

कार्यालय
प्रमुख मुख्य इंजीनियर
पूर्वांचर रेलवे
गोरखपुर - 273012



Office of the
Principal Chief Engineer
North Eastern Railway
Gorakhpur - 273012

No.CE/NER/Track Circular/275/Pt-II/4A

Dated: 15.11.2010

Divisional Railway Manager,
North Eastern Railway,
Izzatnagar, Lucknow & Varanasi

Chief Administrative officer/Con
N.E.Railway/Gorakhpur.

Sr. Divisional Engineer/Co-Ord.,
North Eastern Railway,
Izzatnagar, Lucknow & Varanasi

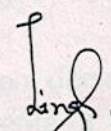
Principal,
System Training School,
North Eastern Railway,
Gorakhpur.

All Engineering Officers, CBE, CTE, CPDE, CE/rmc, CGE, DyCB/P&D, DyCE/BF(HB), DyCE/IG,
North Eastern Railway, Hd. Qrs., DyCE/TP, DyCE/rmc, DyCE/LIA, XEN/TE, XEN/TM, XEN/TP,
Gorakhpur. XEN/D, XEN/Land, Sec/PCB,

Sub: - CE Circular No. 98 (P.Way) of 2010.

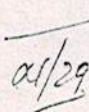
Please find herewith the enclosed CE's Circular No. 98 (P.Way) of 2010 on the subjects **(A) "Prevention of asset failures by increased frequency of lubrication and Inspection"** & **(B) "Measurement of corrosion of rail foot due to liner biting"**. This circular is here by circulated to all concerned for implementation of the instructions contained therein & followup with immediate effect.

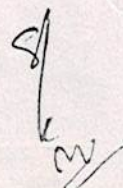
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15.11.10
(K. Singh)

Executive Engineer/ Track
for General Manager/Engg.


16/11/10


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(259/245)

North Eastern Railway
(Engineering Department)

CE's Circular No. 98

Sub: (A) Prevention of asset failures by increased frequency of lubrication and inspection.

(B) Measurement of corrosion of rail foot due to liner biting.

(A) Failures due to corrosion below liners on gauge face sides of the rails of the track has come up as a new challenge for the field engineers in recent years. These failures are not only causing interruption to our traffic, but also have become a threat to safety for movement of trains on our track. Urgent action as detailed below needs to be taken on priority.

Taking above situation into account, the position has been reviewed and the corrosion prone areas are identified as under:-

- Main-line section from Chhapra Kacheri to Lucknow.
- Aunrihar to Manduadih.
- Gorakhpur Cantt to Valmiki Nagar.
- All the passenger lines of the yards alongwith main line tracks within station limit.
- Any other section subsequently approved by CTE.

It is also observed that inside of rail foot i.e. gauge face side is more prone to corrosion.

Further, frequency of lubrication of fishplated joints for CC+6+2 route have to be increased due to heavy load resulting into higher stresses at FPZ, SEJ and glued joints.

To control incidences of asset failures, it has been decided to rationalize the frequency of lubrication and inspection of vital components of track on programmed basis. Existing frequency as well as increased frequency to be adopted till further review is as under:-

258
24/11

S. No.	Track component	Existing frequency	Revised frequency
1.	Lubrication of ERCs, eyes of inserts and sealing of liner contact area: (i) Corrosion prone area.	Once a year	(a) Gauge face side – every 6 months in October/November & March/April. (b) Non gauge face side – every year in October/November.
	(ii) Other areas	Once in two years.	Every year on both sides.
2.	Oiling & greasing of SEJ (tongue rail & stock rails)	Fortnightly	(a) Fortnightly along with oiling & tightening of bolts also. (b) Detailed visual examination of stock rail & tongue rail after opening of M.S. bracket every 3 months.
3.	<u>Points & Crossing:</u> (a) Greasing of gauge face of tongue rail.	To be done as per Para 237(2)(j) of IRPWM, but frequency not laid down.	Weekly
	(b) Oiling & greasing of bolts of points & crossings including stretcher bar bolt, rail screw of slide chair along with thorough cleaning		Monthly
4.	Lubrication of rail joints: (a) On CC+6+2 routes (i) Main line and run through yards	Once a year from October to February.	Twice in a year in October/November & March/April.
	(ii) Other Yards	Once in two years	Once a year in October/November.

