

RAIL COACH FACTORY, KAPURTHALA
(Coach Alteration Instruction)
CAI/RCF/MECH/LHB/062

MD46151

Date: 24/04/2024

SN	Description	Details		
1.	Description	Provision of locking arrangement in saloon sliding door of LHB 1 st AC coach -swivel type lock.		
2.	Coach type affected	LHB 1 st AC Coaches.		
3.	Reason for Alteration	To ensure locking of salon sliding door from inside		
4.	Drawing No.	Drg.no. LA56106 of mounting arrangement of saloon sliding door for LWFAC coaches with part drg.no. LA56171, LA56172 & LA56173.		
5.	Alteration	i. Centre lock either to be removed or to be blocked. ii. Cover to be provided to prevent any recess to tower bolt from outside. iii. Provision of swivel type door locking from inside.		
6.	Implementation Stage	Immediate effect.		
7.	Category of CAI	<table><tr><td>✓ A</td><td>B</td></tr></table> Tick A or B as applicable.	✓ A	B
✓ A	B			

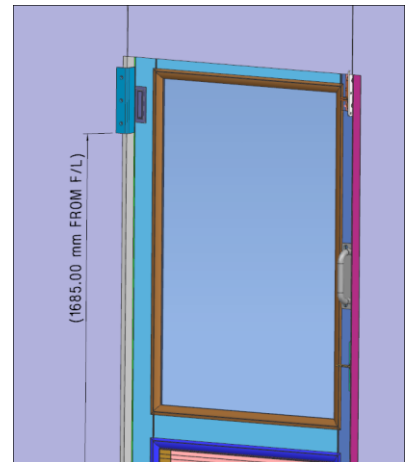
A. Modifications shall be implemented immediately by user Railways.

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

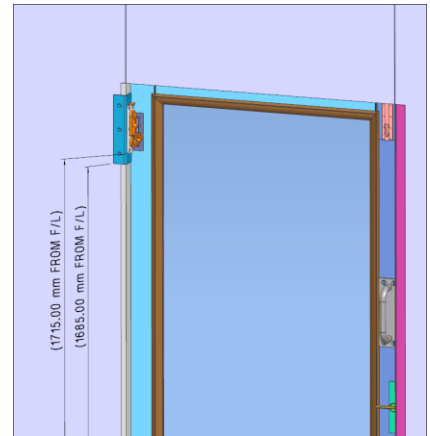
Note: From inside, only swivel type lock shall be available to lock the door from inside. Tower bolt primarily shall be used to remain the door open while boarding or de-boarding the passengers. However, tower bolt may also be used to lock the door from inside.

Procedure for carrying out the alterations:

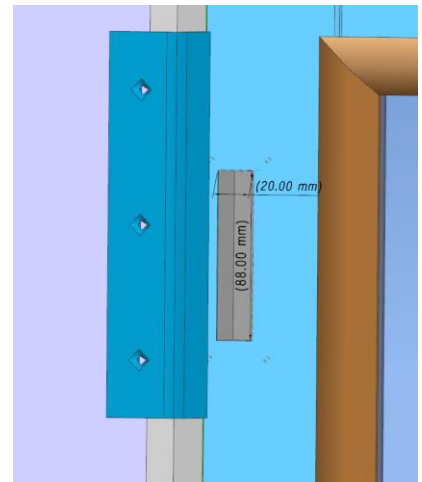
- I. Mount an angle from inside the cabin to drawing no. LA56172 on the face of partition frame opposite the door handle with the help of 3 slotted CSK head self-taping screw of M6X20. (it will work as a back piece for swivel door lock).



- II.** Mount a swivel door lock as per mirror drawing of LR51122 with the help of 6 slotted CSK head self-taping screw of M6X20 should be proper fitted in their respective holes.

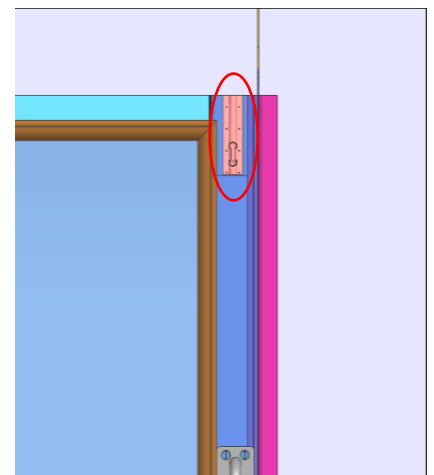


- III.** While door is in proper closed position marking to be done on the door leaf with align to swivel door lock for providing cavity of 20X22X88 (for mount the grommet).

