

**Rail Coach Factory, Kapurthala**

Office of the  
Principal Chief Electrical Engineer

**RCF/HSQ/ED/LHB/2008**

**Dated: 09.04.2025**

**PCMEs :**

1. Central Railway, CST, Mumbai-400 001
2. Eastern Railway, Fairly Place , Kolkata-700 001
3. East Central Railway, Dighi, Disst- Vaishali, Hajipur-844 101
4. East Coast Railway, Chandra Shekharapur, Bhubneshwer-751 016
5. Northern Railway, Baroda House, New Delhi-110 001
6. North Central Railway, Hastings Road, Prayagraj – 211 001
7. North Eastern Railway, Gorakhpur-273 001
8. North East Frontier Railway, Maligaon, Guwahati-781 001
9. Northern Western Railway Jaipur-302 006
10. Southern Railway, Park Town, Chennai-800 003
11. Southern central Railway Rail Nilayam Secundrabad-500 371
12. South Coast Railway, Visakhapatnam-530004.
13. South Eastern Railway., Gardern Reach, Kolkata-700 043
14. South East Central Railway Bilaspur-495 004
15. South Western Rly., 4<sup>th</sup> Floor, DRM Office, Sh. Laxmi Narayan Complex, Station Road Hubli-580 020
16. Western Railway , Church gate, Mumbai-400 020
17. West Central Railway., Jabalpur-482 001

**Sub: Retro-fitment of Enhanced Capacity Pantry Equipment in existing LHB AC Hot Buffet Coach.**

**Ref:** Railway Board letter no. 2022/M/(C)/137/1\_Pantry, dated: 04.03.2025.

In reference to Railway Board letter referred above regarding Retro-fitment of enhanced capacity pantry equipment in existing LHB AC Hot Buffet Coach, Coach alteration instruction sheet to document no. **ED/CAI/041 Dated 09.04.2025** has been prepared and is being issued.

This is for your information and necessary action.

**DA: Copy of CAI No. ED/CAI/041 DATED 09.04.2025.**

(Kulwinder Singh)  
DYCEE/D&D

for Principal Chief Electrical Engineer

**Copy to:**

**PCME/RCF** }  
**PCME/ICF** } : In terms of referred Rly. Bd. Letter, similar arrgt. as per CAI for  
**PCME/MCF** } provision of enhanced capacity pantry equipment in existing new LHB  
AC Hot Buffet Coach (layout no. LH90001 ) to be followed by PUs.

# **RAIL COACH FACTORY, KAPURTHALA**

CAI NO.: ED/CAI/041 dated: 09.04.2025



## **COACH ALTERATION INSTRUCTION FOR RETRO-FITMENT OF ENHANCED CAPACITY PANTRY EQUIPMENT IN EXISTING LHB AC HOT BUFFET COACH**



रेल कोच फैक्टरी, कपूरथला  
RAIL COACH FACTORY, KAPUTHALA

दस्तावेज सं.: ई.डी./सी.ए.आई./041  
दिनांक 09.04.2025  
Doc. No.: ED/CAI/041  
Dated 09.04.2025

**1. Foreward:**

In reference to Railway Board letter no. 2022/M/(C)/137/1\_Pantry, dated: 04.03.2025, Coach Alteration Instruction (CAI) is being issued for Retro-fitment of Enhanced Capacity Pantry Equipment in existing LHB AC Hot Buffet Coach. This covers the modification/additions/deletion to be carried out in the existing LHB AC Hot Buffet coach running in the Zonal Railways.

**2. Reason for modification:**

Retro-fitment of Enhanced Capacity Pantry equipments in Existing LHB AC Hot Buffet Coaches.

**3. Details of Modifications:**

Modification involves five sub-heads:

- Dismantle/Removal of existing pantry equipments in central aisle area .
- Dismantle of Partition frame, Ceiling and Sliding Doors & Service counter Table .
- Modifications in Shell assembly, Flooring and Water pipeline in underframe.
- Rewiring Activities.
- Modifications in SBC for Enhanced pantry equipments.

**4. Implementation by:**

Replacement during POH by workshops or during Refurbishment by Coach Rehabilitation Workshop (as and when required).

**5. Implementation Stage:**

This clause covers various activities involved in retro-fitment of Enhanced Pantry Equipments.

**Step-1: Removal/Dismantle of Existing Electric Cook Tops, Service Tables, Chimney arrangement and wiring in Pantry area:**

This step covers various activities involved in Removal/Dismantle of existing pantry equipments as follows:

- Dismantle of the existing electrical connections of Electric cook tops, chimneys and Chimney control box.

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- Dismantle of chimney and chimney frames (along with chimney control box) by unscrewing from the cooking tables.
- Dismantle of the service tables (LHS and RHS), cooking tables (03 nos.) by unscrewing the mounting hardwares on the coach floors.
- Removal the complete wiring of Electric cook tops provided in the central aluminium extrusion in the roof upto SBC.
- Dismantling of service table counter (of size 920X520 only) including folding flap by unscrewing the mounting hardwares on the coach floors.

**Step-2: Modification work for removal of partition frame ceiling arrangement/sliding doors ( Shell, Furnishing & Plumbing activities (Mechanical) :**

Modification work in **Shell, Furnishing & Plumbing activities** in Pantry area shall carried out as per **CAI no. CAI/RCF/MECH/LHB/097**. The existing/dismantled pantry equipment shall be removed/unloaded from the coach through vestibule area. As rollers are not provided in these items, care shall be taken while removing the equipments without not to damage the floor.

**Step-3: Loading/Mounting/Wiring of Enhance Pantry Equipments in Pantry area:  
( Refer Drawing no. SKED 998)**

This step includes Loading, Securing and Electrical wiring of Enhanced pantry equipments in pantry area.

- Loading of enhance capacity pantry equipments (Indicated in SKED 998) shall be done through Vestibule area. Care shall be taken while loading of pantry equipment to avoid damage to the coach floor.
- Placing of pantry equipment in Central aisle of Pantry area as per SKED 998 and marking the holes on flooring matching with the holes provided on the Base of Pantry equipments. Tapped holes M8 size shall be done and securing of the Enhanced Pantry Equipments by screwing by M8X50 SS screw on the floor shall be done for which additional members as mentioned in CAI/RCF/MECH/ LHB/ 097 are provided.

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- After securing the equipments, Chimney mounting structure as per ref. drawing no. SKED 1002 shall be fixed on the floor by drilling M8 size tapped holes as per the layout drawing SKED 998.
- Mount the Existing Chimney in the mounting structure such that the hoods of chimney matches with the existing cutouts provided in Roof.
- Mount the **Distribution Box-1 & Distribution Box-2** at suitable location. Extra back pieces/fixing plates required for mounting purpose shall be done at site.

**Plumbing activities**

- Connect the water supply pipes through water softners to the inlets of **Combi-oven** and **Brat pan** from water supply points provided near them as per the requirement. Stop cocks shall be provided for maintenance purpose for each equipments.
- Proper arrangement of water drainage from **Combi-oven** shall be provided as per reference drawing no MI008237.

**Step-4 Re-wiring activities**

- Re-connect the existing input wires of Chimney coming from SBC to Chimney Control Box. Connect the output wiring of Chimney Control Box to each Chimney blowers as per the existing arrangement.
- For wiring of Enhanced Pantry Equipments, 3-phase 415V supply shall be tapped from Output Connections of 80A 4-pole MCCB (02 nos.) to be provided in SBC as per SKED 999. From each MCCB the 16mm<sup>2</sup> wires of (750V Grade) E-beam cables along with earth wire (GNY) to be provided up to the Distribution Box-1 and Distribution Box -2 in Pantry area.
- Distribution Box-1 :**  
Consist of RCBOs of suitable ratings as mentioned in reference drawing for connections of Brat Pan, Work table with under storage, Deep Fryer-1&2, Induction cook Top (3-Phase).

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• **Distribution Box-2 :**

Consist of RCBOs of suitable ratings as mentioned in reference drawing for connections of Combi Oven, Work table with under storage, Induction cook Top 02no. (3-Phase) each.

- Connect the Electrical wiring to each Enhanced pantry equipment From Distribution Box-1 & Distribution Box-2 as per detail given in SKED 999

- **For wiring Harness details of enhanced pantry equipments Refer Annexure-A.**

**Step-5: Modification work in Switch Board Cabinet:**

This step covers various activities involved in existing Switch Board Cabinet of LHB Hot Buffet Coach as follows: (Refer drawing no SKED 999 & 1001).

- The existing wiring of Electric cook tops shall be disconnected from their respective MCBs i.e. +S1F114, +S109, +S1F07 and wiring to be removed from SBC.
- Electrical wiring as well as MCBs i.e. +S1F114, +S109, +S1F07 provided for Electric cook tops shall be removed from SBC. Complete wiring upto the equipments to be removed.
- 2 nos. of 4-pole 80A Din rail mounted MCCBs to be provided in SBC at suitable location for provision of 3-phase 4-wire supply for Enhanced pantry equipments.
- Input connection of each 4-pole 80A MCCBs to be connected to 3-phase 4-wire 415 supply from output of Contactors K44 & K46. with provision of 3-conductor Cage clamp terminals to Part no.283-631 of M/s WAGO or equivalent appvd. make alongwith DIN Rail mountings (8nos).

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Enclosures:

SN	Ref. drawing no.	Drawing Description
1.	SKED 998	Layout of Enhance Pantry Equipments.
2.	SKED 999	Wiring Scheme for Enhance pantry Equipments.
3.	SKED 1001	Location of ISOLATOR Switch in SBC.
4.	SKED 1002	Structure for Chimney Mounting.
5.	SKED 1003	Structure for Mounting of Water Softener
6.	Annexure-A	Wiring Harness details of enhanced pantry equipments.
7.	Annexure-B	Bill Of Material
8.	Annexure-C	CAI No. CAI/RCF/MECH/LHB/097 dated 08.04.2025
9.	Annexure-D	List of items to be retained and new items to be provided
10.	MI008232	Water Piping arrgt. for retro fitment of pantry Equpt.
11.	MI008237	Additional Supporting Members on Trough floor
12.	LH10001	Layout of Partition Frames
13.	LH10103	Partition frame between kitchen and non AC Compartment.
14.	LH44121	Ceiling Arrangement in kitchen area.
15.	LH44157	Vestibule & counter area ceiling mounting

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## HARNESS FOR ENHANCED PANTRY EQUIPMENT WIRING FROM SBC-1 (S1X1)

Har. No.	CABLE SIZE	COLOR	FERRULE NO.	LENGTH (mm)	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER. NO.	
A	16 sq.mm.	R	12 11 09.03	1000	+S1K46	2	+S1F126	1	415V SUPPLY-2
	16 sq.mm.	Y	12 11 10.03	1000	+S1K46	4	+S1F126	2	
	16 sq.mm.	B	12 11 11.03	1000	+S1K46	6	+S1F126	3	
	16 sq.mm.	N	12 11 12.03	1000	+S1K46	8	+S1F126	N	
	16 sq.mm.	GNYE	PE	1000		PE		PE	
B	16 sq.mm.	R	33 01 25.03	1000	+S1K44	2	+S1F125	1	415V SUPPLY-1
	16 sq.mm.	Y	33 01 26.03	1000	+S1K44	4	+S1F125	2	
	16 sq.mm.	B	33 01 27.03	1000	+S1K44	6	+S1F125	3	
	16 sq.mm.	N	33 01 28.03	1000	+S1K44	8	+S1F125	N	
	16 sq.mm.	GNYE	PE	1000		PE		PE	
C	16 sq.mm.	R	12 11 13.01	17000	+S1F126	2	+S1F119	1	415V SUPPLY-2
	16 sq.mm.	Y	12 11 14.01	17000	+S1F126	4	+S1F119	2	
	16 sq.mm.	B	12 11 15.01	17000	+S1F126	6	+S1F119	3	
	16 sq.mm.	N	12 11 16.01	17000	+S1F126	8	+S1F119	N	
	16 sq.mm.	GNYE	PE	17000		PE		PE	
D	16 sq.mm.	R	33 01 30.01	12000	+S1F125	2	+S1F116	1	415V SUPPLY-1
	16 sq.mm.	Y	33 01 31.01	12000	+S1F125	4	+S1F116	2	
	16 sq.mm.	B	33 01 32.01	12000	+S1F125	6	+S1F116	3	
	16 sq.mm.	N	33 01 33.01	12000	+S1F125	8	+S1F116	N	
	16 sq.mm.	GNYE	PE	12000		PE		PE	
E	10 sq.mm.	R	95 19 01	4500	+S1F119	2	95U37	1	COMBI OVEN
	10 sq.mm.	Y	95 19 03	4500	+S1F119	4	95U37	2	
	10 sq.mm.	B	95 19 05	4500	+S1F119	6	95U37	3	
	10 sq.mm.	N	95 19 07	4500	+S1F119	8	95U37	N	
	10 sq.mm.	GNYE	95 19 09	4500		PE	95U37	PE	
F	1.5 sq.mm.	Y	95 23 01	3000	+S1F123	2	95U31	1	HOT UNDERSTORAGE-1
	1.5 sq.mm.	BLK	95 23 01	3000	+S1F123	4	95U31	2	
	1.5 sq.mm.	GNYE	95 23 01	3000		PE	95U31	PE	
G	2.5 sq.mm.	R	95 20 01	4000	+S1F120	2	95U28	1	INDUCTION PLATE-1
	2.5 sq.mm.	Y	95 20 03	4000	+S1F120	4	95U28	2	
	2.5 sq.mm.	B	95 20 05	4000	+S1F120	6	95U28	3	
	2.5 sq.mm.	N	95 20 07	4000	+S1F120	8	95U28	N	
	2.5 sq.mm.	GNYE	95 20 09	4000		PE	95U28	PE	
H	2.5 sq.mm.	R	95 17 01	4500	+S1F117	2	95U26A	1	INDUCTION PLATE-2.1
	2.5 sq.mm.	Y	95 17 03	4500	+S1F117	4	95U26A	2	
	2.5 sq.mm.	B	95 17 05	4500	+S1F117	6	95U26A	3	
	2.5 sq.mm.	N	95 17 07	4500	+S1F117	8	95U26A	N	
	2.5 sq.mm.	GNYE	95 17 09	4500		PE	95U26A	PE	
I	2.5 sq.mm.	R	95 18 01	5000	+S1F118	2	95U26B	1	INDUCTION PLATE-2.2
	2.5 sq.mm.	Y	95 18 03	5000	+S1F118	4	95U26B	2	
	2.5 sq.mm.	B	95 18 05	5000	+S1F118	6	95U26B	3	
	2.5 sq.mm.	N	95 18 07	5000	+S1F118	8	95U26B	N	
	2.5 sq.mm.	GNYE	95 18 09	5000		PE	95U26B	PE	
J	1.5 sq.mm.	Y	95 24 01	4000	+S1F124	2	95U32	1	HOT UNDERSTORAGE-2
	1.5 sq.mm.	BLK	95 24 03	4000	+S1F124	4	95U32	2	
	1.5 sq.mm.	GNYE	95 24 05	4000		PE	95U32	PE	
K	6 sq.mm.	B	95 21 01	4000	+S1F121	2	95U29	1	DEEP FRYER-1
	6 sq.mm.	BLK	95 21 03	4000	+S1F121	4	95U29	2	
	6 sq.mm.	GNYE	95 21 05	4000		PE	95U29	PE	
L	6 sq.mm.	B	95 22 01	4000	+S1F122	2	95U30	1	DEEP FRYER-2
	6 sq.mm.	BLK	95 22 03	4000	+S1F122	4	95U30	2	
	6 sq.mm.	GNYE	95 22 05	4000		PE	95U30	PE	
M	10 sq.mm.	R	95 16 01	3000	+S1F116	2	95U25	1	BRAT PAN
	10 sq.mm.	Y	95 16 03	3000	+S1F116	4	95U25	2	
	10 sq.mm.	B	95 16 05	3000	+S1F116	6	95U25	3	
	10 sq.mm.	N	95 16 07	3000	+S1F116	8	95U25	N	
	10 sq.mm.	GNYE	95 16 09	3000		PE	95U25	PE	

Sas

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Pl.

## Bill Of Material

S.No.	Item	Term Function Technical data	Quantity	Drawing No./Part No.	Manufacturer/ Supplier	Place of Installation
1	95 U37	Combi Oven	1	item as per S.no. xviii) of clause 5 of the specification no. EDTS-446, Rev-Nil, Am-1	RCF/ICF approved source	
2	95 F17	Bart Pan	1	item as per S.no. ix) of clause 5 of the specification no. EDTS-446, Rev-Nil, Am-1	RCF/ICF approved source	
3	95 U28	Induction Hot Plate	1	item as per S.no. iii) of clause 5 of the specification no. EDTS-446, Rev-Nil, Am-1	RCF/ICF approved source	
	95 U26	Induction Hot Plate	1	item as per S.no. iv) of clause 5 of the specification no. EDTS-446, Rev-Nil, Am-1	RCF/ICF approved source	
4	95 F21 F22	Deep Fat Fryer	2	item as per S.no. xv) of clause 5 of the specification no. EDTS-446, Rev-Nil, Am-1	RCF/ICF approved source	
5	95 U31 U32	Work Table with Hot Understorage	2	item as per S.no. i) of clause 5 of the specification no. EDTS-446, Rev-Nil, Am-1	RCF/ICF approved source	
6	95 U38	Microwave oven	1	item as per S.no. xvii) of clause 5 of the specification no. EDTS-446, Rev-Nil, Am-1	RCF/ICF approved source	
7		Wall Shelf	1	item as per S.no. viii) of clause 5 of the specification no. EDTS-446, Rev-Nil, Am-1	RCF/ICF approved source	
8		Water softener for Combi oven	1			
9	95 F19	RCBO, 4P, 40A Combi Oven	1	AUF3D404003	L&T ABB SCHNEIDER SIEMENS	S1F119
10	95 F16	RCBO, 4P, 32A Bart Pan	1	AUF3D403203	L&T ABB SCHNEIDER SIEMENS	S1F116
11	95 F17 F18 F20	RCBO, 4P, 10A Induction Hot Plate	3	AUF3D401003	ABB SCHNEIDER L&T SIEMENS	S1F117 S1F118 S1F120
12	95 F21 F22	RCBO, 2P, 25A Deep Fryer	2	AUF3D202503	L&T ABB SCHNEIDER SIEMENS	S1F121 S1F122
13	95 F23 F24	RCBO, 2P, 6A Hot Understorage	2	AUF3D200603	L&T ABB SCHNEIDER SIEMENS	S1F123 S1F124
14		MCCB, 4P, 80A,415V AC	2	EZC100N4080	SCHNEIDER ABB SIEMENS L&T	S1F125 S1F126
15		Distribution Board-1 (16way, 2 Row)	1	DR32S of M/s Hager/Legrand/Havells		
13		Distribution Board-2 (16way, 2 Row)	1	DR32S of M/s Hager/Legrand/Havells		
17		E-Beam Cables	LOT	As per RDSO specification no. ELRS/SPEC/ELC/0019 (Latest Revision)		
18		Cable Jackets class R22/R23 in EN45545-2 with HL-2 category	LOT	PMA Jack Federal Mohul Tyco MV electrosystems ISG Werner Hahm		
19		Ferrules class R22/R23 in EN45545-2 with HL-2 category	LOT	Tyco Phoenix		
20		PVC Rigid Conduit Ø40mm	LOT	IS:9537-83, Part-3		
21		Electrical Metallic Tubing 1"	LOT	IS:9537-83, Part-2		
22		Structure for Chimney mounting	3	SKED-1002		
23		Structure for Water softener mounting	1	SKED-1003		

Bas.      Renu      Ph.

**RAIL COACH FACTORY, KAPURTHALA**

MD46431

Dated : 08.04.2025

**Coach Alteration Instructions**

1. **CAI No.** : CAI/RCF/MECH/LHB/097
2. **Group** : LHB -Shell /Fur
3. **Description** : Modification in Support member as additional channel provided for Enhanced **Capacity Pantry Equipment in Existing Hot buffet type LHB coach.**
4. **Authority for CAI** : Rly. Bd L.No. 2022/M(c )/137/1\_Pantry dated 04.03.2025
5. **Drawing Nos.** : MI008237 alt nil (Shell) & MI008232 alt nil (FUR)
6. **Modifications : Modification Work in Shell & Furnishing assembly**  
(Modifications applicable in existing LHB Hot Buffet Coach to layout no. LH90001(latest))

These modifications covering various modification activities involved in existing trough floor and furnishing area in the existing LHB Hot Buffet shall be as follows:

**A). Furnishing Activity**

1. Removal/Dismantle of Partition frame (towards SBC side) , Ceiling arrangement and Sliding doors for removing the existing pantry equipments.
2. Removal of the Ceiling in Pantry area and SBC/ gangway area.
3. Removal of the Partition frame between Pantry and SBC/gangway area
4. Removal of the Sliding doors on Endwall.
5. After completion of these steps, the dismantled pantry equipments shall be removed from the coach through the SBC side vestibule area .

**B). Shell Activity**

- i. After dismantling the above mentioned items, additional channel or members as per drawing no. MI008237 alt nil shall be welded in the kitchen area .
- ii. Provision of Holes in trough floor for water supply pipes required for **Combi-Oven and Brat pan.**
- iii. Provision of Drain holes in trough floor for water drainage required for **Combi-Oven (ref. drawing MI008237 alt nil)**
- IV. Flooring to be installed with provision of holes for water pipe and drain pipe line(**ref. drawing MI008237 alt nil**)

### C). Plumbing Activity

- I. The water piping arrangement and their layout for piping shall be re-arranged as per drawing no. MI008232 For **Combi-Oven and Brat pan**.

After completing the above activities flooring, partition , and other accessories will be furnished as per ref. drawing no. LH10001 ,LH10103 , LH44121 & LH44157.

7. **Reason for modification :** RB ref. letter no. as mentioned above for retro-fitment of LHB AC pantry car with enhance capacity pantry equipments.
8. **Coaches concerned :** LHB AC Pantry car type coaches.
9. **Implementation stage :** During POH in workshop or as decided by User Railways.
10. **Category of CAI :A / B**
11. Tick A or B as applicable

~~A- Modification shall be implemented immediately by user railways~~

B- Modification shall be implemented by user railways as and when convenient.

