



NSAI
Standards

Irish Standard
I.S. EN 13848-3:2009

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

I.S. EN 13848-3:2009

Incorporating amendments/corrigenda issued since publication:

<i>This document replaces:</i>	<i>This document is based on:</i> EN 13848-3:2009	<i>Published:</i> 22 April, 2009	
This document was published under the authority of the NSAI and comes into effect on: 10 July, 2009		ICS number: 93.100	
NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie	Price Code: I
Údarás um Chaighdeáin Náisiúnta na hÉireann			

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

This European Standard was approved by CEN on 19 March 2009.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Symbols and abbreviations	6
5 Track geometry measuring system fitted on track construction and maintenance machines	6
5.1 General description	6
5.2 Environmental conditions	8
5.3 Track features input	9
5.4 Data localisation	9
5.5 Measuring system/device	9
5.6 Data processing	11
5.7 Data output	11
5.8 Data storage	11
6 Testing of track geometry measuring and recording system	12
6.1 Introduction	12
6.2 Calibration	12
6.3 Validation by field tests	12
6.4 Routine validation	15
Annex A (normative) Parameters measured by track construction and maintenance machine	16
A.1 Introduction	16
A.2 Track gauge	16
A.3 Longitudinal level	17
A.4 Cross level	18
A.5 Alignment	19
A.6 Twist	20
Annex B (informative) Principles of measurement	21
B.1 General Description	21
B.2 Longitudinal level and alignment	21
B.3 Track gauge	21
B.4 Cross level	22
B.5 Twist	22
Annex C (normative) Description of field tests: values to be respected	23
C.1 General	23
C.2 Repeatability	23
C.3 Reproducibility	24
Bibliography	25

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

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 the United Kingdom.

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

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-