HOT WEATHER PATROLLING

1.0 Introduction

Hot Weather Patrolling is the patrol of LWR/CWR track carried out when the rail temperature exceeds significantly the de-stressed temperature.

1.1 **Period for hot weather patrolling:** - shall be laid down by the Chief Track Engineer for each section and patrol charts prepared where necessary.

1.2 **Organisation of Patrolling:** - shall be organised by JE/SSE (P.Way) accordingly. In addition, the JE/SSE (P.Way), the Gang Mate shall be vigilant during summer and on hot days.

1.3 **When Patrolling to be Start**

Patrolling will be introduced, when the rail temperature rises above: -

1. Td + 25°C on PSC sleeper track with sleeper density 1540 nos. Per km and above.

2. Td + 20°C on PSC sleeper track with sleeper density less than 1540 nos. Per km

2.0 Petrol Beat

1. On single line or where only one road in a double line section is having LWR/CWR — One patrolman for 2 km.

2. On double line section when LWR/CWR exist on both roads — One patrolman

2.1 Changes in Beat Length and Man Power Deployment

Changes in beat length and man power deployment, if found necessary, may be decided by the Sr. DEN (Co) of the division depending on prevailing local conditions, frequency of train service, weather conditions etc.

3.0 Equipments

1. Red HS Flags - 2 nos.



2. Staff for Flag - 1 no.



3. Detonators - 10 nos.



4. Canne-a-boule fitted with rubber ball - 1 no.



4.0 Hot Weather Patrolman

1. He shall patrol the track during the hottest part of the day, to look for prominent kinks, incipient buckles or tendency towards buckling.

2. He shall protect the track at the site of the prominent kinks, incipient or actual buckles and report the same to nearest Station Master and JE/SSE/P.Way immediately.

3. The patrolman shall preferably be provided with a GPS tracking device, to monitor his movements so as to ensure effective patrolling.

4. He will walk over his beat slowly over one rail / on sleeper non gauge side of rail in one direction and on the other rail/on sleeper non gauge sleeper side of rail in the return direction.

5. On double lines, he will repeat this procedure alternately on UP and DN tracks. He will be vigilant and look out for kinks in the rail especially during the hottest part of the day.

5.0 Mobile Watchman

The duties of a Mobile Watchman are as follows:–

1. A Mobile Watchman is posted, till period of consolidation is over, on stretches where after maintenance operation, rail

temperature has exceeded td+20°C during the period of consolidation.

2. Number of Mobile watchmen required to be posted would depend upon the length of track attended by manual methods or by tampers.

3. The mobile watchman would patrol such section/beat to look for prominent kinks, incipient buckles or tendency towards buckling, rail/ weld fracture, excessive gaps at SEJs and shearing/snapping of bolts.

4. Mobile watchman will be provided with all equipment, shall protect the track at site if any of the danger situations occurs and report the same to nearest Station Master/ JE/SSE/P.Way.

5. Mobile watchman posted on these sites would patrol the section.

6.0 Action by patrolman in case a kink is observed.

1. He shall immediately examine at least 100 sleepers ahead and in the rear of the kink for any floating condition of track. He should meticulously sound each and every sleeper, 100 sleepers on either side of the kink, to determine any floating condition.

2. The amount of rebound will be noted by dropping a Canne-a-boule on each end of the sleeper to determine the extent of void under the sleeper.

3. Should the amount of rebound reveal a floating condition, under which a buckle may be anticipated or the patrolman has detected actual buckling of track, he will take immediate steps to protect the affected portion by display of hand signals as per rules in force. After protecting the track, the patrolman will arrange to advise the Gangmate, JE/SSE/P.Way of his apprehension of a buckle/actual buckle.

7.0 Action by Track Maintainer-I (Gangmate)

1. The Gangmate on receipt of advice of a danger of buckle will proceed to the site quickly with all available men. On arrival at site, he will first ensure protection of affected portion.

2. He should then inspect the condition of track 100 m on either side of this suspected zone and commence heaping of surplus ballast, if available, on the shoulders and up to the rail head and keep on compacting the ballast with available tool.

3. No attempt should be made to slew or align the track or disturb the existing ballast section. The Gang Mate should continue to remain at site till the arrival of JE/SSE/P. Way.

4. The rail temperature will also be noted by one of these officials at the place of apprehended/actual buckle.

5. The rail facing the sun will be covered up to the level of rail head on the outside by ballast or leaves etc. to bring down the temperature of the rail.

8.0 Action When Danger is observed

8.1 Protection of line

1. When danger is detected on single line

Place a red flag in a prominent position to warn a train, which may approach from one direction. Then run in the opposite direction from which train is likely to come, with a danger signal (red flag) and place one detonator at 600 m and three detonators at 10 metres apart at 1200 m from the site of obstruction/ danger.

Return to the site of obstruction/ danger, and protect the other side with detonators similarly.

2. When danger is detected on double line

Place the red flag in prominent position on affected portion so as to warn an approaching train. Then run with a danger signal (red flag) and place the detonators as in sub-Para 8.1 (1.)

9.0 Responsibility of Engineering Officials in the Matter of Patrolling

1. Inspection of Patrol Books– JE/SSE/ P. Way must examine the patrol books, initial the entries each time he inspects and take corrective measures for irregularities noticed. The Assistant Divisional Engineer should examine the patrol books during his inspection.

2. Supply of Equipment to Patrolmen and Watchmen– JE/SSE/P. Way will be responsible for ensuring that each Patrolman is provided with the equipment specified. The Gang Mate will be responsible for seeing that the Patrolman and watchman possess the correct equipment specified.

3. The JE/SSE/P. Way will be responsible for instructing the patrolmen in their duties about the rules for the protection of the lines and in acquainting them with all vulnerable points on their beats. In addition to oral instructions, the JE/SSE/P.Way shall by practical demonstrations, drill the patrolmen in their detailed duties and responsibilities.

***

हमारा उद्देश्य / OUR OBJECTIVE

To upgrade maintenance technologies and methodologies and achieve improvements in productivity and performance of all railway assets and manpower which inter alia would cover reliability, availability for use, utilisation and efficiency.

सत्यमेव जयते

भारत सरकार – GOVERNMENT OF INDIA

रेल मंत्रालय – MINISTRY OF RAILWAYS

(केवल कार्यालय उपयोग हेतु / For Official use only)

(An ISO: 9001-2015 Certified Organization)

ग्रीष्म ऋतु की गश्त

HOT WEATHER PATROLLING

कैमटेक/सि/2020/एच.डब्ल्यू.पी./2.0

CAMTECH/C/2020/H.W.P./2.0

नवम्बर - 2020 / November – 2020

अअमासं RDSO Transforming Railways

Excellence In Maintenance

Indian Railways

Centre for Advanced Maintenance Technology

DISCLAIMER

The information contained in this pamphlet does not supersede any existing provisions laid down in RDSO & Railway Board instructions. This document is not statutory & instructions given in it are for the purpose of guidance only.

इस संदर्भ में यदि कोई विचार एवं सुझाव देना चाहते हों , तो कृपया dircivilcamtech@gmail.com पर ई-मेल करें।

If you have any suggestion & comments on contents of the pamphlet, please e-mail to: dircivilcamtech@gmail.com