STANDARDISERINGEN I SVERIGE
SWEDISH STANDARDS INSTITUTION

SVENSK STANDARD SS-EN 50206-1

Handläggande organ	Fastställd	Utgåva	Sida	Ingår i
Svenska Elektriska Kommissionen, SEK	1998-05-29	1	1 (1+25)	SEK Översikt 9
				Reg 481 01 61

Järnvägsanläggningar – Strömavtagare – Egenskaper och provning – Del 1: Strömavtagare för järnvägsfordon

Railway applications - Rolling stock – Pantographs: Characteristics and tests – Part 1: Pantographs for main line vehicles

Som svensk standard gäller europastandarden EN 50206-1:1998. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50206-1:1998.

ICS 29.280; 45.060.10

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Prisgrupp R

Tryckt i juli 1998

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50206-1

March 1998

ICS 29.280; 45.060.10

Descriptors: Railway equipment, railway rolling stock, pantographs, definitions, characteristics, marking, tests, inspection, maintenance, electromagnetic compatibility

English version

Railway applications - Rolling stock Pantographs: Characteristics and tests Part 1: Pantographs for main line vehicles

Applications ferroviaires
Matériel roulant
Pantographes: Caractéristiques et essais
Partie 1: Pantographes pour véhicules grandes lignes

Bahnanwendungen - Schienenfahrzeuge
Merkmale und Prüfungen von Stromabnehmern
Teil 1: Stromabnehmer für Vollbahnfahrzeuge

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Ref. No. EN 50206-1:1998 E

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 in railways.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50206-1 on 1998-01-01.

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 (doa) 1998-12-01

- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-12-01

In this standard:

- Annexes A, B, C, D are normative
- Annex E is informative
- Annex F is informative and contains a list of clauses where agreement between supplier and customer is mentioned.

Clauses and subclauses subject to future change are indicated in the text by a note.

Those affected are:

- 4.5 : Measurement of forces
- 4.7.4 : Contact strips
- 6.4.3 : Resistance to vibrations
- 6.11 : Total contact forces
- 6.12 : Current collection tests

Contents

Introduction

The electrical power supply of a tractive unit is achieved by the collection of current from one or more contact wires by means of one or more pantograph(s), installed on the traction unit or on the trainset's vehicle.

The contact strips of the pantograph which slide along the contact wire facilitate the transmission of power.

The pantograph and the catenary form two oscillating sub-systems which can be displaced. There exists an unilateral sliding linkage between them, which shall ensure continuous contact. Their design shall allow for minimum wear of both sub-systems when used.

1 Scope

This document defines the general assembly characteristics which are to be applied to pantographs, to enable current collection from the overhead line system. It also defines the tests the pantographs have to perform, excluding insulators.

This standard does not apply to pantograph dielectric tests, which are to be performed on the pantograph installed on the vehicle roof.

This standard does not apply to pantographs used on isolated metros and light rail systems : these pantographs are considered in EN 50206-2.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 29001	Quality systems - Model for quality assurance in design/development, production, installation and servicing
EN 29002	Quality systems - Model for quality assurance in production and installation
ENV 50121	Railway applications - Electromagnetic compatibility
EN 50125-1 *)	Environmental conditions for rolling stock
EN 50126*)	Railway applications - The specification and demonstration of dependability - Reliability, Availability, Maintenability and Safety (RAMS)
EN 50163	Supply voltage of traction system
EN 50206-2 *)	Railway applications - Rolling stock - Part 2: Pantographs for metros and light rail systems Characteristics and tests
EN 50215 *)	Railway applications - Rolling stock - Tests after completion of construction and before entry into service
IEC 60494 (1974)	Rules for pantographs of electric rolling stock

*) In preparation

IEC 61373 *)	Shocks and vibrations requirements for rolling stock
IEC 61376 *)	General service conditions and general rules for electric equipment for rolling stock

[redacted]

*) In preparation