



No. SV.FIAT (SC)

Dated: 28.10.2020

महा प्रबन्धक (इंजीनियरिंग)

1. मध्य रेलवे, छत्रपति शिवाजी महाराज टर्मिनस, मुम्बई- 400 001.
2. पूर्व रेलवे, फेयरली प्लेस, कोलकाता - 700 001.
3. उत्तर रेलवे, बड़ौदा हाउस, नई दिल्ली - 110 001.
4. दक्षिण रेलवे, पार्क टाउन, चेन्नई - 600 003.
5. दक्षिण मध्य रेलवे, रेल निलायम, सिकन्दराबाद - 500 071.
6. दक्षिण पूर्व रेलवे, गार्डेन रीच, कोलकाता - 700 043.
7. पूर्वोत्तर रेलवे, गोरखपुर - 273 001.
8. पूर्वोत्तर सीमान्त रेलवे, मालीगॉव, गुवाहाटी - 781 011.
9. पश्चिम रेलवे, चर्चगेट, मुम्बई - 400 020.
10. पूर्व मध्य रेलवे, हाजीपुर - 844 101.
11. पूर्व तटीय रेलवे, बीडीए रेंटल कालोनी, रेलवे काम्पलेक्स, भुवनेश्वर, उड़ीसा - 751 017.
12. उत्तर मध्य रेलवे, प्रयागराज - 211 011.
13. उत्तर पश्चिम रेलवे, जयपुर - 302 006.
14. दक्षिण पश्चिम रेलवे, हुबली - 580 023.
15. पश्चिम मध्य रेलवे, जबलपुर - 482 001.
16. दक्षिण पूर्व मध्य रेलवे, आर ई आफिस काम्पलेक्स, बिलासपुर - 495 004.

Sub: Amendment No.3 to Final Speed Certificate for operation of LHB EOG Composite First AC cum AC 2-Tier (LWFCWACA) coach on FIAT bogie fitted with pneumatic suspension at the secondary stage up to maximum speed of 160 kmph on track maintained to C&M-I Vol.-I standard.

- Ref:** i) RDSO's Final Speed Certificate no. SV. FIAT (SC) dated 12.09.2018 with Amendment No.1 dated 14.08.2019 & Amendment No.2 dated 20.03.2020
ii) Southern Railway letter no. M/TP 42/1/BG/LWFCWACA dated 26.08.2020.
iii) Track Directorate letter no. CT/DHS/3/COACHES dated 27.10.2020.

Vide letter under reference (i), Speed Certificate no. SV.FIAT (SC) Dated: 12.09.2018 with Amendment - No.1 dated 14.08.2019 & Amendment No.2 dated 20.03.2020 was issued for operation of the subject coach upto max. operational speed of 160kmph. Vide letter under reference (ii), Southern Railway has requested to examine & review Para 2.1.1.4 & 2.1.2.4 under Para 2.1 of the subject speed certificate. Track Directorate vide note under reference (iii), has given comments on the issue. Hence, as per Track dte. comment, 'Para 2.1 Track' of speed certificate under ref (i) have been amended and newly added Paras 2.6.8, 2.6.9 & 2.6.10 in 'Para 2.6 General'. Amended 'Para 2.1 Track' & newly added Paras 2.6.8, 2.6.9 & 2.6.10 in 'Para 2.6 General' shall be read as under:

2.1 Track

2.1.1 For speed up to 110kmph

- 2.1.1.1 The track shall be to a minimum standard of 52kg rail laid on PSC sleeper with 1540 No./Km on 250mm ballast cushion below the sleepers which may consist of 100mm clean and rest in caked up condition, on compacted and stable formation.
- 2.1.1.2 For track maintained to lower standard than that mentioned above, the Chief Engineer shall decide the lower maximum permissible speed on the basis of maintenance condition. In this connection, instructions issued by Railway Board should also be followed. When the Chief Engineer considers that the road bed is

not compacted or there is improper drainage, he may suitably restrict the maximum permissible speed depending upon the local conditions.

- 2.1.1.3 The maximum permissible speed on curves shall be decided on the basis of the existing provisions of the Indian Railways Permanent Way Manual, June – 2020.
- 2.1.1.4 The welds shall be protected by joggled fish plates as per provisions of USFD Manual and AT welding manual and other policy instructions of Railway Board. The maintenance of Rails and Rail joints shall be ensured as per provisions of the Indian Railways Permanent Way Manual, June – 2020. In addition, wherever condition warrants on account of corrosion on rail/weld collar, wear on rail, cupping of welds etc., necessary precautions shall be taken for fish plating/ joggled fish plating.
- 2.1.1.5 Zonal Railway may ensure further detailed examination of track as deemed fit based on age cum condition basis, overdue renewal and condition of formation etc. as per provisions of the Indian Railways Permanent Way Manual, June – 2020 regarding permanent way renewals and may suitably restrict maximum speed of operation based on such examination.

