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

GB/T 7404-1987

Replacing GB/T 7404.1-2000

**Lead-acid battery for locomotives and rolling stock -- Part 1:
Valve-regulate lead acid for electric and subway locomotives
(English Translation)**

Issued on: January 1, 1970

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Foreword

GB/T 7404 "rail vehicle lead-acid batteries" is divided into two parts.

--- Part 1. electric locomotives, subway cars VRLA batteries;

--- Part 2. VRLA batteries for diesel locomotives.

This section GB/T 7404 Part 1.

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

This Part replaces GB/T 7404.1-2000 "the Locomotive vented lead-acid batteries." this portion of the GB/T 7404.1-2000 in the following changes in comparison.

--- To modify the standard name;

--- Modify scope;

--- Modify normative references;

--- Change symbols;

--- Modify the product classification and nomenclature;

--- Added new product models, basic parameters and dimensions are shown in Table 1, Table 2;

--- Edit "requirements";

--- New "subway and light rail vehicles battery slot should be consistent DIN5510-2. The provisions of 2009-05";

- Added "open circuit voltage combination of consistency";
- Added "capacity is not balanced rate";
- New "high-current discharge";
- Edit "cycle endurance capacity";
- Added "over-discharge performance" (only available in metro vehicle batteries);
- Added "seal reaction efficiency";
- Added "explosion-proof";
- Add a "safety valve opening and closing valve pressure performance and uneven rate";
- Added "hermetic";
- New "emergency ventilation performance (only available in metro vehicle batteries)";
- Added "sealant performance." this part is proposed by the China Electrical Equipment Industrial Association.

The lead-acid batteries in part by the National Standardization Technical Committee (SAC/TC69) centralized.

This part mainly drafted by. Shenyang Institute of batteries, Feng Day Hunan Electric Power Co., the shares have Narada Power Source Limited, Jiangsu double Deng Group Ltd., Anhui Leoch Power Technology Co., AMD Power Co., Ltd., days to Battery Group Co.

Secretary, Camel Group Co., Ltd. Changzhou gifted Teke New Energy Technology Co., Anhui Province Product Quality Supervision and Inspection Institute, Anhui super AMD Power Co., Ltd. Zhejiang Changxing Power Co., Ltd. Golden Sun, Jiang Su Chaowei Power Limited.

1 Scope

GB/T 7404 provisions of this part of the electric locomotives, subway cars with VRLA (hereinafter referred to as battery) symbol, Product classification and nomenclature, requirements, test methods, inspection rules and signs, packaging, transportation, storage and so on.

This section applies to electric locomotives, emergency load and auxiliary electrical equipment subway cars and light rail vehicles used in batteries.

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.

JB/T 2599 lead-acid battery name, model designation and naming approach
DIN5510-2:2009-05 (German rail vehicle fire test standard) to prevent the burning of railway vehicles - Part 2. materials and components Combustion characteristics and burn complicated phenomena (Preventive fire protection in railway vehicle-Part 2. Fire behaviour and fire side effects of material and parts)

3 Symbol

The following symbols apply to this document.

C1 --- 1 hour rate nominal capacity (Ah);

C5 --- 5-hour rate nominal capacity (Ah);

C10 --- 10-hour rate nominal capacity (Ah);

Found CA --- Battery Capacity (Ah), is numerically equal to the discharge current I (A) and the discharge time t (h) the product;

CE --- at reference temperature (25 °C) under the conditions of the actual capacity of the battery (of Ah);

Cd --- at -40 °C condition of the battery capacity measured in units of ampere hours (Ah);

I1 --- 1-hour rate discharging current (the A);

I5 --- 5-hour rate discharge current (A);

I10 --- 10-hour rate discharge current (A);

Is --- maximum discharge current (A), the value is equal to 3C10 or 3C5.

4.1 Naming

Model prepared in accordance with JB/T 2599. With the first capital letter character "power" or "underground" word spelling "DL" and "DT" table