



Safety recommendation no. 114

Date of the publication	03.04.2017
Number of the final report	2015100201
Safety deficit	<p>On Friday 2 October 2015 at 08:28 the empty goods train TRAVYS 8008, made up of control car BDt no. 53 and engine Be 4/4 no. 2, ran away a little after the station at Ste- Croix, on a line with a gradient of up to 44 ‰, and derailed on open track in a left-hand curve between the stations at Trois-Villes and Six-Fontaines. The driver jumped from the train when it was travelling at a speed of 30 to 40 km/h. He suffered contusions. The control car, at the head of the train, landed on the rails after ripping off two contact line masts, and came to a stop below the track about 150 m after derailing. The engine derailed and became embedded in a contact line mast. Train 8008 ran away because, during the two emergency stops, the level of automatic braking acting on the train had diminished, following various incidents of improper handling, so that the brake effort necessary to render the train composition immobile on a gradient of 40 ‰ was no longer sufficient. Vehicles Be 4/4 no. 1 and no. 2, as well as control cars, which were placed into service in the late 1970s, have particular technical characteristics concerning the automatic brake and the door closure warning system. Regarding the automatic brake, action of the fail-safe or the automatic train stop system causes drainage of the brake pipe and simultaneously of the supply line. Regarding monitoring systems, the door closure warning system (monitoring function) is grafted onto the circuits of the fail-safe (safety function). The solutions adopted on these vehicles differ from those normally realised on other vehicles of that era. Should these devices fail, lack of knowledge of these peculiarities on the part of driving staff may create risk situations.</p> <p>Personality requirements are part of the admission examinations for category B or B100 engineers. Thus, as this inquiry has shown, an engineer can be declared fit to drive at the admission exams and declared unfit later on, having had a further personality examination. Furthermore, forecasts made when assessing personality include a level of uncertainty. Inadequacy in the personality requirements represents a risk of latent inappropriate behaviour on the part of the engineer.</p>
Safety recommendation	The STSB recommends that the FOT study the possibility of refining the current personality requirements for the admission of locomotive engineers, and to integrate these requirements into the current psychological assessment.
Addressees	Bundesamt für Verkehr
Stage of the implementation	Implemented. The FOT has requested a position statement from the head of the psychological service. Conclusion: it is possible for a person's aptitude to change over the course of his/her life. Thus, the FOT considers that there are no elements that necessitate a

fine-tuning of the personality requirements for the admission of drivers of motorised vehicles. This safety recommendation has been implemented. No modification will be made to the FOT Directive 'Examens d'Aptitude Psychologique' (Psychological Ability Tests, in French).

**Investigation report concerning
the safety recommendation**

Rapport final