2.1.2 For speed more than 110kmph and up to 130kmph

- 2.1.2.1 The track shall be to a minimum standard of 52kg (90UTS) rail laid on PSC sleeper with 1540 No./Km on 250mm ballast cushion below the sleepers which may consist of 100mm clean and rest in caked up condition, on compacted and stable formation.
- 2.1.2.2 For track maintained to lower standard than that mentioned above, the Chief Engineer shall decide the lower maximum permissible speed on the basis of maintenance condition. In this connection, instructions issued by Railway Board should also be followed. When the Chief Engineer considers that the road bed is not compacted or there is improper drainage, he may suitably restrict the maximum permissible speed depending upon the local conditions.
- 2.1.2.3 The maximum permissible speed on curves shall be decided on the basis of the existing provisions of the Indian Railways Permanent Way Manual, June – 2020 subject to maximum speed on curve would not be more than 130kmph.
- 2.1.2.4 The welds shall be protected by joggled fish plates as per provisions of USFD Manual and AT welding manual and other policy instructions of Railway Board. The maintenance of Rails and Rail joints shall be ensured as per provisions of the Indian Railways Permanent Way Manual, June – 2020. In addition, wherever condition warrants on account of corrosion on rail/weld collar, wear on rail, cupping of welds etc., necessary precautions shall be taken for fish plating/ joggled fish plating.
- 2.1.2.5 Zonal Railway may ensure further detailed examination of track as deemed fit based on age cum condition basis, overdue renewal and condition of formation etc. as per provisions of the Indian Railways Permanent Way Manual, June – 2020 regarding permanent way renewals and may suitably restrict maximum speed of operation based on such examination.
- 2.1.2.6 All turnouts shall be fixed heel curved switches laid on PSC sleepers layout with CMS crossings.
- 2.1.2.7 Sleeper on bridges (other than ballasted deck) would be steel channel/H-beam/Composite sleepers.

2.1.3 For speed more than 130kmph and up to 160kmph

- 2.1.3.1 The track shall be to a minimum standard of 60kg (90UTS) rail laid on PSC sleeper with 1660 No./Km on 300mm ballast cushion below the sleepers which may consist of 150mm clean and rest in caked up condition, on compacted and stable formation.
- 2.1.3.2 For track maintained to lower standard than that mentioned above, the Chief Engineer shall decide the lower maximum permissible speed on the basis of maintenance condition. In this connection, instructions issued by Railway Board should also be followed. When the Chief Engineer considers that the road bed is not compacted or there is improper drainage, he may suitably restrict the maximum permissible speed depending upon the local conditions.

- 2.1.3.3 The maximum permissible speed on curves shall be decided on the basis of the existing provisions of the Indian Railways Permanent Way Manual, June – 2020 subject to maximum speed on curve would not be more than 130kmph
- 2.1.3.4 The welds shall be protected by joggled fish plates as per provisions of USFD Manual and AT welding manual and other policy instructions of Railway Board. The maintenance of Rails and Rail joints shall be ensured as per provisions of the Indian Railways Permanent Way Manual, June – 2020. In addition, wherever condition warrants on account of corrosion on rail/weld collar, wear on rail, cupping of welds etc., necessary precautions shall be taken for fish plating/ joggled fish plating.
- 2.1.3.5 Zonal Railway may ensure further detailed examination of track as deemed fit based on age cum condition basis, overdue renewal and condition of formation etc. as per provisions of the Indian Railways Permanent Way Manual, June – 2020 regarding permanent way renewals and may suitably restrict maximum speed of operation based on such examination.
- 2.1.3.6 All the turnouts in facing direction shall be laid with thick web switches with provision of clamp type lock. All the crossings shall be CMS crossing. All other turnout shall be of fixed heal curved switch type with CMS crossing.
- 2.1.3.7 All the SEJs shall be of improved type.
- 2.1.3.8 Sleeper on bridges (other than ballasted deck) would be steel channel/H-beam/Composite sleepers.
- 2.1.3.9 Track geometry shall be monitored once in two months by Track Recording Car, once a month by OMS and once in four month by Oscillograph Car.
- 2.1.3.10 Improvement on track geometry parameters on the route of operation of the train to be carried out as required.