	(b) On other routes	Once a year in October/November	Once a year in October/November.
	(c) On bridges with span 40FT and above.	Once a year	Twice in a year in October/November & March/April.
5.	Painting of rails:		
	In yards & corrosion prone area	(a) Yearly on gauge face side.	(a) Once a year in November/December on gauge face side.
		(b) Once in 3 years on non gauge face side.	(b) Once in 2 years on non gauge face side.
	Other area	-	(a) Once a year in November/December on gauge face side. (b) Once in 3 years on non gauge face side.
6.	Lubrication of gauge face on curves of radius 600m & less on BG and 300m & less on MG.	To be done as per Para 427 of IRPWM, (presently being done fortnightly).	Weekly
7.	Detailed inspection of glued joint & fittings	-	(a) On CC+6+2 routes – Once a month. (b) On other routes – once in 3 months.

The above frequency is enforced with immediate effect. All concerned are required to be communicated and directed to ensure lubrication and inspection of the above assets as per the increased frequency mentioned in the above table. More intensive frequency can be decided by Sr.DEN depending on the site conditions.

It may also be ensured that greasing, sealing of liner and painting of rails area should be done as per instructions contained in RDSO's letter No. CT/ACP dated 24.2.2006 already circulated vide this office letter No.W/275/0/A/Gen/Pt-II/4A dated 29.6.2006 and again circulated vide this office letter No.W/275/0/A/Gen/Pt-III/4A dated 21.8.2009.

(25) (247)

(B) Measurement of corrosion of rail foot due to liner biting:

As per Board's directives issued vide letter No. 2010/CE-II/WP/21 dated 15.10.2010 corrosion at liner biting locations should be measured at a fixed periodicity of once a year. Hence, register of corrosion measurement should be made.

In order to know and monitor extent of corrosion on rail foot, particularly at liner contact area, periodical measurement of corrosion pit both vertically and laterally (reduction in bottom flange width of rail), shall be taken using straight edge and filler gauges. Such measurements shall be recorded at a frequency of one year on two sleepers in each TP/HP by removing ERCs & liners on gauge face side. Results of such measurements shall be recorded in a register to be maintained by each PWI in the following format:

CORROSION MEASUREMENT OF RAIL FOOT (AT LINER CONTACT AREA)

Division..... Section..... Between stations

Track Structure - Rail Sleeper density Annual GMT

Year of laying Whether corrosion prone area (Yes/No)

Date of testing	Location (Km/TP)	Sleeper No. 1 & 2	Corrosion depth on gauge face (in mm)				Remarks with signature of SSE/JE	Remarks of ADEN	Remarks of Sr.DEN
			Left		Right				
			Vertical	Lateral	Vertical	Lateral			
1	2	3	4	5	6	7	8	9	10

The register should be cross checked by ADEN/DEN/Sr.DENs during their inspections and necessary action to implement corrosion control measures should be taken.

For those locations where incidence of corrosion is more than the limit, Division after detailed survey as suggested above and will submit proposals for renewal in Works Programme (as per IRPWM Para 302) duly supported with relevant records and documentation alongwith reports of steps taken for prevention of corrosion.

25/244

Further, it is to be noted that where corrosion pit depth is more than about 3mm, operation of destressing may result into shifting of liner contact area beyond sleeper seat which will become more prone to fracture. Such locations should be kept under close supervision till renewal. ✓

These instructions should be brought into practice with immediate effect.

Manoj Kumar

(Manoj Kumar)

Principal Chief Engineer

(No. CE/NER/Track Circular/2007/275/Pt-II/4A

Gorakhpur

dated 15.11.2010)