

ICS 45.060
CCS S 41



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 32578-2016

**Railway application -- Fixed installations -- Electric traction
overhead contact lines**

轨道交通 地面装置 电力牵引架空接触网

(English Translation)

Issued on: April 25, 2016

Implemented on: November 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China**

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the re-drafting method to modify the use of IEC 60913.:2013 "rail transit ground device electric traction overhead contact net".

There are technical differences between this standard and IEC 60913.:2013, and the terms involved in these differences have been passed through the margin the vertical single line (|) is marked, and Appendix F gives a list of the corresponding technical differences and their causes.

This standard has made the following editorial changes.

- Amend the order of paragraph 1 of chapter 1 to adjust paragraph 1 of IEC 60913.:2013 to paragraph 1;
- Added sections 3.7.1 and 3.7.2 to classify acronyms and symbols;
- modify the location of Figure 1, from 5.10.7 to 5.10.4, due to 5.10.4 for the first time;
- modify the 8.15.3 voltage requirements described by the way, the clear implementation of GB/T 1402;
- modified part of the reference to the corresponding national standards and changed to normative reference documents;
- deleted references that did not appear in the text;

--- Added Appendix F to illustrate technical differences and their causes.

1 Scope

This standard specifies the requirements and tests for the design of the catenary system, the structural components and their structural calculations and inspections, the design of the assembly, and Requirements and tests for individual component design.

This standard applies to electric traction catenary systems for railway and urban rail transit systems (including trolley buses).

This standard applies to the new catenary system, as well as the existing catenary system of the overall renovation.

This standard does not apply to contact rail systems located next to the rail.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB 311.1 Insulation coordination Part 1. Definitions, principles and rules (GB 311.1-2012, IEC 60071-1.:2006, MOD) GB/T 311.2 Insulation coordination - Part 2. Guidelines for use (GB/T 311.2-2013, IEC 60071-2.:1996, MOD) GB/T 470 zinc ingots (GB/T 470-2008, ISO 752.:2004, MOD) GB/T 700 Carbon structural steel (GB/T 700-2006, ISO 630.:1995, NEQ) GB/T 1001.1 Overhead line insulators with nominal voltages higher than 1000 V Part 1. Porcelain or glass insulators for AC systems Elements - Definitions, test methods and determination criteria (GB/T 1001.1-2003, IEC 60383-1.:1993, MOD) GB/T 1001.2 Overhead line insulators with nominal voltages higher than 1000 V Part 2. Insulator strings for AC systems and insulation Subgroups - definitions, test methods and acceptance criteria (GB/T 1001.2-2010, IEC 60383-2.:1993, MOD) GB/T 1173 Cast aluminum alloy (GB/T 1173-2013) GB/T 1179 round wire concentric twisted air conductor (GB/T 1179-2008, IEC 61089.:1991, MOD) GB/T 1402 rail transit traction power supply system voltage (GB/T 1402-2010, IEC 60850.:2007, MOD) GB 1985 High voltage AC disconnectors and earthing switches (GB 1985-2014, IEC 62271-102.:2001 A1.:2011, MOD) GB/T 2317.3-2008 Test methods for electrical fittings - Part 3. Thermal cycle tests (IEC 61284.:1997, MOD) GB/T 2900.36 Electrical terminology Electric traction [GB/T 2900.36-2003, IEC 60050 (811)..1991, MOD] GB/T 2900.51 Electrotechnical terminology overhead lines [GB/T 2900.51-1998, idtIEC 60050 (466)..1990] GB/T 3190 Chemical composition of deformed aluminum and aluminum alloys GB/T 3191 aluminum and aluminum alloy extruded bar GB/T 3428 Galvanized steel wire for overhead strand (GB/T 3428-2012, IEC 60888. 1987, MOD) GB 3804 3.6kV ~ 40.5kV high voltage AC load switch (GB 3804-2004, IEC 60265-1.:1998, MOD) GB/T 3880 (all parts) General industrial

aluminum and aluminum alloy sheet, strip GB 4208 enclosure protection class (IP code)
(GB 4208-2008, IEC 60529.:2001, IDT) GB/T 4437 (all parts) Aluminum and aluminum
alloy hot extrusion pipes Dimensions, shape, weight and allowable deviation of cold -
formed hollow steel for structural use GB/T GB/T 6892 General industrial aluminum and
aluminum alloy extrusion profiles