### DIN EN 13146-9



ICS 93.100

Supersedes DIN EN 13146-9:2011-12

Railway applications – Track – Test methods for fastening systems – Part 9: Determination of stiffness; English version EN 13146-9:2020, English translation of DIN EN 13146-9:2020-07 Bahnanwendungen – Oberbau – Prüfverfahren für Schienenbefestigungssysteme – Teil 9: Bestimmung der Steifigkeiten;

Englische Fassung EN 13146-9:2020, Englische Übersetzung von DIN EN 13146-9:2020-07

Applications ferroviaires –

Voie –

Méthodes d'essai pour les systèmes de fixation – Partie 9: Détermination de la raideur; Version anglaise EN 13146-9:2020, Traduction anglaise de DIN EN 13146-9:2020-07

Document comprises 32 pages

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Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.



A comma is used as the decimal marker.

## National foreword

This document (EN 13146-9:2020) has been prepared by Technical Committee CEN/TC 256 "Railway applications" (Secretariat: DIN, Germany).

The responsible German body involved in its preparation was *DIN-Normenausschuss Fahrweg und Schienenfahrzeuge* (DIN Standards Committee Railway), Subcommittee NA 087-00-01-04 UA "Fastening systems".

DIN EN 13146 consists of the following parts, under the general title *Railway applications* — *Track* — *Test methods for fastening systems:* 

- Part 1: Determination of longitudinal rail restraint
- Part 2: Determination of torsional resistance
- Part 3: Determination of attenuation of impact loads
- Part 4: Effect of repeated loading
- Part 5: Determination of electrical resistance
- Part 6: Effect of severe environmental conditions
- Part 7: Determination of clamping force and uplift stiffness
- Part 8: In-service testing
- Part 9: Determination of stiffness
- Part 10: Proof load test for pull-out resistance

The European Standards referred to in this document have been published as DIN EN or DIN EN ISO Standards with the same number.

The DIN document corresponding to the international document referred to in this document is as follows:

ISO 21948 DIN ISO 2194

For current information on this standard, please go to DIN's website (www.din.de) and search for the document number in question.

#### Amendments

This standard differs from DIN EN 13146-9:2011-12 as follows:

- a) the Scope has been revised high-frequency measurements are informative;
- b) normative references and the Bibliography have been revised;
- c) a reference to the terminology databases of CEN and ISO has been included;
- d) symbols and abbreviations have been updated;
- e) the procedures for the set-up and calibration of instruments has been brought in line with the requirements of EN 13146-4;
- f) the procedure for the determination of the dynamic high-frequency stiffness has been moved to an informative annex;
- g) the standard has been editorially revised.

#### **Previous editions**

DIN EN 13146-9: 2010-04, 2010-07, 2011-12

## National Annex NA (informative)

# Bibliography

DIN ISO 21948, Coated abrasives - Plain sheets