Encls : Drawing as referred:

- i). MI008232
- ii). MI008237
- iii). LH10001
- iv). LH10103
- v). LH44121
- vi). LH44157

DYCME/Design

**Annexure-D to ED/CAI/041dated08.04.2025**




- i) The existing equipments on the side wall (as per RCF specification **EDTS 118 (LATEST)** and existing coach layout **LH90001** to be retained as per under given details:

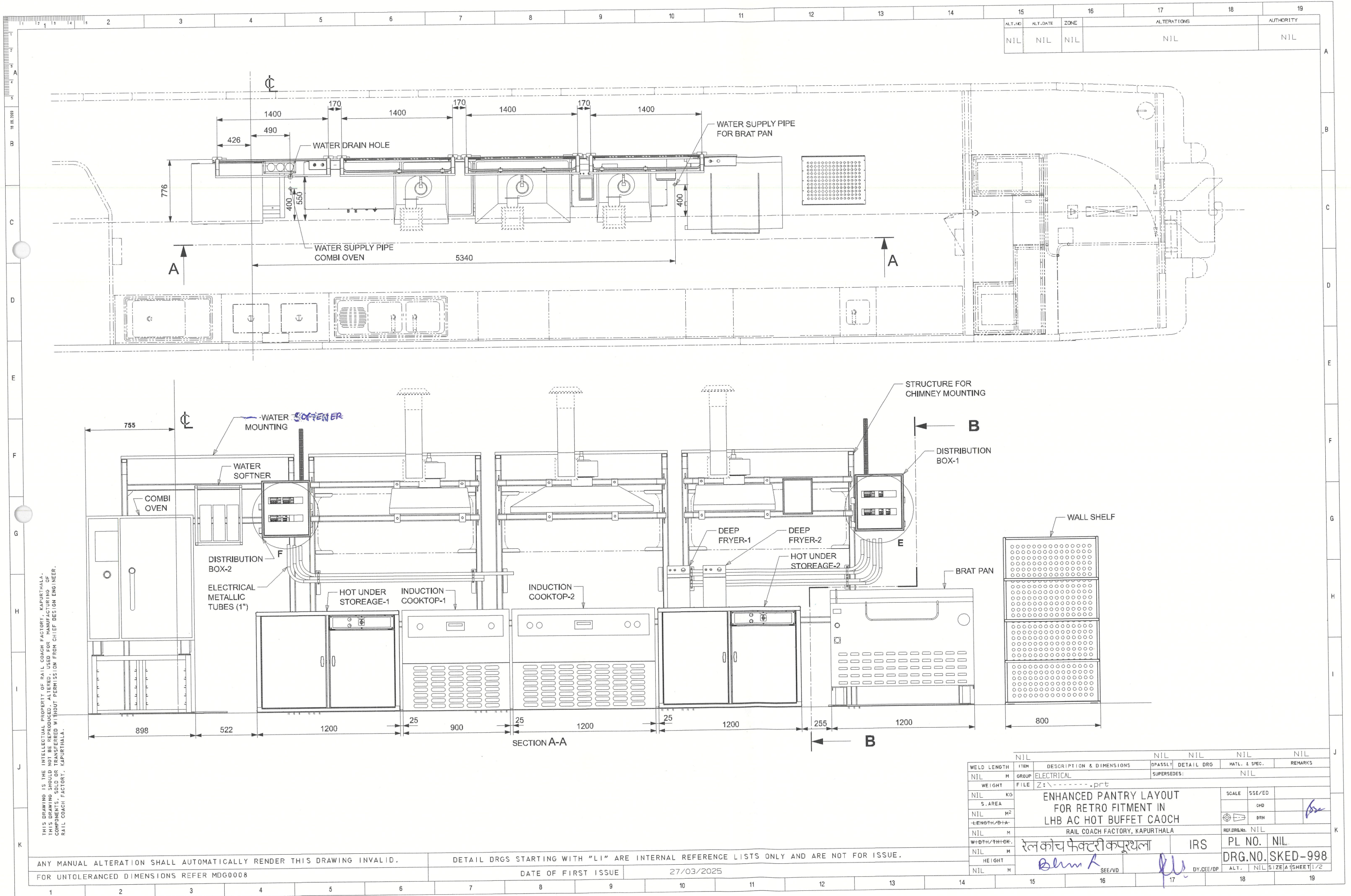
SN	Item Description	QTY	Ref. Spec.	LOCATION	Remarks
1.	Hot case	01	EDTS 118	Side wall Area	To be retained
2.	Sink (single) with Cup Board	01	EDTS 118	Side wall Area	To be retained
3.	Cup Board	01	EDTS 118	Side wall Area	To be retained
4.	Fridge	01	EDTS 118	Side wall Area	To be retained
5.	Deep freezer	01	EDTS 118	Side wall Area	To be retained
6.	Bottle cooler	01	EDTS 118	Side wall Area	To be retained
7.	Water Boiler-1 , 2 & 3	03	EDTS 118	Side wall Area	To be retained
8.	Sink with Cup Board below Water boiler	01	EDTS 118	Side wall Area	To be retained
9.	Cup Board below Windows	02	EDTS 118	Side wall Area	To be retained
10.	Sink (Double) with Cup Board below Water boiler	01	EDTS 118	Side wall Area	To be retained
11.	Water filter	01	EDTS 118	Side wall Area	To be retained
12.	Chimney-1	01	EDTS 118	Side wall Area	To be retained
13.	Chimney-2	01	EDTS 118	Side wall Area	To be retained
14.	Chimney-3	01	EDTS 118	Side wall Area	To be retained
15.	Insect killer	01	EDTS 118	Side wall Area	To be retained

**Note : Existing Chimneys alongwith Control box shall also be retained.**

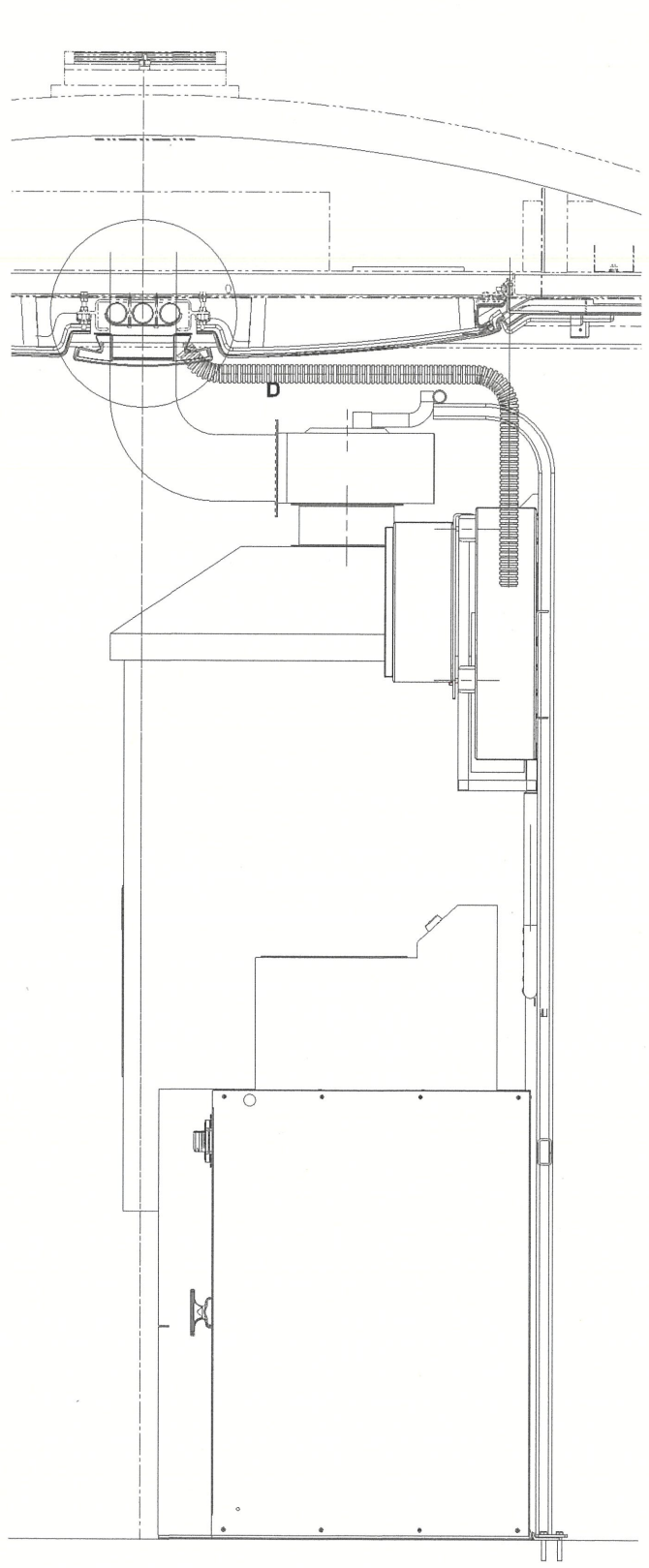
- ii) Details of enhance capacity pantry equipments to be provided in central Aile side of the hot buffet coach as per RCF spec. **EDTS 446 Rev. 0, AM-1** shall be as per undergiven details:

SN	Item Description	QTY	Ref. Spec.	LOCATION	Remarks
1.	Wall Shelf	01	EDTS446 AM-1	Aile Side	To be provided
2.	Brat Pan	01	EDTS446 AM-1	Aile Side	To be provided
3.	Combi Oven	01	EDTS446 AM-1	Aile Side	To be provided
4.	Work Table with Hot Storage	02	EDTS446 AM-1	Aile Side	To be provided
5.	Deep Fryer	02	EDTS446 AM-1	Aile Side	To be provided
6.	MicroWave	01	EDTS446 AM-1	Aile Side	To be provided
7.	Hot Plate (Single)	01	EDTS446 AM-1	Aile Side	To be provided
8.	Hot Plate (Twin)	01	EDTS446 AM-1	Aile Side	To be provided

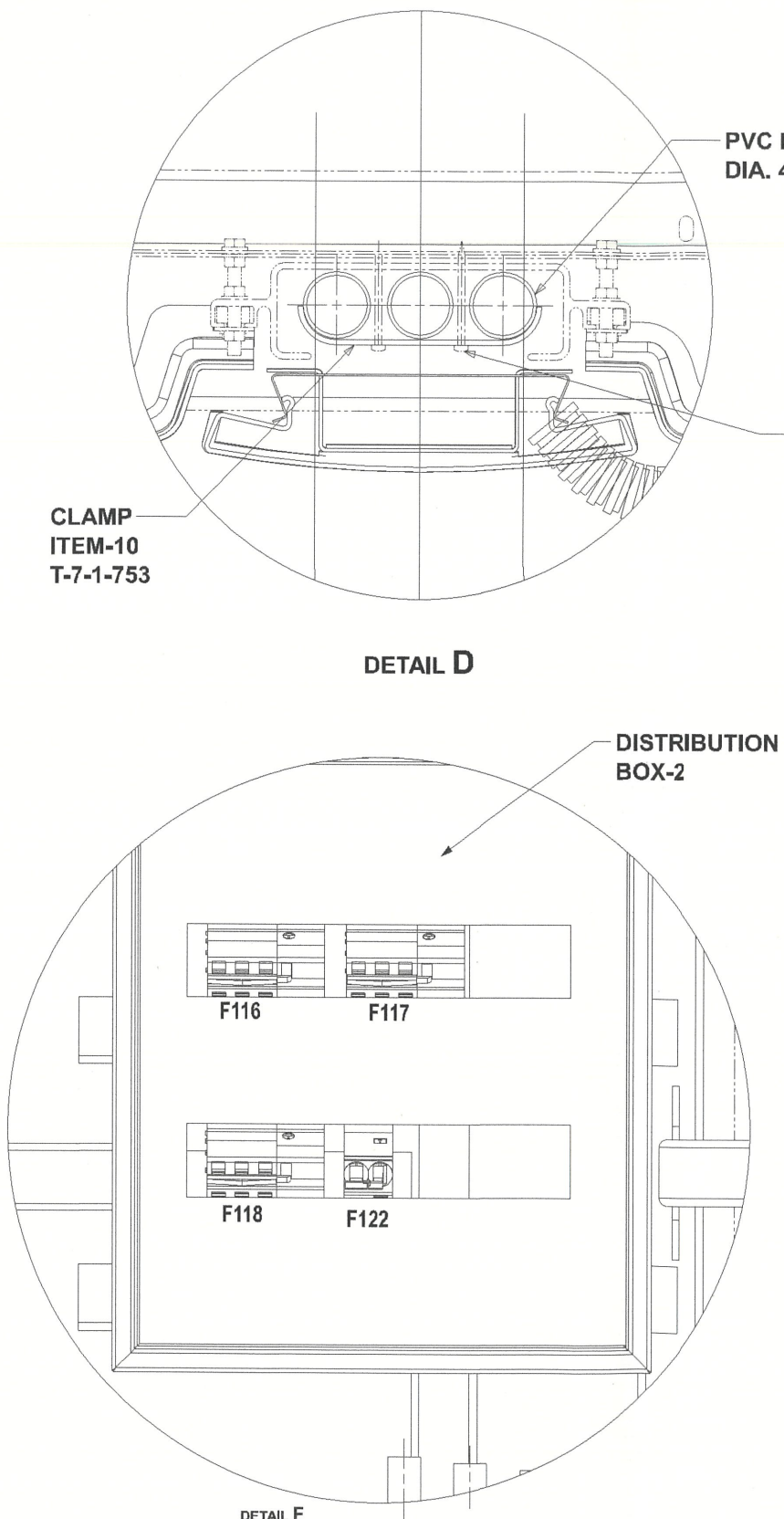
ANNEXURE-D to ED/CAI/041	09.04.2025				Page 1 of 1
Doc. No.	Date	SSE/CAD	SEE/VD	Dy. CEE/DP	Page No.



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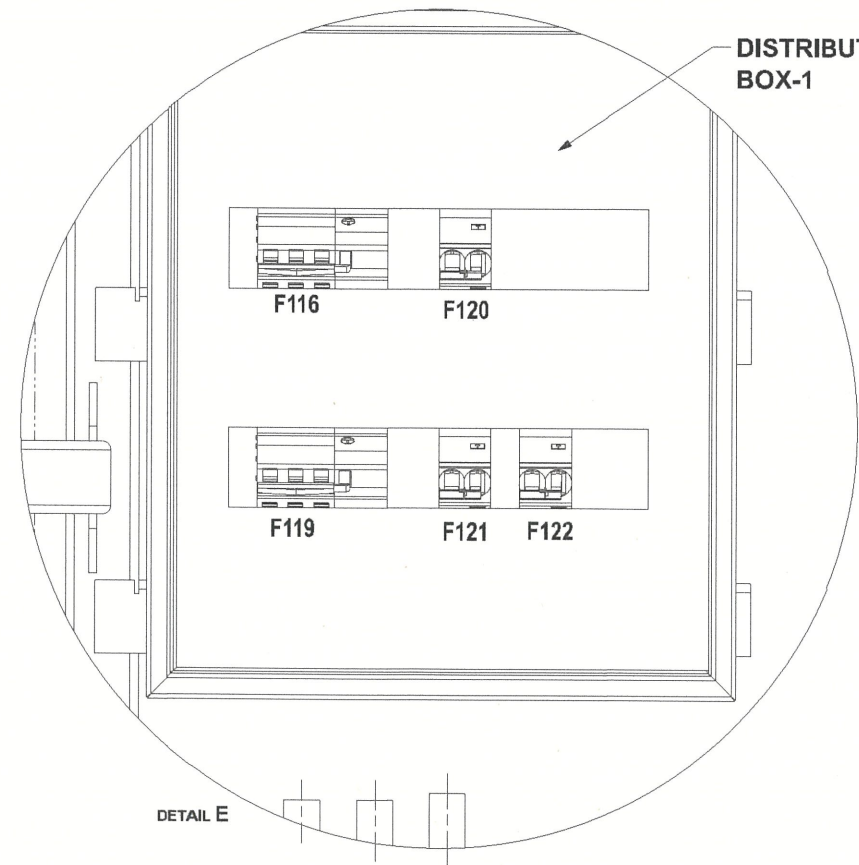


SECTION B-B



DETAIL D

DETAIL F



DETAIL E

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

ENHANCED PANTRY LOAD (415V CIRCUIT-1)		
ITEM No.	ITEM	WATTAGE
1	BRAT PAN (3Ph)	12000 W
2	HOT STORAGE-2	500 W
3	DEEP FAT FRYER-1	3600 W
4	DEEP FAT FRYER-2	3600 W
5	INDUCTION HOT PLATE-2.2 (3Ph)	3500 W
		23200 W

ENHANCED PANTRY LOAD (415V CIRCUIT-2)		
ITEM No.	ITEM	WATTAGE
5	INDUCTION HOT PLATE-2.1 (3Ph)	3500 W
6	INDUCTION HOY PLATE-1 (3Ph)	3500 W
7	HOT STORAGE-1	500 W
8	COMBI OVEN (3Ph)	18600 W
		20100 W

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	OPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP ELECTRICAL			NIL	
WEIGHT	FILE	Z:\-----prt				
NIL	KG					
S. AREA						
NIL	M²					
LENGTH/DIA						
NIL	M					
WIDTH/THICK.						
NIL	M					
HEIGHT						
NIL	M					

ENHANCED PANTRY LAYOUT FOR RETRO FITMENT IN LHB AC HOT BUFFET CAOCH	SCALE	SSE/ED	
RAIL COACH FACTORY, KAPURTHALA	CHD	DRN	
REF.DRG.No. NIL	PL NO.	NIL	
DRG.NO. SKED-998	DRG.NO.	SKED-998	
SEE/VD	DY.CEE/DP	ALT.	NIL

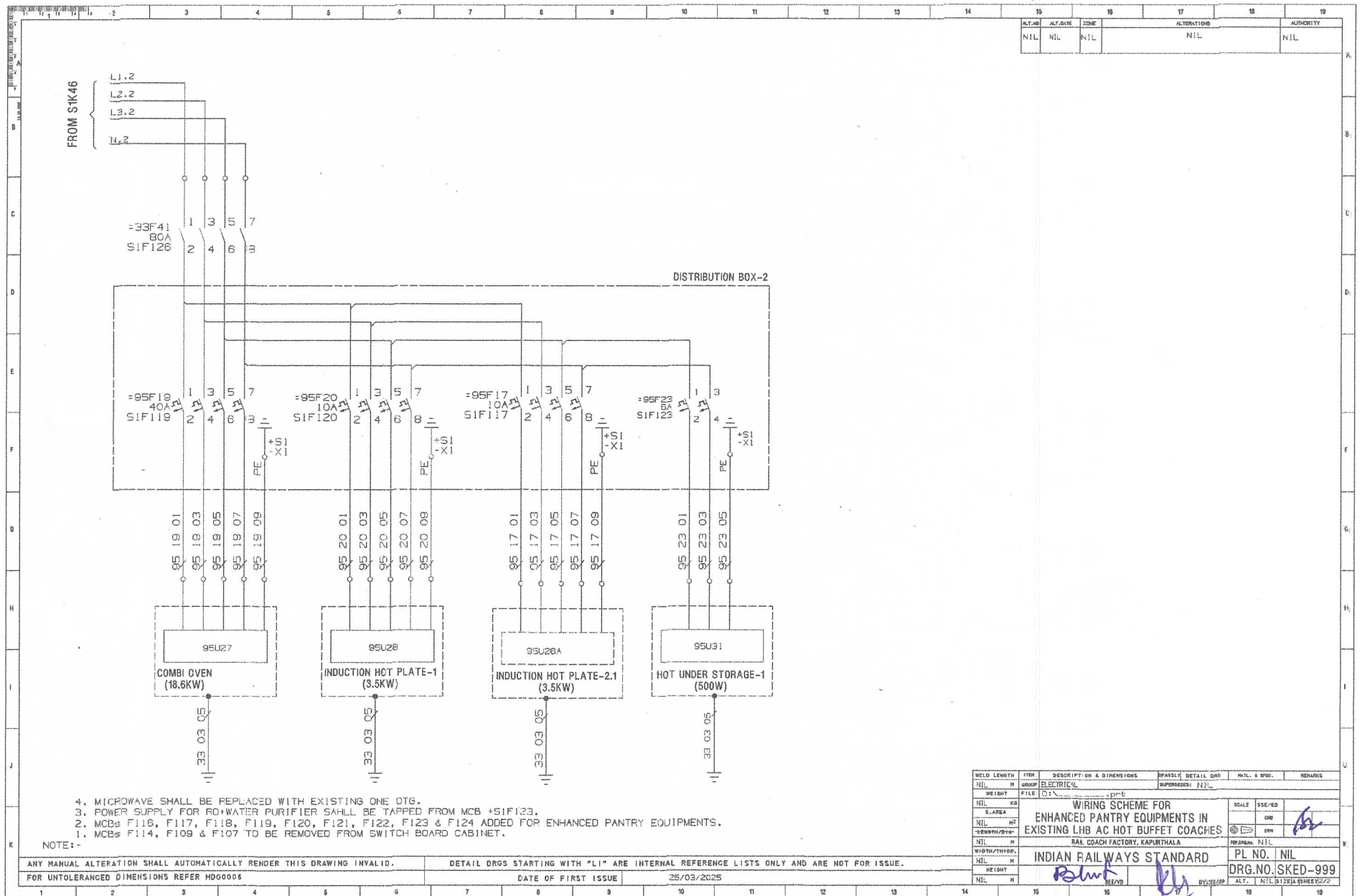
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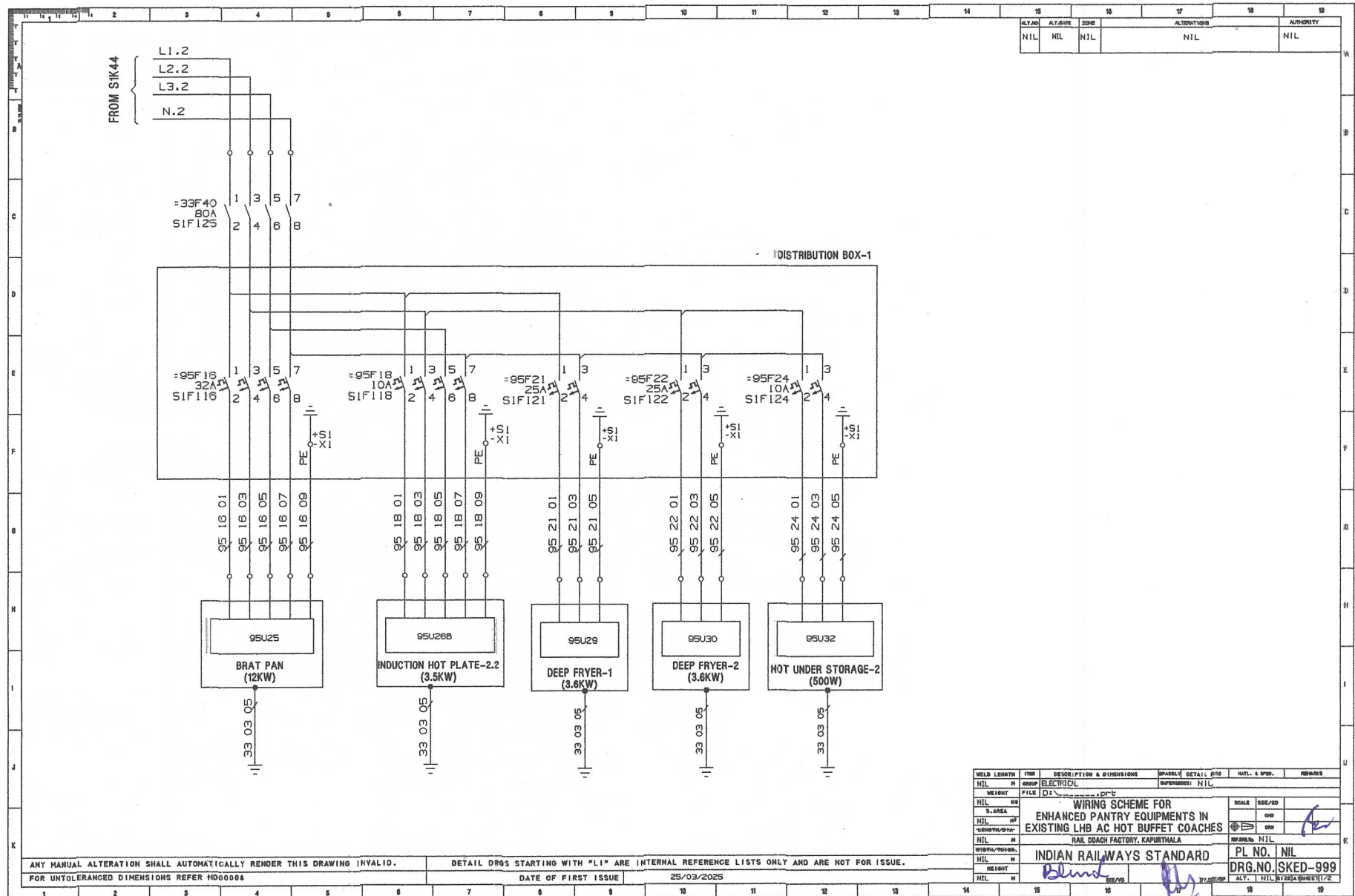
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FOR UNTOLERANCED DIMENSIONS REFER MDG0008

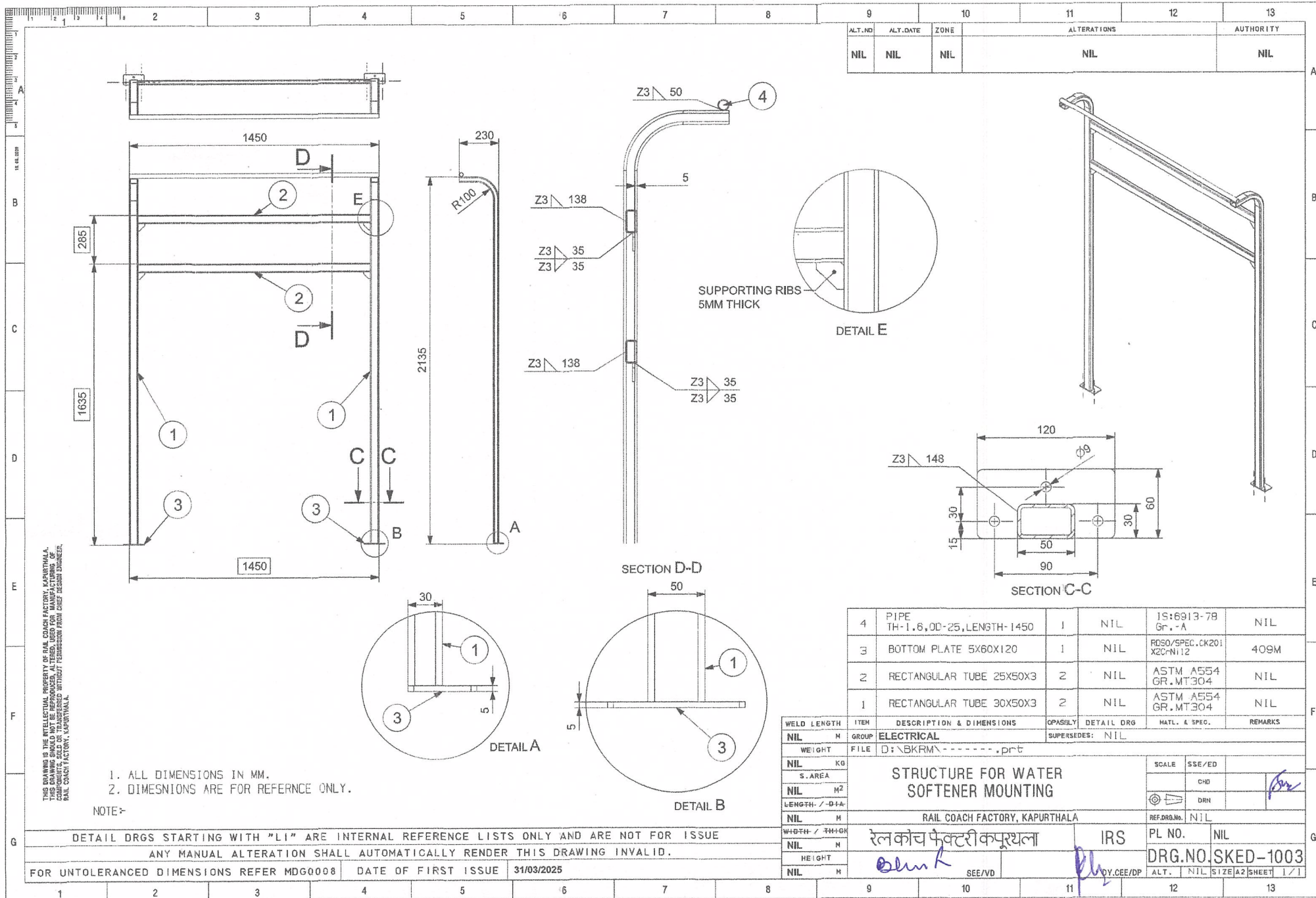
DETAIL DRGS STARTING WITH "LI" ARE INTERNAL REFERENCE LISTS ONLY AND ARE NOT FOR ISSUE.  
DATE OF FIRST ISSUE 27/03/2025











