface by grinding and proper surface</li> </ol>				

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		<p>preparation for pasting of new emergency window.</p> <p>4. Pasting of new emergency window as per drawing no. MI008130 with the help of Sikaflex as indicated in drawing.</p> <p>5. Screwing of window on the backpieces with the hardware provided in MI008130.</p> <p>6.Existing window cowl will be used in LSCN and LDSLR coaches after drilling of 7mm hole in the window cowl for locking pin at location shown in drawing MI008176.</p> <p>7.Installation of emergency locking pin arrangement and emergency notice to drawing no. MI008175 and CC64377 respectively over the window cowl at the location shown in drawing MI008176 with the hardware provided.</p>			
6.	Implementation Stage	Immediate effect.			
7.	Category of CAI	<table border="1"><tr><td>✓ A</td><td>B</td></tr></table>	✓ A	B	
✓ A	B				
		Tick A or B as applicable.			

A. Modifications shall be implemented immediately by user Railways.

B. Modifications shall be implemented by user Railways as & when convenient.

  
**For General Manager (Mech)**

**Encls:** (06 drgs as listed below)

1. MI008130
2. MI008176
3. MI008175
4. CC64377
5. MI008179
6. MI008180

**All Principal Chief Mechanical Engineers:**

1. Central Railway, Mumbai CST-400 001
2. W. Railway Churchgate, Mumbai - 400 020
3. Northern Railway, Baroda House, New Delhi- 110 001
4. N.E. Railway Gorakhpur. Gorakhpur-273 001
5. N.F. Railway Maligaon, Guwahati- 781 011
6. S. Railway, Park Town, Chennai- 600 003
7. S. C. Railway, Rail Nilayam, Secunderabad- 500 371i
8. S. E. Railway, Garden Reach, Kolkata-700 043
9. Eastern Railway, Fairlie Place, Kolkata-700 001
10. E. Coast. Railway, Bhubaneswar- 751 016
11. North Central Railway, Allahabad — 211 001

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12. Northwest Railway, Jaipur — 302 001
13. S. E. Central Railway, Bilaspur- 495 004
14. S. W. Railway, Hubli 580 023
15. West Central Railway, Jabalpur- 482 001
16. East Central Railway, Hazipur- 844 101

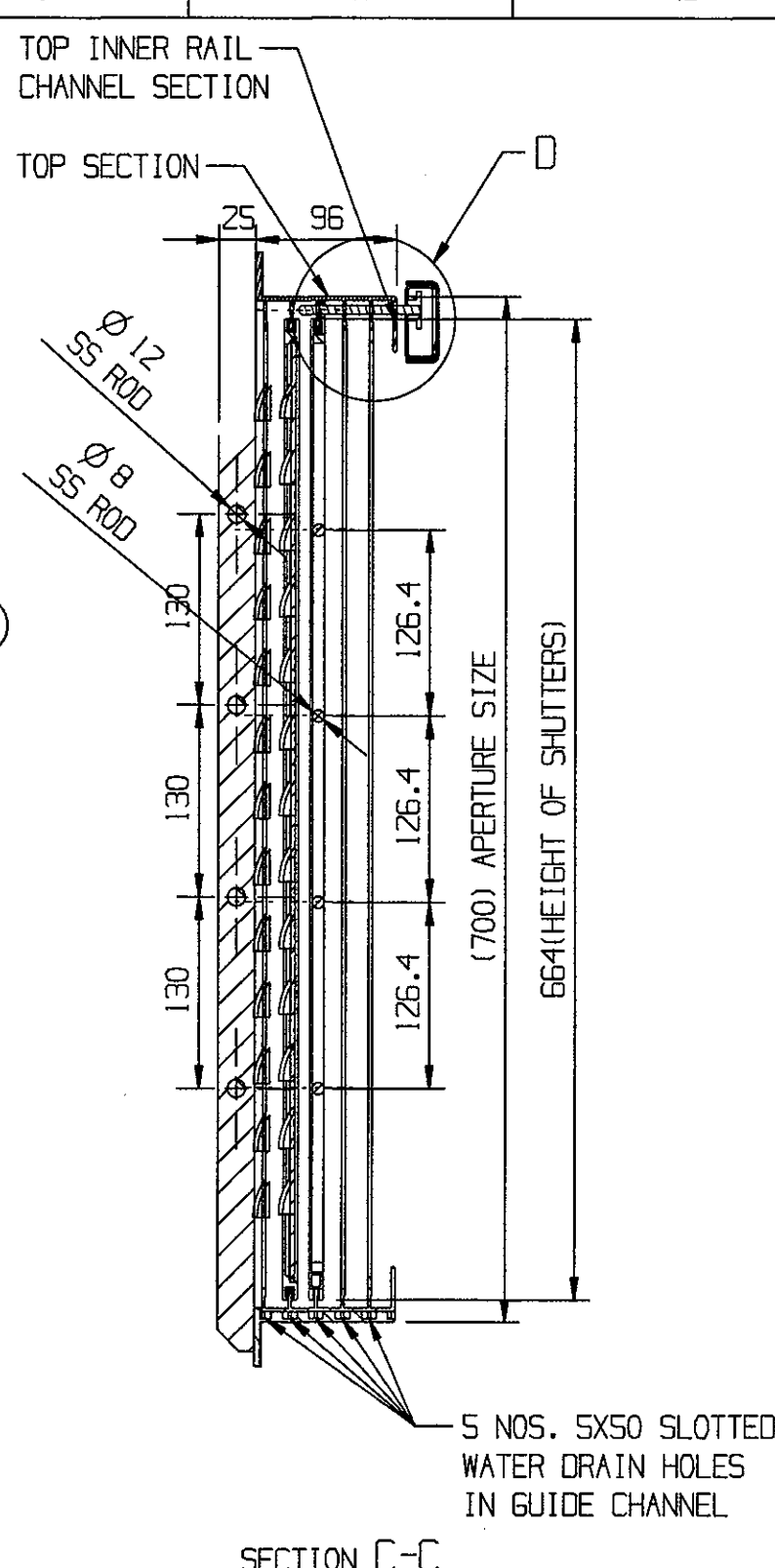
**All Chief Works Engineers:**

1. Central Railway, Matunga, Mumbai- 400 019
2. Bhopal, West Central Railway Nishatpura, MP-462 001
3. Lilluah, Eastern Railway, Howrah- 711 204
4. Alambagh, Northern Railway, Lucknow- 226 005
5. Jagadhari, Northern Railway, - 135 003
6. Gorakhpur N. E. Railway- 273 001
7. New Bongaigaon N. East Frontier Railway- 83 381 8, Perambur, Southern Railway, Chennai- 600 023
8. Golden Rock, Southern Railway, Trichy- 620 004
9. Ashokpuram , Southern Railway, Mysore South- 570 008
10. Lallagudda, S. C. Railway Secunderabad- 500 017
11. Hubli, South Western Railway- 580 020
12. Tirupati, S. C. Railway - 517 506
13. Mancheswar, East Coast Railway, Bhubaneswar- 751 017
14. Kharagpur, S. E. Railway- 721 301
15. Lower Parel, N.M. Joshi Marg, Western Railway, Mumbai- 400 013
16. Western Railway, Ajmer, Rajasthan
17. North East Frontier Railway, Dibrugarh, Assam-786 001

