



## Safety recommendation no. 137

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| <b>Date of the publication</b>     | 18.12.2018  |
| <b>Number of the final report</b>  | 2017071301  |
| <b>Safety deficit</b>              | <p>On 13 July 2017 at 04:10 hours a marshalling movement for the construction service, consisting of one locomotive and three laden wagons, was travelling on the downhill section from Samstager station to a track construction site. On the construction site, a road-rail excavator was waiting on the line in service to distribute the material after unloading. The marshalling movement could not be brought to a halt in time, collided with the road-rail excavator and pushed it more than 150 m downhill; the infrastructure was badly damaged. The foreman shunter, an engine driver travelling on a wagon, and the excavator operator jumped from the vehicles whilst they were still in motion. In the process, one person was injured. The engine driver remained in the locomotive until the vehicles came to a halt before Grünfeld station.</p> <p>The collision between a marshalling movement for the construction service and a road-rail excavator on 13 July 2017 on the steep downhill gradient of 50‰ near Samstager is attributable to the fact that not all brakes were functional.</p> <p>The following factors contributed to the accident:</p> <ul style="list-style-type: none"><li>- The design of the retrofitted parking brake impeded the functioning of the airbrake.</li><li>- The regulations currently in force concerning the shunting braking test, which did not support prior identification of the defective brakes.</li></ul> <p>No regulations exist for marshalling movements on a closed track on downhill gradients which take into consideration the brakes of all vehicles and the braking action of the entire train. It is possible for marshalling movements to be made at speeds higher than is possible for trains; in addition, the functional testing of brakes during marshalling movements is less comprehensive than in the case of trains.</p> |
| <b>Safety recommendation</b>       | The FOT should examine whether the regulations which apply to marshalling movements on closed tracks on downhill gradients are adequate and, if necessary, issue supplementary regulations.   |
| <b>Addressees</b>                  | Bundesamt für Verkehr   |
| <b>Stage of the implementation</b> | Implemented. In the context of the further development of FDV A2020, for marshalling movements on closed tracks according to FDV R300.4, para. 5, the same brake regulations were provided on the track as for marshalling movements on the track according to FDV R300.4, para. 4. This means that as soon as a marshalling movement leaves the station or area with cab signalling, the same brake testing and brake regulations as for trains are applicable. Main brake tests and auxiliary brake tests as well as brake calculations are therefore required.   |

**Investigation report concerning  
the safety recommendation**