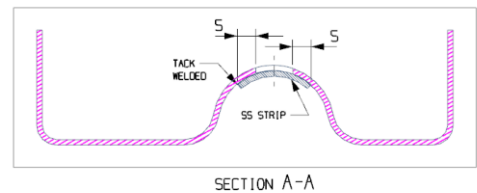
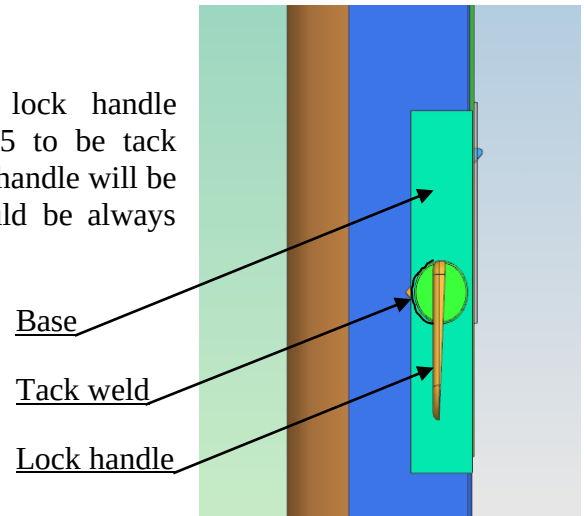


- IV.** Open the doorway ceiling in front of the cabin saloon sliding door to remove the door leaf to drawing no. LD56205 from the door move mechanism.

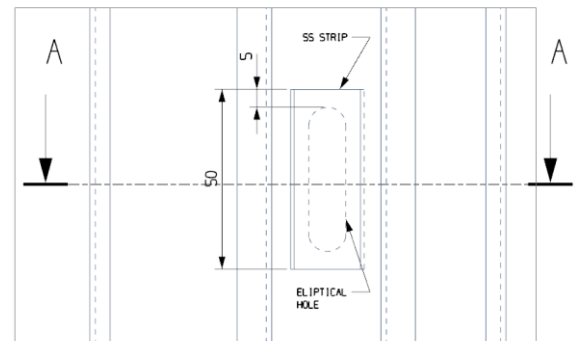
- a. If tower bolt is not in SS grade, replace it with stainless steel tower bolt to IS 15833:2009.



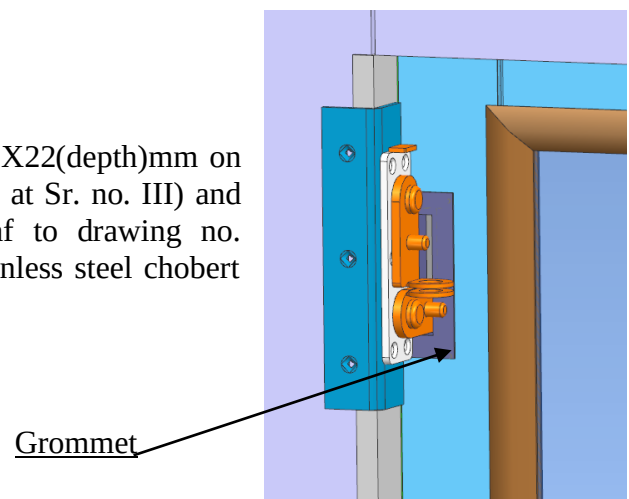
- b. Make the centre lock dummy: lock handle assembly to drawing no. LD56175 to be tack welded with its base while the lock handle will be in vertical position that door should be always remains in the open condition.



- c. Close the elliptical hole provided on the door rabbet with the strip by tack weld.



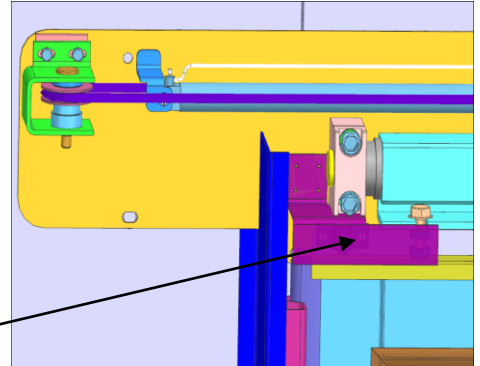
- d. Provide a slot of 20(w)X88(h)X22(depth)mm on the marked door leaf. (marked at Sr. no. III) and mount grommet on door leaf to drawing no. LA56173 with the help of stainless steel chobert rivets.



- e. Mount the door leaf to drawing no. LD56205 on door move mechanism.
- f. Ensure proper fitting of socket for tower bolt to drawing no. LA56144 aligned with tower bolt in both (open & close) position of the door.

- g. Mount the security lock sheet to drawing no. LA56171 with help of stainless steel chobert rivets.

Security lock sheet



- h. Close the doorway ceiling in front of the cabin saloon sliding door.