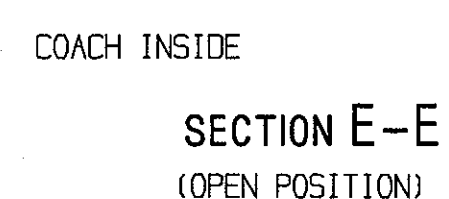
**Copy to:**

1. DG/Carriage, RDSO, Manak Nagar, Lucknow- 226 011
2. EDME (Coaching), Railway Board, New Delhi-110 001
3. EDME (W), (Coaching), Railway Board New Delhi-110 001
4. GM (Mech), Modern Coach Factory, Rae Bareilly-229120
5. GM (Mech), Integral Coach Factory, Chennai-600038





Technical drawing showing a cross-section of a mechanical assembly. The drawing includes a circular detail view on the left and a main view on the right. The main view shows a component with a width of 6 and a height of 10. The circular detail view shows a cross-section of a shaft or rod passing through a hole in a plate, with a dimension of 10 indicated for the distance from the center of the shaft to the edge of the plate.

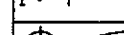
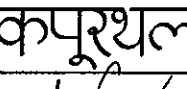


NOTE:-

1. DETAILED DESIGN/DRAWINGS AND THEREAFTER ONE PROTOTYPE SAMPLE OF WINDOW SHALL BE GOT APPROVED FROM CDE/RCF BEFORE BULK SUPPLY IS MADE.
2. WINDOW ASSEMBLY (ALUMINIUM PARTS) SHALL BE POWDER COATED TO SIGNAL RED TO ISC NO.537 TO IS:5-94.
3. TEST FOR WATER LEAKAGE SHALL BE CONDUCTED ON EACH WINDOW.
4. MANUFACTURER'S NAME, ADDRESS, MONTH AND YEAR OF MANUFACTURE SHOULD BE CLEARLY INDICATED ON THE INSIDE OF THE FIXED SHUTTER TOP.
5. THE ALUMINIUM EXTRUSIONS IN WINDOW ASSY. SHALL CONFORM TO IS: -733-1983, GR 63400 W.
6. THE CLEAR GLASSES IN WINDOW ASSY. SHALL CONFORM TO IS:2553 (PT-1)-90, TYPE- a (TOUGHENED SAFETY GLASS)
7. ALL SHARP EDGES/CORNERS SHALL BE ROUNDED OFF. WINDOW SHOULD HAVE ELEGANT FINISH.
8. TOP RAIL SHALL BE UNSCREWED FOR CHANGING THE SHUTTERS.
9. TOP INNER RAIL SHALL BE REMOVED SEPERATELY IN CASE THE SLIDING GLASS SHUTTER NEEDS TO BE CHANGED FOR GLASS REPLACEMENT.
10. SS ROD OF  $\varnothing$  12MM FOR FIXED BAR FRAME &  $\varnothing$  8MM FOR SLIDING BAR FRAME SHOULD COMPLY TO IS:6603, GR-X04CR 19N19, COLD FINISHED.
11. DURABLE METAL LOCK SHALL BE PROVIDED ON INNER SIDES OF LOUVRE AND GLASS SHUTTERS.
12. WINDOW SHUTTERS SHOULD SLIDE WITH AVERAGE HAND FORCE OF HUMAN BEING.
13. FOR ALUMINIUM SHUTTERS IN WINDOW ASSY. SHALL BE CONFORM TO IS:737-2008 GR.31000 H2 OR GR.19000 H2 OR GR. 40800 H2.
14. FOR OTHER DETAILS SUCH AS DRAIN HOLES LOCATION , LOCK ASSY , ALUMINIUM EXTRUSION ETC. REFER Drg. NO. LS54125
15. SUITABLE LOCKING PIECE SHALL BE FIXED WITH BAR FRAME SHUTTER FOR ENGAGING WITH THE PIN OF ALUMINIUM EMERGENCY PIN ARRGT TO KEEP THE BAR FRAME LOCKED IN CLOSED POSITION.

\*15 ITEM 2 AND 3 TO BE PROVIDED LOOSE AND TO BE FITTED AFTER THE FITMENT OF WINDOW COWL AT THE LOCATION SHOWN IN DETAIL VIEW.

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DATA E.  
11 6 JAN 202

		3	EMERGENCY NOTICE		1	CC64377	NIL	NIL			
		2	ALUMINIUM EMERGENCY PIN ARRGT		1	MI008175	NIL	NIL			
		1	EMERGENCY WINDOW FOR SCN COACHES		1	NIL	NIL	NIL			
WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS				QPASSY	DETAIL DRG	MATL. & SPEC.	REMARKS		
NIL	M	GROUP	BOODSIDE WINDOW				SUPERSEDES: MI008130 ALT a				
WEIGHT	FILE	C:\MI008130b.prt(3D)									
NIL	KG	EMERGENCY WINDOW FOR SCN COACH					SCALE	SSE/REC	86-01-25 QUEL 15-11 DRN 15-11 PRAS Taish		
S. AREA							1: 4	CHD			
NIL	M <sup>2</sup>										
LENGTH/Ø/±								DRN		PRAS	
NIL		RAIL COACH FACTORY, KAPURTHALA					REF.DRG.No.	NIL			
WIDTH/THICK.		रेल कोच फैक्टरी कपूरथला					IRS		PL NO.	NIL	
NIL	M								DRG.NO.	MI008130	
HEIGHT							CDE		ALT.	b	SIZE/A ISHEET/1
NIL	M						ADE/SME		BY CME		

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DETAIL DRGS STARTING WITH "I" ARE INTERNAL REFERENCE LISTS ONLY AND ARE NOT FOR ISSUE.

