RAUDTEEALASED RAKENDUSED. RÖÖBASTEE. RÖÖBASTEE GEOMEETRILINE KVALITEET. OSA 3: MÕÕTESÜSTEEMID. RÖÖBASTEE EHITUS- JA HOOLDUSMASINAD

Railway applications - Track - Track geometry quality - Part 3: Measuring systems - Track construction and maintenance machines



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# EUROPEAN STANDARD

# EN 13848-3

# NORME EUROPÉENNE EUROPÄISCHE NORM

April 2009

ICS 93.100

#### **English Version**

# Railway applications - Track - Track geometry quality - Part 3: Measuring systems - Track construction and maintenance machines

Applications ferroviaires - Voie - Qualité géométrique de la voie - Partie 3 : Systèmes de mesure - Engins de travaux et de maintenance de la voie

Bahnanwendungen - Oberbau - Qualität der Gleisgeometrie - Teil 3: Messsysteme - Gleisbau- und Instandhaltungsmaschinen

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EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

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# **Foreword**

This document (EN 13848-3:2009) 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of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.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 is one of the series EN 13848 "Railway applications – Track – Track geometry quality" as listed below:

- Part 1: Characterisation of track geometry
- Part 2: Measuring systems Track recording vehicles
- Part 3: Measuring systems Track construction and maintenance machines
- Part 4: Measuring systems Manual and lightweight devices
- Part 5: Geometric quality levels

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# 1 Scope

This European Standard specifies the minimum requirements that shall be met by measuring systems fitted on track construction and maintenance machines to give an evaluation of track geometry quality when measuring one or more of the parameters described in EN 13848-1. It does not seek to prescribe which parameters are to be measured, since these depend upon the measuring capabilities of the machine and the purpose for which the machine or its measuring system is used.

It also sets out the acceptable differences from EN 13848-1 when using track construction and maintenance machines to measure track geometry. It applies to track geometry measuring systems which are fitted to track construction and maintenance machines from one year after the date of implementation of this standard.

# 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 13848-1:2003+A1:2008, Railway applications – Track – Track geometry quality – Part 1: Characterisation of track geometry

EN 13848-2:2006, Railway applications – Track – Track geometry quality – Part 2: Measuring systems – Track recording vehicles

ENV 13005:1999, Guide to the expression of uncertainty in measurement

# 3 Terms and definitions

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

#### 3.1

#### track construction and maintenance machine

self propelled or hauled machine/vehicle designed to construct track, maintain track and/or improve the quality of track and which is equipped with track geometry measuring systems. Also referred to as "machine" in this European Standard

#### 3.2

### machine

same as "track construction and maintenance machine" (3.1)

## 3.3

#### sensor

device which detects, measures and translates characteristics of track geometry into quantities that can be used for further data processing

#### 3.4

## measuring direction

course between two points on a track, independent of orientation of the machine; between two given points A and B, there are two opposite directions: A to B and B to A

## 3.5

#### orientation

physical positioning of a vehicle, e.g. a track construction and maintenance machine, with regards to which end of the vehicle is leading or trailing