EUROPEAN UNION AGENCY FOR RAILWAYS

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Report

JNS normal procedure on wagon braking systems

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Document History

Version	*Date*	*Comments*
0.1	17/10/2019	First draft
1.0	19/11/2019	First version to be shared with Task Force
1.1	10/12/2019	Final version, incl. Task Force comments

Contents

1. Introduction

1.1. Background to the assignment

On May 27, 2016, a freight train carrying twenty freight wagons had a fixed brake near Breda (NL). Research showed that due to the fixed/sliding brake in one freight wagon the temperature of the wheels and brake blocks was such that all brake blocks of this freight wagon were burned and the tread of all 8 wheels of the freight wagon were deformed.

This incident was reported to ERA by the NIB NL in February 2017.

On November 2017, ERA received a letter from NIB NL referring to the incident above in which they explained that they could not clearly attribute the cause of this sliding/fixed brake to human mistake. In any case, NIB NL considered that human mistake should not have such a big effect, taking into account that within a short period of time, the temperature rose so fast that the tread of the wheels were deformed and the freight wagon can derail.

ERA considered the arguments provided by NIB NL and organised this Joint Network Secretariat task force (TF).

1.2. Contents of the report

This report summarises the analysis carried out in the Joint Network Secretariat – Normal Procedure (JNS NP) 'wagon braking systems' TF.

As far as the content of the report is concerned, it details the composition of the JNS and focuses on the topics dealt with during the JNS meetings. It lists the conclusions reached when discussing these topics and also the positions of the task force representatives on the most important ones.

2. Workgroups

2.1. Composition of the TF

ERA sent invitation to participate to this JNS – wagon braking systems TF to the registered members of the JNS. Based on this invitation, ERA received nominations from the interested stakeholders.

2.2. JNS TF meetings participation

Two meetings were held in 30.05.2018 and 03.04.2019.

The first meeting was attended by representatives of ERA, the Dutch Human Environment and Transport Inspectorate – ILT (NIB NL), NSA FR, UNIFE, EIM, CER aisbl, RailPro, UIP, Lineas, Total Care Wagon Management TCWM NL.

The second meeting was attended by representatives of ERA, the Dutch Human Environment and Transport Inspectorate – ILT (NIB NL), NSA FR, NSA LU, UNIFE, UIP, CER.

3. Working methods

Extranet workspace of the project was established at:

https://extranet.era.europa.eu/safety/JNS/SitePages/Home.aspx

This workspace gathers all documents of the project and is accessible to task force members and their deputies.

4. Main aspects covered

4.1. Analysis of NIB NL incident and similar incidents

The task force struggled from the very beginning with both the lack of similar occurrences to analyse and a deep knowledge of the known occurrences. The group agreed to send to the members of the Task Force a excel questionnaire to identify occurrences similar to the one reported by NIB NL.

The questionnaire was replied by the task force members and thoroughly analysed during the second meeting. Information was provided from a total of 7 sources, including ERA. All available information was discussed.

The TF members considered that there is not enough information at this moment to find out the root causes of any case. Analysis of the data available showed a big multiplicity of causes:

- strange elements in the system (oil, etc.);
- wrong adjustment of calliper/slack adjuster/brake block, during maintenance or retrofitting processes;
- bad quality of brake blocks;
- human factors: brake test not properly done, handbrake left applied, etc.;
- temporary malfunction of the mechanical / pneumatic part which cannot be reproduced during incident investigation.

4.2. Merging the wagon braking systems TF with the broken wheel TF

The TF analysed the possibility of being merged with the “Broken Wheels” TF. After analysis by members of both Task Forces, the conclusion was negative for the following reasons:

– Lack of relationship between both;

– Lack of information available in ‘braking systems’;

– ‘Broken wheels’ are currently working on the final delivery, to be finished in November 2019.

5. Conclusions

The following conclusions and next steps were formulated by the Task Force:

- The TF members are aware of the fact, that there are many different factors , which could lead to a blocked brake;
- The TF members consider that there is not enough information at this moment to find out the root causes of reported incidents involving blocked brakes. Investigation is ongoing for most cases. In others, there is no possibility to have enough information to find the root causes;
- The TF therefore proposes to close this task force until further information is available.

Annex 1 Definitions and abbreviations

Table 1: Definitions

Definition	*Description*
FR	France
LU	Luxemburg
NL	The Netherlands

Table 2: Abbreviations

Abbreviation	*Description*
CER	Community of European Railway and Infrastructure Companies
EIM	European Rail Infrastructure Managers
ERA	European Union Agency for Railways
NIB	National Investigation Body
NSA	National Safety Authority
UIP	International Union of Wagon Keepers
UNIFE	Association of the European Rail Industry
TF	Task Force