DATE OF FIRST ISSUE

28/10/2024

CGM BY

REF.DRG.No.	NIL	
PL NO.	NIL	
DRG.NO.	MI008130	

[illegible]

19 6 JAN 2025

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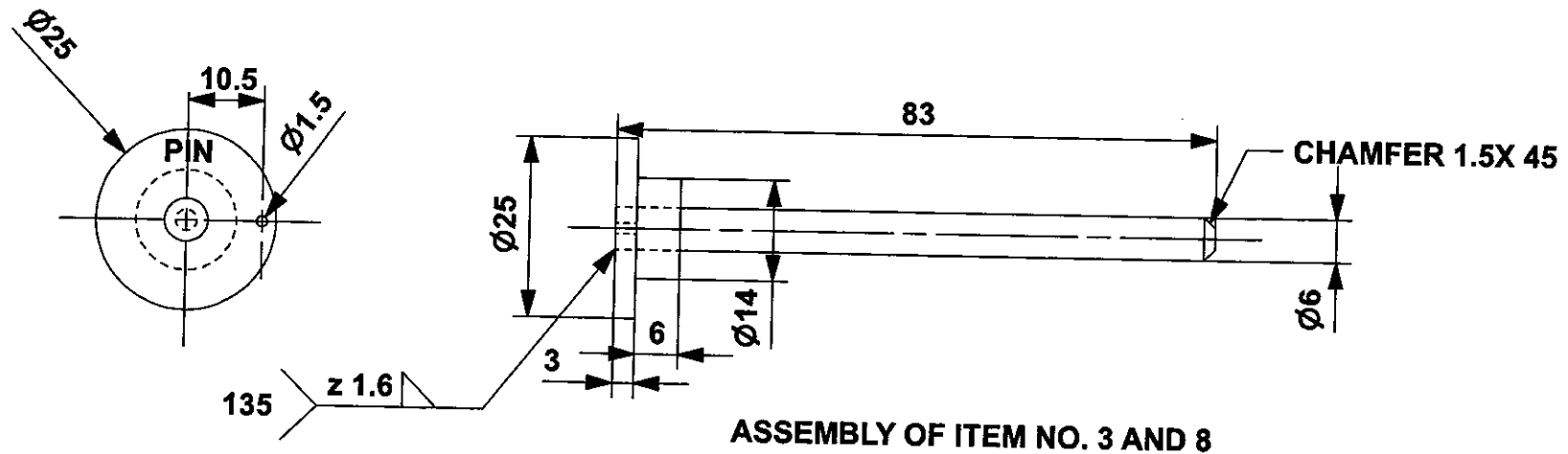
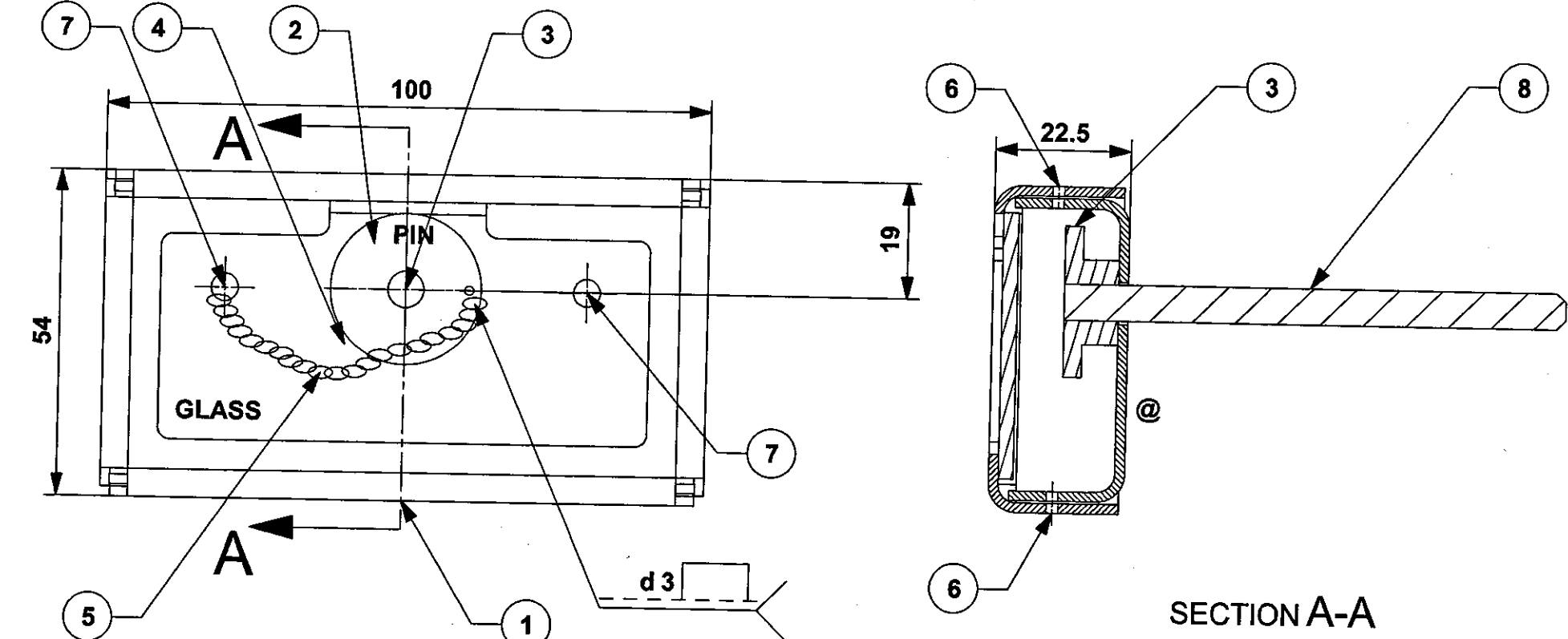
DATE OF FIRST ISSUE	12/12/2024
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CGM BY

3	EMERGENCY NOTICE		1	CC64377	NIL	NIL
2	ALUMINIUM EMERGENCY PIN ARRGT		1	M1008175	NIL	NIL
1	EMERGENCY WIDER WINDOW FOR GS COACHES		1	NIL	NIL	NIL

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	QPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP WINDOWS	SUPERSEDES: M1008176 ALT a			
WEIGHT	FILE	\\M1008176b.prt				
NIL	KG	EMERGENCY WIDER WINDOW (1480X760) WITH SLIDING SHUTTERS FOR GS COACHES			SCALE	SSE/REC 16-01-25
S.AREA					1: 5	CHD DUGL 1/2
NIL	M2				①	DRN PRAS 0.30
LENGTH/DTH					REF.DRG.No. L554125	
NIL		RAIL COACH FACTORY, KAPURTHALA				
WIDTH/THICK.		रेल कोच फैक्टरी कपूरथला			PL NO. NIL	
NIL	M	IRS			DRG.No. M1008176	
HEIGHT					SIZE A1 SHEET 1/1	
NIL	M	ADE/SME			CDE	ALT. D

