

No.: MC/ACF/Fire Detection/AC

Dated: 27.07.2024

Principal Chief Mechanical Engineer

1. मध्य रेलवे, छत्रपति शिवाजी टर्मिनस, मुम्बई - 400 001.	12. उत्तर मध्य रेलवे, हार्लिंग रोड, इलाहाबाद - 211 001.
2. पूर्व रेलवे, फेयरली प्लेस, कोलकाता - 700 001.	13. उत्तर पश्चिम रेलवे, जयपुर - 302 006.
3. उत्तर रेलवे, बड़ौदा हाउस, नई दिल्ली - 110 001.	14. दक्षिण पश्चिम रेलवे, हुबली - 580 023.
4. दक्षिण रेलवे, पार्क टाउन, चेन्नई - 600 003.	15. पश्चिम मध्य रेलवे, जबलपुर - 482 001.
5. दक्षिण मध्य रेलवे, रेल निलायम, सिकन्दराबाद - 500 071.	16. दक्षिण पूर्व मध्य रेलवे, आर ई आफिस काम्प्लेक्स, बिलासपुर - 495 004.
6. दक्षिण पूर्व रेलवे, गार्डेन रीच, कोलकाता - 700 043.	17. इन्टीगरल कोच फैक्ट्री, चेन्नई - 600 038.
7. पूर्वोत्तर रेलवे, गोरखपुर - 273 012.	18. रेल कोच फैक्ट्री, हुसैनपुर, कपूरथला - 144 602.
8. पूर्वोत्तर सीमान्त रेलवे, मालीगाँव, गुवाहाटी - 781 011.	19. बी.ई.एम.एल., बेंगलूर काम्प्लेक्स, न्यू थिप्पासान्द्रा, पोस्ट बाक्स न. 7501, बेंगलूर - 560 075.
9. पश्चिम रेलवे, चर्चगेट, मुम्बई - 400 020.	20. कोंकण रेलवे कार्पोरेशन लि., कार्पोरेट आफिस, बेलापुर भवन, नवी मुम्बई - 400 614.
10. पूर्व मध्य रेलवे, हाजीपुर - 844 101.	21. माडर्न कोच फैक्ट्री रायबरेली .229206
11. पूर्व तटीय रेलवे, बीडीए रेंटल कालोनी, रेलवे काम्प्लेक्स, चन्द्रशेखरपुरा, भुवनेश्वर, उड़ीसा - 751 016.	

Sub: Location for fitment of automatic Fire and smoke detection system (FSDS) in AC coaches.

Ref: (i) This office letter of even no. dated 04.07.2024.

(ii) SR letter no. M/WS/87/DRG/LHB COACHES dated 19.07.24

(iii) MCF/RBL letter no. MD46291 Vol. IV dated 16.07.2024.

(iv) RCF/KXH letter no. MD22161 dated 11.07.2024.

(v) ICF/Chennai letter no. MD/D/Safety/111A dated 24.07.2024.

Vide ref to above subject, Zonal Railways have raised below mentioned concerns regarding provision of FSDS unit on lavatory walls:

- FSDS system on lavatory wall is at risk of tempering by miscreants as system is exposed in open in gangway area.
- Difficulty in laying of cables and pipelines of FSDS system
- Infringement of FSDS unit with roof ceiling during maintenance
- FSDS unit mounted on lavatory wall may injure passengers

Further, during seminar on fire safety held at Liluah workshop on 26.6.24, issue of location for fitment of FSDS system in AC coaches was again discussed by Zonal Railways. In view of it, Zonal Railway and PUs were requested to provide suggestions/feedback for standardising the locations for fitment of FSDS in various IR coaches vide above ref (i) so as to address above mentioned issues

MCF, RCF, ICF and SR have submitted their suggestions/ comments vide letter under ref (ii), (iii), (iv) and (v) respectively. In their feedback, it is suggested that FSDS unit should be fitted in an enclosed space with transparent cover for proper monitoring. Suggestions received by SR, MCF, ICF and RCF are summarised in Annexure-A (Copy enclosed).

RDSO has carefully examined the references received from PU's/Zonal Railways and is in agreement that FSDS being a sensitive system related to passengers' safety, it is desirable that it is not be exposed to travelling public so as to

avoid any tempering with system. Further, any tempering with the system may lead to brake application without any occurrence of fire, which is also not desirable. Hence, FSDS system is desirable to be fitted in an enclosed cabinet. Further, provision of FSDS on lavatory wall is desirable to be alternatively located to ensure ease of maintenance as suggested by PU's also.

