GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)
*****

No. 2010/CE-II/CS/2 New Delhi, dt. 14.02.2011.

The General Managers (Engg.)-CR, ER, ECR, ECoR, NR, NCR, NER, NFR, NWR, SR, SCR, SER, SECR, SWR, WR, WCR and Metro Railway/Kolkata.
The General Manager (Const.), N.F.Railway, Guwahati.

The CAO/Const. All Indian Railways.
FA & CAO, All Indian Railways.
The General Managers (Engg.) – ICF/Chennai, RCF/Kapurthla, DLW/Varanasi, CLW/Chittranjan, W&AP/Yelahanka, Bangalore & DMW/Patiala.

The Director General (Track), RDSO/Alambagh, Lucknow.
Chief Commissioner of Railway Safety, Lucknow.

Managing Director, IRCON, New Delhi.
Managing Director, RITES, New Delhi.
Managing Director, DMRC, N.B.C.C. Building, Pragati Vihar, New Delhi.
Managing Director, CONCOR, New Delhi.
Managing Director, RVNL, August Kranti Bhawan, Bhikaji Cama Place, New Delhi.
Managing Director, DFCCIL, 2nd Floor, Palika Bhawan, Sec.13, R.K. Puram, New Delhi.
Managing Director, PIPAVAV Railway Corp. Ltd., Ist Floor Jeeven Tara Building, Gate No.4, Parliament Street, New Delhi.
Managing Director, MRVC, Church Gate station Building 2nd Floor, Mumbai – 400020.
Managing Director, RLDA, IRCON Office Compound, Next to Safdarjang Rly. station, Motibagh-I, New Delhi.
Managing Director, Konkan Railway Corporation Ltd, Belapur Bhawan, Sector-11, CBD Belapur. Mumbai. Pin - 400614.
The Chief Project Officer, DMRC, Pragati Vihar, New Delhi.

Director, IRICEN, Pune.
Director, IRIEEN, Nasik.
Director, , IRISET, Secunderabad.
Director, IRIMEE, Jamalpur.
Director, IRITM, Vill. Kanausi, Hardoi, Manik Nagar, Lucknow.
Director General, Railway Staff College, Vadodara.
Genl. Secretaries, AIRF, NFIR, IRPOF, FROA, AIRPFA, DAI (Railways) Rail Bhawan, New Delhi.

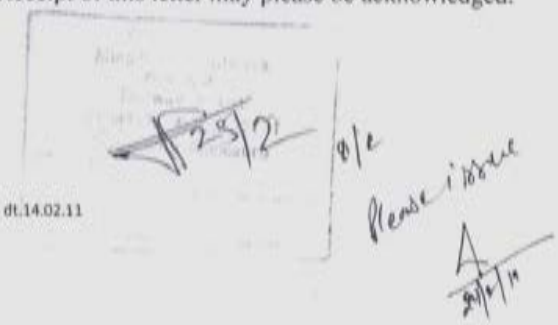
Sub: Advance Correction Slip No. 124 to the Indian Railways Permanent Way Manual.

Ministry of Railways (Railway Board) have decided that correction/addition as indicated in the enclosed Advance Correction Slip No.124 dated 14.02.2011, to relevant para of the IRPWM, be made.

Receipt of this letter may please be acknowledged.

14.2.11

(P.K. Sharma)
Director Civil Engg.(P),
Railway Board.



ACS No.124 dt.14.02.11

No. 2010/CE-II/CS/2 **New Delhi, dt. 14.02.2011.**

Copy to :

Sr. PPS/PS to CRB, ME, ML, MS, MM, MT, FC, Secretary.

AM(CE), AM(Works), AM(Budget), AM(Elect.), AM(Fin.), AM(Sig.), AM(Plg.), AM(Staff), AM(Mech.), AM(PU.), AM(Tele.), AM(Traffic), Adv(Vig.), Adv(L&A), Adv(Safety), Adv(Project), AM(F), AM(Stores), AM(IT), AM(T&C), Adv.(Rates), AM(Comml.).

EDCE(P), EDTK(M), EDTK(MC), EDTK(P), EDCE(G), EDCE(B&S)I, EDCE(B&S)II, ED(L&A)I, ED(L&A)II, ED(L&A)III, ED(Works), EDW(Plg.), EDV(E), ED(Project), ED(Safety), EDF(X)I, EDF(X)II, EDVE.

DTK(MC), DTK(M), DTK(P), Dir(Works)-I, Dir(Works)-II, Dir. Works(Plg.), Dir(L&A), DCE(B&S), DVE-I & DVE-II, JD(B&S),IPWE(I), OSD(ME), OSD/Project, Dir./TMS.

