SLOVENSKI STANDARD
SIST EN 14198:2017+A1:2019/oprA2:2020

01-marec-2020

Železniške naprave - Zavore - Zahteve, ki jih morajo izpolnjevati zavorni sistemi vlakov, vlečeni z lokomotivami - Dopolnilo A2

Railway applications - Braking - Requirements for the brake system of trains hauled by locomotives

Bahnanwendungen - Bremsen - Anforderungen an die Bremsausrüstung lokbespannter Züge

Applications ferroviaires - Freinage - Exigences concernant le système de freinage des trains tractés par locomotive

Ta slovenski standard je istoveten z: **EN 14198:2016+A1:2018/prA2**

ICS:

45.040	Materiali in deli za železniško tehniko	Materials and components for railway engineering
45.060.01	Železniška vozila na splošno	Railway rolling stock in general

SIST EN 14198:2017+A1:2019/oprA2:2020 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
EN 14198:2016+A1:2018

prA2

January 2020

ICS 45.040; 45.060.01

English Version

Railway applications - Braking - Requirements for the brake system of trains hauled by locomotives

Applications ferroviaires - Freinage - Exigences concernant le système de freinage des trains tractés par locomotive

Bahnanwendungen - Bremsen - Anforderungen an die Bremsausrüstung lokbespannter Züge

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 256.

This draft amendment A2, if approved, will modify the European Standard EN 14198:2016+A1:2018. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 14198:2016+A1:2018/prA2:2020) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 14198:2016+A1:2018.

1 Modification to 5.4.4.7.1, General concept

After Table 2 replace the sentence

"The device for venting the brake pipe shall be capable of venting a 400 l reservoir connected to the brake pipe interface in accordance with E.4."

by

"The emergency valve shall be capable of venting a 400 l reservoir connected to the brake pipe interface in accordance with E.4.

The integration of the emergency valves at vehicle/train level shall be assessed in accordance with the Annex F."

2 Modification to Table A.1 — Brake positions, timings and brake performances

For row "S-wagon S2 Vaiable load relay" replace

"100 – 125 up to 65 of the full admissible load (limit for load compensation)[e]"

by

"100 – 125 up to 65 % of the full admissible load (limit for load compensation)[e]"

For rows "Passenger coach" in brake mode "P" and "R" replace

"Min = 105 (related to maximum braking load)"

by

"Min = 105 (related to minimum load)"

and replace

"Min = 126 (related to maximum braking load)"

by

"Min = 126 (for any load between minimum load and maximum braking load)"

For footnote "e" replace

"[e] The maximum mean retardation force admitted (for running speed at 100 km/h) is 16,5 kN per axle. This value comes from the maximum braking energy input permitted on a clasp braked wheel with a nominal new diameter in the range of [920 mm; 1 000 mm] during braking. The braked weight shall be limited to to 14,5 t per wheelset. Usually a unit, with v_{max} = 100 km/h and fitted with a variable relay is designed to obtain λ = 100 % up to 14,5 t per wheelset (limit for load compensation), and by consequence 65 % for 22,5 t per wheelset."

by

"[e] The maximum mean retardation force admitted (for running speed at 100 km/h) is 16,5 kN per axle. This value comes from the maximum braking energy input permitted on a clasp braked wheel with a nominal new diameter in the range of [920 mm; 1 000 mm] during braking. The braked weight shall be limited to 15,25 t per wheelset. Usually a unit, with v_{max} = 100 km/h and fitted with a variable relay is designed to obtain λ = 100 % up to 14,5 t per wheelset (limit for load compensation), and by consequence 65 % for 22,5 t per wheelset. If the maximum load per wheelset is lower than 22,5 t the characteristic of the variable relay valve shall be adopted to obtain λ = 100 % at not more than (65 + 5) % of the maximum load per wheelset.

