SLOVENSKI STANDARD
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[Not translated]

Railway applications - Track - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 3-2: Normalized railway noise spectrum and single number ratings for direct field applications

Bahnanwendungen - Oberbau - Lärmschutzwände und verwandte Vorrichtungen zur Beeinflussung der Luftschallausbreitung - Prüfverfahren zur Bestimmung der akustischen Eigenschaften - Teil 3-2: Standardisiertes Schienenverkehrslärmspektrum und Einzahl-Angaben für gerichtete Schallfelder

Applications ferroviaires - Voie - Dispositifs de réduction du bruit - Méthode d'essai pour la détermination des performances acoustiques - Partie 3-2 : Spectre de bruit ferroviaire normalisé et indices uniques d'évaluation pour des applications en champ direct

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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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English Version

Railway applications - Track - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 3-2: Normalized railway noise spectrum and single number ratings for direct field applications

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This draft European Standard is submitted to CEN members for formal vote. 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.

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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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (FprEN 16272-3-2:2014) 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 Formal Vote.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This European Standard is one of the series EN 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* (the present document);

— *Part 5: Intrinsic characteristics — In situ values of sound reflection under direct sound field conditions* (Technical Specification; currently at Technical Committee Approval stage);

— *Part 6: Intrinsic characteristics — In situ values of airborne sound insulation under direct sound field conditions* (currently at Formal Vote stage).

It should be read in conjunction with:

— FprCEN/TS 16272-5, *Railway applications — Track — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 5: Intrinsic — In situ values of sound reflection under direct sound field conditions*;

— EN 16272-6, *Railway applications — Track — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 6: Intrinsic characteristics — In situ values of airborne sound insulation under direct sound field conditions*.

Introduction

This document will be read in conjunction with prEN 16272-4, FprCEN/TS 16272-5 and prEN 16272-6 and will be applied only to situations as described in those documents (direct sound field).

As the two main intrinsic acoustic characteristics of noise barriers and related devices acting on airborne sound propagation in a direct sound field, the sound reflection index and the sound insulation index, are frequency dependent, there is a need to define a reference railway noise spectrum for test purposes.

Also the sound diffraction index difference, the main intrinsic acoustic characteristic of added devices, i.e. products which may be added on the top of noise barriers and intended to contribute to sound attenuation acting primarily on the diffracted sound field, is frequency dependent and there is an analogous 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, except those used in reverberant conditions, e.g. inside tunnels or deep trenches.