



# *National Agency for the Safety of Railways and Road and Motorway Infrastructure*

**RAILWAY COMPANIES with  
safety certificate for freight  
service**

**PARTIES RESPONSIBLE FOR  
MAINTENANCE of freight wagons**

**HOLDERS of freight wagons**

**INFRASTRUCTURE MANAGERS**

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**ALL RAILWAY COMPANIES  
OPERATING THE ISOLATED  
NETWORKS**

**Sent exclusively by certified e-mail address (PEC)**

**Subject:** Accidents and incidents to freight wagons equipped with brake blocks called “LL”. Outcomes of the examination in the European context (urgent procedure of the ERA JNS) and consequent introduction of short-term risk control measures.



- References:
- [1] Safety alert regarding problems occurring to the blocks of composite brakes of the "LL" type, ANSFISA protocol no. 0002103 of 09/02/2021;
  - [2] Emergency preventive measures following repeated accidents and incidents to freight wagons equipped with brake blocks in composite material of the "LL" type, ANSFISA protocol no. 0017573 of 06/08/2021;
  - [3] JNS urgent procedure on "Braking wagon system" concerning flames on organic composite Brake Blocks (LL) IB116\*, protocol ANSFISA n. 024496 del 29/10/2021.
  - [4] Accidents and incidents to freight wagons equipped with brake blocks called "LL" in organic composite material (IB116\*). Adoption of emergency preventive measures referred to in Article 7, paragraph 3, letter c) of Legislative Decree 50/2019 (Article 8, paragraph 3, letter c) EU Directive 798/16), ANSFISA protocol no. 0024676 of 02/11/2021
- Annexes:
- [A] Outcomes of the urgent procedure of the JNS part 1 "Principles and organisation"
  - [B] Outcomes of the urgent procedure of the JNS part 2 "Action plan containing short-term risk control measures"
  - [C] Outcomes of the urgent procedure of the JNS part 3 "Detailed information on the work of the JNS task force"
  - [D] Courtesy translation of the short-term control measures for risk control
  - [E] Information template required for overheating cases of the "LL" blocks

Considering the issue by this Agency of the safety alert of 9 February 2021 referred to in reference [1], related to the overheating of the composite material "LL" brake blocks in use of freight wagon vehicles;

given the recurrence of accidents and incidents attributable to the same problem, even after the issue of the safety alert referred to in reference [1];

taking into account the potential gravity of the consequences of the events which, in some cases, involved trains carrying dangerous goods;

given the Safety Alerts issued by the Dutch national railway safety authority, in November 2017, and by the Swedish one, in October 2021;

considering the issue - by this Agency, in compliance with the provisions of Article 7, paragraph 3, letter c), of Legislative Decree n. 50/2019 - of emergency preventive measures following the recurrence of accidents and incidents to freight wagons equipped with "LL" type composite brake blocks, pending the identification of shared measures at European level (references [2] and [4]);



given that, in the event of incidents or accidents, each Railway Entity can notify the ERA's JNS (Joint Network Secretariat) of the request for an urgent or normal procedure;

given the rules of the JNS, which distinguish between an urgent and a normal procedure, and according to which:

- the urgent procedure aims to develop short-term harmonised risk control measures at EU level, based on the evidence gathered;
- the normal procedure aims to develop harmonized medium and long-term measures at EU level, also based on the analyses carried out under the urgent procedure, to definitively solve the problem in an efficient and sustainable way;

considering that, at the specific request of the undersigned Agency (note in reference [3]), the JNS has launched an urgent procedure relating to the problem in question, with the aim of analysing the recorded accidents and defining short-term risk control measures, to replace the measures adopted in Italy;

considering that, in the context of the JNS, in order to analyse the problem in question, a task force was set up chaired by the ERA and composed of European experts in the sector coming, as well as from the undersigned Agency, from other NSAs (National Authorities for Safety), by NIB (Investigative Organisms), by the GRB (grouping of European associations made up of companies responsible for the design, construction, operation and maintenance of the railway system: UIC, CER, UIP, UIRR and others), appointed on the basis of the skills required for the analysis and resolution of the problem;