ALT.NO	ALT.DATE	ZONE	ALTERATIONS	AUTHORITY
NIL	NIL	NIL	NIL	NIL



SECTION A-A

ASSEMBLY OF ITEM NO. 3 AND 8

- NOTES:
1. MANUFACTURER'S NAME & DATE OF MFG. SHALL BE MARKED AT THE LOCATION MARKED THUS '@' IN LETTER OF 5MM HEIGHT.
  - \* 2. ITEM 1 & 2 TO BE POWDER COATED TO IS:13871-93 GR-C AND COLOUR TO RAL 9006.
  3. LETTER GLASS AND PIN SHALL BE MARKED ON ITEMS 4 AND 3 RESPECTIVELY AS SHOWN IN SIGNAL RED COLOR TO ISC NO. 537 TO IS:5-1994
  - # 4 ALTERNATIVELY 1MM THICK EASILY BREAKABLE CLEAR ACRYLIC PLASTIC SHEET TO IS:14753-1999 IS ACCEPTABLE.
  5. ALTERNATIVELY IS:737-2008 GR. 19000H2 OR GR.40800 H2 IS ACCEPTABLE.
  6. GLASS TO BE PASTED WITH APPROVED BRAND OF ADHESIVE ON ITEM-1.
  7. ALL SHARP CORNERS SHALL BE ROUNDED OFF.