													9	10	11	12	13	
													ALT.NO	ALT.DATE	ZONE	ALTERATIONS		AUTHORITY
													a	11/04/2005	E9,E11	ITEM NO. 4 DELETED AND QPASSLY OF ITEM NO.7 WAS 1.		SME/DEV-11
													b	15/07/2011	C-8	DIMENSIONS 500 & 570 WERE 600 & 520 RESPECTIVELY.		DY.CME/D-3
																		A
																		B
																		C
																		D
																		E
																		F
																		G

17962

110

10740

20

1800

110

1700

20

1780

20

1772

118

250

110

2345

3

KITCHEN

1678.5

5

2

6

350

500

570

MANAGER'S ROOM

STAFF CABIN

7

STAFF CABIN

2310

760

85

1

ENTERED

INTO

DATE

03 AUG 2011

7	PARTITION FRAME BETWEEN STAFF CABINS	2	LH10127	NIL	NIL
6	PARTITION FRAME BETWEEN CORRIDOR & STORE	1	LH10105	NIL	NIL
5	PARTITION FRAME BETWEEN KITCHEN & STORE	1	LH10105	NIL	NIL
4	PARTITION FRAME BETWEEN MANAGER ROOM & STAFF CABIN.	1	LH10104	NIL	NIL
3	PARTITION FRAME BETWEEN KITCHEN & NON-AC COMPT..	1	LH10103	NIL	NIL
2	PARTITION FRAME BETWEEN STORE & MANAGER ROOM.	1	LH10102	NIL	NIL
1	PARTITION FRAME BETWEEN AC COMPT. & NON-AC COMPT.	1	LH10101	NIL	NIL

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	QPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP	PARTITION FRAME			
WEIGHT	FILE	LH10001b.prt (2D)				
NIL	KG	LAYOUT OF PARTITION FRAMES FOR HOT-BUFFET AC COACH LHB TYPE				
S.AREA		RAIL COACH FACTORY, KAPURTHALA				
NIL	M2	SCALE 1:50				
LENGTH / -DIA-		CHD				
NIL	M	DRN				
WIDTH / THICK		RESU				
NIL	M	REF.DRG.No. NIL				
HEIGHT		PL NO. NIL				
NIL	M	DRG.NO. LH10001				
		ALT. b SIZE A2 SHEET 1/1				

FOR UNTOLERANCED DIMENSIONS REFER MDG0008

DATE OF FIRST ISSUE

28/05/2001

CGM BY

20/7/11

1

2

3

4

5

6

7

8

9

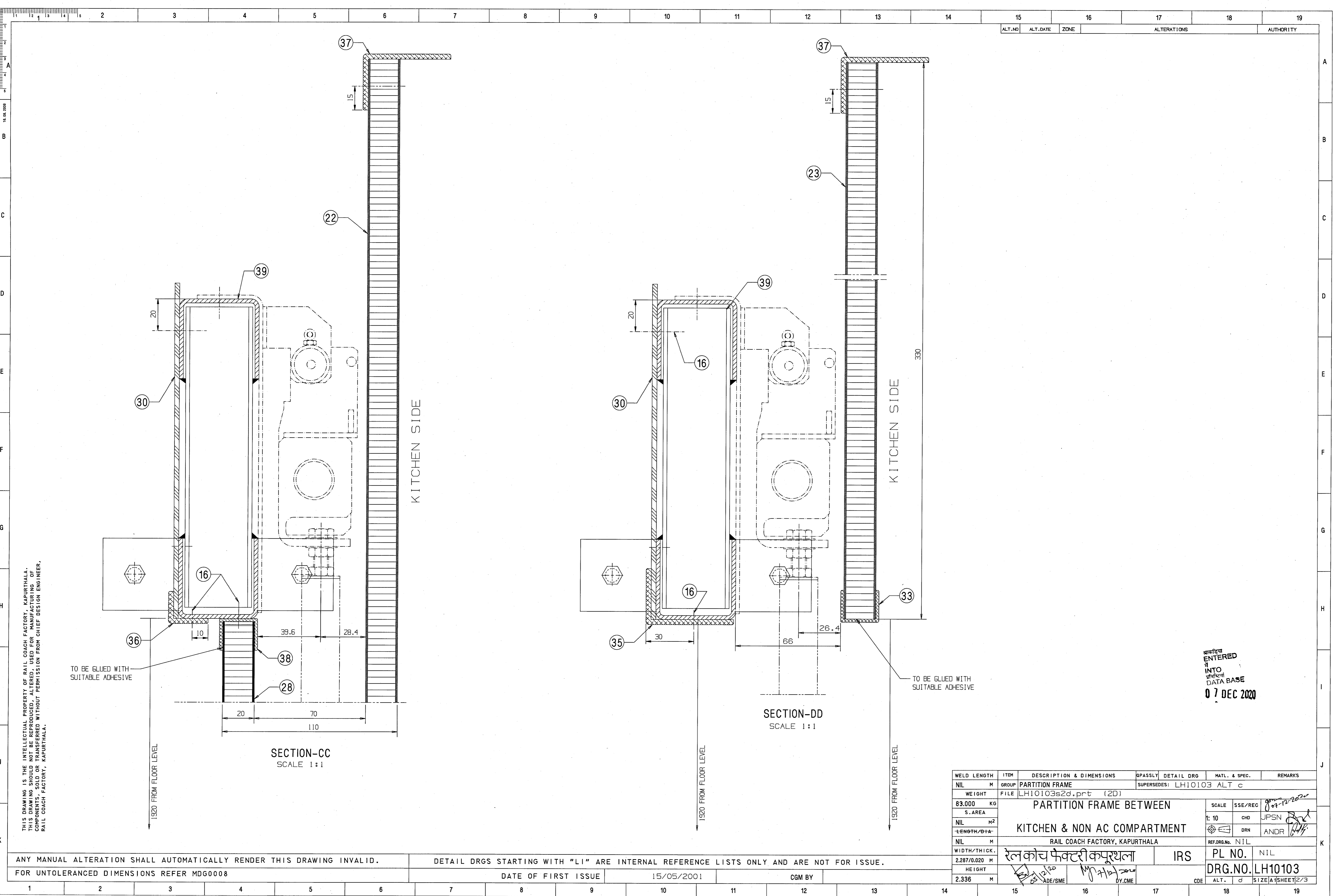
10

11

12

13

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DATE OF FIRST ISSUE

15/05/2001

CGM BY

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	QPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP PARTITION FRAME				
WEIGHT	FILE	LH10103s2d.prt (2D)				
83.000	KG	PARTITION FRAME BETWEEN				
S.AREA		KITCHEN & NON AC COMPARTMENT				
NIL	M <sup>2</sup>	RAIL COACH FACTORY, KAPURTHALA				
LENGTH/B+A						
NIL	M					
WIDTH/THICK.						
HEIGHT						
2.287/0.020	M					
2.336	M					

SCALE	SSE/REC	DRN	JPSN	ANDR
1: 10	CHD			
REF.DRG.No.	NIL			
PL NO.	NIL			
DRG.NO.	LH10103			
ALT.	d	SIZE	A	SHEET 2/3

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RAIL COACH FACTORY, KAPURTHALA.

ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID.  
FOR UNTOLERANCED DIMENSIONS REFER MDG0008

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DATE OF FIRST ISSUE

15/05/2001

CGM BY

NOTE:-

NECESSARY CUTAWAYS TO BE DONE TO SUIT AT SITE.

SIDE WALL

SLIDING DOOR

KITCHEN SIDE

KITCHEN SIDE

KITCHEN SIDE

FLOOR LEVEL

SECTION-EE  
SCALE 1:1

SECTION-FF  
SCALE 1:5

SECTION-AA  
SCALE 1:1

SECTION-BB  
SCALE 1:1

ALT.NO	ALT.DATE	ZONE	ALTERATIONS	AUTHORITY
c	07/07/2011	ALL	1. SIZE OF ITEM-9 WAS MBX35. 2. QPC OF ITEM-16 WAS 100. 3.SIZE OF ITEM-6 WAS A8.4 4.SIZE OF ITEM-20 WAS MB. 5.ITEM-40 ADDED.	DY.CME/D-3
d	01/12/2020	E15 E15 H15 ALL	1.LENGTH OF ITEM Nos. 26 & 27 WERE 1920 & 675 RESPECTIVELY . 2.ITEM NO. 27 WAS CHANNEL AND SIZE OF ITEM-29 WAS 20X358X608. 3.LENGTH OF ITEM Nos 12 & 38 WERE 966 & 643 RESPECTIVELY. 4.DIM.1042,575 & 1918 WERE 1022,615 & 1890 RESPECTIVELY.	DIC NO. MD200046

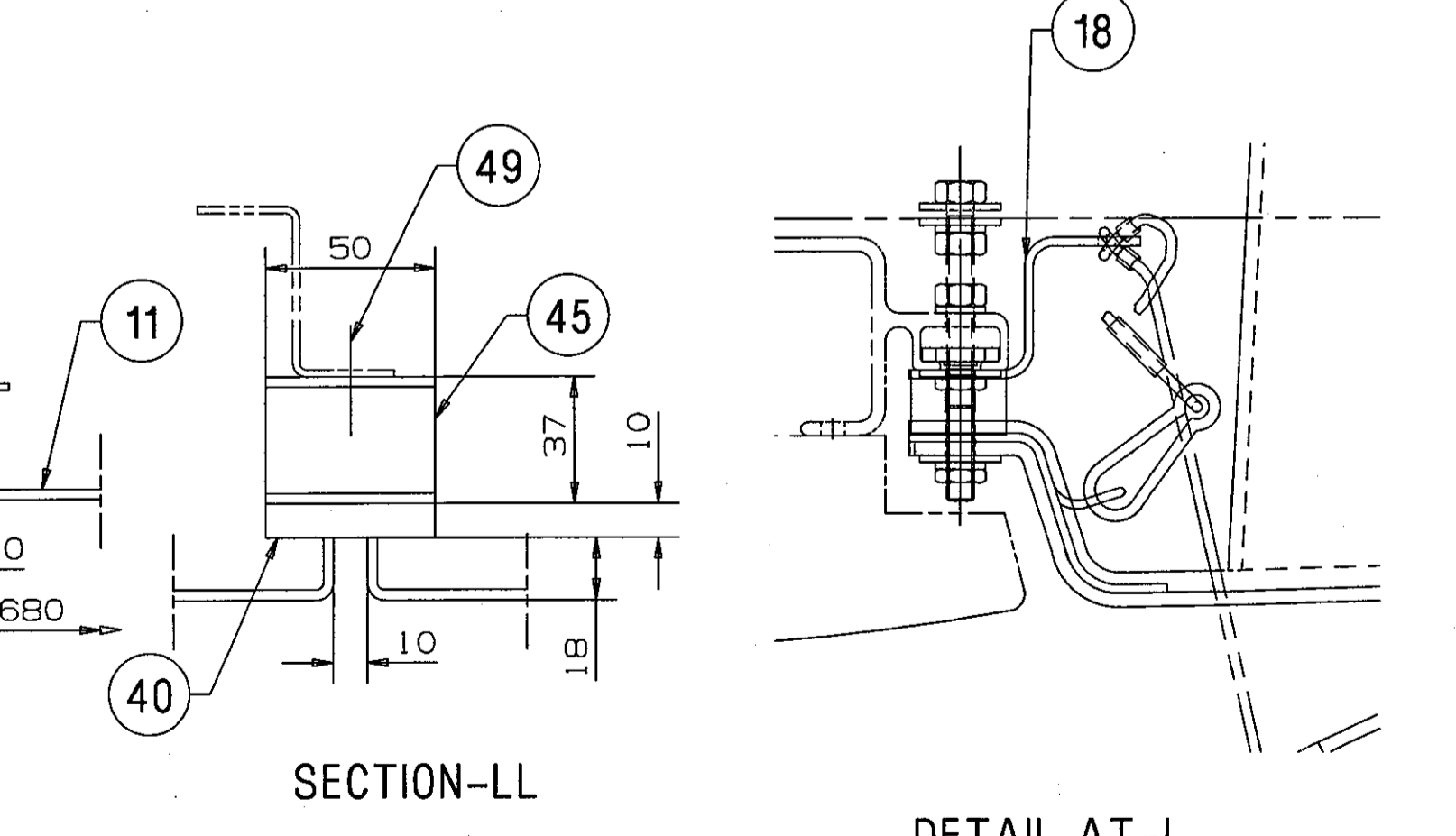
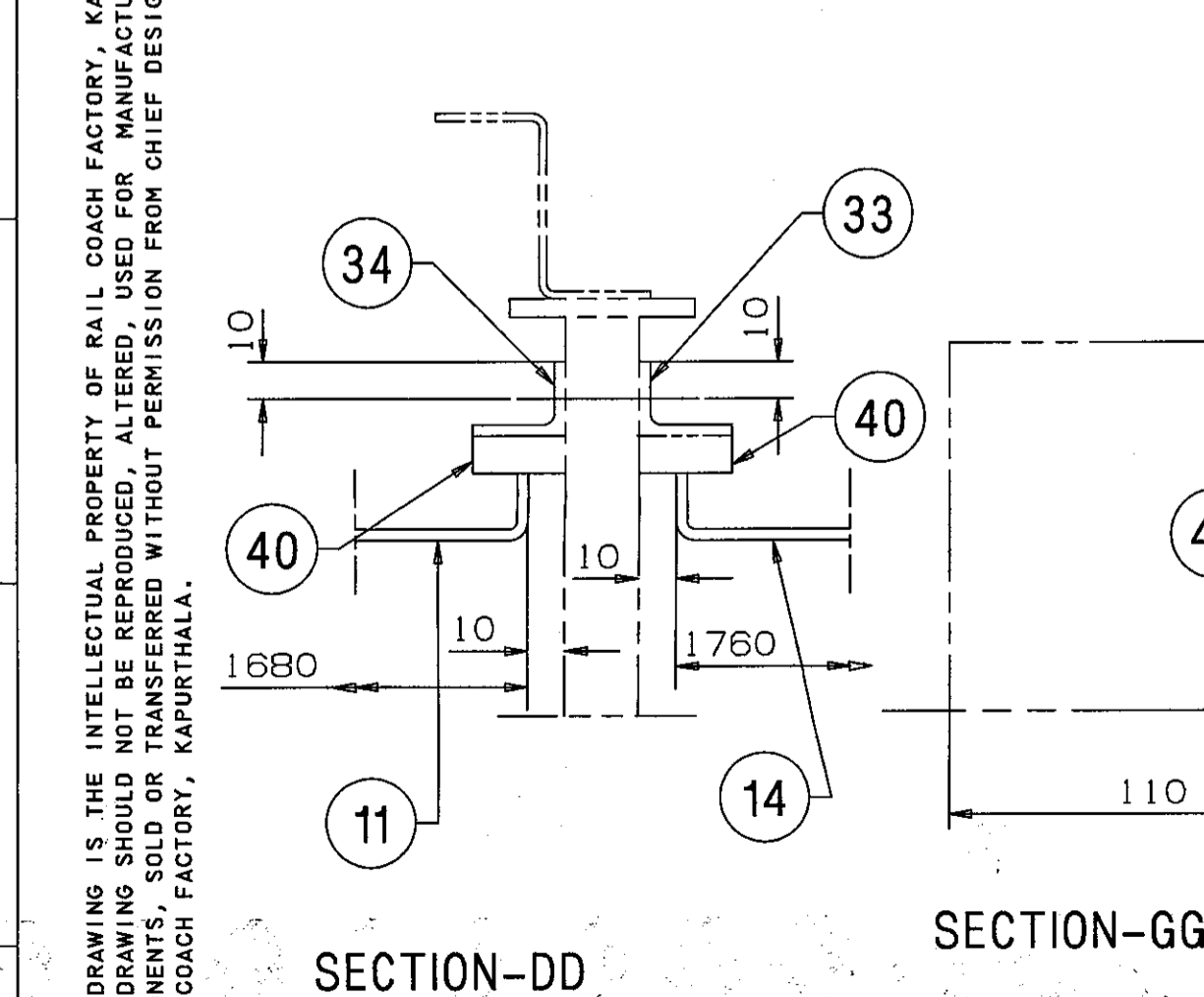
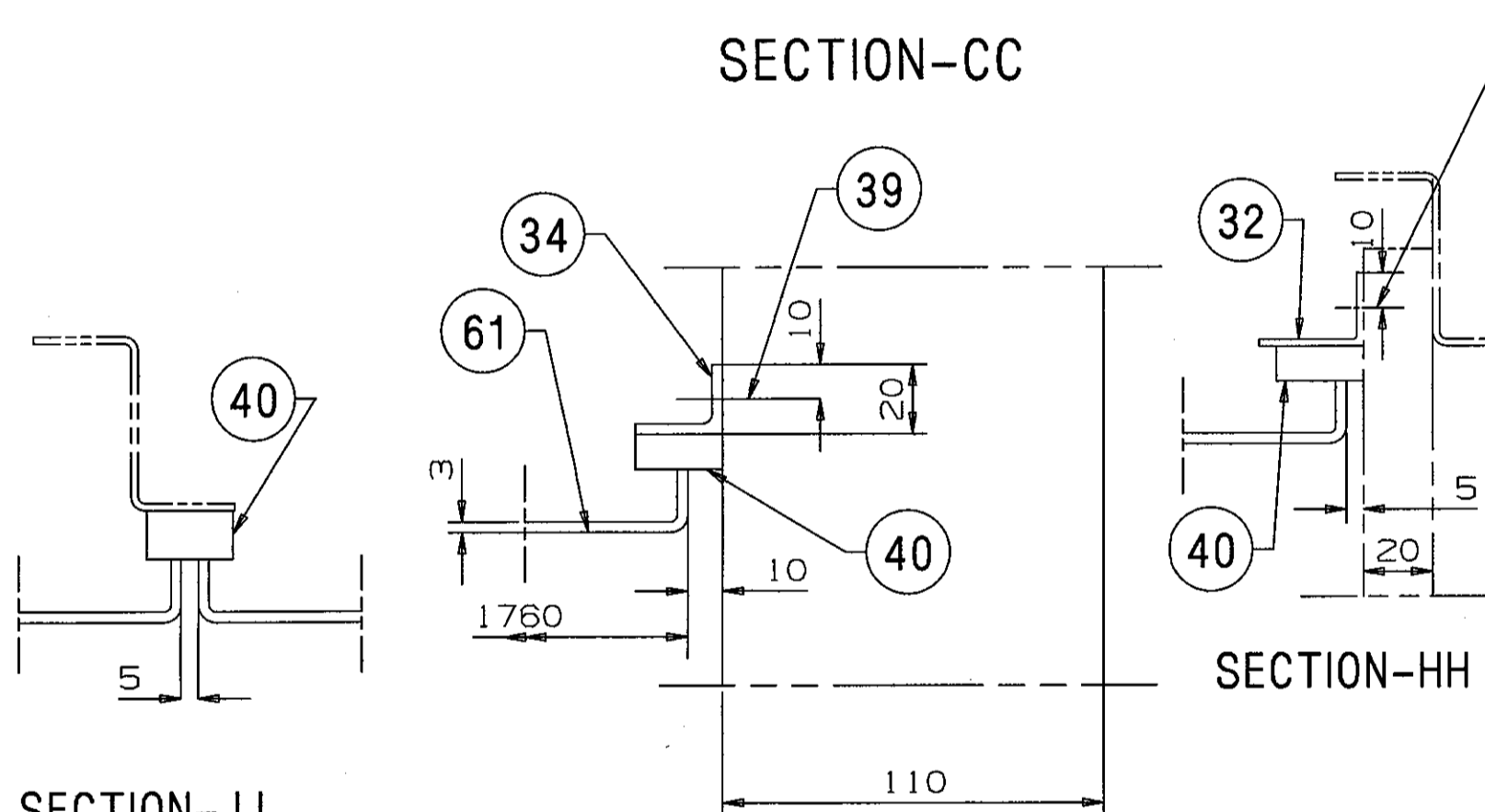
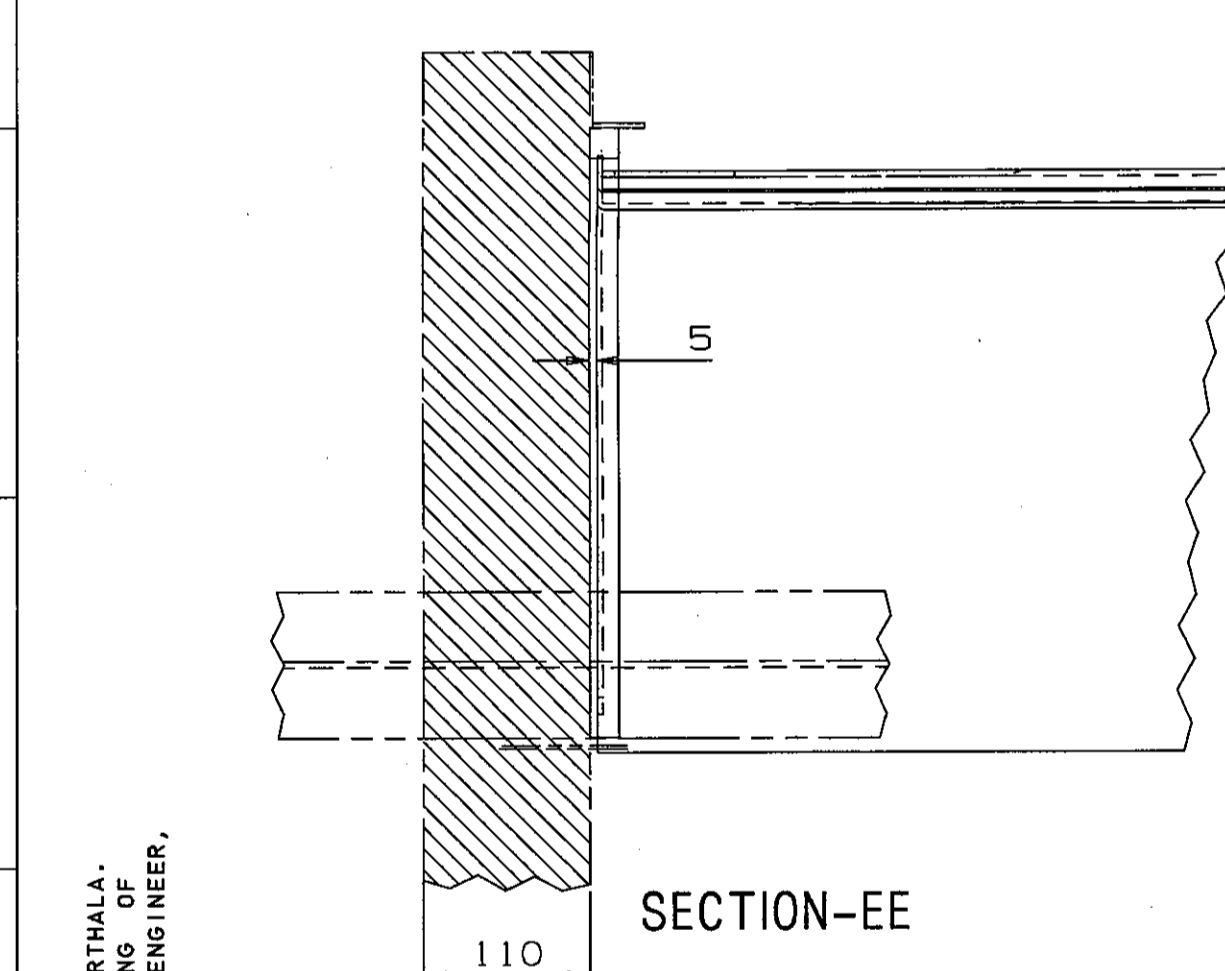
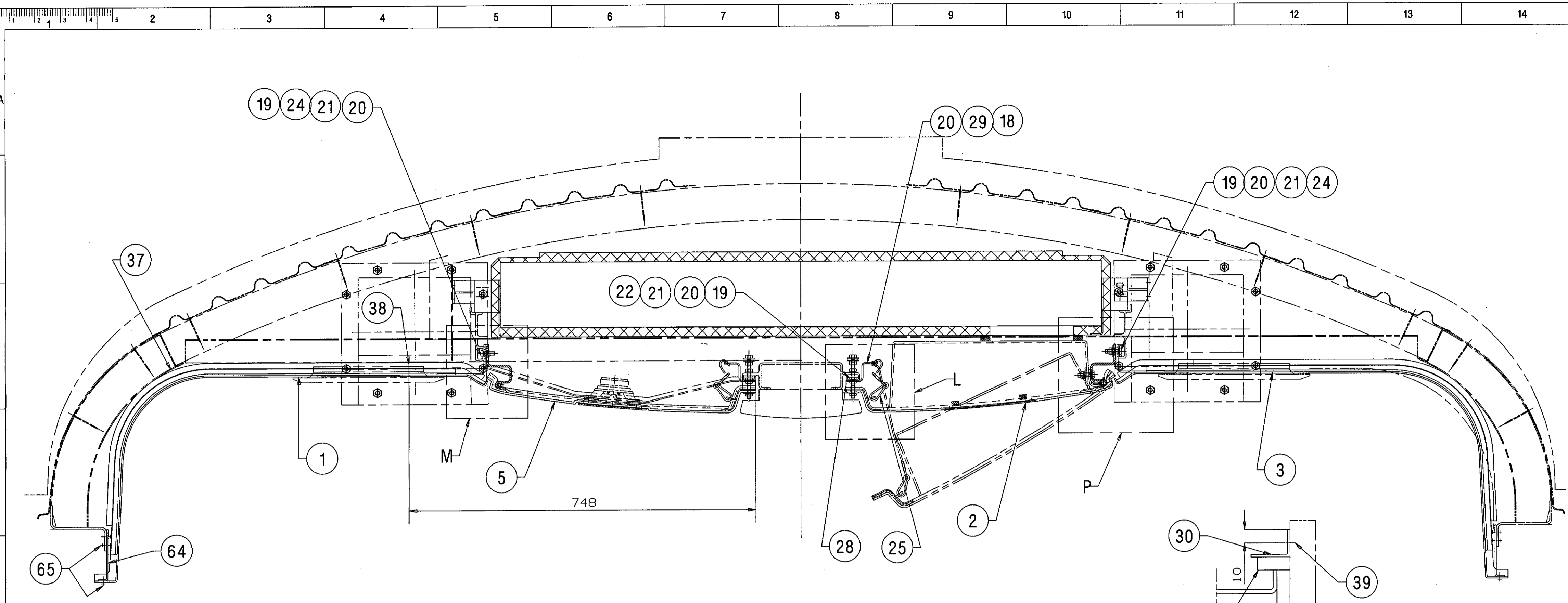
40	STAINLESS STEEL SLOTTED CSK HD TAPP SCREW ST4.2X25-C (A2-70 TO IS:1367 PT.14-84)	16	NIL	IS: 7170-1989, ISO-1482	NIL
39	DOOR FRAME	1	LW10163	NIL	NIL
38	AL.PROFILE	1	LA10116	NIL	L=663
37	AL.PROFILE	1	CC43353	NIL	L=2850
36	AL.PROFILE	1	CC43336	NIL	L=2242
35	AL.PROFILE	1	CC43353	NIL	L=743
34	AL.PROFILE	2	CC43353	NIL	L=1920
33	AL.PROFILE	1	LA10131	NIL	L=743
32	AL.PROFILE	1	UN42163	NIL	L=187
31	AL.PROFILE	3	LA10116	NIL	L=306
30	HPL SHEET 3X210X1530	2	NIL	MDTS-086	NIL
29	HONEYCOMB PARTITION 20X325X590	1	NIL	MDTS-097	NIL
28	HONEYCOMB PARTITION FRAME	1	LH10153	NIL	NIL
27	ANGLE	1	NIL	IS: 737-86 31000H2	L=635
26	AL.CHANNEL	2	NIL	IS: 737-86 31000H2	L=1945
25	AL.PROFILE	2	UN43103	NIL	L=643
24	AL.PROFILE	2	UN43103	NIL	L=966
23	HONEYCOMB PARTITION 20X330X766	1	NIL	MDTS-097	NIL
22	HONEYCOMB PARTITION FRAME	1	LH10154	NIL	NIL
21	PILLOW LINING 1 FOR BRUSH	2	3 10113.0. 21.500.116	NIL	NIL
20	STAINLESS STEEL HEX NUT M6 (A2-70 TO IS:1367 PT-14)	24	LIHWSS08	IS: 1364 PT.3-92 ISO-4032	ITEM-2
19	FLAT WASHERS M6	14	NIL	ISO: 7093-1983 A2-70	NIL
18	HEX.CAP.SCREWS M6X16	14	NIL	ISO: 4017-1988 A2-70	NIL
17	PLYWOOD-PACKING 3X20X790	1	NIL	IS: 303-89 BWR,AA-QLTY.	NIL
16	STAINLESS STEEL SLOTTED CSK HD TAPP SCREW ST4.2X16-C (A2-70 TO IS:1367 PT.14-84)	74	LIHWSS03	IS: 7170-1989, ISO-1482	ITEM-6
15	PACKING	2	4 10113.0. 21.500.133	NIL	NIL
14	ANGLE-2 FOR PARTITION WALL	1	2 10113.0. 21.500.108	NIL	NIL
13	ANGLE-1 FOR PARTITION WALL	1	2 10113.0. 21.500.107	NIL	NIL
12	AL.PROFILE	2	LA10116	NIL	L=986
11	AL. PROFILE	1	LA10116	NIL	L=643
10	PROFILE 1 FOR DOOR RABBAT	1	2 10113.0. 21.500.109	NIL	NIL
9	STAINLESS STEEL HEX HEAD SCREW M6X50 (A2-70 TO IS:1367 PT.14-84)	24	NIL	IS: 1364 PT.2-92 ,CE	NIL
8	AL.PROFILE	2	LA10115	NIL	L=1945
7	AL.PROFILE L=790	2	LA10115	NIL	NIL
6	STAINLESS STEEL MACHINE WASHER A6.4 (A2 TO IS:1367 PT.14-1984)	24	LIHWSS09	IS: 2016-1967 DIN125	ITEM-4
5	PLYWOOD-PACKING 3X20X2270	1	NIL	IS: 303-89 BWR,AA-QLTY.	NIL
4	SEALING BRUSH	4	3 10113.0. 21.500.119	NIL	NIL
3	BRACKET FOR PARTITION WALL COMPLETE	5	3 10113.0. 21.500.102	NIL	NIL
2	HONEYCOMB PARTITION FRAME	1	LH10146	NIL	NIL
1	HONEYCOMB PARTITION FRAME	1	LH10108	NIL	NIL