For General Manager (Mech)

Encls: (08 drgs)

LA56106 Alt g
LA56144 Alt a
LD56205 Alt a
LD56175 Alt nil
LA56171 Alt nil
LA56172 Alt nil
LA56173 Alt nil
LR51122 Alt a

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

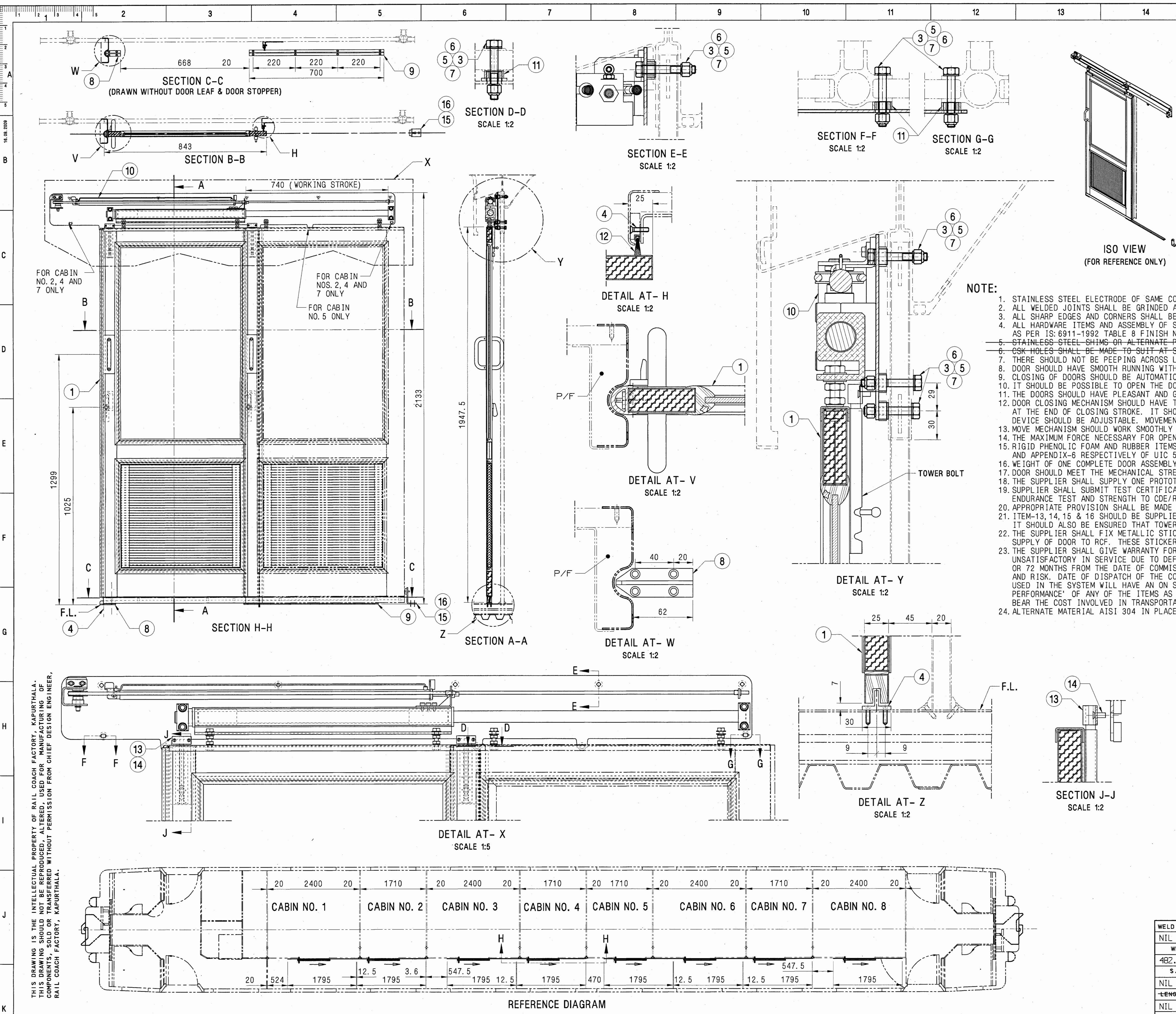
8. S. E. Railway, Garden Reach, Kolkata-700 043
9. Eastern Railway, Fairlie Place, Kolkata-700 001
10. E. Coast. Railway, Bhubaneswar- 751 016
11. North Central Railway, Allahabad — 211 001
12. Northwest Railway, Jaipur — 302 001
13. S. E. Central Railway, Bilaspur- 495 004
14. S. W. Railway, Hubli 580 023
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- 783 381
8. Perambur, Southern Railway, Chennai- 600 023
9. Golden Rock, Southern Railway, Trichy- 620 004
10. Ashokpuram , Southern Railway, Mysore South- 570 008
11. Lallagudda, S. C. Railway Secunderabad- 500 017
12. Hubli, South Western Railway- 580 020
13. Tirupati, S. C. Railway - 517 506
14. Mancheswar, East Coast Railway, Bhubaneswar- 751 017
15. Kharagpur, S. E. Railway- 721 301
16. Lower Parel, N.M. Joshi Marg, Western Railway, Mumbai- 400 013
17. Western Railway, Ajmer, Rajasthan
18. 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