Accordingly, based upon the suggestions from PU's/Zonal Railways and deliberations with suppliers of FSDS systems, it is advised that FSDS should be fitted in following locations of coaches:

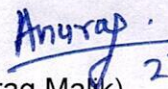
S. No.	Coach type	Standardised Location of FSDS system
1.	1 st AC	Separate enclosure in attendant cabin on PP side with provision of door having transparent opening by acrylic sheet.
2.	2 nd AC	Separate enclosure in linen room (above attendant berth on NPP side) with metallic partition frame and transparent opening with acrylic sheet for visibility of indication of FSDS system.
3.	3 rd AC	
4.	3 rd AC Economy	Existing location beside electrical cabinet (SBC panel) with transparent opening with acrylic sheet for visibility.
5.	AC Chair car	Separate enclosure with metallic partition frame opposite to pantry equipments on PP side with transparent opening with acrylic sheet for visibility.

NOTE: Above standardised location supersedes the instructions of RDSO letter no. MC/ACF/Fire Detection/AC dated 02.02.2024.

In view of above, PUs/Zonal Railways are advised to ensure the fitment of FSDS system as mentioned above. The copy of ref drawings and photos are enclosed at Annexure-B for ready reference.

This is for kind information and necessary action please.

DA: As above

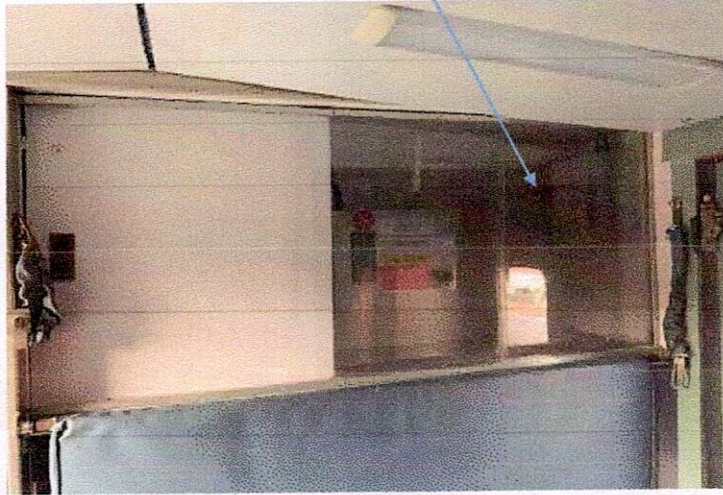

 (Anurag Malik) 27.07.24
 Jt. Director/SS/Carriage

Copy to:

DME/Chg, Rail Bhawan, Railway Board, New Delhi – for information please

S. No.	Coach type	Location of FSDS proposed by PUs/Zonal Railways			Southern Railway
		MCF/RBL	RCF/KXH	ICF/Chennai	
1.	1 st AC	in linen room near attendant cabin & SBC (PP Side) as per drawing no. AHT-ASD-103 alt-Nil	-	in linen room near attendant cabin PP side	FSDS can be changed from inside of linen room to face outside i.e. towards vestibule area with provision of door having transparent opening by acrylic sheet as given in Annexure-III.
2.	2 nd AC	in linen room (NPP Side) as per drawing no. AHT-ASD-102 alt-Nil	Proposed to fit all Electronics equipment items like FSDS, CCTV and PAPIS system in equipment rake (metal) in place of door side linen room (new coaches) at NPP side linen i.e. (535X690 for 2 nd AC and 520X575 for 3 rd AC) as per drawing no. LW90056 alt-Nil (2 nd AC) and LE90050 Alt-'a' (3 rd AC)	in linen room NPP side	SR prepared drawing (SR.SK. No. C&W 4262/BG) with partition and transparent opening with acrylic sheet for visibility of indication in existing FSDS system as per Annexure-II
3.	3 rd AC	in linen room (NPP Side) as per drawing no. AHT-ASD-101 alt-Nil			(i) SR prepared drawing (SR.SK. No. C&W 4261/BG) to provide partition in existing linen room with transparent opening by acrylic sheet for visibility of indication in existing FSDS system so that it would not have any hindrance with linen room. (ii) Another alternate location for provision of FSDS in linen room 520X575X2000 of NPP End by removing 3 partitions in existing room and fixing FSDS system by providing two partitions as per drawing no. 767-9-0-201. (iii) It is not desirable to fit FSDS on Lavatory module wall above dust bin on PP side.
4.	3-Tier Economy coach			in VESDA/PAPIS box/stand aside of SBC	FSDS system is provided beside electrical cabinet with transparent opening for visibility. Existing system can be used
5.	AC Chair car	on partition (Opposite pantry equipment) near body side door (PP side) as per SKETCH no. Sketch-101		on partitions (opposite to pantry equipments) PP End	-