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	QUASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP	PARTITION FRAME	SUPERSEDES: LH10103	ALT c	
WEIGHT	FILE	LH10103s3d.prt (20)				
83.000	KG					
S.AREA						
NIL	M <sup>2</sup>					
±LENGTH/±A						
NIL	M					
WIDTH/THICK.						
2.287/0.020	M					
HEIGHT						
2.336	M					

SCALE	SSE/REC	SCALE	SSE/REC
1: 10	CHD	JPSN	
DRN	ANDR		
REF.DRG.No.	NIL		
PL NO.	NH1L		
DRG.NO.	LH10103		
ALT.	d	SIZE A1	SHEET 3/3

ENTERED  
INTO  
DATA BASE  
07 DEC 2020





DETAIL AT-L

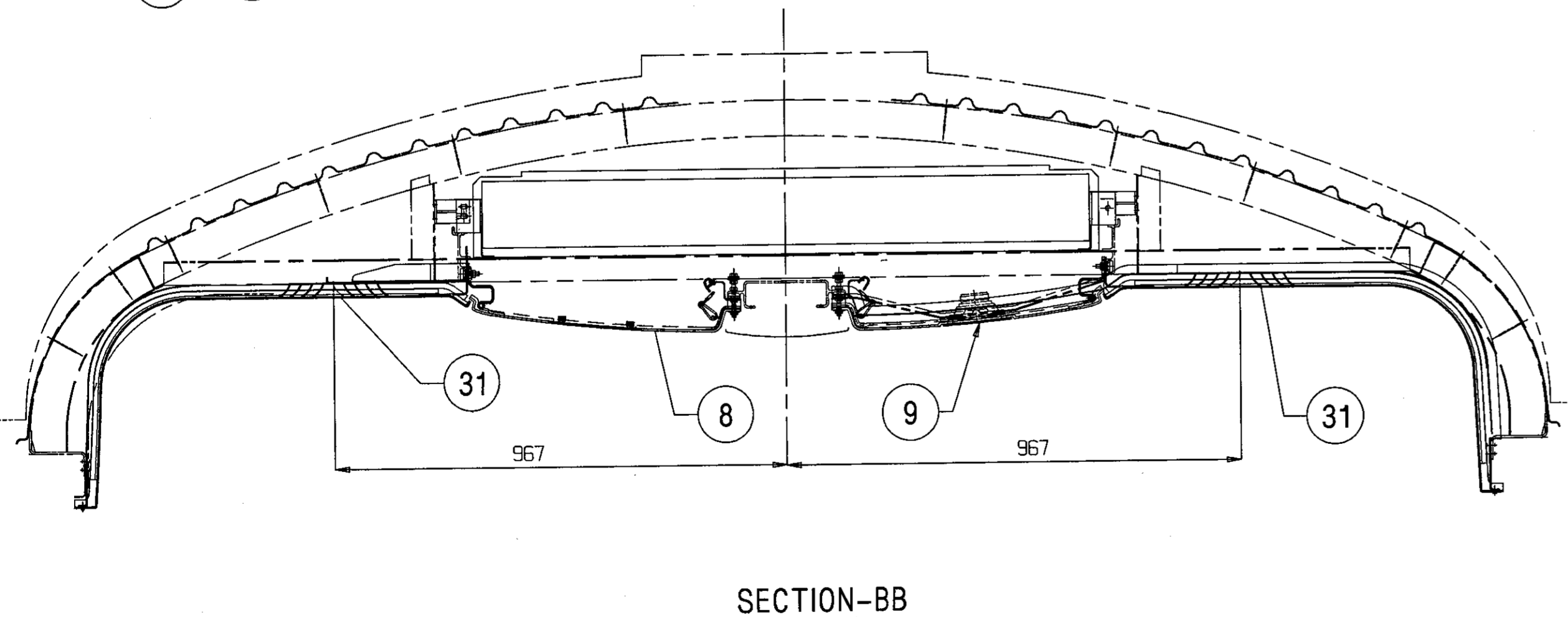
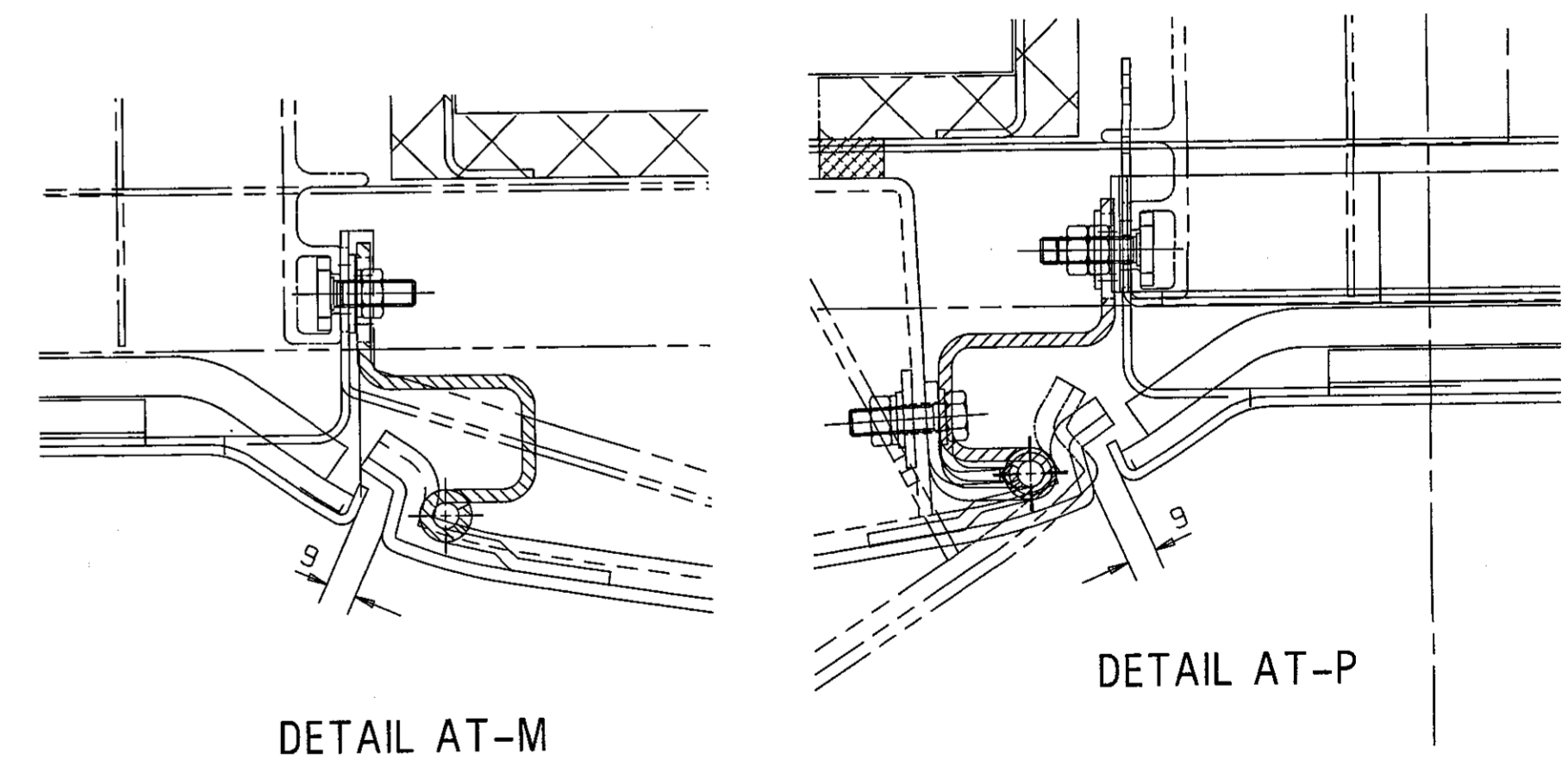
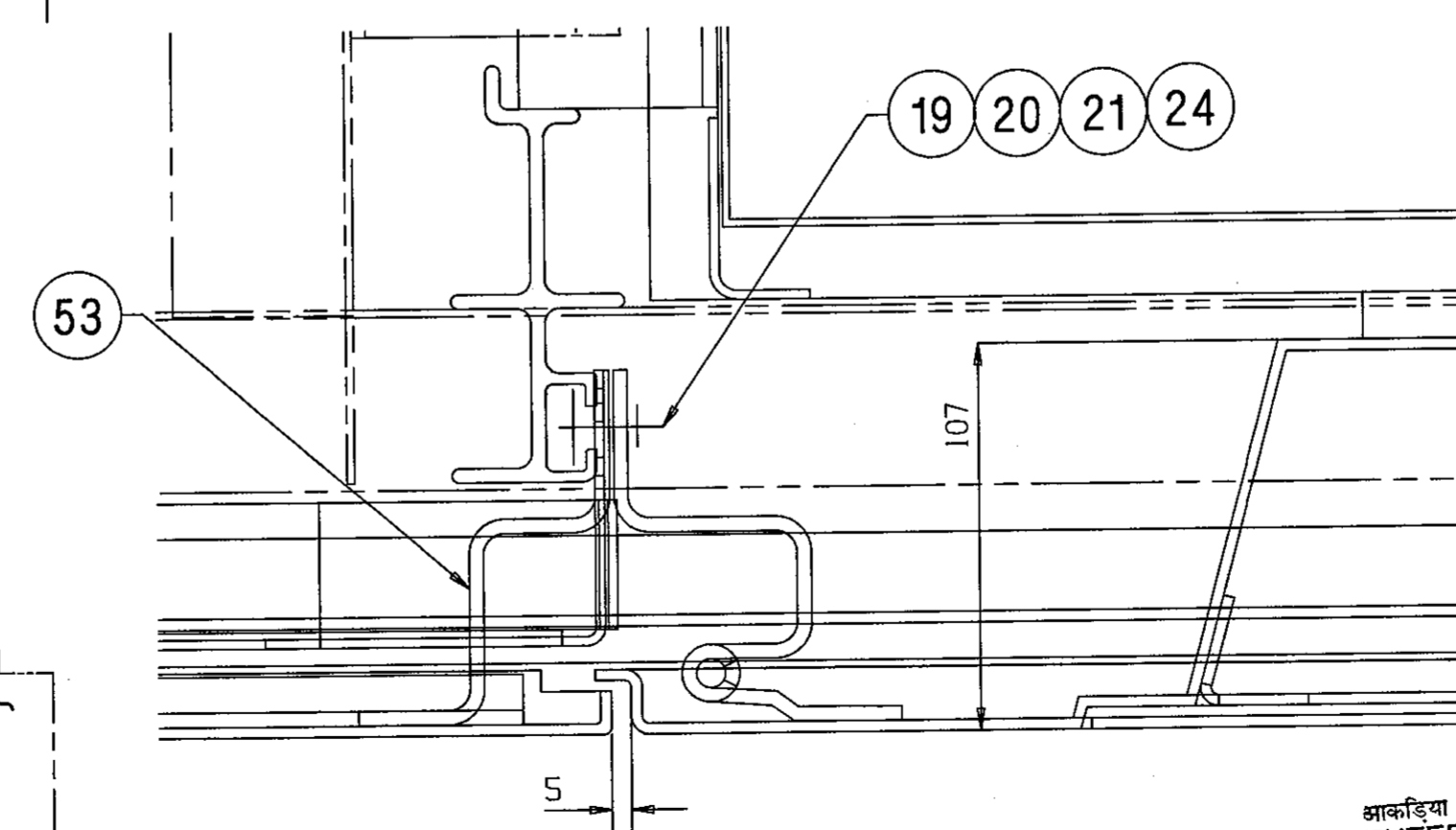
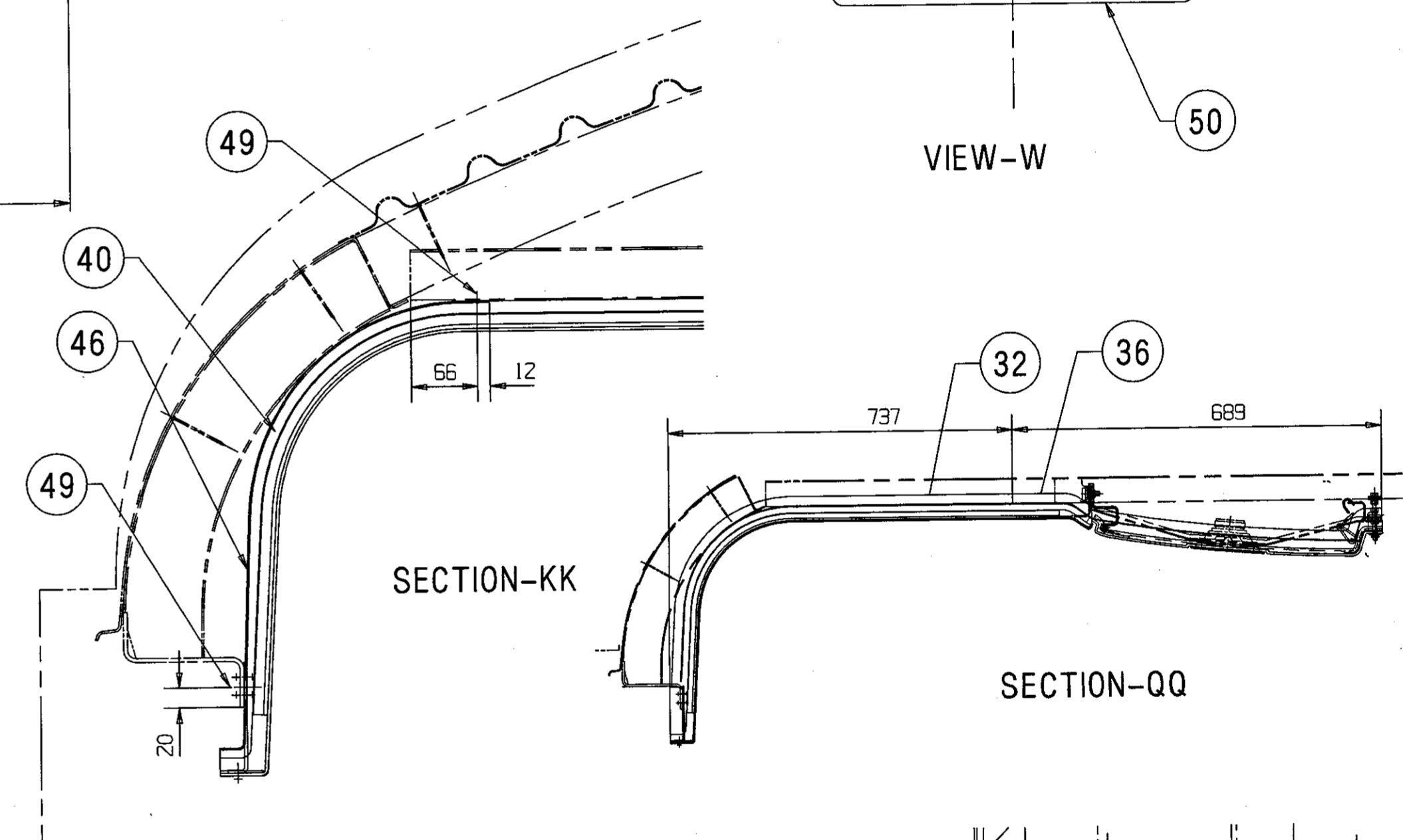
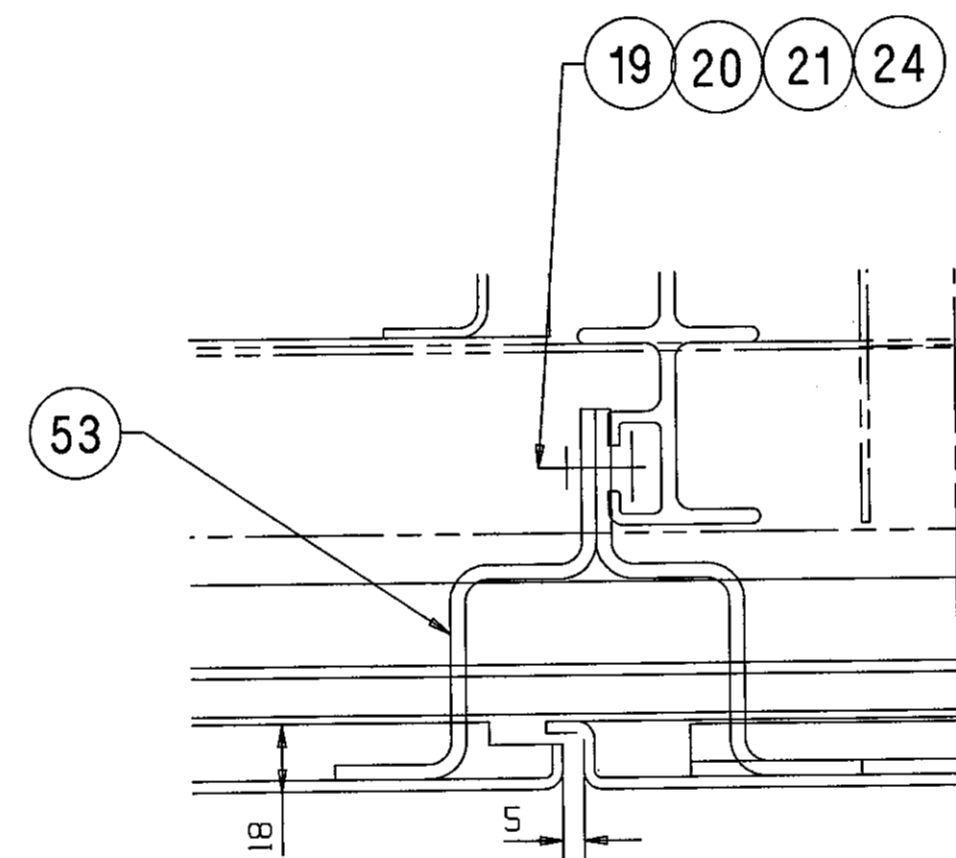
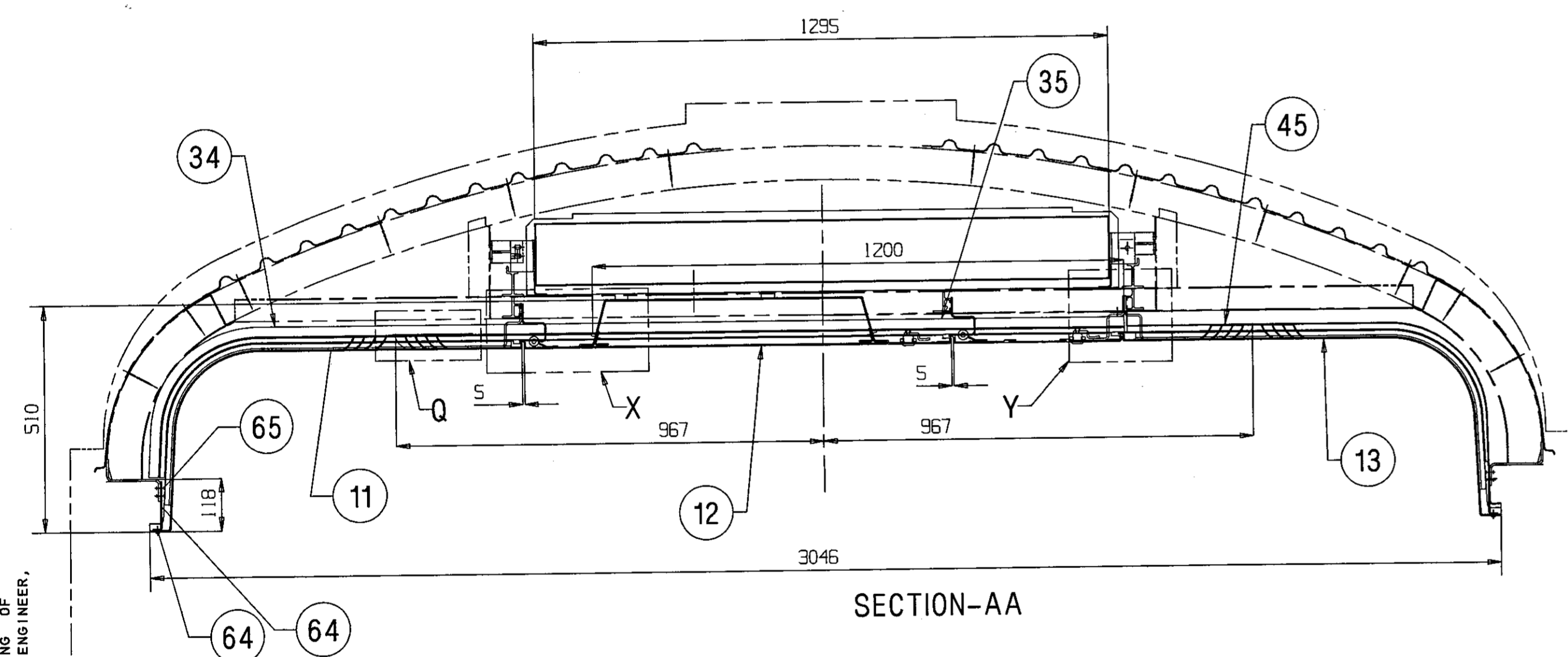
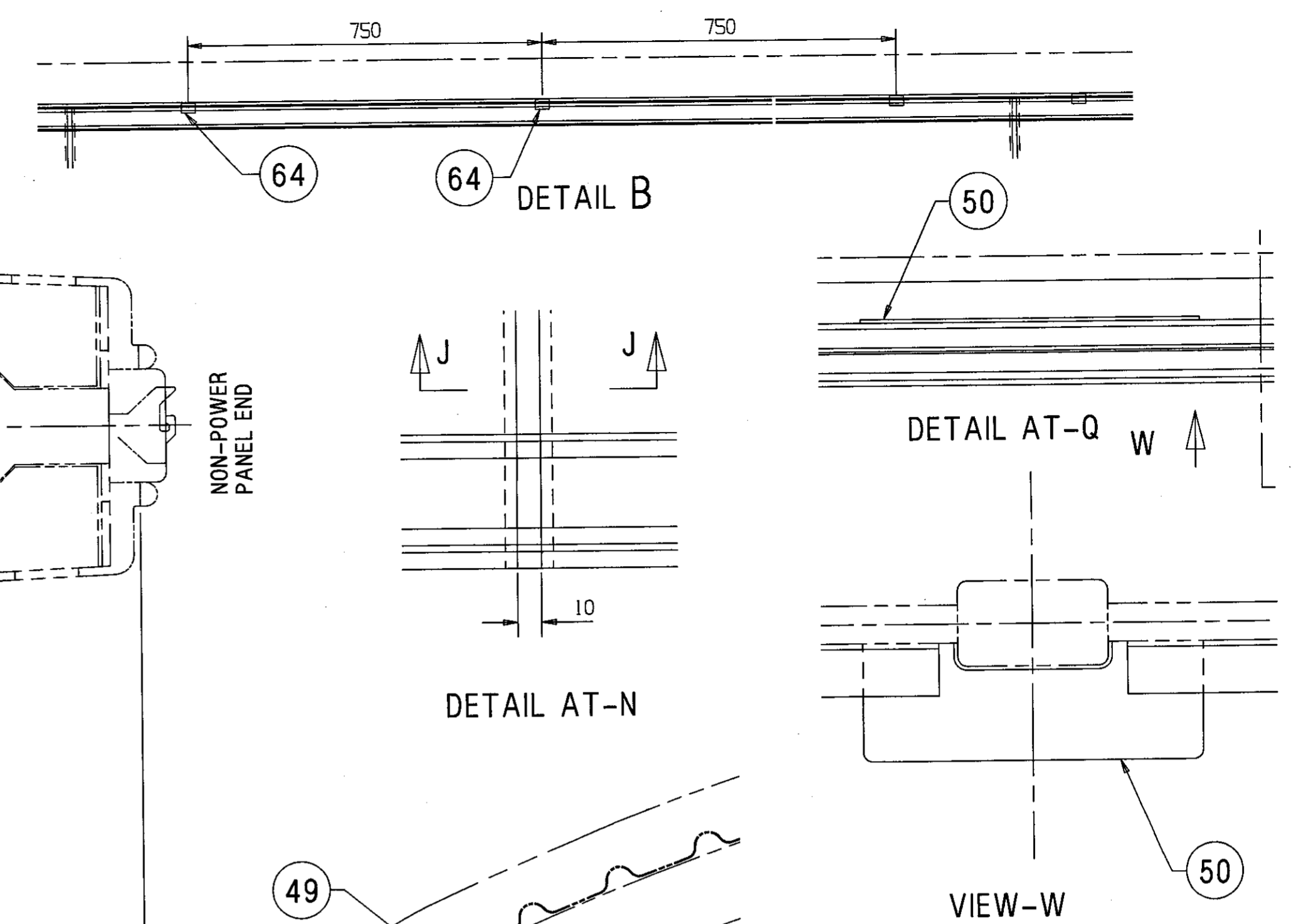
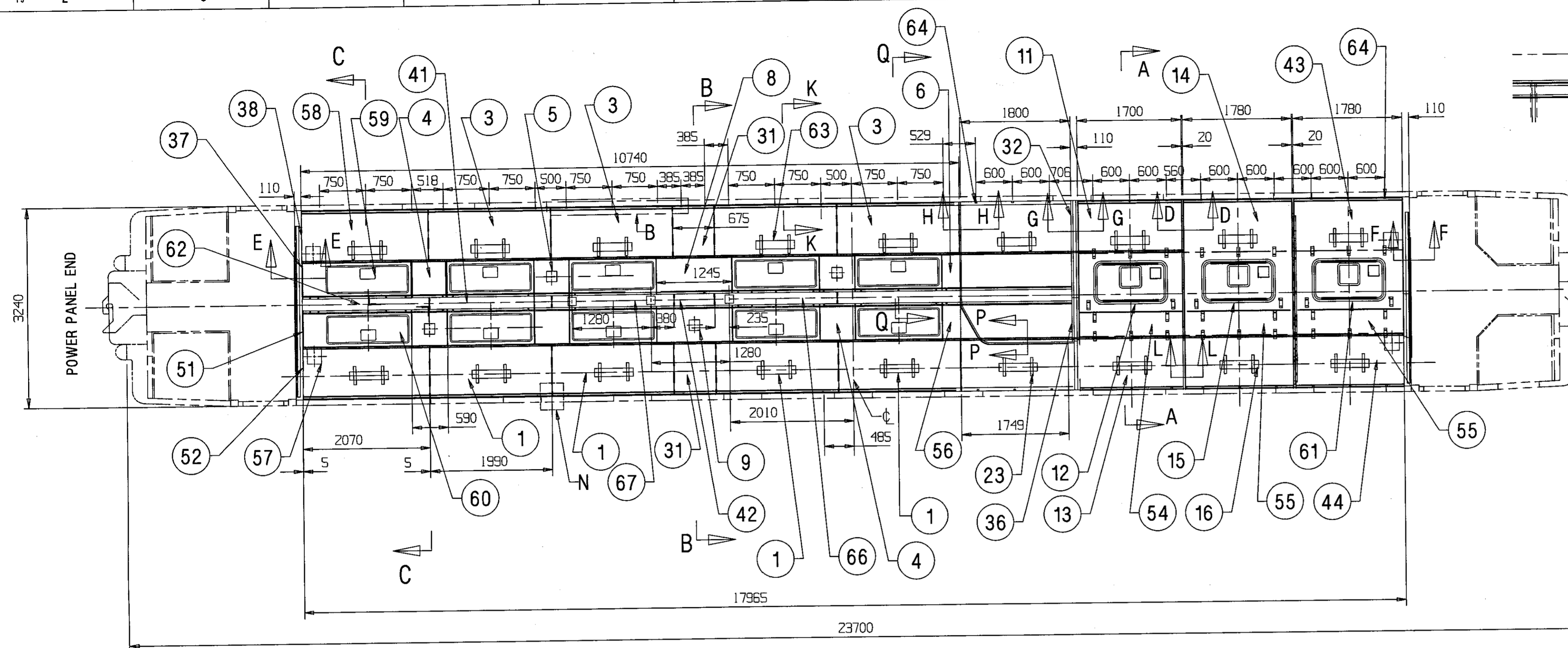
ALT. NO	ALT. DATE	ZONE	ALTERATIONS	AUTHORITY
h	16/08/2014	F11	ITEM NO 65 UPDATED	MD140026 DATED
i	21/04/2015	ALL	ITEM NO 64 RELOCATED DETAIL-B ADDED. ITEM NO. 1,3,11,13,14,16,23, 31,43,44,57,58&63 MODIFIED. ITEM NO.39 UPDATED.	26/06/2014 DIC NO.MD150011
j	11/12/2024	ALL	LENGTH OF ITEM NO 31,57 & 58 INCREASED BY 30 MM. GAP BETWEEN PANEL AND PARTITION IN PANTRY AREA REDUCED FROM 10MM TO 5MM.	DIC NO. MD240064

