SOUTH CENTRAL RAILWAY

Safety.387/Fly Leaf/10/2025

Fly Leaf No. 10 / 2025

Attention..... All Concerned .....

IMPORTANT INSTRUCTIONS FOR OFFICERS / SENIOR SUPERVISORS IN ACCIDENTS.

(General guidelines and important points to be observed by Railway Officials)

The Officer and Senior Sub-ordinate of any department, who may happen to be present at the time of accident or who first arrives at the site of accident (irrespective of whether he is on duty or not) act accordingly to discharge duties with utmost best possible.

- On-board staff like, LP / ALP / Train Manager / TTE / GRP / RPF / Pantry Car / AC Coach Attendants, etc., shall pass on the information quickly to the nearest Station or to control about the accident. They shall render first-aid and take the help of other volunteers travelling by train or from the site of accident location to rescue the passengers.
- Senior–most Officer travelling by the train whether "ON" or "OFF" duty shall take charge as Officer in-charge (OIC) at site.
- Careful observation of clues and a comprehensive record thereof is vital for accident enquiry. In addition, a comprehensive record of track and rolling stock parameters and operating features is required for investigation of derailments.
- Shall take action to preserve the clues and evidence at the site of accident.
- Shall inspect the site of accident and locate the crucial evidence and clues that will help in determining the cause of accident.
- Should organize to post RPF constables or other Railway men available at the locations, where clues and evidence is available.
- Once the officials from safety department (Safety Counsellors, ADSO, DSO, Sr. DSO etc.,) arrive at the site, evidences and clues will be handed over to them.
- In all cases of accidents, Loco Pilot, Asst. Loco Pilot and Train Manager (Guard) will be subjected to breathalyser test. If they are tested positive, blood samples will also to be collected.
- In all those accidents in which prima facie cause appears to be human failure attributable to train passing staff, both breathalyser and blood tests of SM / Points man / Lever man / Cabin man / on duty staff be carried out immediately after the accident.
- Proforma for measurement of locomotive, wagon & carriage readings as per the amendment slip No.6 to Accident Manual, 2012 for recording the details. The joint measurement to be submitted by senior supervisors shall not be complete till all the measurement of rolling stock and track as per proforma have been recorded. Only completed joint measurement w.r.t. rolling stock and track shall become a document to be relied upon by the enquiry committee for drawing conclusion regarding cause of accident.
- No enquiry shall be completed before the complete measurement of rolling stock and track is available and made part of the enquiry report. Enquiry committee may get additional measurements done as per requirement of the derailment case.
- The photographs of the concerned sections of track and part of rolling stocks shall be taken and annexed in the enquiry report. ART personnel should be trained for identifying such relevant part of track and rolling stocks involve in the accident.
- Photography & videography of accident site shall be with great care & precision, similar to a crime scene photography / videography. ART personnel nominated for this shall be suitably

trained for the purpose. The photographs, videos should be self-explanatory such that relevant conclusion can be drawn.

- Site sketch of the derailment / accident location shall be prepared giving due care that all the relevant items are included along with the dimensions. A sample typical sketch of the accident site is incorporated vide Annexure–II to Para 508 of AM-2012 for the guidance. Instructions for the preparation of sketch of the site of accident has been given in "Accident Manual" shall be followed.

  Preservation of relevant clues, documents & photography / videography of the accident scene shall be done under supervision of Safety Officials of the Division.

- In case of a suspected sabotage, Tell-tale sign must be preserved and recorded.
- Observations of SM's Panel need to be recorded in case accident takes place in station area.
- Speed recorders and event loggers in the locomotive shall be freezed immediately post the accident. SM's control panel shall be freezed till the time positions of the knobs, switches, Points & Crossings etc. are jointly recorded. It is the responsibility of the concerned controlling officer / safety officials to ensure freezing of the above. Safety official shall take custody of all the relevant documents, broken parts etc.
- Safety Counsellor has to witness and endorse his signature on the joint note prepared by the Sr. Supervisors.

In addition to the above, following information to be collected in different cases as given below :

Loco Pilot passing Signal at Danger :

- The fact that a Loco Pilot has passed a signal at danger should be formally brought to his notice through a written memo by the station master of the concerned station.
- The position of the signal and route should be recorded by the SM and signed by the SM, Loco Pilot, Train Manager (Guard) and other witnesses, if available.
- The distance by which the train has passed the signal shall be recorded with respect to the length of engine + coach / wagons and / or telegraph / OHE posts, or by measuring the actual distance in metres.
- In the night time, the brightness of the signals should be noted. The weather condition such as foggy / tempestuous condition shall also be recorded.
- If the Loco Pilot is required to use glasses, it should be checked whether he was in possession of them and using them.
- Arrangement for testing brake power of the train shall be made by Officers / Sr. Subordinates at the nearest C&W examination point.
- Data logger output in relation to this incident should be obtained from S&T officials.
- Breathalyzer test will be done and blood samples will be collected from Loco pilot, Asst. loco pilot and Train Manager (Guard) in all cases of suspected SPAD. The Loco Pilot / ALP shall be sent for further medical examination.