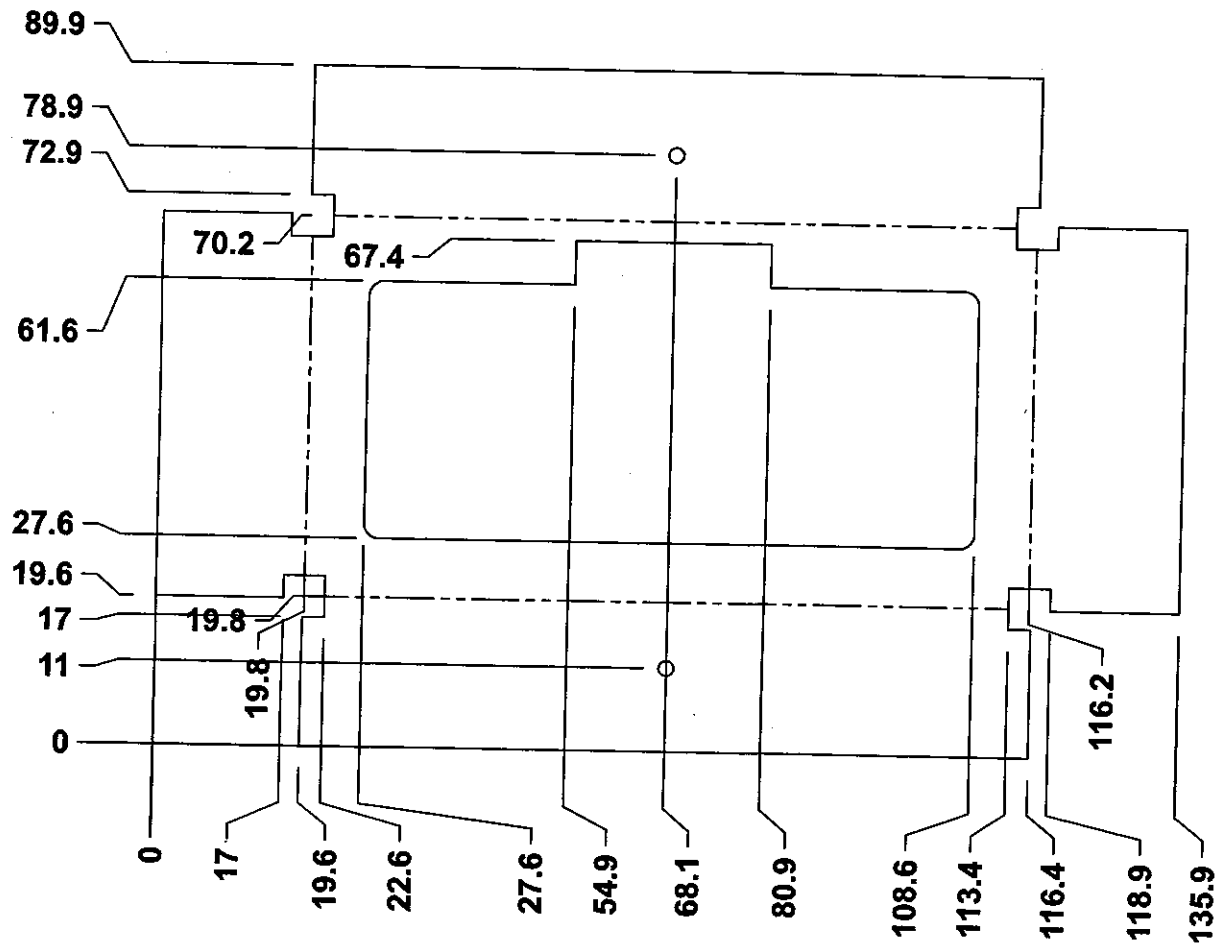
DETAIL OF ITEM 1

DETAIL OF ITEM 2

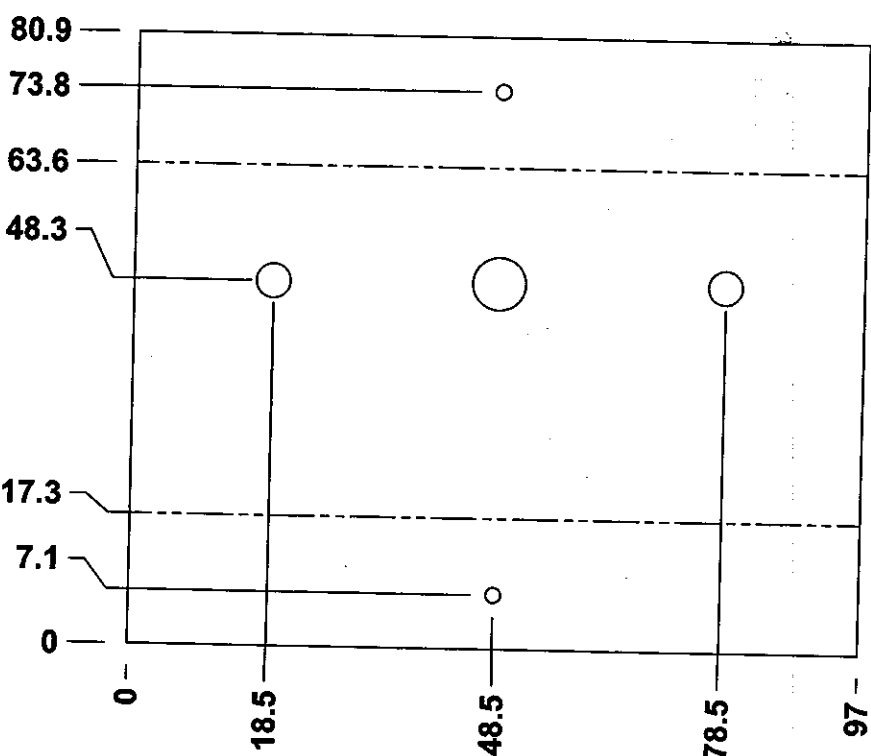
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13 DEC 2024

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DEVELOPED VIEW OF ITEM-1



DEVELOPED VIEW OF ITEM-2

ITEM	DESCRIPTION & DIMENSIONS	QPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
8	STOPPER PIN $\phi$ 6X83	1	NIL	AISI304	NIL
7	SLTD CSK HD SCREW M4X16	2	LIHW03	IS: 1365-1978 -4.8	ITEM-79 COATING TO MDTS 057
6	SLTD PAN HD TAPP SCREW ST3.SX10-F	2	LIHW03	IS: 7173-1989 STEEL	NIL
5	CHAIN	1	NIL	IRS-R-30 PT-1	L=100
4	GLASS SHEET 1.5X44X89	1	NIL	IS: 2835-87	#
3	STOPPER PLATE 9 X $\phi$ 25	1	NIL	AISI304	NIL
2	BACK PLATE 1.6X80.9X97	1	NIL	IS: 737-2008 GR. 31000H2	*
1	FRONT COVER 1.6X89.9X135.9	1	NIL	IS: 737-2008 GR. 31000H2	*

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	QPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP	WINDOWS	FILE	WMI008175.prt	
WEIGHT	FILE	WMI008175.prt				
NIL	KG					
S. AREA						
NIL	M <sup>2</sup>					
LENGTH / DIA						
NIL	M					
WIDTH / THICK						
NIL	M					
HEIGHT						
NIL	M					

ALUMINIUM EMERGENCY PIN ARRGT

RAIL COACH FACTORY, KAPURTHALA

रेल कोच फैक्टरी कपूरथला

IRS

SCALE	SSE/REC	PL NO.	NIL
1:2	CHD	DHRM	PRAS
REF.DRG.No.	NIL	PL NO.	NIL
DRG.NO.	MI008175	SIZE	A2
ALT.	NIL	SHEET	1/1

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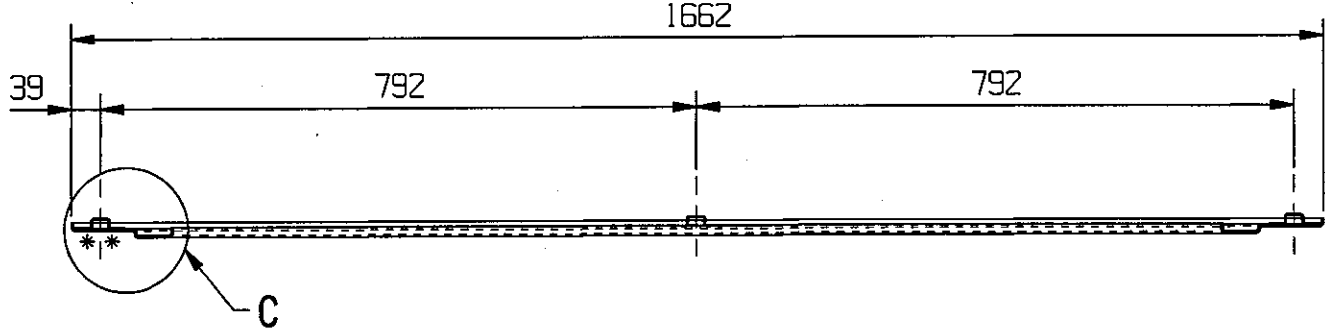
DATE OF FIRST ISSUE 07/12/2024

