



दक्षिण पूर्व मध्य रेलवे, बिलासपुर प्रधान कार्यालय, संरक्षा विभाग

द्विमासिक संरक्षा बुलेटिन
जनवरी - फरवरी 2023

दुर्घटना के मामलों का अध्ययन

Case Study-1 (Dashing of Light Motor Trolley by Light Engine)	
दिनांक एवं समय	30.01.2023 at 16:20 Hrs
डिवीजन/स्टेशन	Nagpur/SEONI (SEY)-BHOMA (BHV)
ट्रेन न.	Diesel Light Engine and Light Motor Trolley
दुर्घटना का संक्षिप्त विवरण	<p>On Light Motor Trolley of Engineering Department occupied by SSE/P.Way/PUE and four Track maintainers working as Trolley man was moving Ex-SEY to BHV without taking any permission from SM/SEY or giving any information to him. The Light Motor Trolley got dashed with Diesel Light Engine between SEY-BHV at Km 1175/8C resulting in death of one Track maintainer at the spot, Serious injury to SSE/ P.Way and a Track Maintainer. Later, SSE/P.Way also expired after reaching to Hospital. The accident place is in 4.07 degree curve with sharp cutting with less visibility ahead. At the time of accident, Diesel Light Engine was negotiating this curve in the Right Hand side.</p>
दुर्घटना का कारण	<p>SSE (P. Way) who was then in-charge of Light Motor Trolley has not taken the required precautions for running of the Light Motor Trolley in the Block section. He remained dependent on Mobile phone only to take information of Trains mostly from SM/SEY but failed to follow the protection rule.</p>
जिम्मेदार कर्मचारी	<p>Primary: Sri R. S. Yadav, SSE/P.Way/PUE (Now Deceased) is responsible due to :</p> <ol style="list-style-type: none">He has not run with Block protection in the section where the clear visibility is restricted due to less than 800 meters (SR15.25.09 (e))He failed to obtain from the Station Master the

	<p>prescribed certificate which is obligatory that, where there is sharp curve or steep gradient. If no information has been given to Station Mastee then responsibility of the protection of the trolley and the men accompanying devolves on him as in-charge of the trolley. SR 15.26.01(b) & (c)</p> <p>c) He failed to remove the trolley clear of the line well in time and could not ensure safety while light engine approached the trolley from the opposite end (SR 15.26.03)</p> <p>d) He failed to stop or remove the trolley from the track where the visibility distance was less than 16 masts length and obey the given instructions as in SR15.26.04</p> <p>e) He has failed to follow the safe working. The responsibility devolved upon him as he was in control of working of the trolley (SR 15.22.07(a))</p> <p>Secondary: All four Track Maintainers who were working Motor Trolley. They did not follow the safety rules for working of Light Motor Trolley and the protection required when visibility is less. Their role was to provide protection to the trolley whenever required and move it safely, but they failed to do so.</p>
<p>Improvements/ corrective action required</p>	<ol style="list-style-type: none"> 1. Section where clear visibility is restricted to less than 800 meter, Light Motor Trolley shall run under block protection only. 2. Any SSE/P-Way moving Light Motor Trolley/ Motor Trolley in the Block section shall always give prior information to the Engineering control of the Division before moving the same and this shall be kept in record. 3. Push trolley inspection record shall be maintained in TMS for all sections including the section opened after Gauge conversion work.
<p>Case Study-2 (Derailment of Goods Train)</p>	
<p>दिनांक एवं समय</p>	<p>12.01.23, 13:22 hrs</p>
<p>डिवीजन/ स्टेशन</p>	<p>Nagpur</p>
<p>ट्रेन न.</p>	<p>Train no. Up N/KRDS</p>
<p>दुर्घटना का संक्षिप्त विवरण</p>	<p>Train no. Up N/KRDS loaded with coal started at 13:15 hrs from KAV line no.11 for KRDS siding. While departing from</p>

	KAV yard, 5 wagons 33 rd , 34 th , 35 th , 36 th and 37 th from loco got derailed at crossover point no. 91A at 13:19 hrs at Km 1124/16-22 between KAV and Junction Cabin.
दुर्घटना का कारण	Proper procedure as per IRPWM was not followed during manual deep screening work. This caused excessive aberration in track parameters i.e. versine and twist reading near point of drop, which caused derailment.
जिम्मेदार कर्मचारी	SSE/P.Way/Spl/TAR was held responsible for not following proper procedures as laid down in IRPWM manual regarding manual deep screening work sites.
Improvements/ corrective action required	<ol style="list-style-type: none"> 1. Before commencement of Manual Deep screening, the competent authority should issue a notice to Station Master and all concerned and obtain acknowledgement from them. At work site, it is responsibility of Engineering department (SSE/P.Way) to inform all concerned department and take all safety precautions. 2. The proper procedure laid down in IRPWM para no. 637 must be followed for manual deep screening work sites. 3. Wooden blocks of standard size should be inserted properly below rail at the crib locations. 4. No unscreened length should be left between screened lengths of the track at the same time. 5. It should be ensured that when ballast is being removed from any sleeper, there are at least four fully supported sleepers between it and the next sleeper worked upon. 6. Measurement and recording of track parameters should be done at worksite location after passage of every loaded train, and in view of safety of track, necessary precautions should be taken as per available guidelines.

