

SOUTH CENTRAL RAILWAY

Safety.387/Fly Leaf/10/2012

Fly Leaf No. 10/2012

Attention...

Winter Precautions in maintenance of track

Awareness:

- Steps should be taken to enhance the awareness in the field Officials regarding USFD and Winter precautions.
- ADENs to interact with the gang and explain about the importance of Winter precautions.
- Engineering Officials shall conduct inspections covering platform lines at major stations, corrosion prone areas, major bridges, tunnels, high banks and their approaches.

Detection of rail defects leading to fractures:

A. USFD testing:

- Need-based USFD testing of rails of all sections need to be ensured.
- Periodical testing of AT Welts as per USFD Manual should be done with updating of records.
- Apart from need-based USFD, testing shall be done in all 72 UTS rails territory where > 250 GMT and in 90 UTS territory where traffic is upto 50 GMT.
- Apart from normal testing, SKV/AT welds shall be carried out on all major bridges and their approaches for a length of 100m on either side.
- One round of gauge face corner testing (GFC) of rails to be carried out before Winter.
- USFD of rails having > 5 and upto 16 GMT per annum should be regulated so that one round of testing is done before Winter.
- Fracture prone sections are to be identified and USFD inspection has to be increased.

B. Visual examination:

- Keyman roster during November to the end of February should be 0600-1100 & 1400-1700 hours.
- Night Patrolling should commence from November and last upto the end of March, if required the period can be extended based on the local conditions.
- Winter patrolling should be similar to monsoon patrolling and the beat charts are to be prepared and sent by Sr.DEN/DEN.
- The beat length and an power deployment may be decided depending on local conditions, frequency of trains, weather conditions, etc.,
- The Patrolman shall obtain the signature of the Gateman enroute in his beat length apart from SMs of the station/s.
- Night foot-plate inspections shall be done by Engineering Officials in the sections nominated.

- Special patrolling may also be carried out in identified stretches where corrosion of rail is quite severe in addition to normal winter patrolling. This should be decided by the Sr.DEN/DEN.
- Rs.500/- may be awarded to the Night Patrolman who detect weld / rail failure between 2200 to 0400 hours as an incentive.

Preventive action:

- All AT/SKV welds which has completed 50% of their stipulated fatigue life on sections having annual GMT > 15 are to be provided with joggled fishplates with 2 far end bolts giving priority to curves on outer rail, approaches of bridges, high banks above 5m, high banks between 3m to 5m and other locations.
- One metre long fish-plates at fish-plated joints on all bridges including their approaches should be provided, preferably before Winter.
- TWR work to be taken up on priority in identified fracture prone stretches.
- De-stressing of LWR at identified locations shall be taken up immediately. However, the condition of rails for any corrosion, particularly in the liner contact area of the rail foot must be checked and de-stressing should not be done where rails get corroded in the liner contact area.
- LWR/CWRs identified as fracture prone and where the depth of the corrosion is < 2mm, de-stressing may be carried out at a lower temperature, i.e., between t_m to $t_m + 5^{\circ}$ C.
- Painting of weld collar with epoxy paint / anti-corrosive painting to be taken up.
- Sealing of liner contact area of rail flange with grease should be done on gauge face sides in corrosion prone areas.
- While repairing fractures, the rail which is inserted in the track needs to be cleared by USFD before putting into the track. Each P.Way/SE should have a stock of rails which have been tested by USFD and cleared for usage in track.
- Suitable SR shall be imposed on stretches where foot corrosion at the liner contact area is quite severe, especially were corroded liner contact area at the rail foot is shifted and is in suspended condition. All such cases shall be decided by Sr.DEN/DEN case-wise.

Action on fracture:

- Night Patrolmen are to be trained and counselled for taking necessary precautions for passing trains at the fracture area which is upto 30mm.
- Sufficient joggled fish-plates shall be provided at fracture prone locations.
- Adequate number of joggled fish-plates with clamps, wooden blocks shall be provided at all LC Gates and in Gang Tool Box.
- Joggled fish-plates with clamps shall be provided on one of the rails at every one KM interval on UP & DN tracks separately. However, the locations shall be selected in such a way that it is staggered for every $\frac{1}{2}$ KM.

**CHIEF SAFETY OFFICER
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