Collision and Averted Collision :

- The aspect of the signal and position of point levers / knobs in the panel, and block instruments shall be checked and noted down immediately.
- The train signal register should be signed so as to indicate the last entry made and then seized.
- Note down the indication of track circuits, axle counters, slots, point detection etc., in the panel / cabin.
- Readings of all counters / provided for the route, block, axle counters, route cancellation, crank handle, emergency operation of points, emergency route release, etc.,

- Data logger print outs.
- Relay room should be immediately locked with a new and the key should kept in the safe custody of safety officer.
- The position of the two trains or train and obstruction shall be marked on the sleepers. The distance between them shall be measured in metres in case of Averted Collision. A rough sketch shall be drawn showing their position vis-a-vis signals, station platform, turnouts and other fixed land marks.
- Arrangement for testing brake power of the train / trains shall be made by the Officers / Sr. Subordinates at the nearest C&W examination point.

Derailments :

- There are two broad categories of derailments. ***Sudden derailment*** caused by wheel set jumping off the rails and another is the ***derailment by flange climbing***, caused by wheel mounting the rail in a relatively gradual manner.

  Sudden derailment caused due to wheel set jumping off the rails indicates that the derailing forces were high enough to suddenly force the wheel off the rail. These are typically caused by failure of vehicle / track components, obstruction on track, entanglement of hanging parts of rolling stock etc. These derailments are characterized by a short mark on rail table between Point of Mount and Point of Drop. In some case the Point of Mount may even be absent.

  Derailment by flange climbing indicates that the derailing forces were powerful enough to overcome the normal stabilizing forces, yet not sufficient to cause a sudden derailment. Such derailments are characterized by a longer mark on the rail table between Point of Mount and Point of Drop. Tack and rolling stock parameters and operating features influence the rail-wheel interaction forces and, hence, their complete record and a comprehensive analysis is required to arrive at the mechanism of derailment. Cause and consequence of derailment are required to be differentiated through this comprehensive analysis.

- Locating and examining the wheel mounting mark(s) at the initial point of derailment is very important for identifying the category of derailment. Precise measurements and critical & detailed examination of the wheel mounting marks should be made e.g., their length, strong or faint, broken or continuous, single or multiple etc. Photographs should be taken of such marks, not only on the rail, but also on the fastenings, sleepers and ballast.
- Derailment proneness increases with increased Lateral wheel force, reduced Vertical wheel load (Off-loading) and increased Positive Angularity of wheel. Derailment proneness becomes substantially higher in case of axle moving with a persistently positive angularity. Track and rolling stock parameters and operating features should be critically analysed for their contribution towards these causes. In case of derailments in curve, proper functioning of Bogie rotation system to ensure undue angularity needs close examination. Contribution of track twist, spring defects and twist in bogie frame / vehicle under frame to derailments caused by wheel off-loading needs to be analysed. In case of derailments at high speed, parameters affecting vehicle oscillation and damping thereof needs close analysis.
- While analysing the mechanism of derailment, relative contribution of track and rolling stock parameters to the rail-wheel interaction forces needs a comprehensive analysis. Reference should be made to the safety limits / Maintenance limits specified in IRPWM / IRCA Rules / Maintenance Manuals.
- In case of derailment of passenger trains causing injury to passengers, video recording of the concerned part of track and rolling stock shall be carried out by nominated ART personnel, trained for the purpose.
- Metallurgical and Chemical (M&C) report from RDSO must also be part of accident enquiry report in case accident is attributed to breakage of any component of track or rolling stock.

- If rail / weld failure is suspected to be cause of derailment, assessment of impact loading to which the rail / weld was subjected to prior to its failure becomes important. In such cases, WILD data for few preceding trains shall be analysed for critical alarms and any critical alarm shall be brought out and deliberately by enquiry committee.
- Point of mount and drop, if available, should be marked.
- The rail fittings and the point readings including the locking arrangement should be examined. It shall be seen whether there was any obstruction resulting in gap in the points. Marks on the rails and sleepers shall be observed.
- In cases of derailments during shunting operations, it should be noted as to who was actually supervising the shunting.
- The position of the shunt signals, point / trap indicators / any point levers concerned shall be recorded. Shunting order, if any, shall be seized.

Accident at Manned Level Crossing :

* Location, number and classification of the gate.
* Whether engineering or traffic ?
* Whether interlocked or non-interlocked ?
* Gate working instructions – validity.
* Visibility of signals, if the gate is interlocked.
* Condition of the road surface / approaches of the level crossing.
* Duty roster of the Gatemen.
* Competency Certificate of the Gateman on duty.
* Last census – date and Train Vehicle Units (TVUs).
* Length of the check rails and clearance.
* Availability of the safety equipment.
* Frequency of inspections and last inspection by Officers / Supervisors.
* Availability of whistle boards, road signs, speed breakers and stop boards etc.

Accident at Unmanned Level Crossing :

- Location number and classification of the level crossing.
- Curve or straight for railway track and road separately.
- Visibility for road users and the Loco Pilot separately.
- Condition of the road surface and approaches of the level crossing.
- Last census – date and Train Vehicle Units (TVUs).
- Length the check rails and clearance.
- Availability of whistle boards, road signs, speed breakers and stop boards etc.

Note : In all the accidents, Photographs from different angles shall be taken and submitted through e-mail within 24 hours of the accident to Principal Chief Safety Officer for onward transmission to Railway Board. Where necessary, videography may also be recorded.

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