

**Raudteealased rakendused. Ratta/rööpa vahelise
hõõrdumise seire. Rattaharja õlitamine**

Railway applications - Wheel/rail friction management -
Flange lubrication

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15427:2008 sisaldab Euroopa standardi EN 15427:2008 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 10.11.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 22.10.2008.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 15427:2008 consists of the English text of the European standard EN 15427:2008.

This standard is ratified with the order of Estonian Centre for Standardisation dated 10.11.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 22.10.2008.

The standard is available from Estonian standardisation organisation.

ICS 21.260, 45.040

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ICS 21.260; 45.040

English Version

Railway applications - Wheel/rail friction management - Flange lubrication

This European Standard was approved by CEN on 24 August 2008.

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Foreword

This document (EN 15427:2008) 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of an identical text or by endorsement, at the latest by April 2009, and conflicting national standards shall be withdrawn at the latest by April 2009.

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 European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to support Essential Requirements of EU Directive 96/48/EC¹⁾, as modified by EU Directive 2004/50²⁾ of 29 April 2004.

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

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¹⁾ Official Journal of the European Communities No L 235 of 17.09.96.

²⁾ Official Journal of the European Communities No. L 220 of 21.6.04.

Introduction

Friction management using solid or fluid (oil, grease, etc) substances at the wheel-rail interface is a complex subject and includes:

- lubrication of the wheel flange / rail gauge corner interface, commonly referred to as “flange or rail lubrication”;
- friction modification of the top of rail / wheel tread interface, commonly referred to as “top of rail friction management”.

This document sets out requirements for the lubrication of the wheel flange / rail gauge corner only. It describes systems fitted on board trains and on the track, as both systems may need to be employed to achieve effective lubrication of the wheel-rail interface.

Managing the wheel-rail interface effectively will reduce wear of both wheel and rail. When friction is managed effectively, noise levels, energy consumption and the risk of flange climbing are reduced. Conversely where not managed effectively, assets may require replacement prematurely before reaching their full economic potential.

There needs to be control in the application of lubrication such that there is no:

- loss of traction or braking performance;
- adverse effect on signalling systems or track circuits;
- intolerable increased risk of fire;
- harmful environmental effect;
- incompatibility between the different lubricants in use, particularly, between solid and fluid systems.

1 Scope

This document is limited to specifying the requirements when applying lubricants to the wheel-rail interface between the wheel flange and the rail gauge corner (active interface) either directly or indirectly to the wheel flange or to the rail, and includes both trainborne and trackside solutions.

This document defines:

- the characteristics that systems of lubrication of the wheel-rail interface shall achieve, together with applicable inspection and test methods to be carried out for verification;
- all relevant terminology which is specific to the lubrication of the wheel-rail interface.

2 Normative references

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

EN 13749, *Railway applications — Wheelsets and bogies — Method of specifying the structural requirements of bogie frames*

EN 50121-1, *Railway applications — Electromagnetic compatibility — Part 1: General*

EN 50125-1, *Railway applications — Environmental conditions for equipment — Part 1: Equipment on board rolling stock*

EN 61373, *Railway applications — Rolling stock equipment — Shock and vibration tests (IEC 61373:1999)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

Figures 1 and 2 show the areas on the wheel and rail that are referred to in this standard.