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No. W-HQ/W-4/Track/PCE/CIR/4

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CTE PROCEDURE ORDER No 25/2022-23

Sub- Prevention of Rail failures due to Liner bite corrosion.

Para 613 of IRPWM 2020 provides detailed guidelines for prevention of corrosion and maintenance of record of corrosion due to liner bite. Some of important guidelines are reiterated as below-

1. **Greasing and sealing of liner contact area** – In identified corrosion prone areas, the rail liner seat should be greased using graphite grease IS-408-1981 Gr. O 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.
2. The extent of liner bite corrosion and action required to be taken is detailed below-
 - (a) **When extent of corrosion is upto 1.5mm-** No action is required, except greasing and sealing of liner contact area as mentioned in Para (1) above. Destressing can be done as and when required following various considerations as prescribed in IRPWM.
 - (b) **When extent of corrosion is more than 1.5mm-** If liner bite corrosion is at isolated locations which can be tackled by isolated rail renewal, isolated rail renewal shall be carried out. However, if corrosion is widespread to the extent that it is not feasible to be tackled by casual renewal of rails, TRR shall be proposed as per IRPWM Para 702(b) (ii) reproduced as under:
“Corrosion beyond 1.5 mm in the web or foot may be taken as the criterion for wear due to corrosion. Existence of the localized corrosion such as corrosion pits, especially on the underside of the foot and liner biting etc. on rail foot, act as stress raisers for the origin of fatigue cracks and would necessitate renewals.”
3. When destressing is required to be undertaken for rails having liner bite corrosion more than 1.5 mm, the same should be done in suitable rail panel lengths so that post destressing liner

bite spot do not go beyond sleeper seat. If still liner bite locations go beyond sleeper seat post distressing, cutting of small piece of rail having length equal to one AT weld gap i.e. 25 mm plus required extent of pulling back may be resorted to.

4. Interchanging of rail gauge face in case of liner bite corrosion should not be undertaken on account of adverse tensile rail stresses condition at non gauge side of bottom of rails.
5. Rail flange/web should be kept free of the muck.
6. Train watering arrangements 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.
7. Patrolling of fracture prone sections during winter shall continue to be governed by instructions contained in winter precautions issued every year.


13.1.23
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