Case Study-3 (Derailment of Goods Train)

दिनांक एवं समय	28.01.2023/ 13:50 hrs
डिवीजन/स्टेशन	Bilaspur/Saragaon Road
ट्रेन न.	00801 UP Parcel (AZA-KEB)
दुर्घटना का संक्षिप्त विवरण	On date 28.01.2023, Train no. 00801 arrived at Saragaon Road station at 12:00 hrs and after getting departure

	<p>signal, train was started at 13:52 hrs. While train was negotiating point no. 46, one coach (LVPH), NR 265144, 1st from engine got derailed by all wheels of rear trolley (HWH end) at 14:00 hrs. After derailment, train was on run and stopped after travelling 4 Km towards Bilaspur end.</p> <p>FIBA operated in the affected Coach No.- NR 225144 and troubleshooting was done by Guard and Loco Pilot at SGRD before departure from Station Yard.</p>
दुर्घटना का कारण	<p>Due to improper procedure adopted by LP and Guard for FIBA activation isolation. LP isolated the FP pressure from loco at 12:50 hrs. and again started the train at 13:46 hrs. During this time interval, Wheel slide protection of whole train stopped working and air suspension system of all coaches started discharging due to isolation of FP pressure supply from loco. While negotiating on point no. 46A, derailment occurred.</p>
जिम्मेदार कर्मचारी	<p>Loco Pilot, Assistant Loco Pilot and Train Manager of the train</p>
Improvements/ corrective action required	<ol style="list-style-type: none"> 1. Running staff especially working in coaching train should be trained about working of LHB train and its basic trouble shooting. Specially FIBA isolation upon activation and appropriate method for operation of the train thereafter. 2. TXR control should be cautious while trouble shooting over the phone. They must demand photo and videos from site and appreciate the condition in full before advising to the running staff. 3. All group LI's, CLI, TLC must be thoroughly trained with respect to FIBA activation and isolation. They in turn should train and counsel others down the line. 4. As far as possible, coaching crew and guard should be booked in coaching stocks irrespective of the fact that it is a non-passenger carrying train. 5. While examination of LHB train at C&W point, LHB (LVPH) coaches with twisted side buffer face plate should be detached as twist of side buffer affects safe train operation. 6. While placing LHB rake for pit-line examination, the rake should be placed with twin pipe connected to avoid damage to the air suspension (bellow).

Case Study-4 (Dashing of Trolley by passenger carrying train)

दिनांक एवं समय	21.01.2023, 15:23 hrs
डिवीजन/स्टेशन	Biaspur/SIVNI-CPH
ट्रेन न.	Train No. 08733 MEMU (KRBA-BSP local)
दुर्घटना का संक्षिप्त विवरण	Train No. 08733 MEMU (KRBA-BSP local) left Sivni at 15.20 hrs. While the train was negotiating 4 degree curve between Sivni and CPH, a push trolley on the track was noticed by crew of the train. Some engineering staff were trying to remove the trolley from the track. Observing this, LP of the train immediately applied emergency brake. Before the train could stop, it dashed with the trolley between km 66/15-13. The trolley entered inside the motor coach of the train, which was pulled out by the engineering staff. There was no damage to the engine and no casualty due to this incident.
दुर्घटना का कारण	Careless working of SSE/P-way/ KRBA and other engineering staff accompanying the trolley. Block section protection was not taken as per IRPWM para 837 during trolley movement from Sivni to CPH.
जिम्मेदार कर्मचारी	Primary: 1. SSE/P-way/KRBA; 2. JE/P-way/CPH; Secondary: 1. T/M (Sivni) 2. Trolley man/KRBA 3. Trolley man/KRBA 4. T/M-III/MWRN 5. Trolley man/KRBA

Case Study-5 (Derailment of Goods Train)

दिनांक एवं समय	04.02.2023 at 14:58 hrs
डिवीजन/स्टेशन	Nagpur/ Dongargarh Yard
ट्रेन न.	DN Long haul train (FOU/E + FOU/E)
दुर्घटना का संक्षिप्त विवरण	DN Long haul train (FOU/E + FOU/E) departed from DGG line no 6 to joint line. Just after departure, wagon no WCR 21161910281 BOSTHS M2 (6th from rear brake van) of 2nd part of long haul derailed at line no 6 at km no 928/68. Leading trolley, leading axle both wheel of wagon no WCR 21161910281 BOSTHSM2 derailed. UP and Down movement was not hampered.

