Eastern Railway

No. ELS/6/Mail/Exp

Sealdah, dt – 03.11.2020

CCC/R/SDAH, CCC/R/DDJ
CCR/North, KOAA, DDJ & NH
All CLIs
Eastern Railway

Sub: Counselling to avoid rail burnt due to wheel slipping.

In connection with the incident of the train no. BOXN(LD)/TWS/SER, T/LD-59BOXN(LD)+1BV, Tonage-5157(T), hauled by Loco no. 28152/WAG-7/SRE., **rail burnt occurred over 52m length of rail In 10 places due to wheel slip** , enroute Ex-DK, while BOXN(LD) was negotiating up goods (reversible) line in NACC station limit over bridge no B-9 on 01.11.2020. After analysing the incident, the conclusion of the incident as under.

S.N.	Item	Report
1	Train No. /Loco No.	BOXN (LD)/TWS/SER, Loco no – 28152/WAG-7/SER
2	Line Report	As reported by LPG while the train passed MJT Adv/Str passed on 'Y' aspect, he observed that the next signal NACC Str was not visible from adequate distance due to obstructed by tree branches, resulted he controlled the train. When the signal aspect was visible, he resume traction and at that time wheel slipping took place. To avoid stalling LPG puts Q 51 in wedge condition though sand was not available in the sand box. Finally, rail burnt took place due to heavy wheel slipping.
3	Actual cause of detention	A joint note has been prepared by CLI/OP/SDAH & SSE/PWI/BGA and their observations – They found rail burnt in 10 places in between km no. 9/8X – 9/10X over B-9 bridge in NACC Stn limit. Dragging marks found about 150 mm x 50 mm x 2-3 mm. This occurred due to stalling of loco.
4	Action should be taken by LPM/LPG/LPS/ALP	LPG should follow action while taking charge of the locomotive- i) If no sand is available, should be relayed to TLC at the time of CTO. Depending upon the situation, train should be worked only when sand is made available. ii) Gross weight should be relayed to TLC. If gross weight is high and there is doubt of stalling, banking loco should immediately be demanded through TLC. iii) If wheel slipping/stalling tendency is felt, forcible traction by wedging Q51 must not be done at any cost. Step i&ii must be followed.

WHEEL SLIPPING

1. Wheel slipping occurs when tractive effort exceeds adhesive weight.
When Tractive effort is more than adhesive weight, difference in power between two TMs of same block accelerate the wheels which results into grinding action on the rail.

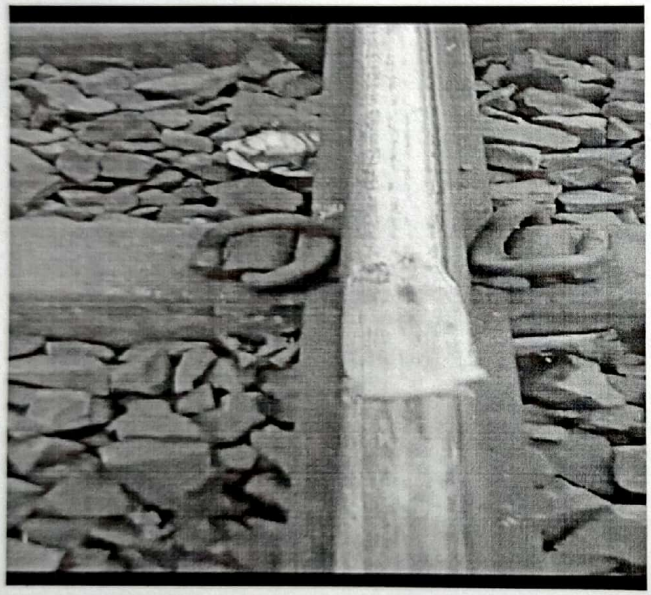
CAUSES OF WHEEL SLIP

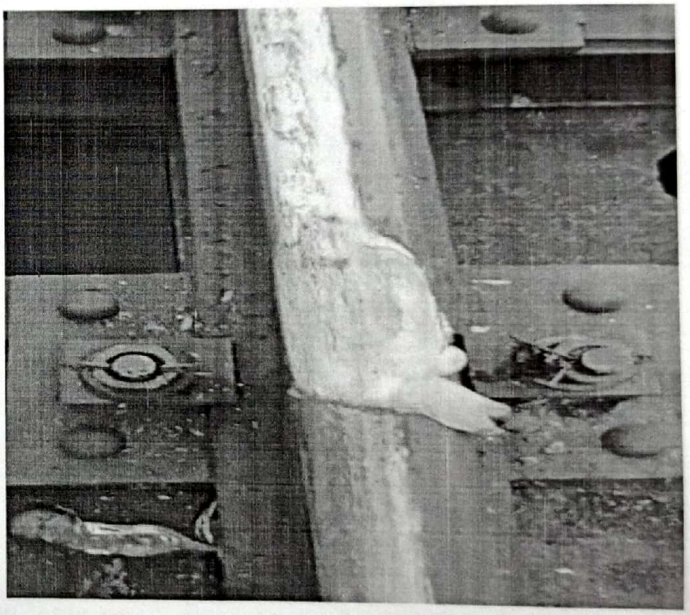
- Brake binding in train.
- Taking notch without releasing train brake.
- Poor knowledge on road learning.
- Not using sander during starting.
- Not using of 'ZQWC/BPQWC' during starting.
- Inclement weather can result in poor adhesion.
- UP Gradient section.
- Excess Tonnages.
- Defective Traction Motor/Line Contactor/Shunting Contactor.

TO PREVENT WHEEL SLIPPING

- Every LP should be fully conversant with the maximum permissible speeds, gradients & land mark, location of the signals on the section.
- When attacking an up-gradient, the LP will attain sufficient speed at the foot of the gradient & ensuring the maximum permissible speed for that section is not exceeded.
- 'ZQWC' or 'BPQWC' to be pressed during starting (for Conventional locomotive).
- For oily or wet rail 'PSA' to be used for manual sanding.
- In case of brake binding, train to be checked and rectify the same.
- In case where hauling power of locomotive is not adequate to carry the load of train, then should be relayed to TLC for arranging banking if required.
- Check availability of dry sand in sand boxes and ensure sanding equipment are in working condition during CTO.
- Do not continue notching forward forcibly while heavy wheel slipping was continuing, where relay Q51 wedged condition (possibility of rail burn).
- If wheel slip occurs in WAG-9 loco then operate throttle in WAG-9 loco; stop it by reducing throttle according to requirement. If wheel slip occurs in WAG-9 loco then operate throttle smoothly.
- Don't use BPCS while working the train with WAG-9 loco in undulating section.

RAIL BURN PICTURE





3.11.2020.

(Vikash Anand)
Sr.DEE/OP/SDAH