ALT. NO	ALT. DATE	ZONE	ALTERATIONS	AUTHORITY
d	22/09/2014	E12 H15	1. NOTE-15 REVISED. 2. DESCRIPTION OF ITEM-13 WAS ANGLE FOR TOWER BOLT.	DY CME/D1
e	02/08/2016	G12	1. NOTE- 22 & 23 ADDED.	DIC NO. MD160012
f	09/04/2019	G12	1. NOTE - 23 REVISED.	DY. CME/D11
g	17/01/2020	H15, G15 J15 F12 G12	1. ITEM-15 AND 16 ADDED. 2. SIZE OF ITEM-3 WAS M8X55. 3. NOTE-21 REVISED. 4. NOTE-24 ADDED.	DIC NO MD190040 & MD170052

- NOTE:
1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC. C-K: 201 TO BE USED FOR WELDING.
 2. ALL WELDED JOINTS SHALL BE GRINDED AND BURNS TO BE REMOVED.
 3. ALL SHARP EDGES AND CORNERS SHALL BE ROUNDED OFF.
 4. ALL HARDWARE ITEMS AND ASSEMBLY OF STAINLESS STEEL ITEMS SHALL HAVE DULL SATIN FINISH AS PER IS: 6911-1992 TABLE 8 FINISH NO. 6.
 5. STAINLESS STEEL SHIMS OR ALTERNATE PACKINGS SHALL BE SUPPLIED AS PER THE GIVEN DIMENSIONS.
 6. CSK HOLES SHALL BE MADE TO SUIT AT SITE IN LOWER DOOR GUIDANCES.
 7. THERE SHOULD NOT BE PEEPING ACROSS LOUVERS.
 8. DOOR SHOULD HAVE SMOOTH RUNNING WITHOUT JERKS AND LOW NOISE FUNCTIONING.
 9. CLOSING OF DOORS SHOULD BE AUTOMATIC WITH A SPEED OF 0.1m/sec. (APPROX.)
 10. IT SHOULD BE POSSIBLE TO OPEN THE DOOR DURING CLOSING STROKE ALSO.
 11. THE DOORS SHOULD HAVE PLEASANT AND GOOD LOOKING APPEARANCE MATCHING WITH THE OUTER COLOUR SCHEME OF THE COACH.
 12. DOOR CLOSING MECHANISM SHOULD HAVE TIME DELAY DEVICE TO INCREASE THE CLOSING TIME OF DOORS AT THE END OF CLOSING STROKE. IT SHOULD TAKE 30sec. TO 120sec. BEFORE CLOSING. THE TIME DELAY DEVICE SHOULD BE ADJUSTABLE. MOVEMENT SHOULD BE SLOWER AT END OF CLOSING OF STROKE FOR LAST 200mm (0.05m/sec).
 13. MOVE MECHANISM SHOULD WORK SMOOTHLY FOR 3,50,000 CYCLES.
 14. THE MAXIMUM FORCE NECESSARY FOR OPENING THE DOOR SHALL BE 5 TO 6 Kg.
 15. RIGID PHENOLIC FOAM AND RUBBER ITEMS SHALL BE TESTED FOR FIRE RETARDANCE AS PER CLASS-B OF APPENDIX-8 AND APPENDIX-6 RESPECTIVELY OF UIC 564-2 OR. THE FIRM SHOULD SUBMIT TEST REPORTS FROM A NABL/REPUTED LABORATORY.
 16. WEIGHT OF ONE COMPLETE DOOR ASSEMBLY MUST NOT EXCEED 60Kg.
 17. DOOR SHOULD MEET THE MECHANICAL STRENGTH REQUIREMENTS AS PER UIC 566.
 18. THE SUPPLIER SHALL SUPPLY ONE PROTOTYPE OF DOOR FOR APPROVAL BY CDE/RCF BEFORE COMMENCING BULK SUPPLY.
 19. SUPPLIER SHALL SUBMIT TEST CERTIFICATES FOR MATERIAL, FIRE CHARACTERISTICS, ENDURANCE TEST AND STRENGTH TO CDE/RCF ALONG WITH PROTOTYPE OF DOOR.
 20. APPROPRIATE PROVISION SHALL BE MADE TO ENSURE SMOOTH OPERATION OF MIDDLE LOCK IN CLOSED POSITION. IT SHOULD ALSO BE ENSURED THAT TOWER BOLT IS LOCKING THE DOOR PROPERLY (BOTH IN OPEN AND CLOSED POSITION).
 21. ITEM-13, 14, 15 & 16 SHOULD BE SUPPLIED LOOSE AND IT SHOULD BE FITTED AFTER FITTING THE DOOR IN COACH.
 22. THE SUPPLIER SHALL FIX METALLIC STICKERS ON EACH DOOR MENTIONING NAME OF THE SUPPLIER AND MONTH OF SUPPLY OF DOOR TO RCF. THESE STICKERS SHALL NOT BE VISIBLE TO THE PASSENGERS EASILY.
 23. THE SUPPLIER SHALL GIVE WARRANTY FOR THE COMPLETE DOOR SYSTEM INCLUDING INDIVIDUAL PARTS AGAINST FAILING OR PROVING UNSATISFACTORY IN SERVICE DUE TO DEFECTIVE DESIGN, MATERIAL OR WORKMANSHIP WITHIN 84 MONTHS FROM THE DATE OF SUPPLY OR 72 MONTHS FROM THE DATE OF COMMISSIONING OF COACH, WHICHEVER IS EARLIER AND SHALL REPLACE THE SAME AT HIS OWN COST AND RISK. DATE OF DISPATCH OF THE COACH FROM RCF SHALL BE TAKEN AS THE DATE OF COMMISSIONING OF THE COACH. HOWEVER ITEMS USED IN THE SYSTEM WILL HAVE AN ON SITE WARRANTY OF 72 MONTHS AGAINST CORROSION. IN THE EVENT OF 'NON-SATISFACTORY PERFORMANCE' OF ANY OF THE ITEMS AS INDICATED ABOVE, SUPPLIER WILL HAVE TO REPLACE THE SAME AT HIS OWN EXPENSE AND ALSO BEAR THE COST INVOLVED IN TRANSPORTATION, HANDLING AND REPLACEMENT OF EACH ITEM.
 24. ALTERNATE MATERIAL AISI 304 IN PLACE OF C-K201 CrNi1810 (304) MAY BE USED FOR COMPONENTS IN THIS ASSLY DRAWING.