47	BRACKET FOR FL IN PANTRY	5	LH44190	NIL	NIL
46	CEILING FLAT	11	LH44223	NIL	NIL
45	CEILING FLAT IN CORRIDOR	4	LH44222	NIL	NIL
44	COVER CEILING PART	1	LH44221	NIL	NIL
43	COVER CEILING PART	1	LH44172	NIL	NIL
42	CENTER COVER ASSEMBLY	1	LH44178	NIL	NIL
41	CENTER COVER ASSEMBLY	2	LH44177	NIL	NIL
40	CEILING FOAM 20X20X36000	1	MDTS046	NIL	NIL
39	STAINLESS STEEL SLOTTED PAN HD TAPP SCREW ST4.8X19-F (A2-70 TO IS1367 PT.14-84)	50	LHWS03	IS: 7173-1989, IS 0-1481	ITEM-10
38	CEILING PROFILE	1	LH44225	NIL	NIL
37	CEILING PROFILE	1	LH44226	NIL	NIL
36	CEILING ANGLE	1	LH44218	NIL	NIL
35	ALUMINIUM PROFILE L=1200MM	5	CC43337	NIL	NIL
34	CEILING ANGLE	3	LH44217	NIL	NIL
33	CEILING ANGLE	2	LH44216	NIL	NIL
32	CEILING ANGLE	1	LH44215	NIL	NIL
31	COVER CEILING PART COMPLETE	2	LH44173	NIL	NIL
30	ALUMINIUM PROFILE L=2200MM	1	CC43337	NIL	NIL
29	SPECIAL HAMMER HEAD SCREW	22	LW44160	NIL	NIL
28	SHIM	60	4 10113.0, 21.410.016	NIL	NIL
27	SPECIAL HAMMER HEAD SCREW	40	LW44161	NIL	NIL
26	BRAIDED HOOK	9	NIL	R03 00299799	NIL
25	BOW CRAMP	22	NIL	NIL	NIL
24	SPECIAL HAMMER HEAD SCREW	170	LW44167	NIL	NIL
23	COVER CEILING PART COMPLETE	1	LH44160	NIL	NIL
22	SPECIAL HAMMER HEAD SCREW	60	LW44168	NIL	NIL
21	PLAIN WASHER A9	250	LHWS09	IS: 2016-1967 STEEL	ITEM-4 COATING TO MDS 057
20	SPRING WASHER B8	250	LHWS09	IS: 3063-1994	ITEM-20 COATING TO MDS 057
19	HEX NUT M8 (A2-70 TO IS1367 PT-14)	250	LHWS08	IS: 1364 PT.3-92	ITEM-3 COATING TO MDS 057
18	BRACKET	22	2 10113.0, 21.410.015	NIL	NIL
17	BRACKET FOR FL	3	LW44162	NIL	NIL
16	COVER CEILING PART	1	LH44116	NIL	NIL
15	DIFFUSER ASSEMBLY	1	LH44106	NIL	NIL
14	COVER CEILING PART	1	LH44117	NIL	NIL
13	COVER CEILING PART	1	LH44120	NIL	NIL
12	DIFFUSER ASSEMBLY	1	LH44123	NIL	NIL
11	COVER CEILING PART	1	LH44113	NIL	NIL
10	BRACKET FOR FL AND SPEAKER	3	LH44163	NIL	NIL
9	MIDDLE CEILING PART COMPLETE	1	LH44171	NIL	NIL
8	MIDDLE CEILING PART COMPLETE	1	LH44170	NIL	NIL
7	MIDDLE CEILING PART COMPLETE	1	LH44131	NIL	NIL
6	MIDDLE CEILING PART COMPLETE	1	LH44309	NIL	NIL
5	MIDDLE CEILING PART 3, COMPLETE	3	2 10113.0, 21.410.008	NIL	NIL
4	MIDDLE CEILING PART 2, COMPLETE	3	2 10113.0, 21.410.004	NIL	NIL
3	COVER CEILING PART	3	LH44331	NIL	NIL
2	MIDDLE CEILING PART 1, COMPLETE	8	1 10113.0, 21.410.003	NIL	NIL
1	COVER CEILING PART	4	LH44330	NIL	NIL

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DATA BASE  
30 DEC 2024

67	CENTER COVER ASSEMBLY	1	LH44481	NIL	NIL
66	CENTER COVER ASSEMBLY	1	LH44482	NIL	NIL
65	SLOTTED PAN HD TAPPING SCREW ST4.8X25-C(A2-70 TO IS1367,PT.14-84)	174	NIL	IS: 7173-89 ISO: 1481	NIL
64	SUPPORT BRACKET	58	LE44225	NIL	NIL
63	COVER CEILING PART	1	LH44413	NIL	NIL
62	CENTER COVER ASSLY.	1	LH44339	NIL	NIL
61	DIFFUSER ASSEMBLY	1	LH44334	NIL	NIL
60	MIDDLE CEILING PART	1	LH44333	NIL	NIL
59	MIDDLE CEILING PART	1	LH44332	NIL	NIL
58	COVER CEILING PART	1	LH44152	NIL	NIL
57	COVER CEILING PART	1	LH44155	NIL	NIL
56	MIDDLE CEILING PART	1	LH44313	NIL	NIL
55	CEILING ASSEMBLY	2	LH44306	NIL	NIL
54	CEILING ASSEMBLY	1	LH44304	NIL	NIL
53	SUPPORT FOR CEILING	15	LW44143	NIL	NIL
52	CEILING PROFILE	1	LH44228	NIL	NIL
51	CEILING PROFILE	1	LH44227	NIL	NIL
50	CEILING PIECE	12	LH44229	NIL	NIL
49	CSK FLAT HEAD SCREW ISO 7046-1-MX16-4.8-H	35	NIL	ISO: 7485 (PT-1) 2005 STEEL	COATING TO MDS 057
48	BRACKET FOR FL AND SPEAKER IN PANTRY	5	LH44191	NIL	NIL

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	SPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP	CEILING AND MOULDING	SUPERSEDES: LH44121	ALT i	
WEIGHT	FILE	\\hvc\eng\Lh44121.jprt (2d)				
496.00	KG	CEILING ARRANGEMENT IN CREW COMPARTMENT AND KITCHEN AREA FOR HOT BUFFET COACH (LHB-TYPE)				
NIL	M2	SCALE: SSE/REC: 1:50				
LENGTH/Ø	M	CHD DUGL				
17.940	M	DRN PUSH				
WIDTH/THICK.	M	RAIL COACH FACTORY, KAPURTHALA				
HEIGHT	M	REF.DRG. NO. 1 10113.0.21.410.001				
NIL	M	PL NO. NIL				
		DRG.NO. LH44121				
		ADE/SME				
		CDE				



THIS DRAWING IS THE INTELLECTUAL PROPERTY OF RAIL COACH FACTORY, KAPURTHALA. THIS DRAWING SHOULD NOT BE REPRODUCED, ALTERED, USED FOR MANUFACTURING OF COMPONENTS, SOLD OR TRANSFERRED WITHOUT PERMISSION FROM CHIEF DESIGN ENGINEER, RAIL COACH FACTORY, KAPURTHALA.

आकड़िया  
ENTERED  
में  
INTO  
प्रविष्टियां  
DATA BASE  
30 DEC 202

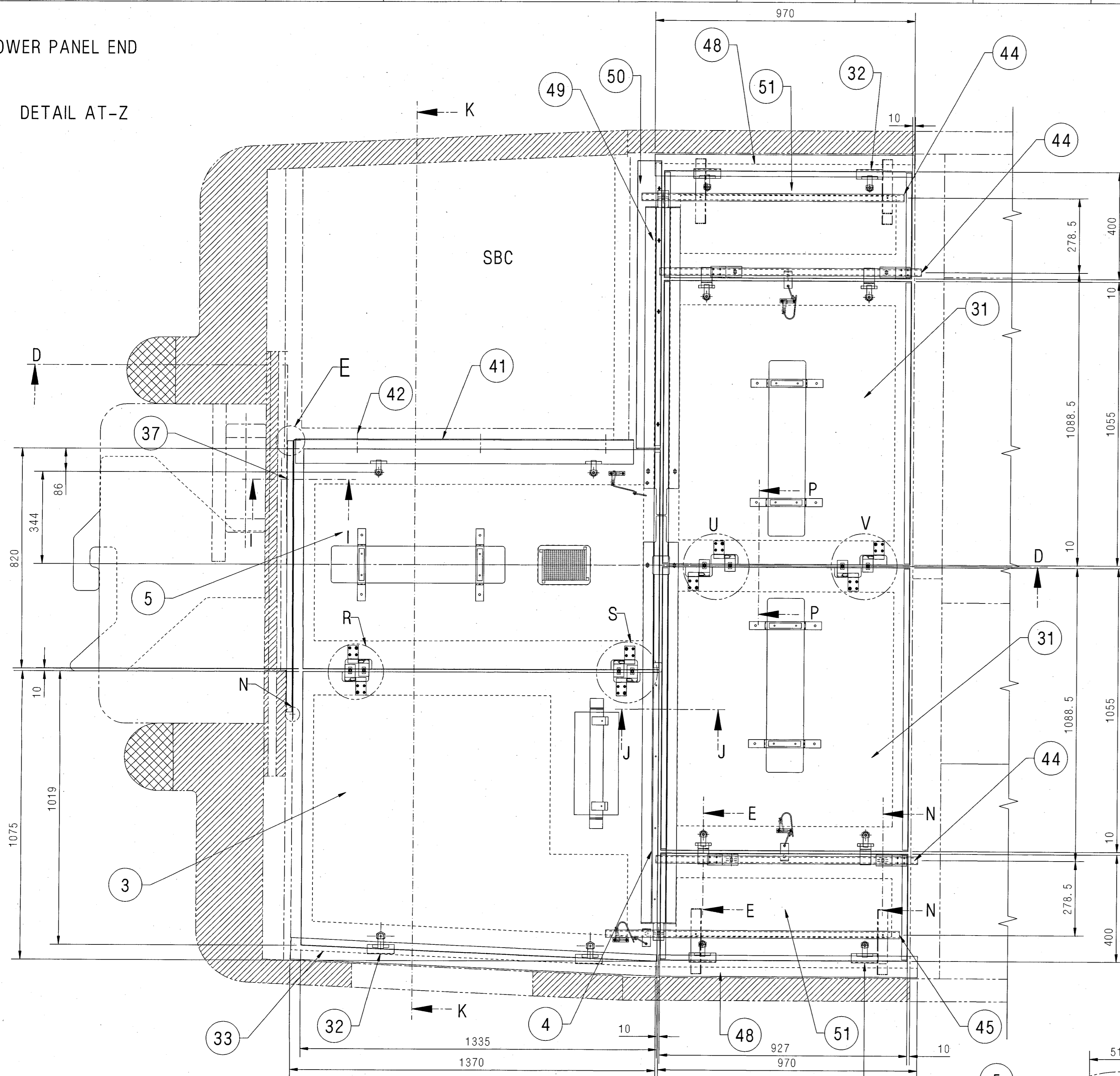
WELD LENGTH		ITEM	DESCRIPTION & DIMENSIONS		QPASSLY	DETAIL DRG	MATL. & SPEC.		REMARKS				
NIL		M	GROUP	CEILING AND MOULDING	SUPERSEDES: LH44121		ALT		i				
WEIGHT		FILE		\\lh\c\cng\lh44121\j.prt (2d)									
496.00		KG		CEILING ARRANGEMENT				SCALE		SSE/REC			
S.AREA		IN CREW COMPARTMENT AND KITCHEN AREA FOR HOT BUFFET COACH (LHB-TYPE)				1:50		CHD		DUGL			
NIL						M <sup>2</sup>		DRN		PUSH			
LENGTH/B+*						17.940		REF.DWG. NO.		1		10113.0.21.410.001	
WIDTH/THICK.						रेल कोच फैक्टरी कपूरथला		IRS		PL NO.		NIL	
NIL		M				DRG.NO.		LH44121					
HEIGHT		M		ADE/SME		CDE		ALT.		J			
NIL		M		DY.CME				SIZE		A1/SHEET 1/2			

ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID.  
FOR UNTOLERANCED DIMENSIONS REFER MDG0008

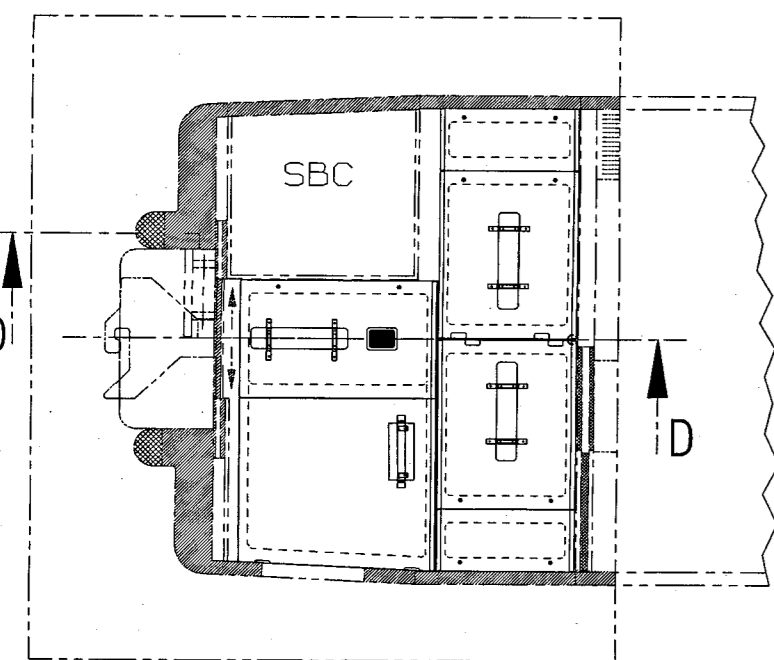
DETAIL DRGS STARTING WITH "LI" ARE INTERNAL REFERENCE LISTS ONLY AND ARE NOT FOR ISSUE.			
DATE OF FIRST ISSUE	25/06/2001	CGM BY	

