8 November 2023
SAFETY WEBINAR
Objects left on the Line

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Key figures
SNCF Réseau in figures

28,000 km
of lines in operation
including 2,700 km of high-speed lines

2.85 billion €
devoted to renewing tracks

732 km
of tracks renewed every year

3.25 billion €
invested in development projects for the national network

15,000 trains every day

5 million
passengers every day

250,000 tonnes
of freight transported every day

3 million
tonnes of rails, ballast, and sleepers were removed during work on the network
50% were collected to be reused, recovered or recycled

49 customers
including railway companies for passengers, freight and transport operators on the French railway network (intermodal transport, ports)

3,000 stations and halts

20,000 train paths delivered every day
Events related to objects left on the lines
COLLISION OCCURRENCES
3 occurrences since 2017

➢ *Rail push trolley*
  The trolley was stored against the wall inside a tunnel and not secured. During opening operations, the trolley moved because of the air blast induced by the train displacement inside the tunnel. Damages to a coach of the train.

➢ *Wedges for trolley track positioning*
  Wedges used for trolley track positioning and track removal has been left close to the rails. Nothing went wrong during opening operations but when the second train passed by running high-speed operations one of the wedges has been “sucked” by the air displacement. Emergency stop due to pneumatic damages to braking system of the train. Damages to a coach of the train, damages to rails.

➢ *Carbon scraping tool*
  After carbon scraping operations the tool has been forgotten on the rails. The tool has been hit by the first running train the day after. Damages to the train, to rail and to signaling wiring.
INVESTIGATIONS PROCESS
Dedicated meetings

➢ Day + 1
Following every major event, top management of the units involved are requested to present their analysis of the event to the Chief Safety Officer.
The goal is to:
• share first causes identified
• set, if necessary, precautionary measures
• launch additional analysis (technical expertise, organizational and human factor analysis, etc.)
The goal IS NOT to look for responsibilities.

➢ Day + 30
Following additional analysis, the goal is to:
• share measures taken locally to prevent new occurrence of the event
• decide if such measures are valuable to the entire company’s operating perimeter
INVESTIGATIONS PROCESS
Human and Organizational Factors

Analysis of Human and Organizational Factors
Based on an analysis template focusing on:
- Operational context key factors
- Operational tasks
- Management
- Company strategic management

Notably using a non-technical skills analysis grid
LEARNING FROM EXPERIENCE

First event

➢ Actions taken
  • Raising awareness of aerodynamic effects of a running train
  • Every single object left close to the lines, specially in tunnels, must be properly secured

Any new tunnel or underground structure falling in the categories described in the specification referenced in Appendix T, Index [14], has to provide that maximum pressure variation, caused by the passage of a train running at the maximum allowed speed in the tunnel, do not exceed 10 kPa during the time taken for the train to pass through the tunnel.
LEARNING FROM EXPERIENCE

Second event

➢ Analysis

• The trolley has been bought without the dedicated wedges
• Staff used old ones that are lighter, more subject to lift up because of trains aerodynamical effects and have no yellow painting (following less visible by night operations)
• Didn’t fit in the dedicated storage area

Wedges used the day of the event

“Flying” wedge

Damages to the pneumatic system
LEARNING FROM EXPERIENCE

Second event

➢ Actions taken

• Use dedicated accessories for equipment
• By and use dedicated wedges and running belt to ease operations
• Have paintings allowing high visibility by night
• Use dedicated storage area
• Dedicated communication to staff as a reminder – safety alert
LEARNING FROM EXPERIENCE

Third event

➢ Analysis
  • By night operations at the end of work staff has forgotten the carbon scraping tool on a rail
  • There was no room available on the push trolley and staff decided to come back to pick it up later
  • Task have been interrupted and they forgot the tool

Pieces of the carbon scraping tool after being struck
LEARNING FROM EXPERIENCE

Third event

Actions taken
• Use of magnetic boards sticked on vehicles with magnetic stickers as a reminder of what tools are inside and outside the vehicle
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THANK YOU FOR YOUR PARTICIPATION!