16	STAINLESS STEEL SLOTTED PAN HD TAPP SCREW S14.8X32-C (A2-70 TO IS4367 PT.14-84)	16	NIL	IS: 7173-1989, IS 0-1481	NIL
15	DOOR STOP	8	CC63384	NIL	NIL
14	STAINLESS STEEL SLOTTED CSK HD TAPP SCREW S14.2X13-C (A2-70 TO IS4367 PT.14-84)	4	NIL	IS: 7170-1989, ISO-1482	NIL
13	SOCKET FOR TOWER BOLT	2	LA56144	NIL	NIL
12	SEALING BRUSH	16	3 10113.0, 21.500.119	NIL	NIL
11	SHIM	80	LD56146	NIL	NIL
10	MOVE MECHANISM COMPLETE	8	LD56138	NIL	NIL
9	GUIDE RAIL MAIN	8	LD56144	NIL	NIL
8	GUIDE RAIL SIDE	8	LD56143	NIL	NIL
7	SPRING WASHER B8	71	LIHW09	IS: 3063-1994	ITEM-20 CONTING TO MOTIS 057
6	STAINLESS STEEL MACHINE WASHER A8.4 (A2 TO IS1367 PT.14-1984)	100	LIHWSS09	IS: 2016-1967 DIN125	ITEM-5
5	STAINLESS STEEL NYLOC NUT M8 (A2-70 TO IS1367 PT.14)	71	LIHWSS08	IS: 7002-1991 DIN982	ITEM-8
4	STAINLESS STEEL SLOTTED CSK HD TAPP SCREW S14.2X25-C (A2-70 TO IS4367 PT.14-84)	96	NIL	IS: 7170-1989	NIL
3	STAINLESS STEEL HEX HEAD BOLT M8X45 (A2-70 TO IS1367 PT.14-84)	71	NIL	IS: 1364 PT.1-92 CE	NIL
2	BEARING SHEET	8	LA56107	NIL	NIL
1	DOOR LEAF ASSEMBLY	8	LD56205	NIL	NIL

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	QPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP	INTERIOR DOORS & ACCESSORIES COMPLETE	SUPERSEDES: LA56106 ALT f		
WEIGHT	FILE	1a56106g.prt (3D)				
482.00	KG					
S.AREA						
NIL	M2					
LENGTH/DIA						
NIL	M					
WIDTH/THICK.						
NIL	M					
HEIGHT						
NIL	M					

SCALE

SSE/REC

1:10

CHD

DRN

SATS

REF.DRG.No.

NIL

PL NO.

