Railway applications - Current collection systems - Pantographs, testing methods for carbon contact strips

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

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Käsitlusala: This European Standard gives rules for testing methods for carbon contact strips. The purpose of this standard is to demonstrate that the carbon strip construction is fit for purpose. Not all tests may be relevant to some designs.	**Scope:** This European Standard gives rules for testing methods for carbon contact strips. The purpose of this standard is to demonstrate that the carbon strip construction is fit for purpose. Not all tests may be relevant to some designs.

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Bahnanwendungen - Stromabnahmesysteme - Stromabnehmer für Oberleitungsfahrzeuge, Prüfverfahren für Kohleschleifstücke

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CENELEC

European Committee for Electrotechnical Standardization
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Foreword

This European Standard was prepared by SC 9XB, Electromechanical material on board of rolling stock, of Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways. The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50405 on 2006-03-01.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2007-03-01
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1 Scope

This European Standard gives rules for testing methods for carbon contact strips. The purpose of this standard is to demonstrate that the carbon strip construction is fit for purpose. Not all tests may be relevant to some designs.

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 ISO 9001	Quality management systems – Requirements (ISO 9001)
EN 50206-1	Railway applications – Rolling stock – Pantographs: Characteristics and tests – Part 1: Pantographs for main line vehicles
EN 50206-2	Railway applications – Rolling stock – Pantographs: Characteristics and tests – Part 2 : Pantographs for metros and light rail vehicles
EN 50367	Railway applications – Current collection systems – Technical criteria for the interaction between pantograph and overhead line (to achieve free access)
IEC 60413	Test procedures for determining physical properties of brush materials for electrical machines

3 Definitions

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

3.1
carbon contact strip
strip of carbon material, permanently attached to an integral supporting structure (carrier) but excluding bolted assemblies

3.2
shear strength
stress at failure of the adhesion between carbon and the support structure

3.3
autodrop detection (ADD) sensor
mechanism incorporated in the carbon contact strip to provide the indication for the pantograph automatic dropping device

3.4
flow continuity
uninterrupted flow of air or other fluid

3.5
rated current loading
current value defined by the manufacturer that the carbon strip is designed to sustain without degradation under the specified operating conditions