From the braking point of view, it is permitted to use an S2 wagon for a maximum running speed of 120 km/h under the following condition:

— if the maximum load for clasp braked wheels with a nominal new diameter in the range of [920 mm; 1 000 mm] is higher than 20 t per wheelset and if it is required $\lambda \geq 100\ \%$ with mass/wheelset > 15,25 t then it is necessary to consider another kind of brake (for example: disc brake)."

3 Creation of Annex F

Add a new Annex F as follows:

"

Annex F
(normative)

Venting performance of Emergency Valves

F.1. Purpose

To ensure the required emergency brake stopping distance rolling stock shall comply with the foreseen equivalent brake build up times.

Annex F defines requirements and test method on the rolling stock to ensure required integration and sufficient venting performance of the emergency valves.

Annex F applies to all emergency valves that can be actioned by the driver or by other equipment as safety equipment and train protection systems. It doesn't apply to passenger alarm systems.

F.2. General rules

This venting capacity is assessed with the measurement of the time between emergency demand (action on emergency controller or on emergency push button by the driver, or electric signal from a safety equipment, etc.) and a 1,5 bar pressure drop in a 400 l reservoir mounted on brake pipe at the extremity of the vehicle (see F.3 for test procedure).

For each type of emergency brake demand, the pressure drop of 1,5 bar achived by the corresponding emergency brake valve shall not exceed 3,9 s.

Locomotives and driving trailers shall be tested alone.

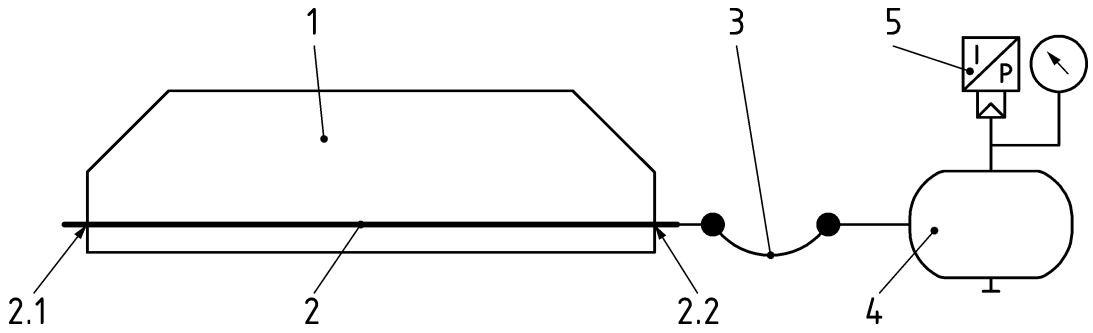
If a type of emergency brake demand is realized by opening several valves, then the venting performance shall be assessed in the less favourable configuration allowed in operation (for example: a type of emergency brake demand is done by opening two valves and the train is allowed to operate with one of these two valves isolated, then the venting performance shall be assessed with only one valve opening).

F.3. Test procedure

Test conditions:

— The leakage compensation by the Driver's Brake Valve shall be as in running situation with an emergency brake application.

— Venting valves which can stay closed during an emergency brake application have to be blocked (e.g. passenger alarm valves, etc.) to avoid unwanted venting during the tests.



Key

1	vehicle
2	brake pipe
2.1, 2.2	brake pipe connection at each end of the vehicle
3	flexible hose
4	400 l reservoir
5	devices to measure the pressure in the reservoir

Device 5 shall not be mounted at the inlet of the reservoir.

Figure F.1 — Configuration for emergency valves' test

A 400 l reservoir (Figure F.1, Position 4) is mounted on the brake pipe at one end of the vehicle. This reservoir is connected to brake pipe through a flexible hose with an internal diameter of 32 mm or 1 ¼ inch and with a length of (5 ± 0,5) m (Figure F.1, Position 3).

A test shall be done for each type of emergency brake demand in the 2 configurations (reservoir connected to brake pipe at positions 2.1 and 2.2 shown in Figure F.1) unless it is obvious that one configuration has the slowest venting performance. In this case it is permitted to test this configuration only."