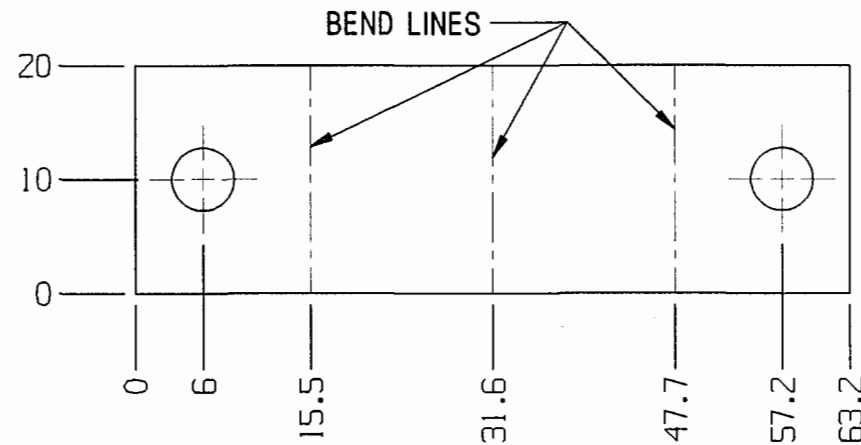
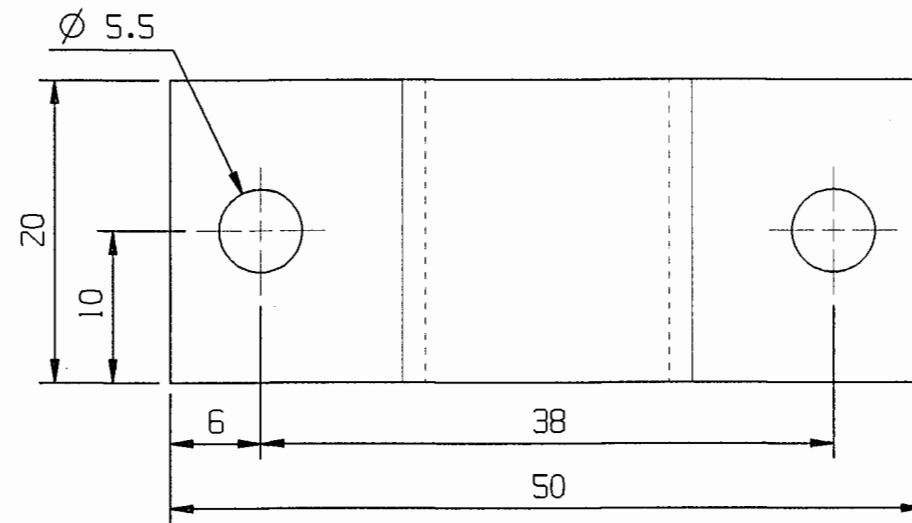
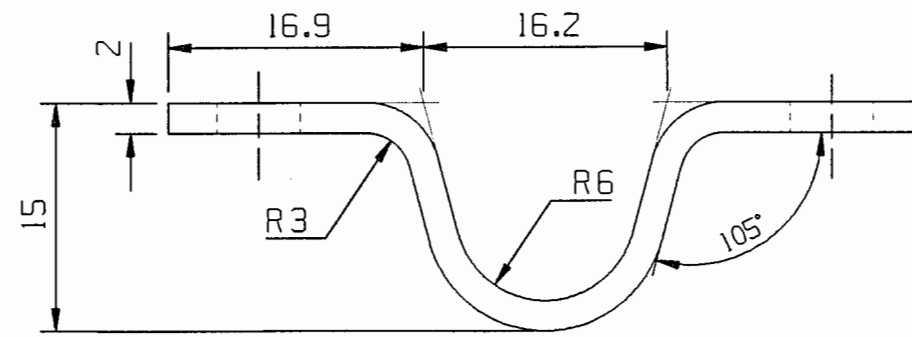
NIL

DRG.NO.

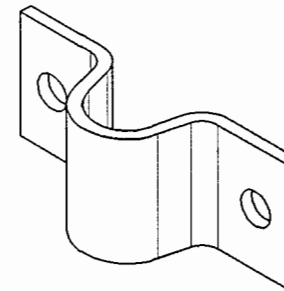
LA56106

SIZE/A1

SHEET/1/1



DEVELOPED VIEW
(FOR REFERENCE ONLY)



ISO VIEW
(FOR REFERENCE ONLY)

ALT. NO	ALT. DATE	ZONE	ALTERATIONS	AUTHORITY
a	29/08/2014	ALL	1. DRG. REVISED AND TITLE OF DRG. WAS ANGLE FOR TOWER BOLT.	DY CME/DI A

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Entered
Into
Date Base

30 AUG 2014

NIL		SOCKET 2X20X64		NIL		NIL		RDSO.SPEC: C-K201		X2CrNi12							
WELD LENGTH		ITEM		DESCRIPTION & DIMENSIONS		QPASSLY		DETAIL DRG		MATL. & SPEC.		REMARKS					
NIL		M		GROUP		INTERIOR DOORS & ACCESSORIES COMPLETE		SUPERSEDES:		LA56144 ALT NIL							
WEIGHT		FILE		LA56144a.prt (3D)													
0.020		KG		SOCKET FOR TOWER BOLT						SCALE		SSE/REC		Rail 30.08.14			
S.AREA										2:1		CHD		YKSH		24/8/14	
NIL		M ²								⊙		DRN		PRSH		27/2/11	
LENGTH / DIA																	
NIL		M		RAIL COACH FACTORY, KAPURTHALA						REF.DRG.NO.		NIL					
WIDTH / THICK				रेल कोच फैक्टरी कपूरथला				IRS		PL NO.		NIL					
NIL		M								DRG.NO.		LA56144					
HEIGHT				ADE/SME				OY.CME		N.R		CDE					
NIL		M								ALT.		a					
										SIZE		A3 SHEET 1 / 1					