POWER PANEL END

DETAIL AT-Z

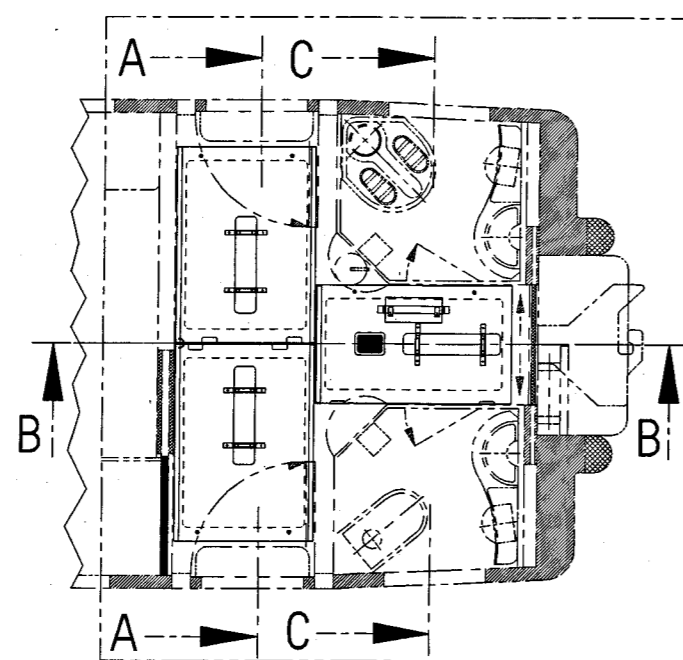


Z POWER PANEL END



(SCALE 1:50)

NON-POWER PANEL END Z1



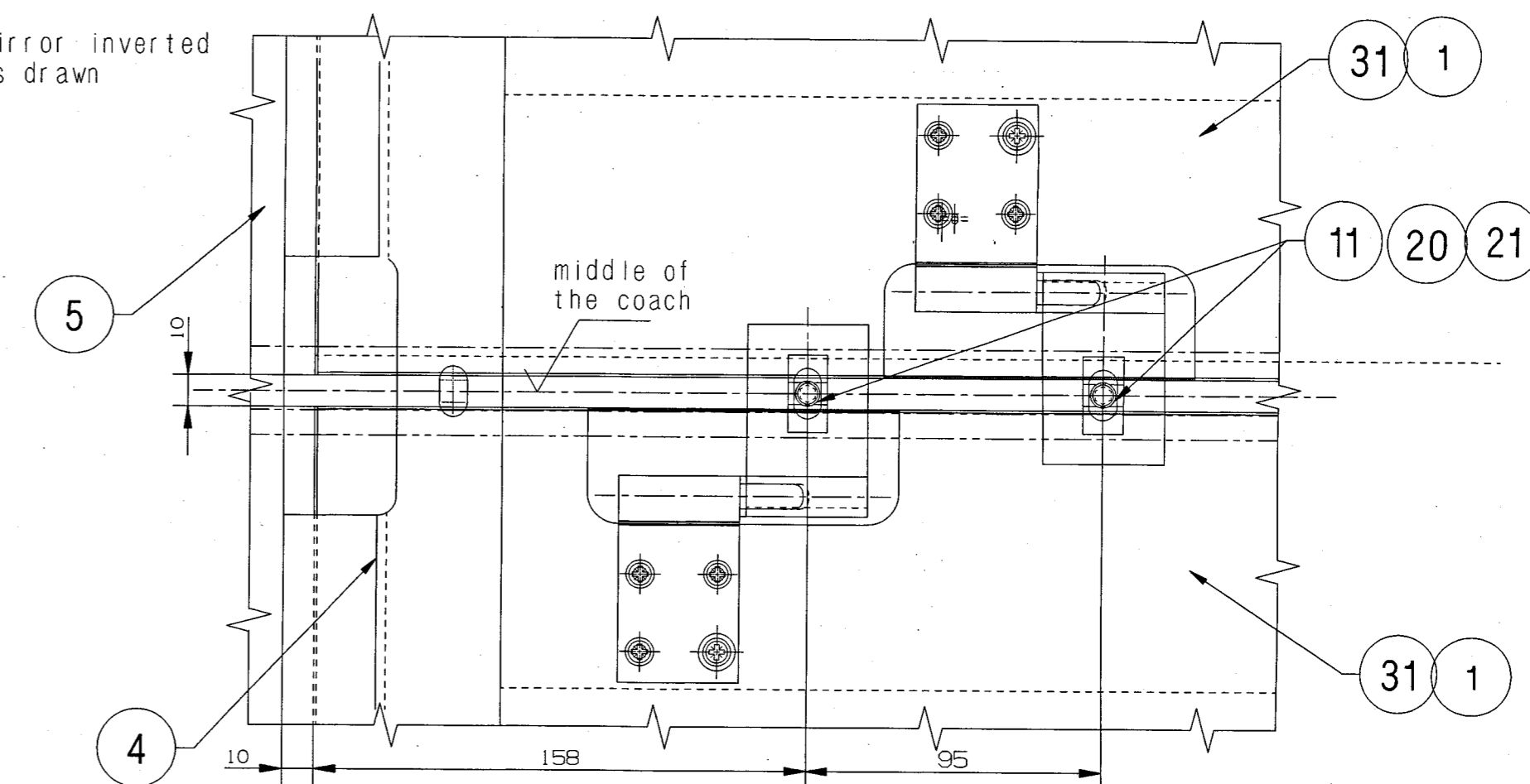
DETAIL AT- R

SCALE 4:1

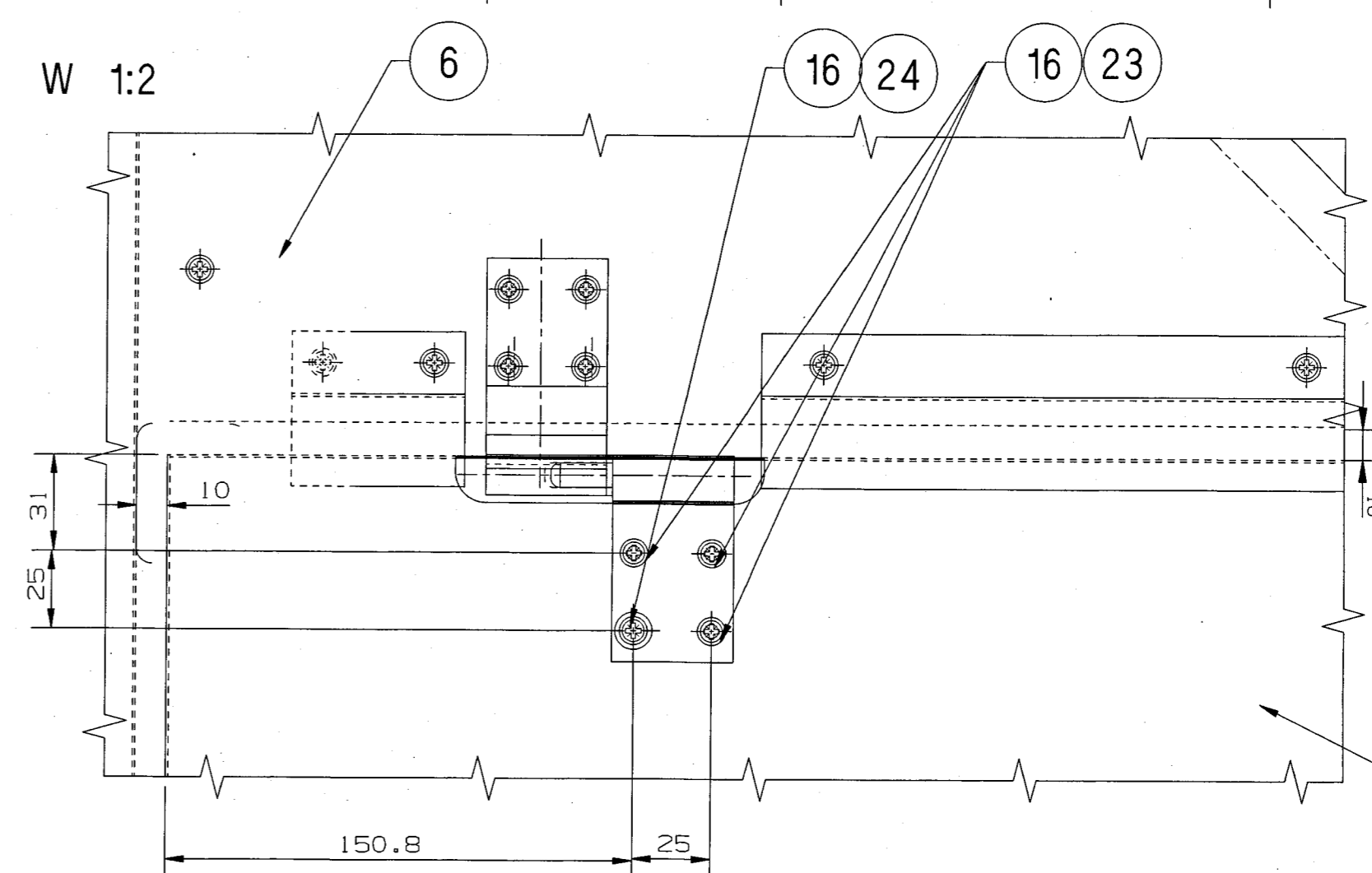
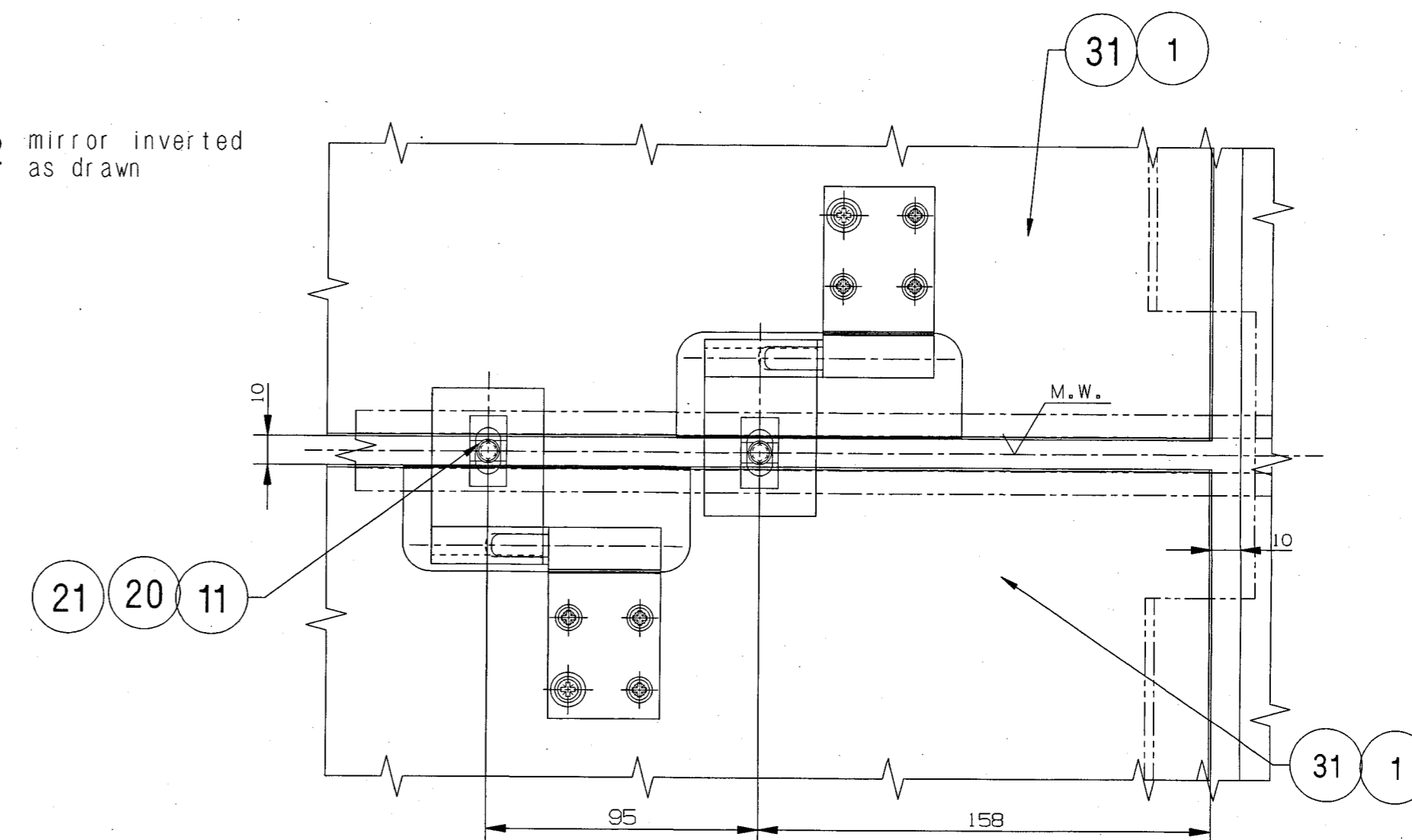
DETAIL AT- S

SCALE 4:1

U 1:2  
U1 1:2 mirror inverted  
as drawn



V 1:2  
V1 1:2 mirror inverted  
as drawn



DETAIL E  
SCALE 5:1

DETAIL AT- N

(SCALE 1:1)

ENTERED  
INTO  
DATA BASE

18 JAN 2021

ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID.  
FOR UNTOLERANCED DIMENSIONS REFER MDG0008

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

DATE OF FIRST ISSUE

29/01/2002

CGM BY

IR


N.R.

PL NO. NIL

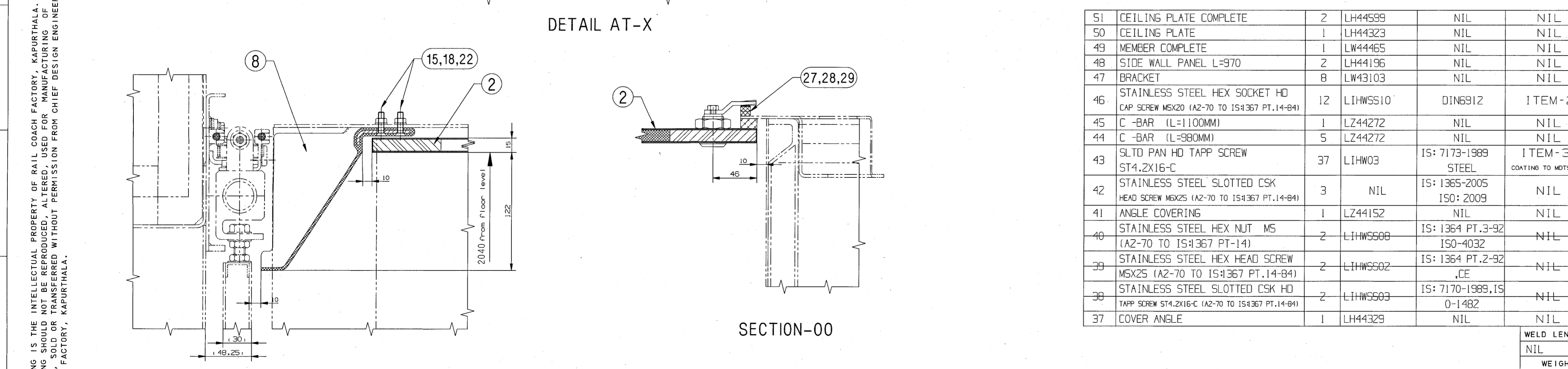
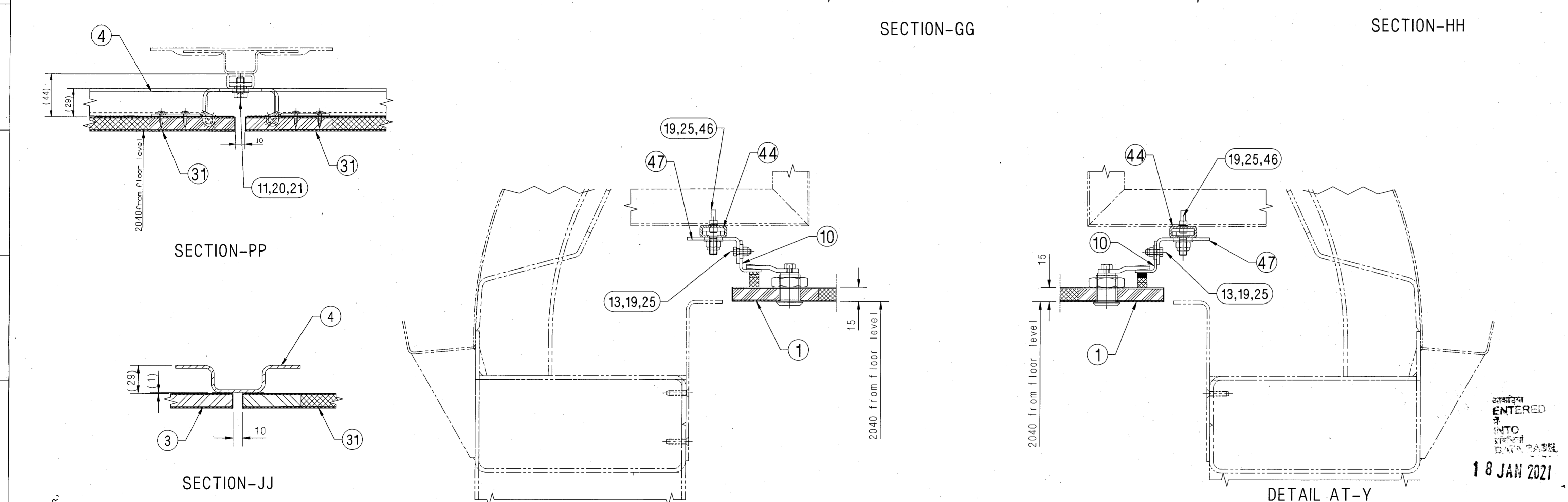
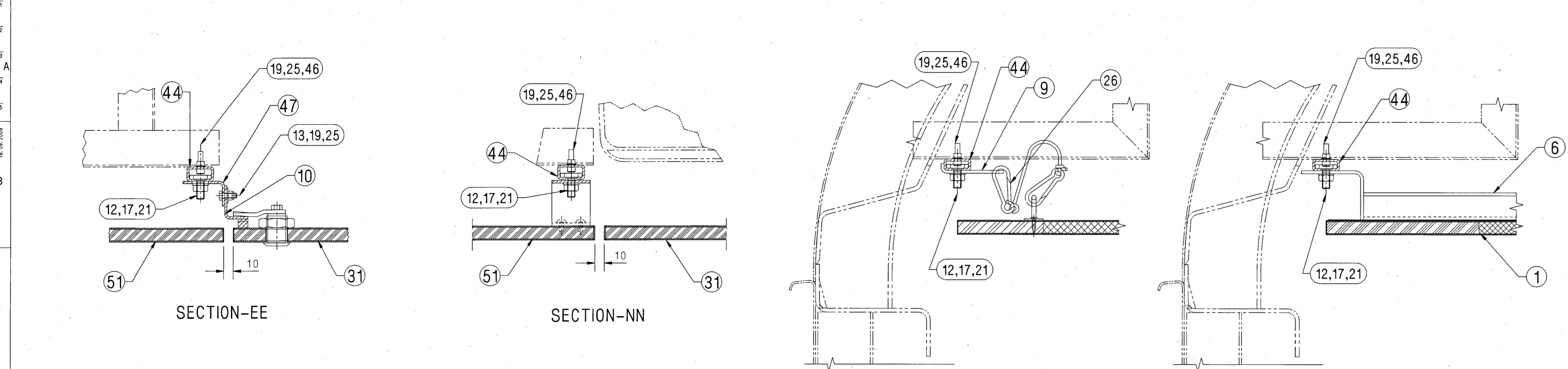
DRG.NO. LH44157

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	QPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP CEILING AND MOULDING	SUPERSEDES: LH44157	ALT F		
WEIGHT	FILE	1h44157sig.prt (2D)				
90.000 KG						
S. AREA						
NIL	M2					
LENGTH/DIA						
NIL	M					
WIDTH/THICK.						
NIL	M					
HEIGHT						
NIL	M					

SCALE	SSE/REC	1:10	CHD	DUGL	29/01/2021
DRN				MKSH	29/01/2021
REF.DRG.NO.	NIL				
PL NO.	NIL				
DRG.NO.	LH44157				

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	SPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS	
NIL	M	GROUP CEILING AND MOULDING	SUPERSEDES: LH44157		ALT f		
WEIGHT	FILE	1h44157s2g.prt (2D)					
90.000 KG	VESTIBULE CEILING MOUNTING FOR AC HOT BUFFET LHB TYPE COACH				SCALE	SSE/REC	
S.AREA					1:10	CHD	
NIL	M <sup>2</sup>					DUGL	11/11/20
LENGTH/DIA						DRN	MKSH
NIL	M	RAIL COACH FACTORY, KAPURTHALA				REF.DRG.NO.	NIL
WIDTH/HEIGHT	रेल कोच फैक्टरी कपूरथला				IRS	DLG.NO.	NIL
NIL	M					DRG.NO.	LH44157
HEIGHT					N.R.	ALT.	Q
NIL	M					SIZE	A1 SHEET 2/4





NOTE:-

- ITEM NOS. 27, 28 & 29 OF THE REQUIRED SIZE SHOULD BE CUT TO SUIT AT SITE.
- ITEM-49 & ITEM-50 TO BE ASSEMBLED WITH ITEM-43 TO SUIT AT SITE.

ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID.

