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STN	**Železnice Skrine nápravových ložísk Skúška výkonnosti**	**STN EN 12082+A1 28 2220**

Railway applications - Axleboxes - Performance testing

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/21

Obsahuje: EN 12082:2017+A1:2021

Oznámením tejto normy sa ruší
STN EN 12082 (28 2220) z marca 2018

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European foreword

This document (EN 12082:2017+A1:2021) has been prepared by Technical Committee CEN/TC 256 “Railway Applications”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2021, and conflicting national standards shall be withdrawn at the latest by December 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes ▌A1⟩ EN 12082:2017 ⟨A1▐.

▌A1⟩ The main changes with respect to the previous edition are listed below:

— A clarification on how to account for stops and variations in speed is added

— A clarification on how to evaluate the first four elementary trips as well as the pre-test is added

— A clarification on which type of axlebox to be tested in the field is added

— The location of the temperature sensor position in the target zone is better specified

— The temperature criteria are clarified and Annex D (informative) gives examples on evaluation

— Formula A.4 in A.9.2 “Preconditions for applicability of existing results” is corrected

— Annex ZA is removed since it is not relevant for this norm being a testing standard

NOTE Clause 6 of the previous version of the EN (EN 12082:2007+A1:2010) is referred to in both TSI's on rolling stock and remains mandatory. Clause 7 of this version of the EN is an improvement of the Clause 6 of the previous version and is therefore equivalent. ⟨A1▐

This document includes Amendment 1 approved by CEN on 11 April 2021.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ▌A1⟩ ⟨A1▐.

▌A1⟩ *deleted text* ⟨A1▐

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

To improve the reliability, availability, durability, the high speed capacity and maintenance of the European rail transportation system, there is a need to ensure the required quality, safety and efficiency of axleboxes that are covered by the set of standards: EN 12080, EN 12081 and EN 12082.

This European Standard has been drawn up with the purpose of standardizing the performance testing of axleboxes for all types of rolling stock to ensure suitability for the required service, i.e. that the assembly of box housing, bearing(s), seal(s) and grease is well suited for the service requirements.

This testing is made in two stages, a “rig test”, described in detail in this European Standard, and a “field test”. The extent of testing to be applied depends on the novelty of bearing design, seal design, grease formulation and/or box housing, as well as the application (see EN 12080 and EN 12081).

1 Scope

This European Standard specifies the principles and methods for a rig performance test of the system of axlebox rolling bearing(s), housing, seal(s) and grease. Test parameters and minimum performance requirements for vehicles in operation on main lines are specified. Different test parameters and performance requirements may be selected for vehicles in operation on other networks (e.g. urban rail). This standard is historically developed for outboard applications but can be used for vehicles with other bearing arrangements (e.g.: inboard application or single wheels).

It gives some possible examples where a "sequenced performance test" addresses the broad range of different service conditions within a specific application or vehicle platform into account.

It describes in detail the water tightness test and basic principles and minimum requirements for a field test.

This European Standard only applies to axleboxes equipped with rolling bearings and greases according to EN 12080 and EN 12081.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ASTM D7303:2012, *Standard Test Method for Determination of Metals in Lubricating Greases by Inductively Coupled Plasma Atomic Emission Spectrometry*

DIN 51460-1:2007, *Testing of petroleum products - Method for sample preparation - Part 1: Microwave incineration*

DIN 51829:2013, *Petroleum products - Determination of additive and wear elements in greases - Analysis by wavelength dispersive X-ray fluorescence spectrometry*

EN 12080:2017, *Railway applications - Axleboxes - Rolling bearings*

〚A1〛 EN 12081 〚A1〛, *Railway applications - Axleboxes - Lubricating greases*

〚A1〛 EN 15663 〚A1〛, *Railway applications - Definition of vehicle reference masses*

〚A1〛 EN ISO 11885 〚A1〛, *Water quality - Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES) (ISO 11885:2007)*

ISO 15243:2017, *Rolling bearings — Damage and failures — Terms, characteristics and causes*