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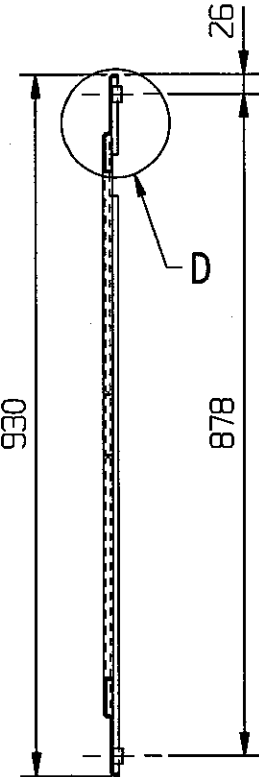
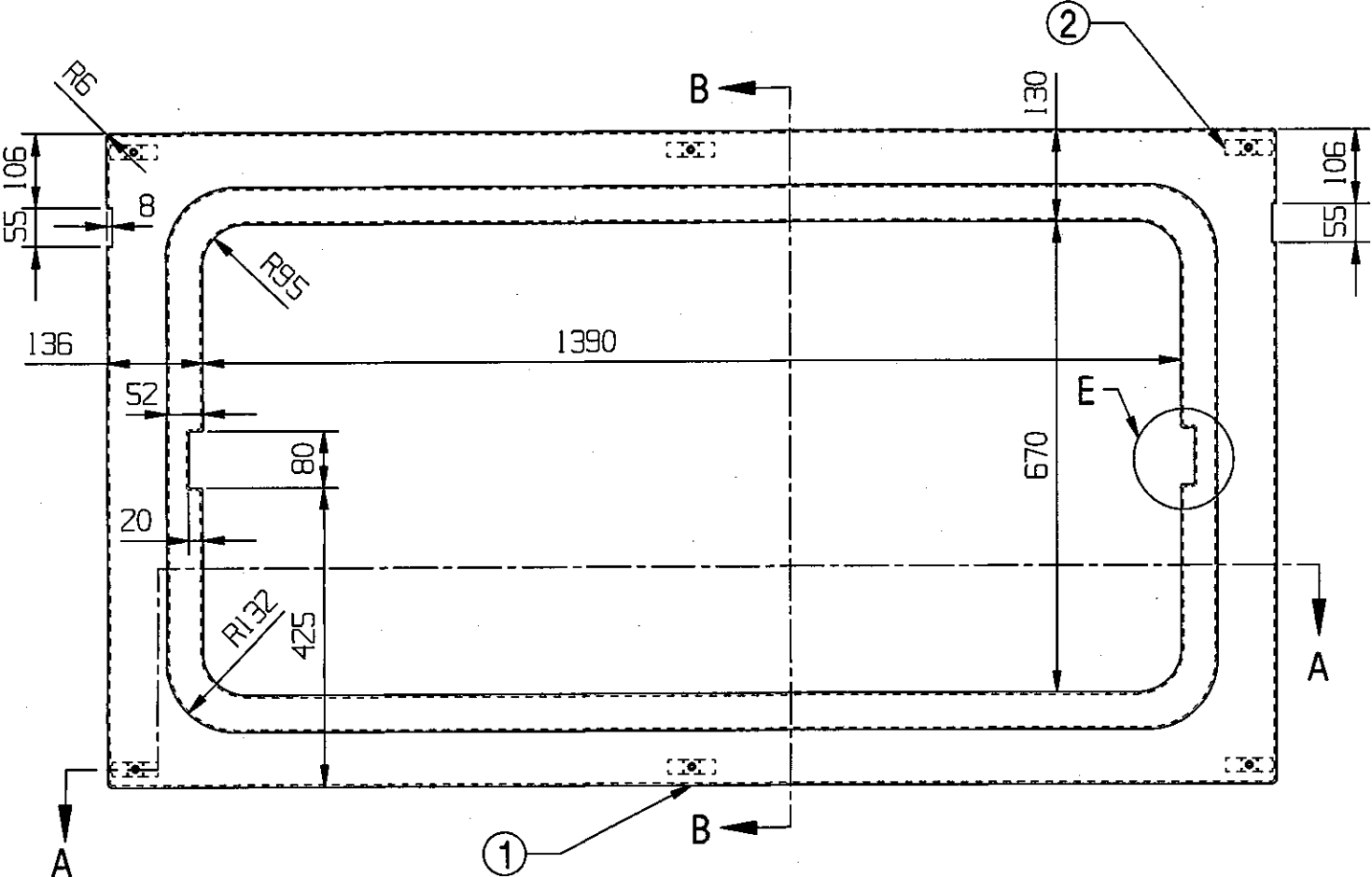




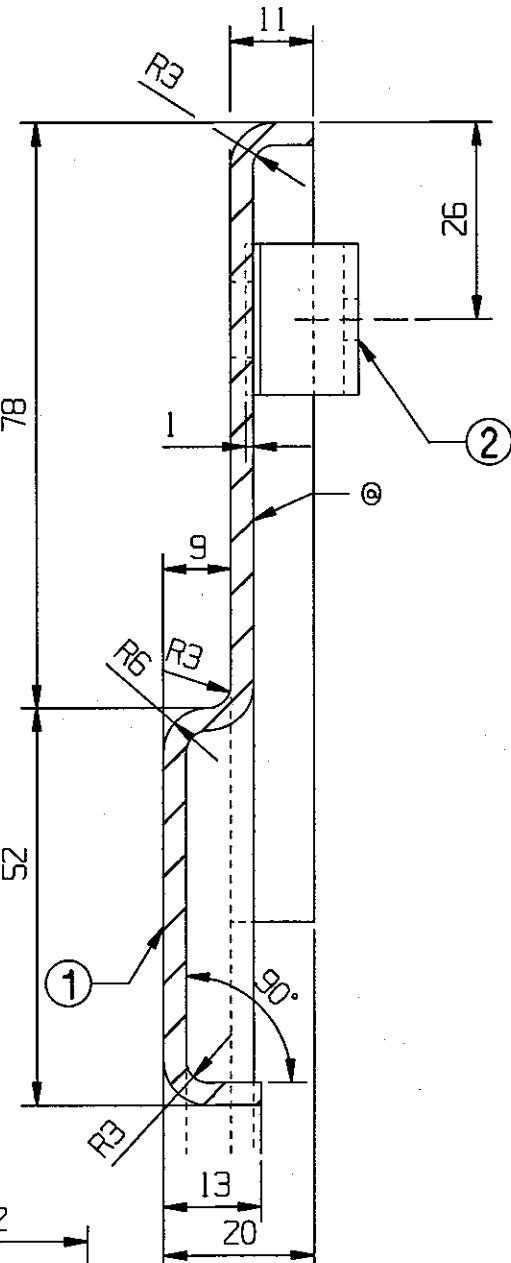
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NIL	NIL	NIL	NIL	NIL