दुर्घटना का कारण	Track defect i.e excessive twist & difference of versine beyond permissible limit (Twist is attributed to lifting and through packing operation which are executed at site).
जिम्मेदार कर्मचारी	SSE (P. Way/Cons)/RJN
Improvements/ corrective action required	<ol style="list-style-type: none"> 1. Before giving fitness, the track must be thoroughly checked by concerned SSE/JE/In charge of site and after recording track parameters and in consultation with AXEN/ADEN, track must be given fit. 2. As track was newly laid, so fitness of track must be given only after one round of machine tamping using DGS so that some consolidation can be achieved. 3. As track was newly laid, unevenness and changes in track parameters frequently occurred due to consolidation. So, the register must be maintained at site and after each passage of train, parameters should to be taken and necessary attention must be done. 4. Round the clock Packing team should be kept at site for the first few days to attend the track as and when required. 5. Practice of site protection using banner flag and deputing lookout man to inform about incoming train at previous stations shall be ensured. In any case if there is visible disturbance of track parameter, train shall not be allowed to pass. Efforts should be made to rectify track parameters. Only then trains shall be passed. 6. Site engineers shall keep constant and uniform supervision over the site.

Case Study-6 (Derailment of Locomotive during shunting)

दिनांक एवं समय	19.03.22 at 20:35 hrs
डिवीजन/स्टेशन	Raipur/ Raipur east yard
ट्रेन न.	Diesel Light Engine
लोको नंबर	13609/WDG-3A
दुर्घटना का संक्षिप्त विवरण	Electric light engine no. 37445/WAP7 was programmed to move from Line no.1 to Bay line -2 for stabling. The Station Master/R/ East instructed to Pointsman of said electric loco through Walkie-Talkie to start movement of the electric loco. At the same time the Diesel light engine no. 13609/WDG-3A was waiting at Bay Line-1 for further program. Due to misunderstanding, Pointsman of Diesel loco no. 13609 allowed the loco to move towards Urkura

	end through open DS point no. 56 due to which the Diesel loco got derailed at Point o. 56/DS which was in open condition.
दुर्घटना का कारण	The derailment occurred due to misunderstanding of instructions given by Station Master to Pointsman involved in shunting of Diesel light engine 13609/WDG3A and non-observance of route setting by Pointsman and Loco Pilot.
जिम्मेदार कर्मचारी	<p>Primary: Pointsman was held responsible for the said derailment due to his mis-understanding the instruction of Station Master/ Raipur East and not ensuring the setting of DS Point before movement of the Diesel Loco.</p> <p>Secondary: Loco Pilot was held responsible because he failed to observe and ensure the setting of said DS Point before the movement. He also started loco by only verbal instruction of Pointsman instead of observing hand signal by Pointsman. Pointsman was available with him in the loco cab.</p>

Case Study-7 (SPAD)

दिनांक एवं समय	31.03.23 at 22:41 hrs
डिवीजन/स्टेशन	Bilaspur/Gatora
ट्रेन न.	Train No.-N/MBPJ
दुर्घटना का संक्षिप्त विवरण	<p>On 31.03.2023, Up train No.-N/MBPJ was being admitted on GTW line no. 3 (Up main line) with Home Signal 'One Yellow', Inner Home Signal on approach 'One Yellow', Starter Signal was in manual mode which was in 'Danger aspect' and Advance Starter Signal was in auto mode which was in 'Double Yellow' aspect. The train was required to be stopped at the Starter Signal S-15.</p> <p>Crew of the Train failed to stop his train at the Starter Signal which was at ON position. Crew applied emergency brake due to which train stopped 33 meters after passing the Signal at ON position.</p>
दुर्घटना का कारण	Loco Pilot and Asst. Loco Pilot misinterpreted GTW Advance Starter Signal aspect 'Double Yellow' as Starter Signal and accordingly raised speed upto 28 kmph. On reaching nearer to starter signal,S-15, they noticed that Starter Signal was danger. Both applied emergency brake at 28

	Kmph speed, but it was too late to stop the train before Signal S-15.
जिम्मेदार कर्मचारी	Loco Pilot and Assistant Loco Pilot of the train
Improvements/ corrective action required	<ol style="list-style-type: none"> 1) After passing one yellow signal, Crew should proceed ahead at cautious speed keeping the previous signal in mind until he becomes fully confirm that signal ahead has been taken off for his train only. 2) After passing one yellow signal, Assistant loco pilot should repeat the aspect of previous signal to Loco Pilot until signal ahead clearly visible and keep his hand on RS valve so that he can immediately apply Emergency brake if required.

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