SOCKET FOR TOWER BOLT

RAIL COACH FACTORY, KAPURTHALA

रेल कोच फैक्टरी कपूरथला

IRS

PL NO. NIL

DRG.NO. LA56144

29/08/14 ADE/SME

29/08/14 DY.CME

N.R

CDE

ALT. a SIZE A3 SHEET 1/1

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

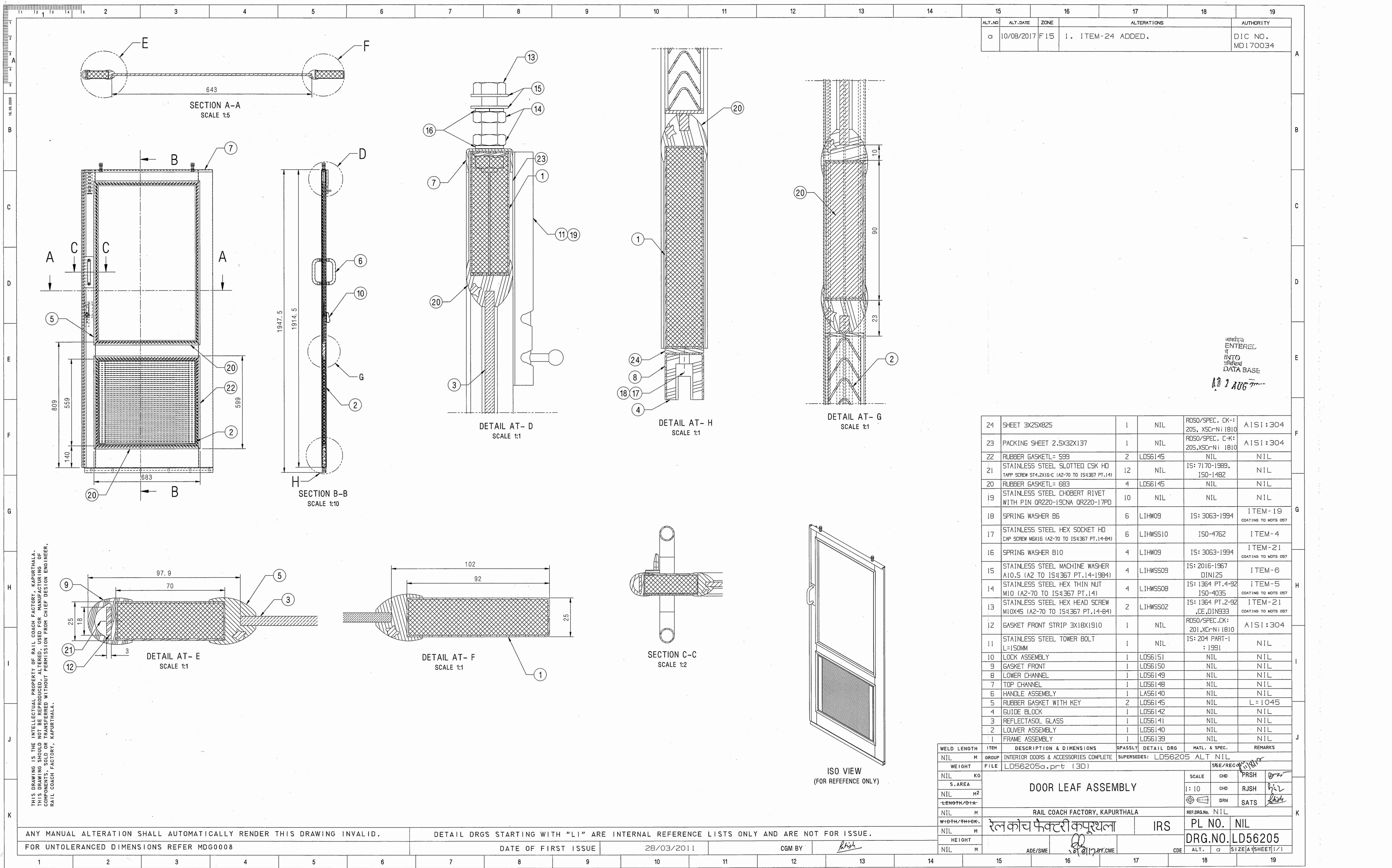
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FOR UNTOLERANCED DIMENSIONS REFER MDG0008