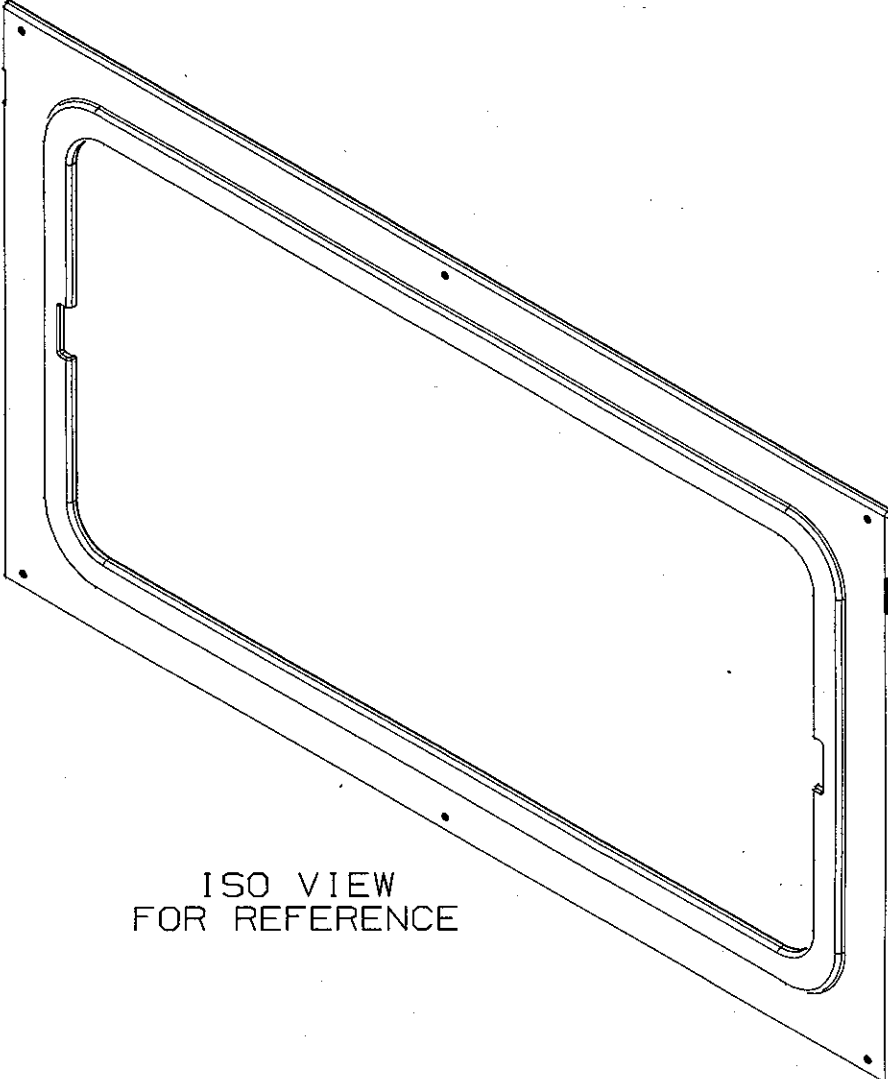
SECTION A-A



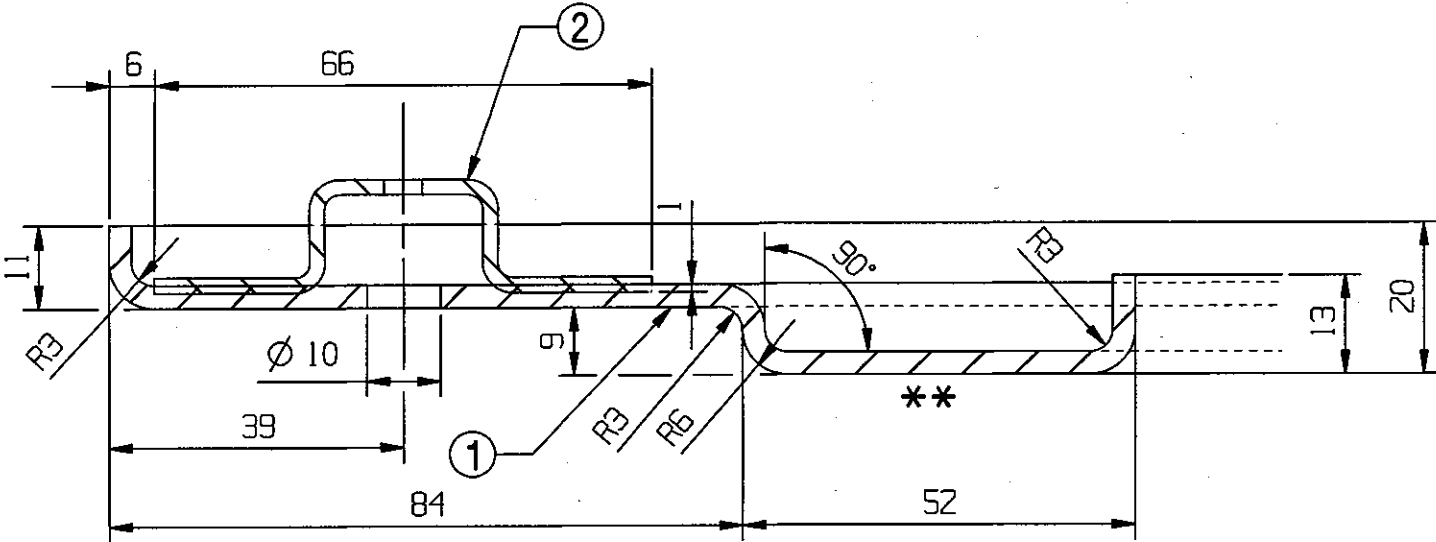
SECTION B-B



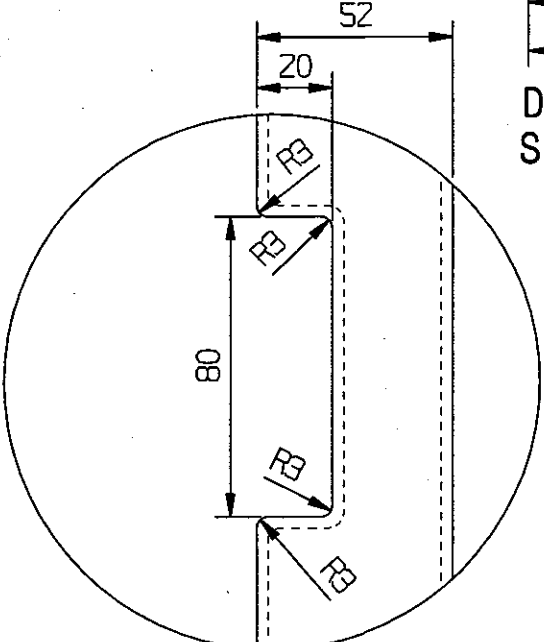
DETAIL D  
SCALE 1:1



ISO VIEW  
FOR REFERENCE



DETAIL C  
SCALE 1:1



DETAIL E  
SCALE 1:2

- # NOTE :-
1. SURFACES MARKED THUS '\*' ARE FINISHED FACES.
  2. TOLERANCES ON DIMENSIONS UPTO 5mm SHALL BE -0.1 TO +0.4mm.
  3. CORNER RADIUS MAY BE TAKEN AS 'R1', IF NOT SPECIFIED.
  4. COLOUR OF COMPONENT SHALL BE AS PER INTERIOR COLOUR SCHEME OF THE COACH AND THE SURFACE SHOULD BE PROPERLY CLEANED BEFORE PU PAINTING AS PER MOTS-118.
  5. MANUFACTURER'S NAME & DATE OF MFG. SHALL BE MARKED/EMBOSSSED AT THE LOCATION MARKED THUS '@' IN LETTER OF 5mm HEIGHT.
  6. ITEM-2 SHALL BE PROPERLY EMBEDDED IN THE FRP PANEL (ITEM-1).