2.6 General:

- 2.6.8** The track structure has been specified to standards laid down by Railway Board through letter no. 2014/CE-II/TSC/1Pt.1 dated 8th Sep 2016 for speed above 110kmph and upto 160kmph. CT-20 may also be referred for operation of train at 160kmph.
- 2.6.9** Track maintained to C&M-1, Vol-I standard in this speed certificate shall be considered as track maintained as per provisions of Indian Railway Permanent Way Manual, June – 2020, containing track geometry standards under Para – 522.

2.6.10 For speed more than 110kmph and up to 130kmph:

- (i) All the level crossing shall be manned with telecommunication facilities and preferably interlocked.
- (ii) Concerned Zonal Railway shall ensure provision of fencing at vulnerable location on need basis.

2.6.11 For speed more than 130kmph and up to 160kmph:

- (i) All the level crossing shall be manned with telecommunication facilities and interlocked. Removal of level crossings with grade separator shall be planned.
- (ii) Concerned Zonal Railway shall ensure provision of sturdy fencing all along the track.
- (iii) Action to be taken for relocation/modification of engineering signals in consultation with S&T and OHE department of Zonal Railways.
- (iv) Stretches of existing weak formations (where permanent/temporary speed restriction is imposed), if any, shall be planned to be rehabilitated/strengthen first before permitting higher speed.
- (v) Zonal Railways should also plan subways at suitable location to avoid trespass and ensure effectiveness of fencing provided.
- (vi) The visibility at level crossing should be as laid down in IRPWM/Railway Board's instructions. All requirements pertaining to level crossing as laid down in IRPWM/Railway Board's instructions should be fulfilled to ensure safety at level

crossing. Drainage of the level crossing and adjoining track should be in good condition.

संलग्नक:

1. Final Speed Certificate no. SV.FIAT (SC) Dated: 12.09.2018 with Amendment no-1 dated 14.08.2019 & Amendment no – 2 dated 20.03.2020.

(वी.के.अग्रवाल)
कार्यकारी निदेशक मानक/चालन शक्ति

प्रतिलिपि:-

1. सचिव (यांत्रिक/इलेक्ट्रिकल/इंजीनियरिंग)– रेलवे बोर्ड, रेल भवन, नई दिल्ली.110 001.
2. मुख्य रेल संरक्षा आयुक्त, अशोक मार्ग, लखनऊ-226 001
3. महाप्रबन्धक (यांत्रिक/विद्युत/परिचालन/संकेत एवं दूरसंचार)
 1. मध्य रेलवे, छत्रपति शिवाजी महाराज टर्मिनस, मुम्बई- 400 001.
 2. पूर्व रेलवे, फेयरली प्लेस, कोलकाता – 700 001.
 3. उत्तर रेलवे, बड़ौदा हाउस, नई दिल्ली – 110 001.
 4. दक्षिण रेलवे, पार्क टाउन, चेन्नई – 600 003.
 5. दक्षिण मध्य रेलवे, रेल निलायम, सिकन्दराबाद – 500 071.
 6. दक्षिण पूर्व रेलवे, गार्डेन रीच, कोलकाता – 700 043.
 7. पूर्वोत्तर रेलवे, गोरखपुर – 273 001.
 8. पूर्वोत्तर सीमान्त रेलवे, मालीगोव, गुवाहाटी – 781 011.
 9. पश्चिम रेलवे, चर्चगोट, मुम्बई – 400 020.
 10. पूर्व मध्य रेलवे, हाजीपुर – 844 101.
 11. पूर्व तटीय रेलवे, बीडीए रेंटल कालोनी, रेलवे काम्पलेक्स, भुवनेश्वर, उड़ीसा – 751 017.
 12. उत्तर मध्य रेलवे,, प्रयागराज - 211 011.
 13. उत्तर पश्चिम रेलवे, जयपुर – 302 006.
 14. दक्षिण पश्चिम रेलवे, हुबली – 580 023.
 15. पश्चिम मध्य रेलवे, जबलपुर – 482 001.
 16. दक्षिण पूर्व मध्य रेलवे, आर ई आफिस काम्पलेक्स, बिलासपुर – 495 004
4. प्रबन्ध निदेशक, कोंकण रेलवे कारपोरेशन, बेलापुर भवन, नवी मुम्बई-400 014

संलग्नक:

1. Final Speed Certificate no. SV.FIAT (SC) Dated: 12.09.2018 with Amendment no-1 dated 14.08.2019 & Amendment no – 2 dated 20.03.2020.

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