DATE OF FIRST ISSUE 19/09/2011

CGM BY

29/08/14



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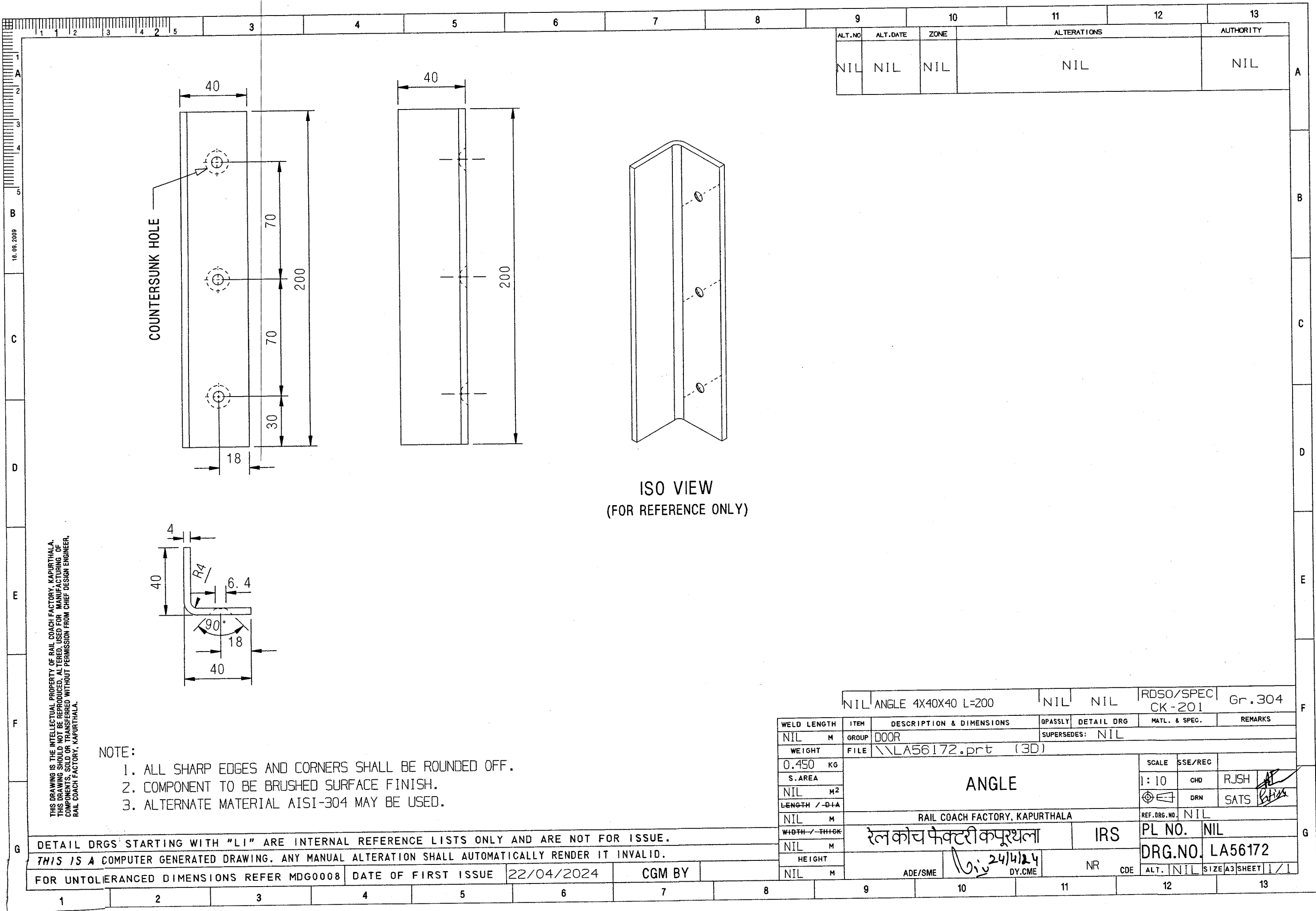
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DATE OF FIRST ISSUE

28/03/2011

CGM BY

Rish



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

NIL		ANGLE 4X40X40 L=200		NIL	NIL	RDSO/SPEC	Gr.304
WELD LENGTH		ITEM		DESCRIPTION & DIMENSIONS		OPASSLY	DETAIL DRG
NIL		M		GROUP		SUPERSEDES: NIL	
WEIGHT		FILE		\\LA56172.prt (3D)		SCALE	
0.450		KG		S. AREA		1:10	
NIL		M ²		LENGTH / -DIA		CHD	
NIL		M		WIDTH / -THICK		DRN	
NIL		M		HEIGHT		SATS	
NIL		M		ADE/SME		REF. DRG. NO.	
NIL		M		DY.CME		NIL	
NIL		M		NR		PL NO.	
NIL		M		CDE		NIL	
NIL		M		ALT.		DRG.NO.	
NIL		M		SIZE		LA56172	
NIL		M		SHEET		1/1	

