SLOVENSKI STANDARD
oSIST prEN 15437-2:2010

01-oktober-2010

Železniške naprave - Kontrola ohišja ležajev kolesnih dvojic - Zahteve pri projektiranju - 2. del: Naprave na vozilu za nadzor temperature

Railway applications - Axlebox condition monitoring - Performance requirements - Part 2: Onboard systems for temperature monitoring

Bahnanwendungen - Zustandsüberwachung von Radsatzlagern - Leistungsanforderungen - Teil 2: Fahrzeugbasierte Systeme für Temperaturüberwachung

Applications ferroviaires - Surveillance des boîtes d'essieux - Exigences - Partie 2: Systèmes embarqués pour surveillance de température

Ta slovenski standard je istoveten z: **prEN 15437-2**

ICS:

45.060.01	Železniška vozila na splošno	Railway rolling stock in general

oSIST prEN 15437-2:2010 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 15437-2

May 2010

ICS

English Version

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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
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Foreword

This document (prEN 15437-2:2010) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This documents is currently submitted to the CEN Enquiry.

This European Standard has been prepared under a mandate given to CEN/CENELEC/ETSI by the European Commission and the European Free Trade Association to support Essential Requirements of

— Directive 2008/57/EC of the European Parliament and of the council of 17 June 2008 on the interoperability of the rail systems within the community[1)]

For relationship with EU Directives, see informative Annexe ZA which is an integral part of this document.

1) Official Journal of the European Union No L191/1 of 18.07.2008

Introduction

Failed wheelset bearings on rolling stock create a hazard to the safe operation of the railway. If a bearing fails whilst rolling stock is in service there is the potential for a catastrophic event. A catastrophic event may result in fatalities, severe damage to rolling stock and/or the infrastructure and a risk that rolling stock may derail and/or a fire may develop.

One indication that a bearing is about to fail is a rise in the heat generated by the bearing. Bearings that are about to fail may therefore be detected by monitoring their temperature to identify an unacceptable rise.

This part of EN 15437 covers the monitoring of axle box bearing temperature by onboard systems.

It was developed by Working Group 35 Hot Box Detection of CEN Technical Committee 256 Railway Applications. It defines the minimum requirements for the equipment, monitoring performance, operation and interface in order to provide temperature-based diagnostic information to the onboard diagnosis system.

In most cases, axle boxes continue to be monitored by trackside Hot Axle Bearing Detectors which is the subject of Part 1 of EN15437.For onboard systems, the notable features are that the supervision is performed in a continuous way, based on inputs from temperature sensors. Further, that the system is fitted onboard the train and is able to function autonomously from trackside systems which by nature are ground-based.

In contrast to trackside monitoring systems, the detection characteristic may be adapted to the particular vehicle design, such that the alarm levels employed are configured depending on the bearing properties, sensor arrangement, vehicle type, network characteristics, etc…

The use of onboard monitoring may also provide a solution for overcoming constraints related to bogie design or other aspects of vehicle design or operation which may prevent effective monitoring by means of the track-side systems.

Other devices which apply functionally equivalent alternatives (for example based on the principle of vibration monitoring) may be available and normalized elsewhere, such as in other parts of this series of EN standards.