FOR UNTOLERANCED DIMENSIONS REFER MDG0008

DATE OF FIRST ISSUE 29/01/2002

CGM BY

ALT. NO.	ALT. DATE	ZONE	ALTERATIONS	AUTHORITY
9	25/08/2020	ALL	1. SECTION-FF DELETED & SECTION-EE, SECTION-NN, SECTION-JJ1 ADDED. 2. DETAIL VIEW AT-E, AT-Q & SECTION-KK UPDATED. 3. ITEM-34, 35, 36, 38, 39, 40 DELETED & ITEM-41 TO 51 ADDED. 4. DIM. 760 & 18 ON SHEET 2 WERE 780 & 10 RESPECTIVELY. 5. OPC OF ITEM-9, 10, 11, 12, 13, 14, 15, 17, 19, 21, 25, 26, 33 WERE 4, 4, 11, 24, 4, 14, 8, 24, 4, 27, 4, 16, 3 RESP. 6. DRG. NO. FOR ITEM-4 WAS 3 10113.0.21.420.117 7. NOTE-2 ADDED. 8. DIM. 820 & 1335 AT SHEET-1 WERE 780 & 1285 RESPECTIVELY.	DIC NO. MD200022, MD190012

36	BRACKET	4	LH44325	NIL	NIL
35	CEILING PLATE COMPLETE	1	LH44322	NIL	NIL
34	3M PRESSURE LOCK	6	GJ3467	NIL	NIL
33	SIDE WALL PANEL L=1370	1	LH44196	NIL	NIL
32	BRACKET FOR PANEL FIXING L=100	6	LH44197	NIL	NIL
31	CEILING PLATE COMPLETE	2	LH44167	NIL	NIL
29	SHIM 5X15X60	5	NIL	MTS072	NIL
28	SHIM 3X15X60	5	NIL	MTS072	NIL
27	SHIM 1X15X60	5	NIL	MTS072	NIL
26	SPRING HOOK Ø 3X137	7	LW44166	NIL	ITEM NO. - 1
25	FLAT WASHER WITHOUT CHAMFER 5.3	20	NIL	IS: 2016-1967 STEEL	NIL
24	STAINLESS STEEL FLAT WASHER WITHOUT CHAMFER 4.3	1	NIL	IS: 5370-1969 DIN 9021	NIL
23	STAINLESS STEEL MACHINE WASHER A4.3 (A2-70 TO IS:1367 PT.14-1984)	3	LIHW509	IS: 2016-1967 DIN125	ITEM-1
22	PLAIN WASHER A6	12	LIHW09	IS: 2016-67 STEEL	COATING TO MDT5 057
21	SPRING WASHER B8	31	LIHW09	IS: 3063-1994	ITEM-20 COATING TO MDT5 057
20	SLIDING BLOCK	12	4 14051.0. 76.200.030	MTS-069	NIL
19	STAINLESS STEEL NYLOC NUT M5 (A2-70 TO IS:1367 PT.14)	20	LIHW508	IS: 7002-1991 DIN982	ITEM-6
18	STAINLESS STEEL HEX NUT M6 (A2-70 TO IS:1367 PT.14)	16	LIHW508	IS: 1364 PT.3-92 ISO-4032	ITEM-2
17	STAINLESS STEEL NYLOC NUT M8 (A2-70 TO IS:1367 PT.14-84)	29	NIL	IS: 7002-1991 DIN 982	NIL
16	RECESSED FLAT HEAD TAPPING SCREW C4X16	4	NIL	IS: 6739-72	NIL
15	CSK HD. SCREW WITH HEXAGON SOCKET M6X25 (A2-70 TO IS:1367 PT.14-84)	4	NIL	IS: 6761-1994	NIL
14	SLTD CSK HD TAPP SCREW ST5.5X38-C	10	NIL	IS: 7170-1989 STEEL	COATING TO MDT5 057
13	STAINLESS STEEL HEX HEAD SCREW MSX16 (A2-70 TO IS:1367 PT.14-84)	8	NIL	IS: 1364 PT.2-2002, ISO: 4017	NIL
12	HAMMER HEAD SCREW M6X25	29	LW44161	NIL	NIL
11	STAINLESS STEEL HEX SOCKET HD CAP SCREW M6X16 (A2-70 TO IS:1367 PT.14-84)	12	NIL	IS: 2269-2006	NIL
10	BRACKET	8	3 10113.0. 21.095.021	NIL	NIL
9	ANGLE	5	3 10113.0. 21.095.020	NIL	NIL
8	DOOR GUIDANCE COVERING COMPLETE	1	2 10113.0. 21.420.124	NIL	NIL
7	CEILING PLATE COMPLETE	1	LW44462	NIL	NIL
6	CEILING PLATE COMPLETE	1	LW44461	NIL	NIL
5	CEILING PLATE COMPLETE	1	LH44298	NIL	NIL
4	MEMBER COMPLETE	1	LW44464	NIL	NIL
3	CEILING PLATE COMPLETE	1	LH44158	NIL	NIL
2	CEILING PLATE COMPLETE	1	LH44327	NIL	NIL
1	CEILING PLATE COMPLETE	2	LW44486	NIL	NIL

51	CEILING PLATE COMPLETE	2	LH44599	NIL	NIL
50	CEILING PLATE	1	LH44323	NIL	NIL
49	MEMBER COMPLETE	1	LW44465	NIL	NIL
48	SIDE WALL PANEL L=970	2	LH44196	NIL	NIL
47	BRACKET	8	LW43103	NIL	NIL
46	STAINLESS STEEL HEX SOCKET HD CAP SCREW MSX20 (A2-70 TO IS:1367 PT.14-84)	12	LIHW510	DIN6312	ITEM-2
45	C -BAR (L=1100MM)	1	LZ44272	NIL	NIL
44	C -BAR (L=980MM)	5	LZ44272	NIL	NIL
43	SLTD PAN HD TAPP SCREW ST4.2X16-C	37	LIHW03	IS: 7173-1989 STEEL	ITEM-39 COATING TO MDT5 057
42	STAINLESS STEEL SLOTTED CSK HEAD SCREW M6X25 (A2-70 TO IS:1367 PT.14-84)	3	NIL	IS: 1365-2005 ISO: 2009	NIL
41	ANGLE COVERING	1	LZ44152	NIL	NIL
40	STAINLESS STEEL HEX NUT M5 (A2-70 TO IS:1367 PT.14)	2	LIHW508	IS: 1364 PT.3-92 ISO-4032	NIL
39	STAINLESS STEEL HEX HEAD SCREW MSX25 (A2-70 TO IS:1367 PT.14-84)	2	LIHW502	IS: 1364 PT.2-92 ,CE	NIL
38	STAINLESS STEEL SLOTTED CSK HD TAPP SCREW ST4.2X16-C (A2-70 TO IS:1367 PT.14-84)	2	LIHW503	IS: 7170-1989, IS 0-1482	NIL
37	COVER ANGLE	1	LH44329	NIL	NIL

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	OPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP	CEILING AND MOULDING	SUPERSDES: LH44157	ALT F	
WEIGHT	FILE	LH44157s4g.prt (20)				
90.000	KG	VESTIBULE CEILING MOUNTING FOR AC HOT BUFFET LHB TYPE COACH				
NIL	S.AREA	RAIL COACH FACTORY, KAPURTHALA				
NIL	M2	SCALE SSE/REC 1:10 CHD DUGL				
LENGTH/DIA		DRN MKSH				
NIL	M	REF.DRG.No. NIL				
WIDTH/THICK.		PL NO. NIL				
NIL	M	DRG.NO. LH44157				
HEIGHT		ALT. g SIZE A1 SHEET 4/4				
NIL	M					

**Rail Coach Factory, Kapurthala**

Office of the  
Principal Chief Electrical Engineer

**RCF/HSQ/ED/LHB/2008**

**Dated: 10.04.2025**

**PCMEs :**

1. Central Railway, CST, Mumbai-400 001
2. Eastern Railway, Fairly Place , Kolkata-700 001
3. East Central Railway, Dighi, Disst- Vaishali, Hajipur-844 101
4. East Coast Railway, Chandra Shekharpur, Bhubneshwer-751 016
5. Northern Railway, Baroda House, New Delhi-110 001
6. North Central Railway, Hastings Road, Prayagraj – 211 001
7. North Eastern Railway, Gorakhpur-273 001
8. North East Frontier Railway, Maligaon, Guwahati-781 001
9. Northern Western Railway Jaipur-302 006
10. Southern Railway, Park Town, Chennai-800 003
11. Southern central Railway Rail Nilayam Secundrabad-500 371
12. South Coast Railway, Visakhapatnam-530004.
13. South Eastern Railway., Gardern Reach, Kolkata-700 043
14. South East Central Railway Bilaspur-495 004
15. South Western Rly., 4<sup>th</sup> Floor, DRM Office, Sh. Laxmi Narayan Complex, Station Road Hubli-580 020
16. Western Railway , Church gate, Mumbai-400 020
17. West Central Railway., Jabalpur-482 001

**Sub: Retro-fitment of Enhanced Capacity Pantry Equipment in existing LHB AC Hot Buffet Coach.**

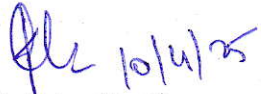
**Ref:** (i). Railway Board letter no. 2022/M/(C)/137/1\_Pantry, dated: 04.03.2025.  
(ii). This office letter even no. dated 10.4.25

In continuation to letter at ref.(ii) above, following set of **part drawings** are enclosed herewith Coach alteration instruction sheet to document no. **ED/CAI/041 Dated 09.04.2025** already issued for Retro-fitment of enhanced capacity pantry equipment in existing LHB AC Hot Buffet Coach.

SN	Ref. Assembly drg.	Part Drawing
1	MI008237	AAI10492
2		98110081
3		72910073
4		LH13166
5		LP11495
6	MI008232	3.10113.0.30.095.077
7		LE63222
9		LW63111

This is for your information and necessary action.

**DA: As above**

  
(Kulwinder Singh)

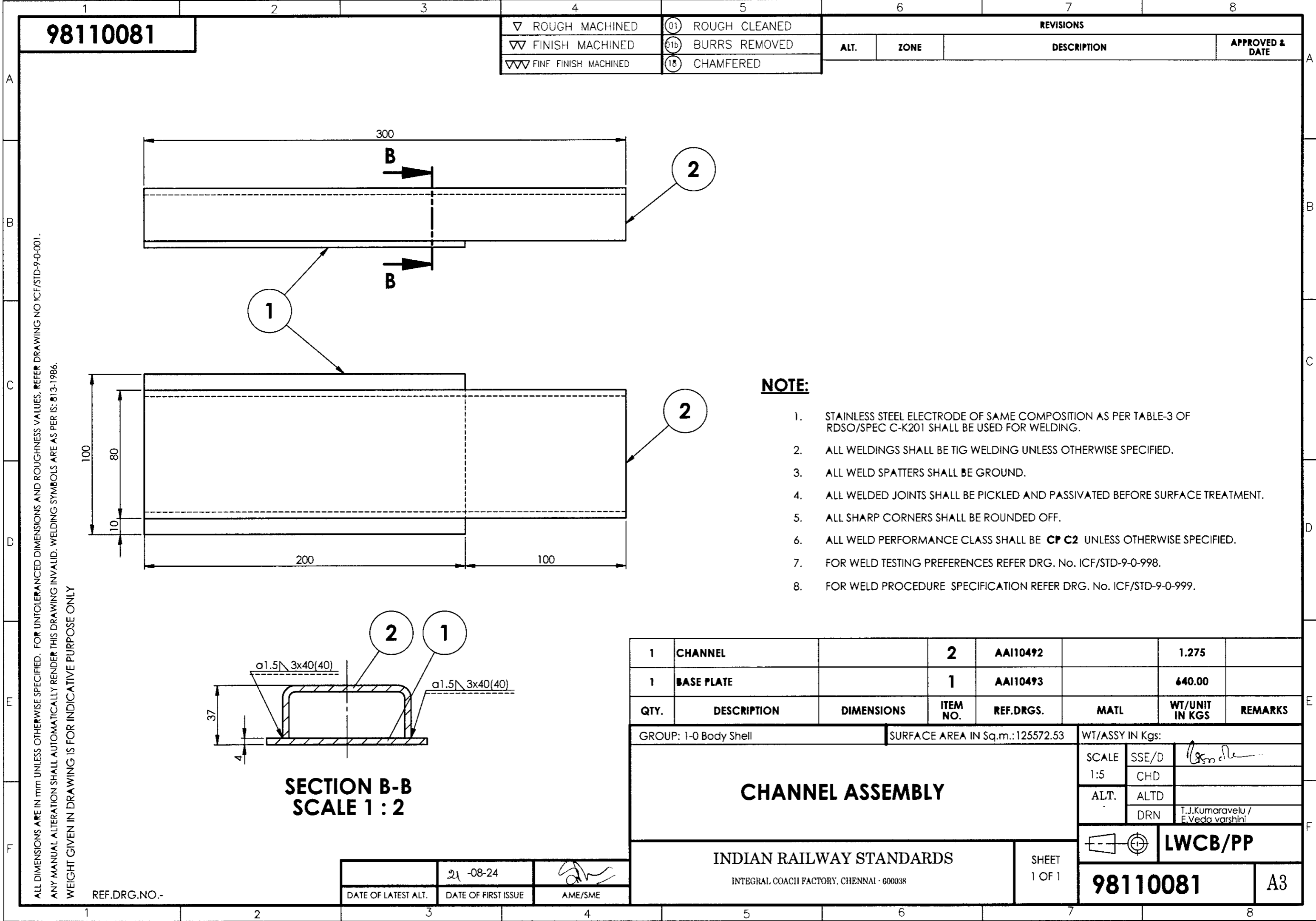
DYCEE/D&D

for Principal Chief Electrical Engineer

**Copy to:**

**PCME/RCF** } In terms of referred Rly. Bd. Letter, similar arrgt. as per CAI for  
**PCME/ICF** } provision of enhanced capacity pantry equipment in existing new LHB  
**PCME/MCF** } AC Hot Buffet Coach (layout no. LH90001 ) to be followed by PUs.

1		2		3		4		5		6		7		8																																																														
AAI10492				▽ ROUGH MACHINED		① ROUGH CLEANED		REVISIONS																																																																				
				▽▽ FINISH MACHINED		①b BURRS REMOVED		ALT.		ZONE		DESCRIPTION			APPROVED & DATE																																																													
				▽▽▽ FINE FINISH MACHINED		①8 CHAMFERED																																																																						
<div>ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY</div> <div><div>1</div><div>300</div><div>80</div><div>33</div><div>4</div><div>R4</div></div>																																																																												
<table><tr><td>1</td><td>CHANNEL</td><td>4x130x300</td><td>1</td><td></td><td>RDSO/SPEC C-K201 X2CrNi12</td><td>1.275</td><td></td></tr><tr><td>QTY</td><td>DESCRIPTION</td><td>DIMENSIONS</td><td>ITEM NO.</td><td>REF. DRGS</td><td>MATL.SPEC.</td><td>WT/UNIT IN KGS</td><td>REMARKS</td></tr><tr><td colspan="5">GROUP: 1-0 BODY SHELL</td><td colspan="2">SURFACE AREA IN Sq.m.:</td><td>WT/ASSY IN Kgs:</td></tr><tr><td colspan="5" rowspan="4">CHANNEL</td><td>SCALE</td><td>SSE/D</td><td></td></tr><tr><td>1:5</td><td>CHD</td><td></td></tr><tr><td>ALT.</td><td>ALTD</td><td></td></tr><tr><td></td><td>DRN</td><td>T.J.Kumaravelu / E.Veda varshini</td></tr><tr><td colspan="4">INDIAN RAILWAY STANDARDS</td><td colspan="2">SHEET 1 OF 1</td><td colspan="2">AAI10492</td><td colspan="2">A3</td></tr><tr><td colspan="4">INTEGRAL COACH FACTORY, CHENNAI - 600038</td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr></table>																1	CHANNEL	4x130x300	1		RDSO/SPEC C-K201 X2CrNi12	1.275		QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS	GROUP: 1-0 BODY SHELL					SURFACE AREA IN Sq.m.:		WT/ASSY IN Kgs:	CHANNEL					SCALE	SSE/D		1:5	CHD		ALT.	ALTD			DRN	T.J.Kumaravelu / E.Veda varshini	INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		AAI10492		A3		INTEGRAL COACH FACTORY, CHENNAI - 600038									
1	CHANNEL	4x130x300	1		RDSO/SPEC C-K201 X2CrNi12	1.275																																																																						
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS																																																																					
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REF.DRG.NO.-		21 -08-2024		AME/SME																																																																								
DATE OF LATEST ALT.		DATE OF FIRST ISSUE																																																																										



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ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.  
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

98110081

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①8 CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

- NOTE:**
1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
  2. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
  3. ALL WELD SPATTERS SHALL BE GROUND.
  4. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
  5. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
  6. ALL WELD PERFORMANCE CLASS SHALL BE **CP C2** UNLESS OTHERWISE SPECIFIED.
  7. FOR WELD TESTING PREFERENCES REFER DRG. No. ICF/STD-9-0-998.
  8. FOR WELD PROCEDURE SPECIFICATION REFER DRG. No. ICF/STD-9-0-999.

1	CHANNEL		2	AA10492		1.275	
1	BASE PLATE		1	AA10493		640.00	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-0 Body Shell				SURFACE AREA IN Sq.m.: 125572.53		WT/ASSY IN Kgs:	
CHANNEL ASSEMBLY					SCALE	SSE/D	T.J.Kumaravelu / E.Veda varshini
					1:5	CHD	
					ALT.	ALTD	
						DRN	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038					SHEET 1 OF 1		
					98110081		A3

SECTION B-B  
SCALE 1 : 2

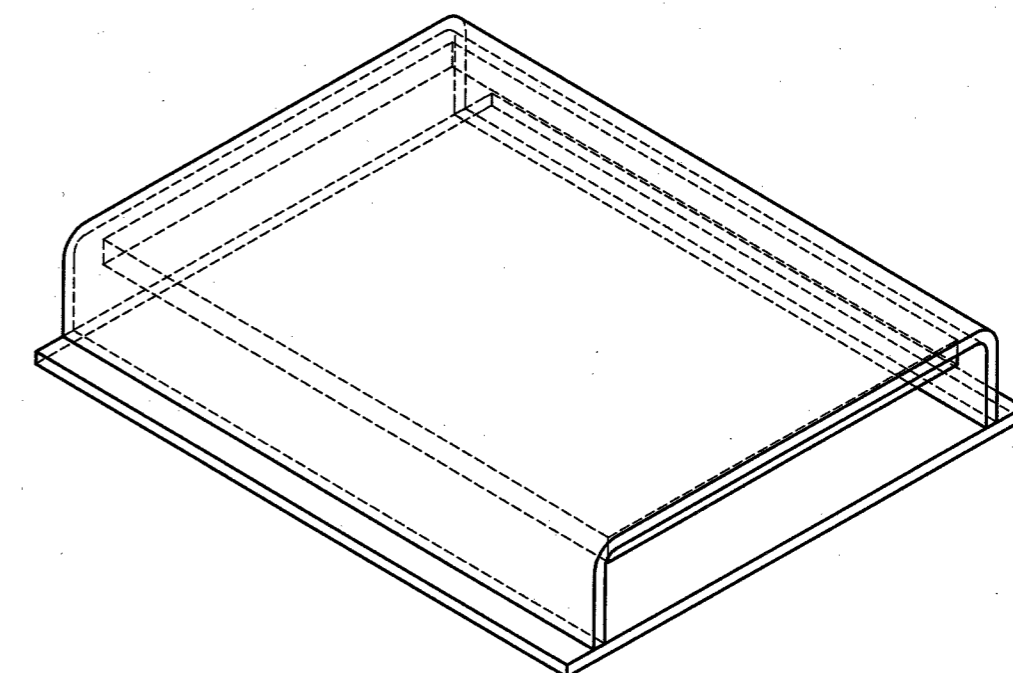
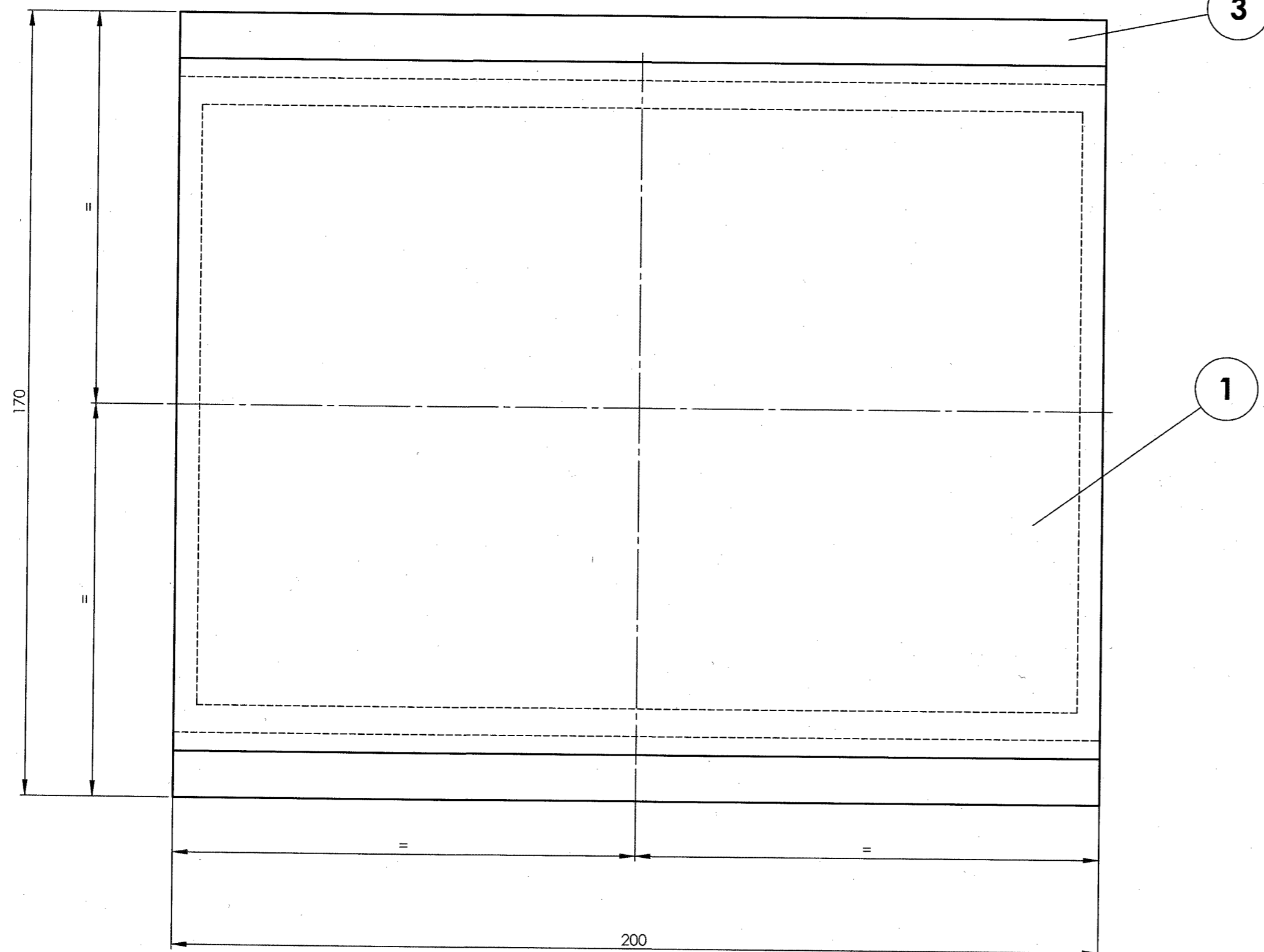
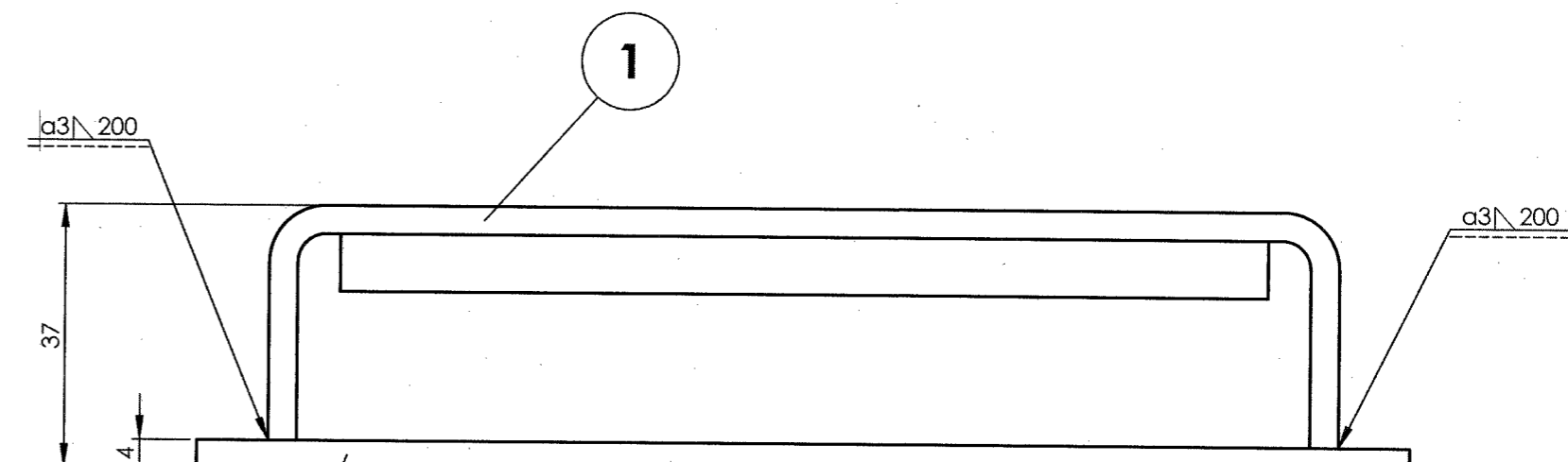
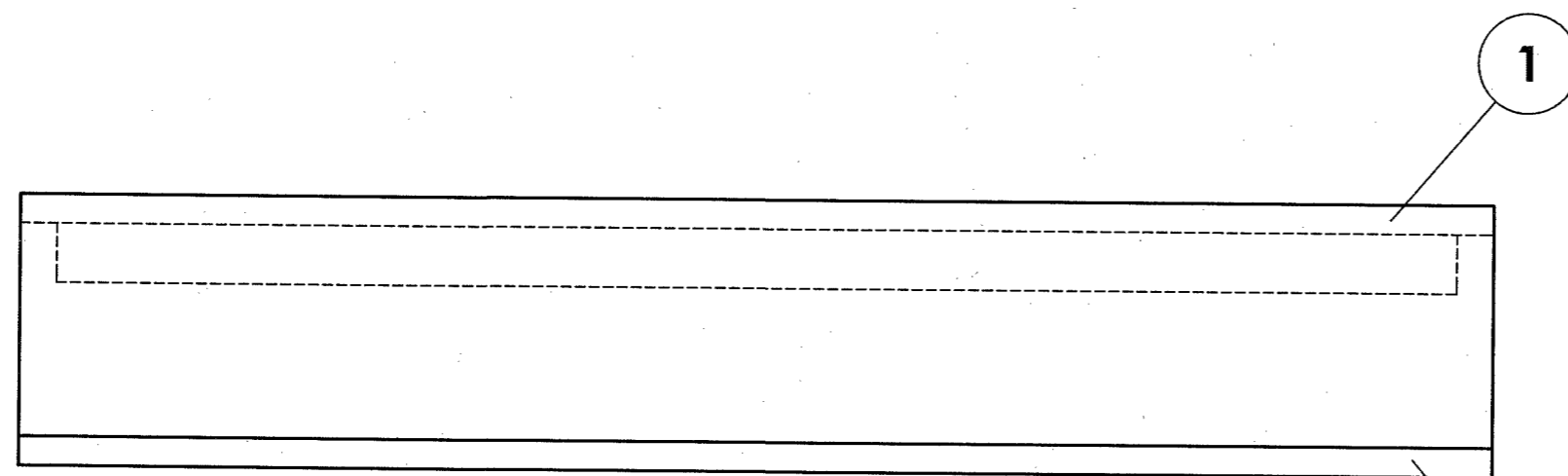
REF.DRG.NO.-