TRANSPARENT ACRYLIC SHEET



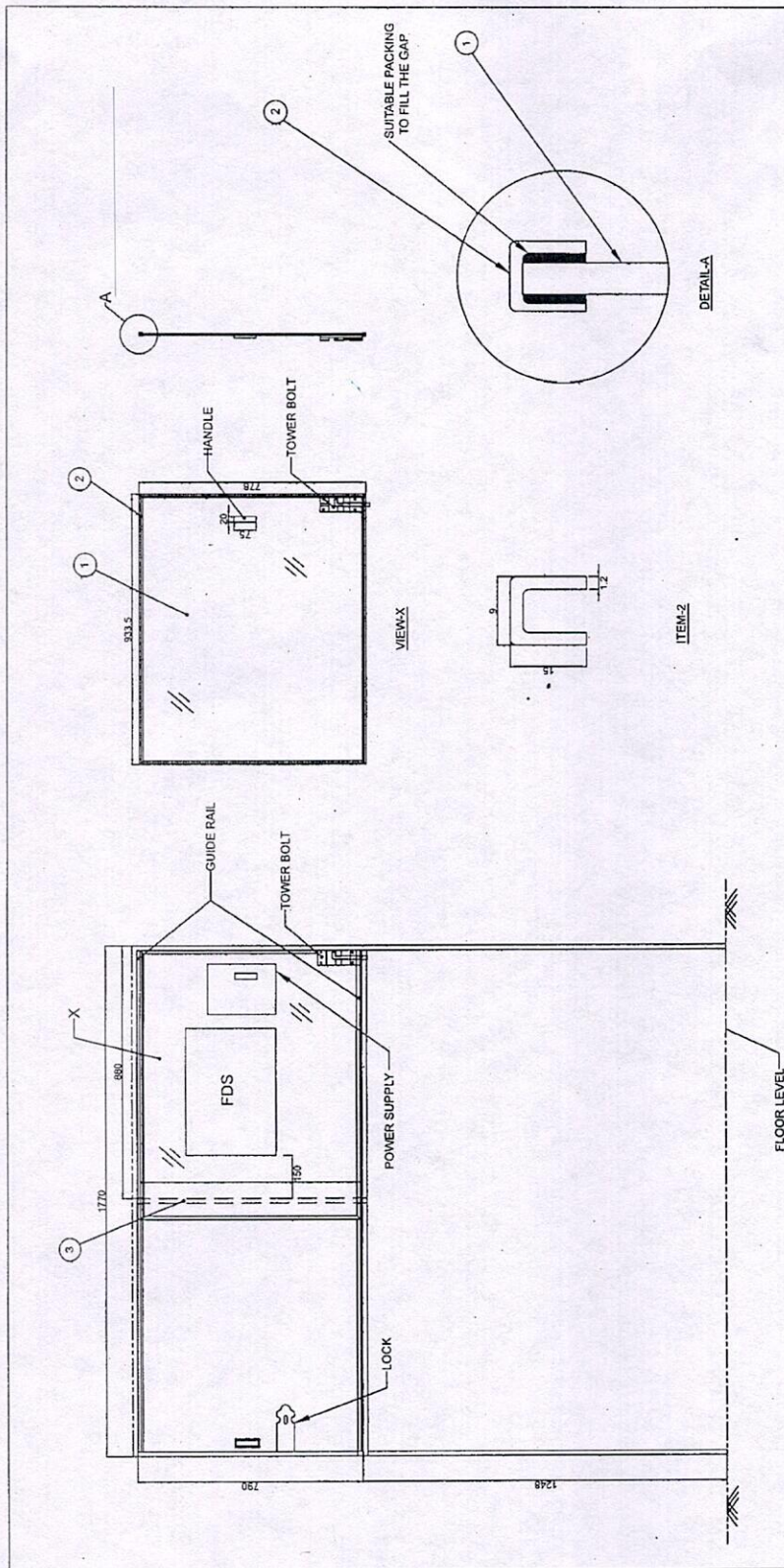
PARTITION



SS SHEET

For AC-2Tier & AC 3-Tier

Singh



NOTE:-

1. ALL DIMENSIONS ARE IN mm.
2. ALL SHARP EDGES SHOULD BE ROUNDED OFF.
3. LOCK TO BE FIXED 150MM FROM PARTITION BOARD.
4. REF. DRG. FOR 3-TIER LHB 4112, CS55271 & LBS109.
5. TOWER BOLT & HANDLE SHOULD BE FIXED ON ACRYLIC SLIDING DOOR WITH NUT & BOLT AT SUITABLE LOCATION.
6. PARTITION BOARD TO BE FIXED WITH SUITABLE BRACKET.
7. EXISTING SLIDING DOOR TO BE REPLACED WITH ACRYLIC SLIDING DOOR ARRANGEMENT.

