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

GB/T 32347.1-2015

**Railway applications -- Environmental conditions for equipment
-- Part 1: Equipment on board rolling stock**

轨道交通 设备环境条件 第1部分：机车车辆设备

(English Translation)

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Foreword

GB/T 32347 "rail transportation equipment, environmental conditions," is divided into three parts.

- Part 1. rolling stock equipment;
- Part 2. ground electrical equipment;
- Part 3. Signal and communications equipment.

This section GB/T Part of 132,347.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses redrafted law revision using IEC 62498-1:2010 "rail transportation equipment, environmental conditions - Part 1. locomotive Vehicle equipment. " this part of IEC 62498-1:2010 compared to the existence of technical differences, these differences involve the provision of a single vertical line in the margin (-) Were marked. This part of IEC 62498-1:2010 compared to the existence of technical differences and their reasons are as follows.

- Situation on normative references, this part of the technical differences have been adjusted in order to adapt to China's technical conditions, adjustment Focus reflected in Chapter 2, "Normative references" on. Specific adjustments are as follows.
- Modify with international standards of GB/T 1402 instead of IEC 60850 (see 4.14.1 and 4.14.5);
- equivalent adoption of international standards GB 4208 instead of IEC 60529 (see 4.11);
- Modify with international standards of GB/T 4798.5-2007 instead of IEC 60721-3-5 (see

4.3,4.6,4.9 and 4.11);

- equivalents adoption of international standards GB/T 21563 instead of IEC 61373 (see 4.12);
 - equivalents adoption of international standards GB/T 24338.3 instead of IEC 62236-3-1 (see 4.13);
 - Modify with international standards of GB/T 24338.4 instead of IEC 62236-3-2 (see 4.13);
 - Modify with international standards of GB/T 32350.2 replaced by IEC 62497-2 (see 4.10);
 - increase the GB/T 11804-2005 (see Chapter 3);
 - Remove the IEC 60721-2-3 (see IEC 62498-1:2010 Chapter 2 and 4.2).
- Remove some of the terms, related terms in GB/T 11804-2005 has been defined (see IEC 62498-1. 3.1,3.4 2010's and 3.5).
- Added "rolling stock and equipment perform two temperature grade" in order to adapt to China's regional operational requirements (see 4.1).
- Modify the elevation requirements to meet our requirements for traction equipment elevation (see 4.2, IEC 62498-1:2010 4.2).
- Modify the requirements of solar radiation, in order to adapt to China's solar radiation conditions (see 4.9, IEC 62498-1:2010 4.9).

This section also made the following editorial changes.

- Remove the IEC 62498-1:2010 in 4.14 "noisy environment", the original provision no content, and the lower number of the original 4.15 postponed;
- Revised reference.

This part by the State Railway Administration.

This part of the National electric traction equipment and systems Standardization Technical Committee (SAC/TC278) centralized.

This part mainly drafted by. Zhuzhou CSR Times Electric Co., Ltd.

This section participated in the drafting unit. China CNR Datong Electric Locomotive Co., Ltd., CSR Zhuzhou Electric Locomotive Co., Ltd., Wing Ji Xinshisu Electric Equipment Co., Ltd., Qingdao Sifang Rolling Stock Research Institute Co., Limited China CNR Dalian Locomotive and Rolling Stock the company.

1 Scope

This section GB/T 32347 specifies the mounted on rolling stock electrical, electromechanical and electronic equipment (including vehicle signals and communication

devices Standby) environmental conditions parameters, including altitude, temperature, humidity, air movement, rain, snow and hail, ice, solar radiation, lightning, pollution, shock and vibration Behaviors and electromagnetic environment and the power supply system.

This section also provides.

--- Interface conditions of rolling stock and their environment;

--- Rolling stock equipment (especially Locomotive main system) general environmental rules.

This section gives general guidelines, in order to reduce errors during evaluation of bids.

Defined environmental conditions can be considered normal operating conditions, the occasional more severe conditions separately. Bureau surrounding the device Ministry of climatic conditions specified in the relevant product standards, regulations or special requirements.

This section does not apply to cranes, mining vehicles and cable cars.

This part of the device and the device travelers with passengers is not taken into account.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 1402 rail traction power supply system voltage (GB/T 1402-2010, IEC 60850:2007, MOD) GB 4208 housing protection (IP Code) (GB 4208-2008, IEC 60529:2001, IDT) GB/T 4798.5-2007 application of electric and electronic products environmental conditions - Part 5. Ground vehicle use (IEC 60721-3-5.

1997, MOD)

GB/T 11804-2005 electric and electronic products environmental conditions term GB/T 21563 rail rolling stock equipment - Shock and vibration tests (GB/T 21563-2008, IEC 61373.

1999, IDT)

GB/T 24338.3 rail Electromagnetic compatibility Part 3-1. Rolling stock train and vehicle (GB/T 24338.3-2009, IEC 62236-3-1:2003, IDT) GB/T 24338.4 rail Electromagnetic compatibility Part 3-2. Rolling stock equipment (GB/T 24338.4-2009, IEC 62236-3-2:2003, MOD) GB/T 32350.2 rail Insulation coordination - Part 2. overvoltage protection and related (GB/T 32350.2-2015, IEC 62497-2:2010, MOD)

3 Terms and Definitions

GB/T 11804-2005 define the following terms and definitions apply to this document.