



OFFICE OF THE
GENERAL MANAGER (ENGG)
GORAKHPUR
DATED : 17-12-99

CE'S Circular No. 8 of 1999

NO. W/275/O/RWF/4A

All Sr. DENs/L,
North Eastern Railway,
IZN, LJN, BSB, SEE, SPJ

Subject : Rail Fractures, Winter Precaution

Following action shall be undertaken to prevent Rail Fractures:-

1.0 Cold weather patrolling

Instruction already exists in IRPWM (1986 Edition) and LWR Manual (1996 Edition) for cold weather patrolling. These are again reiterated as under:-

1.1 Cold weather patrolling shall be introduced when the rail temperature is less than Td-30deg.C. Patrol charts shall be prepared as per IRPWM para 9.1.2(ii). Cold weather patrolling shall be organised by SSE/SE (Incharge).

1.2 Cold weather patrolling shall be carried out as under:-

- (i) On single line or where only one road in a double line section is having LWR /CWR one patrolman for two kilometers.
- (ii) On double line section when LWR/CWR rest on both road one patrolman for one kilometer length of UP & DN road.

2.0 Early Morning Patrolling

- (i) In fracture prone areas where rail fractures are more than one per Kilometer, early morning winter patrolling should be ensured from the months of October to February.
- (ii) Keyman's daily roster may be modified accordingly. Patrolling should commence from 4.00 Hrs. which may be altered keeping the local conditions in view.
- (iii) On 90R fatigued rail tracks which have been sanctioned for renewals, early morning winter patrolling should also be undertaken from October to February. These rails are generally existing on SV-BTK, SEE-CPR, HJP-GRL sections.

3.1 Cold weather patrolman shall carry following equipments.

- | | |
|----------------------------------|-----------------------------------|
| 1- 10 Fog signals in tin case | 4- 2 Red flags and one green flag |
| 2- 2 Tri color hand signals lamp | 5- one three cell torch |
| 3- One match box | 6- One staff |

3.2 Duties of cold weather patrolman /early morning patrolman/Keyman should be as follows:-

He will walk over his beat early morning slowly along one rail in one direction and on the other rail in return direction. On double line he will repeat this procedure alternatively on UP and DN track. On seeing a Rail/Weld fracture action mentioned under Para 8.0 should be under taken

3.3 Checking of Patrolman

The surprise checks for patrolling during coldest odd hours (00Hrs. to 6.00Hrs.) will also be conducted by sectional SE/SSE at least once in a month by rotation and by AEN at every month. They should also drill the staff down below for action taken during emergency.

4.0 IMR/REM Rails and welds

On this Railway Need Based USFD Testing has been introduced on 'D' and 'D' Spl. routes with effect from 30.6.99. Frequency of USFD testing should be as specified in Need Based System. Following action should be taken on detection of IMR/REM Rails/Welds.

- (i) IMR Rails and Welds should be removed from track immediately (not later than 3 days) and impose 30 kmph restriction and depute a watchman till defective part is replaced.
- (ii) All REM welds should be provided with joggled fishplates and four clamps and supported on wooden blocks and impose 30 kmph restriction if not replaced within 15 days.
- (iii) OBS(E) defect located within fishplated zone must be replaced or endcropped within 15 days and impose 30 kmph restriction if not replaced within 15 days.
OBS(B) defect on any major bridge and upto 100 meters on its approaches must be replaced within 15 days and impose 30 kmph restriction if not replaced within 15 days.

5.0 LWR

- 5.1 All LWR should be inspected and those which are not having correct destressing Temperature and /or are not behaving properly should be destressed. Certificate should be submitted by Sr.DEN/I that "All LWR in Division are behaving satisfactorily except in the following and their destressing has been organised as per programme enclosed".
- 5.2 SEJ will be got marked with red paint for designed maximum displacement of stock and tongue rails by SSE/SE. Inspecting Official will be vigilant and look out for the excess gap. Tongue and stock rail should not go beyond the red paint marks on both sides of SEJ. He shall also tap SEJ for detecting cracks as done by TXR staff in detecting hollow tyres. SEJ sounding hollow should be suspected for crack and checked in detail after opening the brackets after taking due safety measures. Similarly, speed restriction (not higher than 30 kmph) on cracked SEJ shall be imposed.
- 5.3 Oiling greasing and its maintenance should also be done once in fortnightly.

6.0 Additional Precautions

- 6.1 Sufficient Nos. of wooden blocks and fish plates and joggled fish plates should be available at all manned level crossing and also at gang tool boxes.

- 6.2 Joggled fish plates and clamps should be provided at every Kilometer on the 90 R track.
- 6.3 During Trolley Inspections SSE/SE/JE should also carry atleast two sets of joggled fish plates with clamps and bolts.
- 6.4 Sufficient nos. of rail thermometer should be available with SSE/SE so that defective one can be replaced by new one. All the thermometer should also be marked hot/cold weather patrolling so that Key Man/Gang Mate can also read and take action to start the patrolling.
- 6.5 Visual inspection of fish plated rail joints should be checked with the help of magnifying glass and mirror and oiling and greasing completed from OCT. month to FEB. month.
- 6.6 On fatigue 90R rails on LJN-KIR section oiling and greasing of all such fish plated rail joints should also be undertaken every two three months and rails having cracks in fish plated zones shall be removed immediately. Closure rails should be kept at site of oiling and greasing so as to replace the detected cracked fish plated ends at the time of their detection. Suitable number of closure may be carried.
- 6.7 No closure piece of less than 6.00 Metre shall be left in track after removal of REM rail/weld cracked.
- 6.8 Welding of closures should immediate be done preferably at the time of removing the rails/welds detected
- 7.0 Wheel Flats and Overloading.**
Rolling stocks having wheel flats /over loading should be reported and insisted upon to be detached immediately.

8.0 Action to be taken on emergency

- 8.1 If any fracture takes place on LWR/CWR, immediate action should be taken by the official who detected the fracture to suspend the traffic and to protect the line. He shall report the fracture to the Gang Mate /Key Man/PWI, who shall arrange for making emergency repairs to pass the traffic immediately. Repairs shall be carried out in four stages as described in para 7.2.3, 7.2.4 and 7.2.5 of LWR Manual (1996 edition)
- 8.2 In emergency repairs, the fractured rails shall be joined by using 1 Metre long special fish plate and screw clamp or joggled fish plate and clamp. If the gap at fracture does not exceed 30 mm, insertion of any closure rail piece is not necessary. The traffic may then be resumed at a speed of stop dead and 10 KMPH for the first train and 20 KMPH for subsequent trains. Temporary repairs and permanent repairs shall be carried out as per para 7.2.4 and 7.2.5 of LWR Manual.
- 9.0 Kindly bring these instructions to the knowledge of all Railway officials/Supervisors for compliance.
- 10.0 Your suggestion if any may also be advised to this office.

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