considering that, in the context of the JNS, accidents and incidents concerning "LL" type brake blocks and the problems connected both to the risk of fire and to damage to the wheels that could, in some cases, also lead to the derailment of the railway train;

considering that the analyses conducted within the JNS have shown, also through studies, insights and risk analysis (FMECA: analysis of the methods, effects and criticality of the failures), that the risk of fire for vehicles equipped with "LL" brake blocks is not higher than the one of vehicles equipped with cast iron brake blocks and that the negative effects of occasional events of deformation of the rolling surface of the wheels due to locking of the brakes can be further reduced by applying the short-term risk control measures set out in Annex [B], which take into account best practices and the most common measures and technologies used in EU countries;

given the results of the aforementioned urgent procedure of the JNS which identified, as a solution to the problem in question, short-term risk control measures relating to the operation and maintenance of the wagons (annexes [A], [B], [C] ), to be adopted to replace those applied in Italy;

considering that the JNS has also recognised the need to further investigate the phenomenon as part of a subsequent Normal Procedure of the same JNS, immediately launched,



the adoption of the provisions of Annex [B] and of all the short-term risk control measures indicated therein is available. This adoption replaces, at the same time, the emergency preventive measures defined by this Agency, referred to in references [2] and [4].

The Operators concerned therefore remain responsible for adopting the provisions of Annex [B] in compliance with the procedures of their Safety Management Systems and must guarantee the effectiveness of the measures themselves also through technological, regulatory, organisational and training interventions of the staff. In fulfilling the provisions of Annex [B], particular attention and cooperation between the Railway Operators involved is also required.

Subject to the aforesaid and in continuity with what was previously indicated:

1. Each railway company must:
  - a. effectively monitor, pursuant to Reg. 1078/2012, the execution of brake tests on trains with freight wagons equipped with "LL" brake blocks in order to ensure their effectiveness, keeping appropriate documentation for subsequent checks;
  - b. effectively monitor the behaviour of its agents with regard to the correct use of the brake and compliance with speed limits.
2. The Infrastructure Managers affected by freight traffic must:
  - a. implement the program for lowering the alarm thresholds of the RTB/RTF technological systems within the strictly necessary technical times, pending the adoption of measure 2.2.1 referred to in Annex [B], starting, on an experimental basis, from an alarm value of 280°C;
  - b. intensify the presence of trains, in the sections not yet equipped with equipment complying with the provisions of the previous point a) and affected by freight traffic;
  - c. submit a program for the adaptation, integration and replacement of RTB/RTF technological systems, which:
    - i. comply with the recommendations issued by this Agency on the matter;
    - ii. allow, when fully operational, that these devices are equipped with a double alarm threshold, in accordance with measure 2.2.1 reported in Annex [B];
    - iii. discriminate the alarm values according to the type of train intercepted;
    - iv. allow the reading of temperatures in the most appropriate point of the wheels, based on the type of vehicle.

The Addressees must notify this Agency of all events attributable to the issues in question, in cases where at least defects have been found on the rolling surface of the wheels or principles of fire, in application of the



provisions of Art. 5.4 point 14) of the "Attributions relating to safety of railway traffic" issued with the ANSF Decree 4/2012. The first information report must be sent by also attaching the template in annex [E]. To this end, the holders and the SRMs, in compliance with art. 5, paragraph 3 of the Implementing Regulation (EU) no. 779/2019, must promptly provide the railway companies, in traceable format, with the characteristic data of the brake blocks (type, model, year and lot of production, manufacturer, date of installation on the vehicle), also using the databases currently available.

The addressed Railway Operators, also through trade associations, no later than 90 days from receipt of this letter, must provide evidence of the implementation of the measures referred to in this note and the verification of the effectiveness of the measures implemented.

Failure to respond within the terms indicated constitutes a non-compliance, which is liable to the administrative sanction provided for by Legislative Decree No. 50/2019.



THE GENERAL MANAGER  
*Ing. Pier Luigi Giovanni Navone*



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