

SLOVENSKI STANDARD
oSIST prEN 16272-3-1:2011
01-julij-2011

Železniške naprave - Zgornji ustroj - Protihrupne ovire in pripadajoče naprave, ki ovirajo razširjanje zvoka po zraku - Preskusna metoda za ugotavljanje akustičnih lastnosti - 3-1. del: Normalizirani spekter železniškega hrupa in enomestne številske stopnje razpršenega zvokovnega polja

Railway applications - Track - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 3-1: Normalized railway noise spectrum and single number ratings for diffuse field applications

Bahnanwendungen - Oberbau - Lärmschutzwände und verwandte Vorrichtungen zur Beeinflussung der Luftschallausbreitung - Prüfverfahren zur Bestimmung der akustischen Eigenschaften - Teil 3-1: Standardisiertes Schienenverkehrslärmspektrum und Einzahl-Angaben für diffuse Schallfelder

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Ta slovenski standard je istoveten z: prEN 16272-3-1

ICS:

17.140.30	Emisija hrupa transportnih sredstev	Noise emitted by means of transport
93.100	Gradnja železnic	Construction of railways

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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April 2011

ICS 93.100

English Version

**Railway applications - Track - Noise barriers and related devices
acting on airborne sound propagation - Test method for
determining the acoustic performance - Part 3-1: Normalized
railway noise spectrum and single number ratings for diffuse
field applications**

Bahnanwendungen - Oberbau - Lärmschutzwände und
verwandte Vorrichtungen zur Beeinflussung der
Luftschallausbreitung - Prüfverfahren zur Bestimmung der
akustischen Eigenschaften - Teil 3-1: Standardisiertes
Schienenverkehrslärmspektrum und Einzahlangaben für
diffuse Schallfelder

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

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard 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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (prEN 16272-3-1:2011) 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 European Standard is one of the series prEN 16272, *Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Test method for determining the acoustic performance* as listed below:

- *Part 1: Intrinsic characteristics – Sound absorption in the laboratory under diffuse sound field conditions*
- *Part 2: Intrinsic characteristics – Airborne sound insulation in the laboratory under diffuse sound field conditions*
- *Part 3-1: Normalized railway noise spectrum and single number ratings for diffuse field applications*
- *Part 3-2: Normalized railway noise spectrum and single number ratings for direct field applications*
- *Part 4: Intrinsic characteristics – In situ values of sound diffraction*
- *Part 5: Intrinsic characteristics – In situ values of sound absorption under direct sound field conditions*
- *Part 6: Intrinsic characteristics – In situ values of airborne sound insulation under direct sound field conditions*
- *Part 7: Extrinsic characteristics – In situ values of insertion loss*

It should be read in conjunction with:

- prEN 16272-1, *Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Test method for determining the acoustic performance – Part 1: Intrinsic characteristics – Sound absorption in the laboratory under diffuse sound field conditions*
- prEN 16272-2, *Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Test method for determining the acoustic performance – Part 2: Intrinsic characteristics – Airborne sound insulation in the laboratory under diffuse sound field conditions*

prEN 16272-3-1:2011 (E)

Introduction

This document is to be read in conjunction with prEN 16272-1 and prEN 16272-2 and shall be applied only to situations as described in those documents (diffuse sound field).

As the two main intrinsic acoustic characteristics of noise barriers and related devices acting on airborne sound propagation in a diffuse sound field, sound absorption and airborne sound insulation, are frequency dependent, there is a need to define a reference railway noise spectrum for test purposes. This European Standard defines the basic properties of railway noise measured at the rail track side in terms of a characteristic normalized railway noise spectrum which is needed to evaluate single-number ratings of noise barriers and related devices acting on airborne sound propagation in reverberant conditions, e.g. inside tunnels or deep trenches.

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