INDIAN RAILWAY PERMANENET WAY MANUAL (Reprint 2004)
CORRECTION SLIP NO 124 DATED 14.02.2011

The existing sub para (2) of para 250 of Indian Railways Permanent Way Manual shall be replaced as under:

250(2) ***Prevention of corrosion*** –

(a) *Identification and measurement* - (i) Areas prone to corrosion of rails shall be identified by the Principal Chief Engineer of the Railway on the basis of reports sent by Divisional Engineers.

(ii) In corrosion prone areas identified in accordance with above para, measurement of depth of corrosion pits both vertically and laterally (reduction in bottom flange width of rail), shall be done using straight edge and feeler gauge or any other suitable device at a fixed periodicity of once in a year on every 100 sleepers by removing Elastic Rail Clips and liners and such measurements shall be recorded in a register to be maintained by each Section Engineer (P. Way) as per Annexure- 2/20.

(iii) For new line/gauge conversion projects, corrosion prone areas shall be identified by CAO(C)/Chief Engineer(C) in consultation with Principal Chief Engineer.

(b) *Anti-corrosive painting* – (i) In case of the new rails to be laid during track renewal/doublings/other construction projects in identified corrosion prone areas, anti-corrosive bituminous coating as per procedure mentioned in (iii) below should be provided before laying in track. This should preferably be done in Flash Butt Welding Plants. For severe corrosion prone areas, wherever possible, Zinc metalisation in lieu of bituminous painting in centralized plant/ Flash Butt Welding plant can also be done. The Zinc metalisation shall be done as per procedure laid down in RDSO Circular no. CT/ACP dated 24-02-2006.

(ii) In case of rails that are already laid in track in identified corrosion prone areas, anti-corrosive bituminous coating to rails should be given in the track itself as per procedure mentioned in (iii) below.

(iii) Surface preparation of rails shall be done, with the help of had operated or power operated tools i.e. scrappers, wire brushes, sand paper, pumice stones etc. Wire brushing shall invariably be done at the end so as to obtain uniform rubbed surface. The surface prepared shall

be checked visually for uniformity of surface. Special care should be taken in surface preparation at weld collars and liner contact areas. Surface preparation should not be done when ambient temperature is below 10^0C or above 50^0C, in rainy season, during night, in winter before 8AM, in summer between 11AM to 3PM and in extremely windy/misty/dusty conditions. Chemical should not be used for surface preparation. Painting should be done in two coats of thickness of 100 microns each by anti corrosive bituminous black paint confirms to IS: 9862 after an interval of 8 hours between two coats. All the liners and Elastic Rail Clips shall also be painted with anti corrosive black bituminous paint after duly cleaning the surface.

(iv) In identified corrosion prone areas, bituminous painting of rails shall be done once in a year on inside of gauge face including web and foot and once in three years on non-gauge face side of rail including web and foot. In other areas, wherever signs of corrosion are seen in isolated patches, prompt action for anti-corrosive painting shall be taken.

(c) *Greasing and sealing of liner contact area* – In identified corrosion prone areas, the rail liner seat should be greased using graphite grease to the RDSO specification after proper cleaning. The grease is also applied all around the liner on the rail foot on gauge face side to prevent the ingress of toilet droppings in the gap between the liner and the rail foot. Greasing and sealing of liners contact area shall be done once in year for gauge face side and once in two years on non-gauge face side of rail.

(d) *Shifting of liner locations* – Shifting of liner location on rail foot at regular intervals is desirable to ensure that the effect of corrosion is not allowed to build up at liner locations and render rails vulnerable to fractures due to increased depth of liner bite pits. After new rails are laid in an identified corrosion prone area, regular watch on the effect of corrosion shall be kept by taking measurement of depth of pits and shifting of the liner biting locations by de-stressing of rails in LWR track and pulling back rails in SWR/fish-plated track as per frequency and guidelines approved by the Chief Track Engineer based on local conditions.

(e) Rail flanges/web should be kept free of the muck particularly at stations.

(f) Periodical cleaning of rubbish should be done in goods shed siding lines.

(g) Train watering arrangements/Water columns should be avoided on the run through main lines as far as possible. Proper drainage should be ensured in yard/station lines including washing lines, washable aprons, train watering lines etc.

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……..RAILWAY

ANNEXURE- 2/20 Para 250 (2) (a) (ii)

Proforma for Measurement of Liner bite/corrosion of Rail

Division Section Between Stations

Track Structure (rail) Sleeper Density Annual GMT

Whether corrosion prone area (Yes/No)

Date of recording	Location (KM/TP)	Sleeper No.	Corrosion depth in mm								Remarks with signature
			Left Rail				Right Rail				
			Vertical		Lateral		Vertical		Lateral		
			GF	NGF	GF	NGF	GF	NGF	GF	NGF	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)

Where GF - gauge face side, NGF- non gauge face side.