3	PARTITION BOARD (790X409X9)	-	IS: 303-396R-BWRTY-AA
2	U-SHAPE ALUMINIUM FRAME	-	IS: 1948
1	ACRYLIC SHEET 4 MM THICK	-	IS: 14753
ITEM NO.	DESCRIPTION & DIMENSIONS.	DRG. NO.	MATL. & SPEC.
SCALE:-NTS			

P. Srinivas 19/07

/ PRINCIPAL CHIEF MECHANICAL ENGINEER

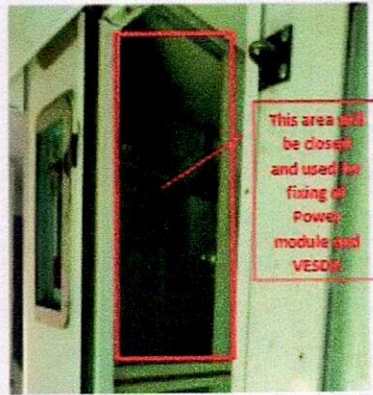
ENCLOSURE FOR FDS IN 3-TIER LHB COACH

SR. SK. No.: C&W 4261/BG.

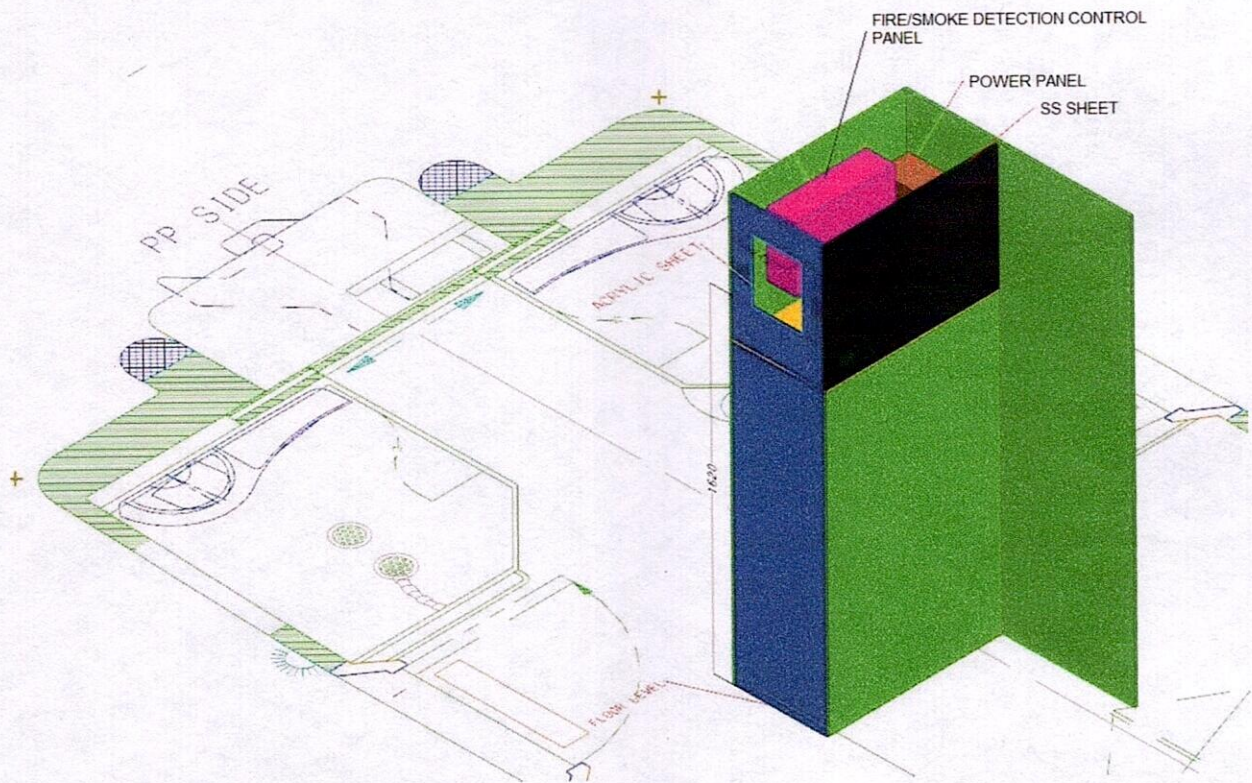
DRAWN BY	GAURAV/JE
SSE/DRG.	<i>[Signature]</i>
SSE/CHG.	<i>[Signature]</i>
DATE	18-07-2024

TRANSPARENT ACRYLIC SHEET

(240 X 300) mm



1st AC (LWFAC)



LOCATION OF FSDS IN FIRST AC COACHES

Syll