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

GB/T 28026.3-2018

**Railway applications -- Fixed installations -- Electrical safety,
earthing and the return circuit -- Part 3: Mutual interaction of
a.c. and d.c. traction systems**

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Foreword

GB/T 28026 "Electrical safety, grounding and reflow of rail transit ground devices" is divided into three parts.

--- Part 1. Electric shock protection measures;

---Part 2. Protective measures for stray currents in DC traction power supply systems;

--- Part 3. Interaction of AC and DC traction power systems.

This part is the third part of GB/T 28026.

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

This section uses the redrafting method to modify the electrical safety, grounding and return of IEC 62128-3.2013 "railway ground devices".

Stream Part 3. Interaction of AC and DC Traction Power Systems.

This part has been adjusted in structure compared with IEC 62128-2.2013, and the appendix number has been revised, according to the order mentioned in the article.

The order is adjusted, Appendix B is adjusted to Appendix C, and Appendix C is adjusted to Appendix B.

There are technical differences between this part and IEC 62128-3.2013, and the terms involved in these differences have been passed on the outside margins.

The vertical single line (|) of the position is marked. The specific technical differences and their causes are as follows.

---About the normative reference documents, this part has made technical adjustments to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

* Replace IEC 62128-1.2013 with GB/T 28026.1-2018 using international standards (see Chapters 3, 4.1, 4.2,

7.1, 7.2, 7.3, 7.4, 7.6, 8.1, 8.2.2, 8.2.3.1, 8.3.2);

* Replace IEC 62128-2:2013 with GB/T 28026.2-2018 modified with international standards (see 4.1, 8.1, 8.2.2, 8.).

3.2, 8.3.4, 8.4).

--- Modified the note as the text, as the note contains the requirements (see 4.1, 6.2).

This section also made the following editorial changes.

--- Removed the relevant content of the basic frequency of 16.7Hz, 60Hz to adapt to the technical conditions of our country (see A.2.1, A.2.3);

--- Removed example 2 (see A.2.3).

1 Scope

Due to the interaction between the AC and DC electric traction power supply system, dangerous induced voltage and current may cause injury to the human body and equipment.

harm. This part of GB/T 28026 gives the electrical safety and protective measures for the ground unit of AC/DC electric traction power supply system.

Claim.

This section applies to the electrical safety requirements of the ground unit maintenance work of the electric traction power supply system.

Interactions include the following.

--- Parallel operation of AC and DC electric traction power supply systems;

--- Cross operation of AC and DC electric traction power supply systems;

--- Shared tracks, buildings or other structures;

--- Transition section between AC and DC electric traction power supply systems.

This section is limited to the voltage and current of the fundamental frequency and its superimposed part. The regulations on radiated interference are not covered.

This section applies to all new lines, extension lines and existing electric traction power supply systems, including.

--- railway;

--- guided public transport systems, such as. trams, elevated and underground railways, mountain railways, trolleybus systems and installations

Contact system or contact rail magnetic levitation system;

--- Material transportation system.

This section does not apply to.

--- Underground mine traction power supply system;

--- Cranes, rail transport platforms and similar transport equipment, temporary buildings (eg exhibition structure), because such facilities are currently not available

The precedent for powering the net, they are not affected by the traction power supply system;

--- Suspension cable car;

--- Funicular railway;

---Maintenance works.

The provisions in this section also apply to hazardous voltage or current generated by AC or DC electric traction power supply systems to non-electric traction lines.

Road interaction.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 28026.1-2018 Electrical safety, grounding and recirculation of rail transit ground units
- Part 1

(IEC 62128-1.2013, MOD)

GB/T 28026.2-2018 Electrical safety, grounding and recirculation of rail transit ground units
- Part 2. DC traction supply

System stray current protection measures (IEC 62128-2.2013, MOD)