**HU-6132**

**2019-1330-5 Szerencs (Railway incident / Signal passed at danger)**

### Overview of the accident

On 28 November 2019, the freight train № 48403-2 composed at Miskolc-Rendező station and heading to Nyírábrány was received on Track IV, Szerencs station, which is accessible through switches in diverging direction, where it should have waited for some time. However, the freight train entered the track at a speed of 54 km/h and could not stop there, and overran the exit signal V4 without authorisation.

The IC found that the main line of the airbrake was not open between the first and the second wagons of the train therefore the brake did not work in 42 wagons of the train.

The IC attributes the cause of the occurrence to an incorrect braking test performed by the wagon examiner and the locomotive driver; in addition, the locomotive driver’s failing to perform a running braking test after departure also hindered the detection of the error.

# CONCLUSIONS

## Direct causes

The factor which had direct effect on the occurrence was as follows:

1. only the locomotive and the leading wagon were connected into the braking circle therefore the braking effect of the train was insufficient.

## Indirect causes

Those findings relating to competences, procedures and maintenance which are related to the factors enumerated above:

1. the wagon examiner responsible for the braking test did not carry it out in line with the requirements therefore he did not realise that only 1 of the 43 wagons were involved in the braking;
2. the locomotive driver did not realise that recharging of the brake system of the train took place within a fraction of the usual time both after connection of the locomotive and during the braking test, and he did not suspect a gross deficiency of the brake system;
3. the locomotive driver failed to carry out a running brake test after departure therefore he did not realise the insufficient braking effect;
4. when realising that the braking effect was insufficient, the locomotive driver did not increase braking into emergency braking, thus he did not even utilise the lower braking effect to the full.

## Root causes

Causes that are distant in time and space from one another but which are related to system operation within the regulatory environment and in the safety management system:

1. the IC found no root causes.

## Other risk factors

The IC found no other factors.

## Proven procedures, good practices

It mitigated the consequences of the occurrence, i.e. helped avoid a more serious outcome and resolved the situation, so it proved to be a good practice that:

1. owing to the track system of Szerencs station, the train ran onto a dead-end track, i.e. did not move towards the main line.
2. the chief traffic manager realised the emergency and manually closed the barrier № SR1 manually as well (it had been closed due to departure of the train № 5258).

## Lessons learnt

Braking test is a type of inspection and examination of the braking systems of trains (to be carried out both before start or during running) which serves detection of such malfunctions of equipment which may endanger transport safety.

Both the locomotive driver and the wagon examiner should be aware that the braking test must not be done superficially or without due care. Both usual and unusual signs must be listened to.

When a wagon examiner is aware that the train to be subjected to a braking test includes wagons of which the brake systems may move slower due to earlier cargo (e.g. salt), then he should carry out the steps of the braking test even more carefully. He should check not only for visible but also for audible signs. In the case that the application or release of the brake is not accompanied by mechanical noises, he should take notice of it.

A locomotive driver should be aware that if the application or release of the brake takes much less time than usual, he must inform the wagon examiner that something is wrong.

A running brake test, to be carried out at a relatively slow speed, serves to finally find out whether the braking effect of the train is sufficient. Omission of that test may lead to similar occurrences or even to accidents.

In summary, the personnel needs to be aware that the braking test must be carried out in line with the rules specified in the Braking Instruction E.2 and, in addition to those rules, they should also check for unusual phenomena, because that may help them detect malfunctions endangering transport safety and prevent accidents.