	21-08-24	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

72910073

▽	ROUGH	MACHINED	(01)	ROUGH	CLEANED
▽▽	FINISH	MACHINED	(01b)	BURRS	REMOVED
▽▽▽	FINE FINISH	MACHINED	(18)	CHAMFERED	

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



ISOMETRIC VIEW

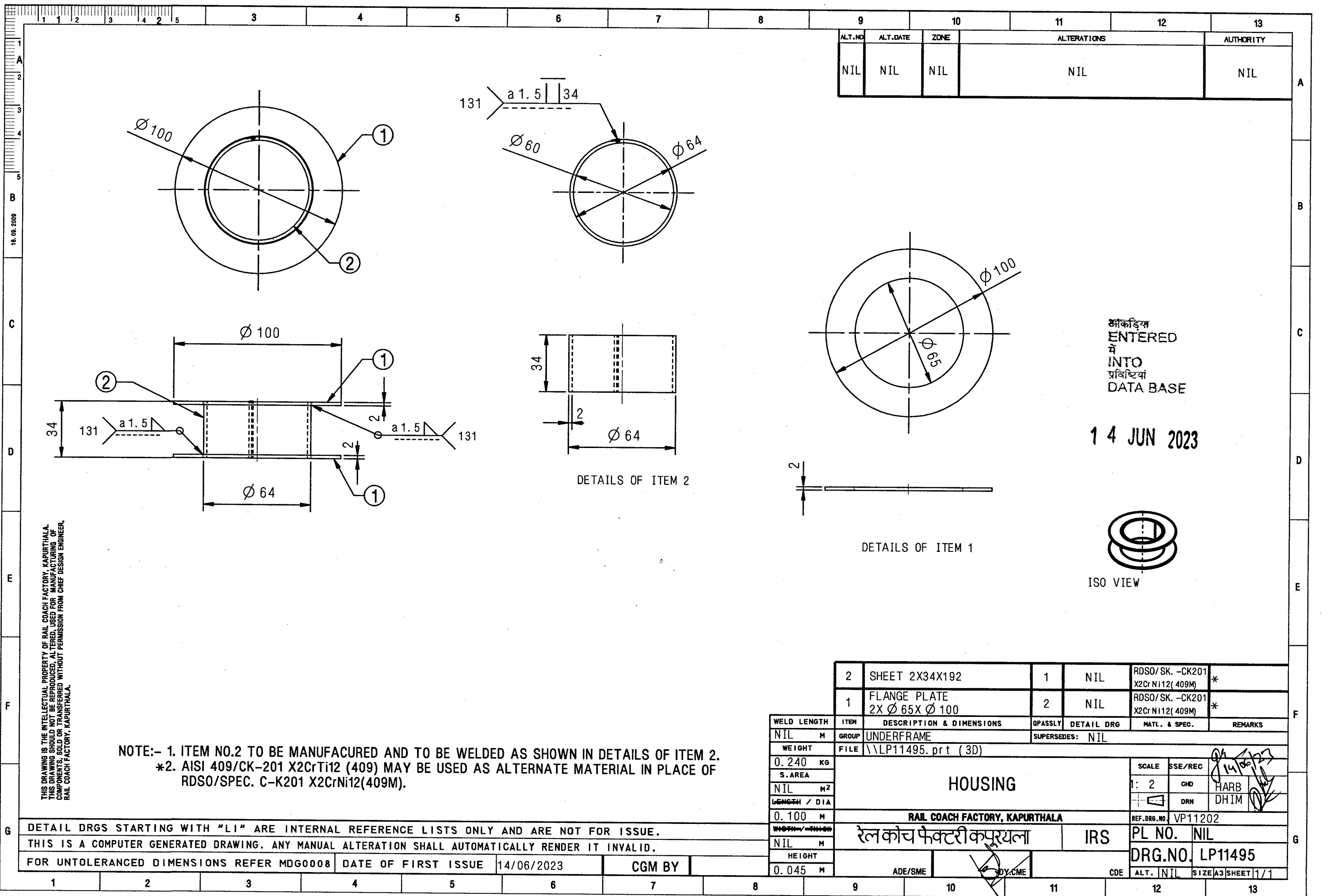
1	BRACKET		2	AAB10048		1.088	
1	CHANNEL ASSEMBLY.		1	72910074		2.879	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-0 BODY SHELL				SURFACE AREA IN Sq.m.: 0.210		WT/ASSY IN Kgs:	
CHANNEL ASSEMBLY				SCALE	SSE/D	P. Murugan	
				1:1	CHD		
				ALT	ALTD	P.MURUGAN	
					DRN		
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1		LSLRD/US	
						72910073	
						A2	

REF.DRG.NO.LS10140 ALT "a"

DATE OF LATEST ALT.	28/3/18	AME/SME
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ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS 813-1986. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

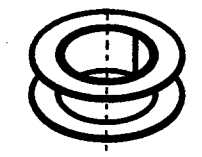




ALT. NO.	ALT. DATE	ZONE	ALTERATIONS	AUTHORITY
NIL	NIL	NIL	NIL	NIL

आकृति  
ENTERED  
में  
INTO  
प्रविष्टि  
DATA BASE

1 4 JUN 2023




ISO VIEW

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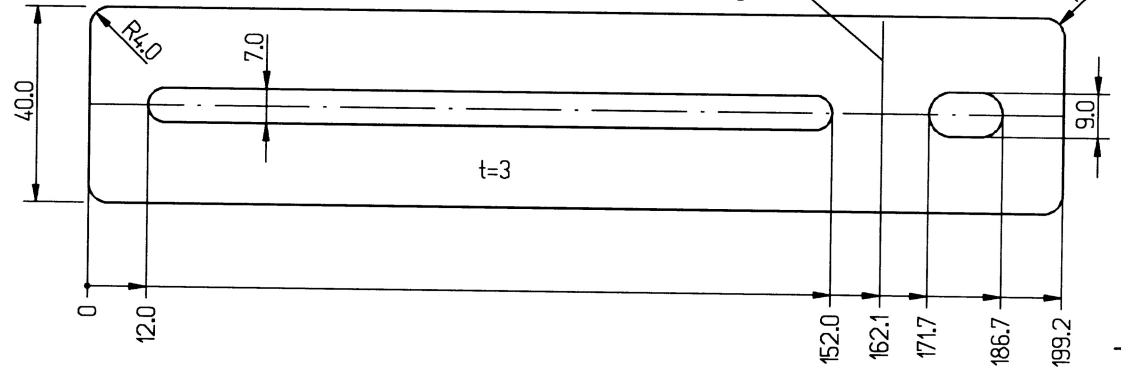
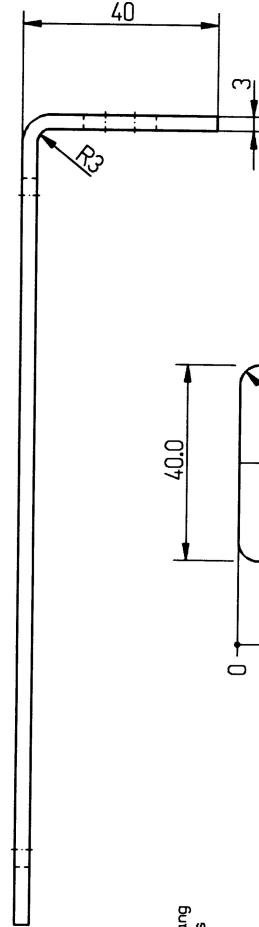
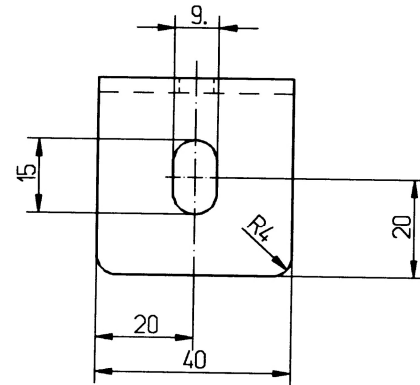
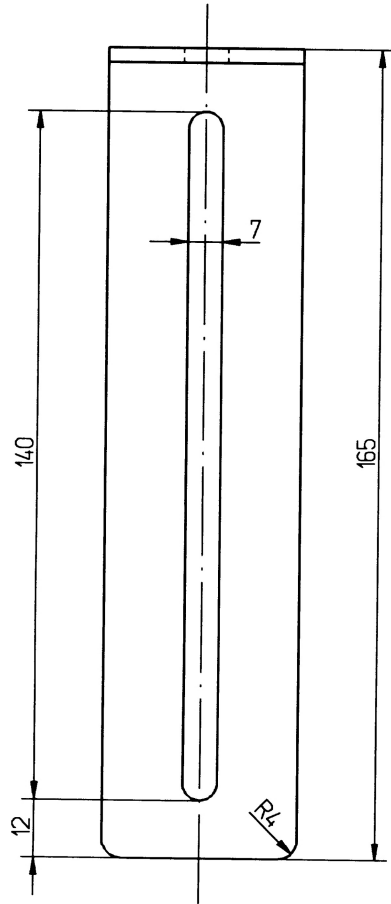
NOTE:- 1. ITEM NO.2 TO BE MANUFACTURED AND TO BE WELDED AS SHOWN IN DETAILS OF ITEM 2.  
\*2. AISI 409/CK-201 X2CrTi12 (409) MAY BE USED AS ALTERNATE MATERIAL IN PLACE OF RDSO/SPEC. C-K201 X2CrNi12(409M).

DETAIL DRGS STARTING WITH "LI" ARE INTERNAL REFERENCE LISTS ONLY AND ARE NOT FOR ISSUE.  
THIS IS A COMPUTER GENERATED DRAWING. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER IT INVALID.  
FOR UNTOLERANCED DIMENSIONS REFER MDG0008 DATE OF FIRST ISSUE 14/06/2023 CGM BY

2	SHEET 2X34X192	1	NIL	RDSO/SK. -CK201 X2Cr Ni12( 409M)	*		
1	FLANGE PLATE 2X Ø 65X Ø 100	2	NIL	RDSO/SK. -CK201 X2Cr Ni12( 409M)	*		
WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	OPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS	
NIL	M	GROUP	UNDERFRAME		SUPERSEDES: NIL		
WEIGHT	FILE	\\LP11495.prt (3D)					
0.240	KG	HOUSING			SCALE	SSE/REC	14/06/23 HARB DHIM
S.AREA					1: 2	CHD	
NIL	M <sup>2</sup>					DRN	
LENGTH / DIA							
0.100	M	RAIL COACH FACTORY, KAPURTHALA			REF.DRG.NO.	VP11202	
WIDTH / THICK		रेल कोच फेक्टरी कपूरथला		IRS	PL NO.	NIL	
NIL	M				DRG.NO.	LP11495	
HEIGHT					ALT.	NIL	SIZE A3 SHEET 1/1
0.045	M	ADE/SME	DY.CME	CDE			

SCALE SSE/REC  
1: 2 CHD HARB  
DRN DHIM

REF.DRG.NO. VP11202  
PL NO. NIL  
DRG.NO. LP11495



This drawing is restricted for use in accordance with clause 15 and 16 of the contract for Transfer of Technology for all Metal Light Weight High Speed Coaches BG/167/5mm/Na95/DEV/Cell/LM/Coach dated 16.10.95 of the Project R-Coach.

Diese Zeichnung darf nur verwendet werden im Zusammenhang mit den Klauseln 15 und 16 des Technologietransfervertrages für Leichtbau-Hochgeschwindigkeitswagen aus Metall Breitspur 167/5mm/Na-95/DEV/Cell/LM/Coach vom 16.10.95 des Projekts Reisezugwagen R.

K\_0716402\_00\_A00\_01

FERTIGUNGSPLOT

Verwendbar für:

ZEICHNUNG DARF NUR IM CAD-SYSTEM GEÄNDERT WERDEN

INDIAN RAILWAYS

Maße ohne Toleranzangaben:  
ISO 2768-mK  
DIN 2310 IC

Oberrflächen  
DIN ISO 1302

Ausgabe  
Datum

Maßstab 1:1

Datum	Name
01.98	Krueger
01.98	Krueger
01.98	Krueger
Fert.	

Halter  
bracket

Linke-Hofmann-Busch GmbH  
Salzgitter-Watenstedt

3 10113.0.30.095.077

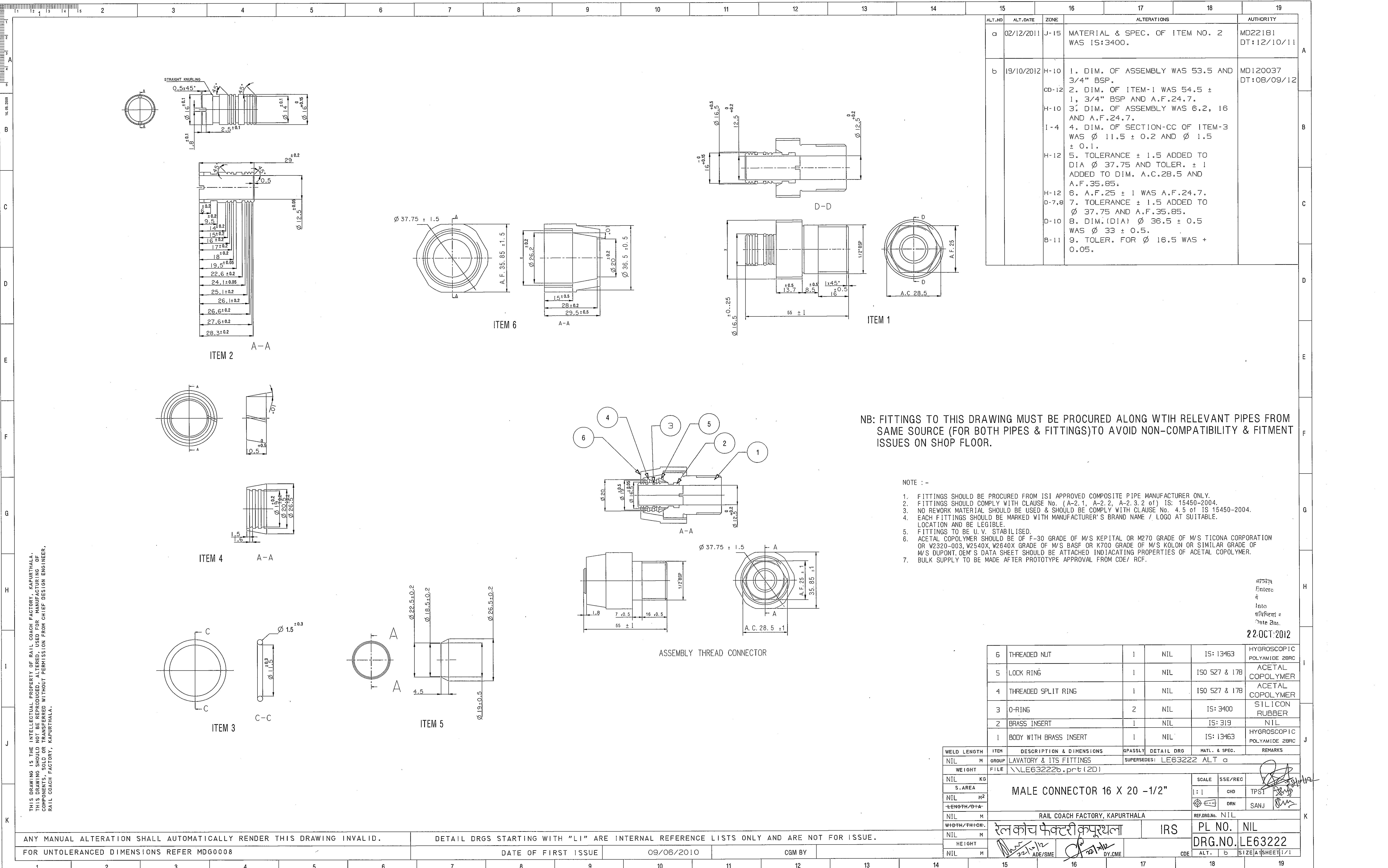
Blatt 01

Zust.	Änderung	Datum	Name	Urspr.	CAD	DNR	0716402	01	BL

Für diese technische Unterlage behalten wir uns alle Rechte vor, auch für den Fall der Patenterteilung oder Gebrauchsmustereintragung. Sie darf ohne unsere vorherige schriftliche Zustimmung weder vervielfältigt, noch Dritten zugänglich gemacht, noch in anderer Weise mißbräuchlich verwertet werden.

13.07.00

noch in anderer Weise missbräuchlich verwendet werden.											PA5TOK		16:23		13.07.00	
1	2				3	4		5			6		7	8		
Pos.	D	C	B	A	Einheit	Benennung		Sachnummer / Norm-Kurzbezeichnung			Werkstoff		Gewicht kg /Einheit		Bemerkung	
1				1	STK	bracket		DIN59382 BL3x40x199,2 01018086			EN10088-2 1.4301 X5CrNi18-10		0,162			
Angaben zu den Mengenspalten						Zeichng.   St. Ausg.   Zustand		Änderung / Datum								
A	ACFCZ/L; ACCZ/L; WLRRM/L					00   A   A		35027605 0699			INDIAN RAILWAYS					
B											Bearb. 12.97   TR3KRU		Bracket			
C											Gepr. 06.99   TR3KRU					
D											Norm. .					
											ALSTOM LHB GmbH Linke-Hofmann-Busch-Straße Salzgitter-Watenstedt		3 10113.0.30.095.077 CAD		Blatt 0716402   01	
											Ers.f. -		01 Bl.			



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NB: FITTINGS TO THIS DRAWING MUST BE PROCURED ALONG WITH RELEVANT PIPES FROM SAME SOURCE (FOR BOTH PIPES & FITTINGS) TO AVOID NON-COMPATIBILITY & FITMENT ISSUES ON SHOP FLOOR.

NOTE :-

1. FITTINGS SHOULD BE PROCURED FROM ISI APPROVED COMPOSITE PIPE MANUFACTURER ONLY.
2. FITTINGS SHOULD COMPLY WITH CLAUSE No. (A-2.1, A-2.2, A-2.3.2 of) IS: 15450-2004.
3. NO REWORK MATERIAL SHOULD BE USED & SHOULD BE COMPLY WITH CLAUSE No. 4.5 of IS 15450-2004.
4. EACH FITTINGS SHOULD BE MARKED WITH MANUFACTURER'S BRAND NAME / LOGO AT SUITABLE LOCATION AND BE LEGIBLE.
5. FITTINGS TO BE U. V. STABILISED.
6. ACETAL COPOLYMER SHOULD BE OF F-30 GRADE OF M/S KEPITAL OR M270 GRADE OF M/S TICONA CORPORATION OR W2320-003, W2540X, W2640X GRADE OF M/S BASF OR K700 GRADE OF M/S KOLON OR SIMILAR GRADE OF M/S DUPONT. OEM'S DATA SHEET SHOULD BE ATTACHED INDICATING PROPERTIES OF ACETAL COPOLYMER.
7. BULK SUPPLY TO BE MADE AFTER PROTOTYPE APPROVAL FROM CDE/ RCF.

अनुमोदित  
Entire  
के  
द्वारा  
प्रमाणित  
Date Recd.

22-OCT-2012

6	THREADED NUT	1	NIL	IS: 13463	HYGROSCOPIC POLYAMIDE 28RC
5	LOCK RING	1	NIL	ISO 527 & 178	ACETAL COPOLYMER
4	THREADED SPLIT RING	1	NIL	ISO 527 & 178	ACETAL COPOLYMER
3	O-RING	2	NIL	IS: 3400	SILICON RUBBER
2	BRASS INSERT	1	NIL	IS: 3119	NIL
1	BODY WITH BRASS INSERT	1	NIL	IS: 13463	HYGROSCOPIC POLYAMIDE 28RC

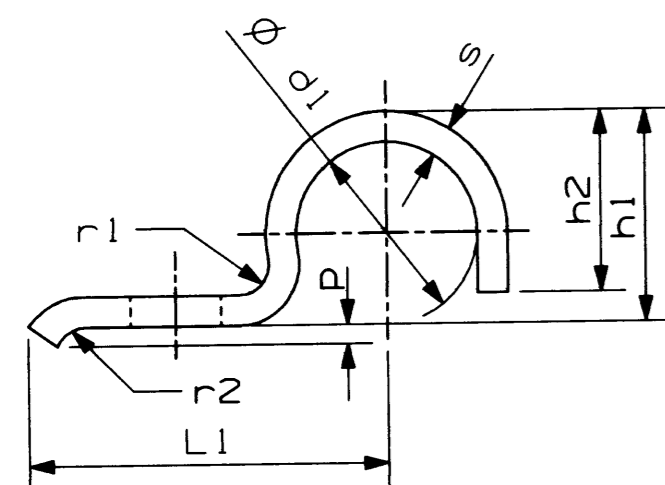
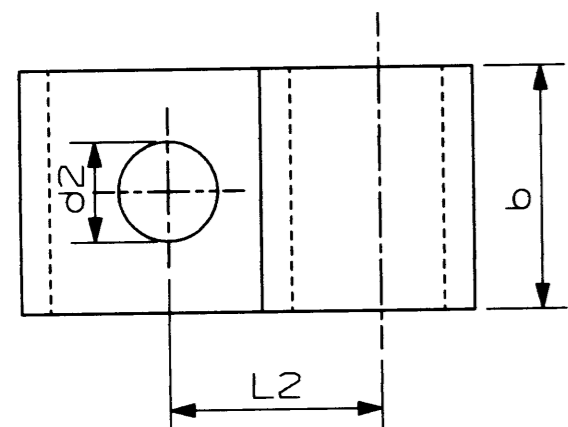
WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	QPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	LAVATORY & ITS FITTINGS		SUPERSEDES: LE63222	ALT a	
WEIGHT	FILE	\\LE63222b.prt (2D)				
NIL	KG					
S.AREA						
NIL	M2					
LENGTH/DIA						
NIL	M					
WIDTH/THICK.						
NIL	M					
HEIGHT						
NIL	M					

SCALE	SSE/REC	1:1	CHD	TPST
DRN	SANJ			
REF.DRG.No.	NIL			
PL NO.	NIL			
DRG.NO.	LE63222			
SIZE	A	SHEET	1/1	

ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID.  
FOR UNTOLERANCED DIMENSIONS REFER MDG0008

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

DATE OF FIRST ISSUE 09/06/2010 CGM BY



ITEM	d1	b	d2	h1	h2	L1	L2	p	r1	r2	s	Length	Weight/1000 piece in Kg	To be screwed with	To be used with outer dia. of tube	
1	7	16	6.6	5	4	26	14	1.25	2.5	2.5	2	35	8.3	M 6	5.5 to 7	
2	9			6	5	28	16					40	9.5		above 7 to 9	
3	13	9		7	30	18	47					14.2	9.5 to 13			
4	15.5	12		10	32	20	55					16.7	above 13 to 15.5			
5	19	15		13	34	22	62					18.9	above 15.5 to 19			
6	23	25	9	19	15	43	28	1.5	2.5	2.5	3	77	43.8	M 8	20 to 23	
7	26			22	18	44	29					85	48.5		above 23 to 26	
8	28.5			24	20	47	32					92	52.7		above 26 to 28.5	
9	31			27	23		32					98	56.2		above 28.5 to 31	
10	36	30	11	32	26	57	40	2	4	4		4	117	80.4	M 10	33 to 36
11	39			34	28	59	42						123	84.7		above 36 to 39
12	43			38	32	61	44						133	91.7		above 39 to 43
13	46			41	35	62	45						140	96.7		above 43 to 46
14	49	40	14	44	36	67	48	2	4	4	4	150	184	M 12	above 46 to 49	
15	58			52	44	74	55					173	212		53 to 58	
16	61			56	48	77	58					184	226		above 58 to 61	

NOTE:-

1. ALL DIMENSIONS ARE IN MM.
2. MAT. SPECIFICATION SHALL BE AS PER IS:6911-92 GRADE-304 S1.
3. ALL SHARP EDGES SHOULD BE GROUNDED PROPERLY.
4. ITEMS REQUIRED TO BE DESIGNATED AS :LW63111, ALT.'NIL' ITEM-8,  
FOR TUBE OF DIA. 28.5 MM.

NIL		CLAMP		NIL		NIL		NIL	
WELD LENGTH		ITEM		DESCRIPTION & DIMENSIONS		QASSLY		DETAIL DRG	
NIL		M		GROUP		LAVATORY AND IT'S FITTINGS		SUPERSEDES: NIL	
WEIGHT		FILE		/users1/b/lhb/lw/lw63111.prt					
NIL		KG		CLAMP					
S. AREA									
NIL		M <sup>2</sup>							
LENGTH / DIA									
NIL		M		RAIL COACH FACTORY, KAPURTHALA					
WIDTH / THICK				INDIAN RAILWAYS STANDARD					
NIL		M		PL NO. 00207949					
HEIGHT				DRG. NO. LW63111					
NIL		M		ALT. NIL SIZE A2 SHEET 1/1					