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23 DEC 2024

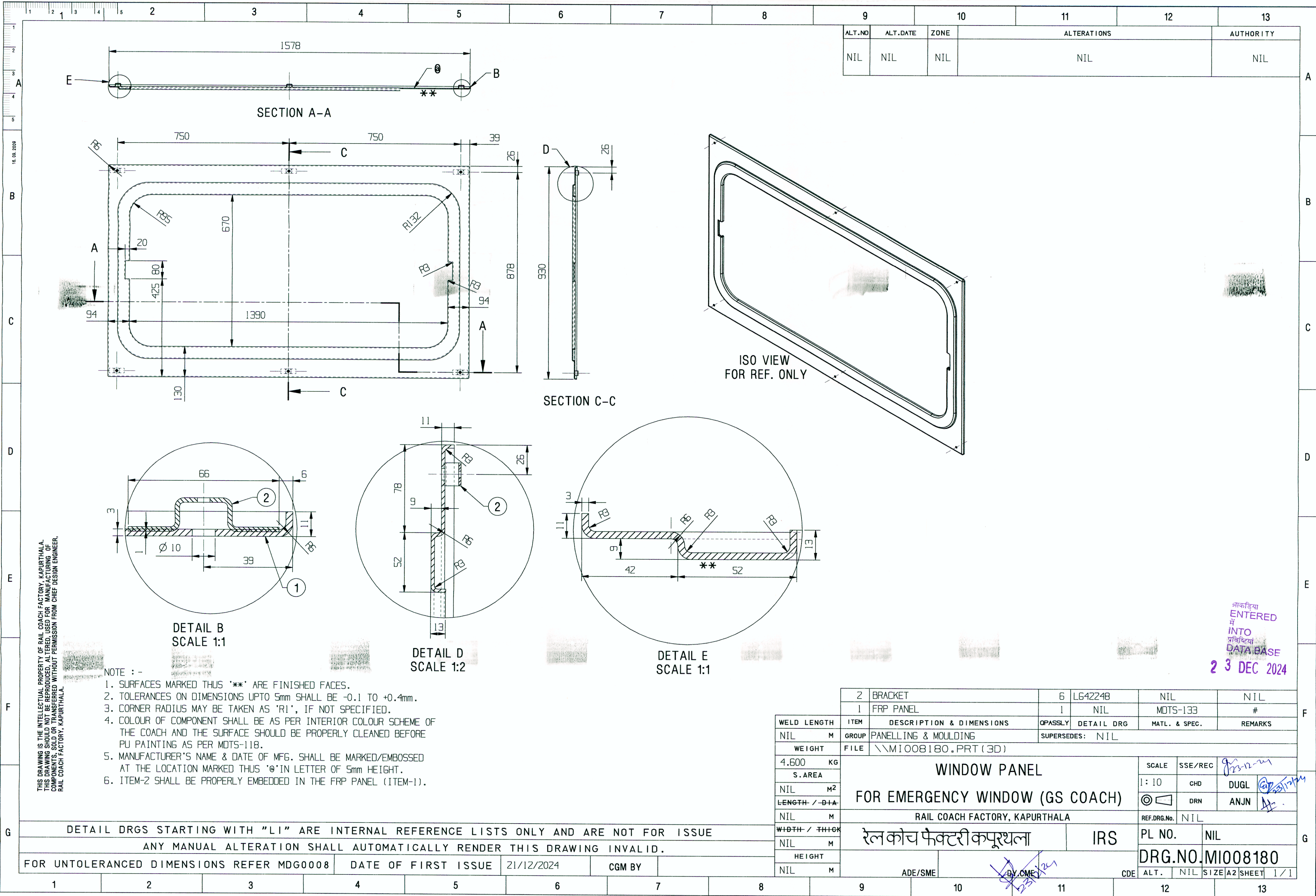
	2	BRACKET	6	LG42248	NIL	NIL		
	1	PANEL	1	NIL	MTS-133	#		
WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	OPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS		
NIL	M	GROUP	PANELLING & MOULDING		SUPERSEDES: NIL			
WEIGHT	FILE	\\MIO08179.prt (3D)						
4.920	KG	WINDOW PANEL  FOR EMERGENCY WINDOW (GS COACH)			SCALE	SSE/REC	1:10 CHD DUGL VARU	
S.AREA								
NIL	M <sup>2</sup>				1:10	CHD	DUGL	
LENGTH / DIA					DRN		VARU	
NIL	M	RAIL COACH FACTORY, KAPURTHALA			REF.DRG.No.	NIL		
WIDTH / THICK		रेल कोच फैक्टरी कपूरथला			IRS		PL NO.	NIL
NIL	M							
HEIGHT		ADE/SME			NR		DRG.NO. MIO08179	
NIL	M							
		BY CME			CDE	ALT.	NIL	SIZE A2 SHEET 1/1

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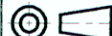
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ALT.NO	ALT.DATE	ZONE	ALTERATIONS	AUTHORITY
NIL	NIL	NIL	NIL	NIL

		2	BRACKET	6	LG42248	NIL	NIL		
		1	FRP PANEL	1	NIL	MDTS-133	#		
WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS			OPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS	
NIL	M	GROUP	PANELLING & MOULDING			SUPERSEDES: NIL			
WEIGHT		FILE	\\MI008180.PRT (3D)						
4.600	KG	WINDOW PANEL FOR EMERGENCY WINDOW (GS COACH)				SCALE	SSE/REC	g2312-24	
S.AREA						1:10	CHD	DUGL	At 23/12/24
NIL	M <sup>2</sup>	RAIL COACH FACTORY, KAPURTHALA					DRN	ANJN	At
<del>LENGTH / DIA</del>						REF.DRG.No.	NIL		
NIL	M	रेल कोच फैक्टरी कपूरथला				PL NO.		NIL	
<del>WIDTH / THICK</del>						DRG.NO. MI008180			
NIL	M	ADE/SME		DY. SME				CDE	
HEIGHT									
NIL	M					ALT.	NIL	SIZE A2	SHEET 1/1

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RAIL COACH FACTORY, KAPURTHALA.

- NOTE :-
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  2. TOLERANCES ON DIMENSIONS UPTO 5mm SHALL BE -0.1 TO +0.4mm.
  3. CORNER RADIUS MAY BE TAKEN AS 'R1', IF NOT SPECIFIED.
  4. COLOUR OF COMPONENT SHALL BE AS PER INTERIOR COLOUR SCHEME OF THE COACH AND THE SURFACE SHOULD BE PROPERLY CLEANED BEFORE PU PAINTING AS PER MDTS-118.
  5. MANUFACTURER'S NAME & DATE OF MFG. SHALL BE MARKED/EMBOSSED AT THE LOCATION MARKED THUS '0' IN LETTER OF 5mm HEIGHT.
  6. ITEM-2 SHALL BE PROPERLY EMBEDDED IN THE FRP PANEL (ITEM-1).

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