სსტ ენ 1032:2003+A1:2008/2019

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ეროვნული სააგენტო
თბილისი

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Mechanical vibration - Testing of mobile machinery in order to determine the vibration emission value

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Mechanische Schwingungen - Prüfverfahren für bewegliche Maschinen zum Zwecke der Bestimmung des Schwingungsemissionswertes

This European Standard was approved by CEN on 28 February 2003 and includes Amendment 1 approved by CEN on 5 October 2008.

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Foreword

This document (EN 1032:2003+A1:2008) has been prepared by Technical Committee CEN/TC 231 “Mechanical vibration and shock”, 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of an identical text or by endorsement, at the latest by May 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2008-10-05.

This document supersedes [A1] EN 1032:2003 [/A1].

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A1] [/A1].

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

[A1] For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. [/A1]

Annexes A to F are informative.

This document includes a Bibliography.

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

Introduction

Exposure to mechanical vibration from mobile machinery can interfere with comfort, working efficiency and, in some circumstances, health and safety. The EC Machinery Directive, supported by the basic safety standards [A1] EN ISO 12100 [A1], requires that machinery is designed and constructed so that the risks resulting from vibration emissions are minimized and that where risks remain, despite such measures, the manufacturer shall supply warnings. It also states that the magnitudes of vibration generated by mobile machinery shall be noted in the relevant instruction handbook in terms of root-mean-square (r.m.s.) value of frequency-weighted acceleration. This European Standard is limited to test methods and measurements related to fulfilment of the second statement. Knowledge of whole-body and hand-transmitted vibration emission values will aid the selection of low-vibration machinery.

The vibration emission determined by a test code should be in proportion to the magnitude of the vibration hazard. In some cases (for example, where the vibration emission at the seat contains shocks) the r.m.s. values determined by the test code cannot adequately represent the vibration hazard. Test codes should provide guidance on how to warn of vibration risk (residual risk) in these cases.

However, the EC Machinery Directive does not require specific declaration of the magnitude of shocks. Therefore in this European Standard, only requirements for evaluation of r.m.s. values are given, together with general requirements for testing and evaluating whole-body and hand-transmitted vibration emissions of mobile machinery as a basis for technical committees responsible for the preparation of vibration test codes.

Standardized vibration test codes are required for many purposes, e.g. to fulfil legal requirements, as well as for trade agreements, aspects of work environment, vibration control, planning of process and work.

In order to prepare a vibration test code for a specific family of machinery it is essential to establish additional requirements for that family, e.g. installation and mounting conditions, operating conditions, measurement positions, measurement directions, vibration declaration, information to be reported.

It is essential when developing a test code for declaration of vibration emission to define a procedure to collect representative vibration values for the machine, to identify causes of variability, to validate the test method and to evaluate the reproducibility of results.