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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 26950.1-2025

Replacing GB/T 26950.1-2011

Explosion-proof industrial trucks - Part 1: Battery industrial trucks

防爆工业车辆 第1部分：蓄电池工业车辆

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1 Scope

GB/T 26950.1-2025 is the Chinese national standard covering the battery forklift certified to work in an explosive atmosphere - every motor, contactor, connector and lamp enclosed or made intrinsically safe, the surface temperature limited, and the battery itself, which is a hydrogen source, contained. Part 1 of the series. It replaces GB/T 26950.1-2011. It was issued on 31 December 2025 and has been in force since 1 July 2026, replacing GB/T 26950.1-2011. The document is under the responsibility of the China Machinery Industry Federation. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the technical requirements, test methods, inspection rules, as well as markings, accompanying documents, transportation, and storage of explosion- proof battery industrial trucks. This document applies to battery industrial trucks for use in explosive atmospheres of Zone 1, Zone 2, Zone 21 and Zone

22.Explosion-proof pedestrian-controlled industrial trucks may use this document as a reference. This document does not apply to battery industrial trucks for use in firedamp explosive atmospheres and ammunition dust atmospheres.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 3836.1-2021, Explosive atmospheres - Part

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 explosion-proof battery industrial truck Battery industrial truck designed and manufactured in accordance with the provisions of this document for use in explosive atmospheres without becoming an ignition source.

3.2 explosive atmosphere

4 Technical requirements

4.1 Basic performance requirements The basic performance of explosion-proof battery industrial trucks (hereinafter referred to as "vehicles") shall meet the following provisions. -- Rider-controlled counterbalance forklift trucks with a rated load capacity of 500 kg ~ 10 000 kg shall comply with the provisions of JB/T 2391; -- Rider-controlled counterbalance forklift

trucks with a rated load capacity of 10 000 kg ~ 65 000 kg shall comply with the provisions of JB/T 11037; -- Battery forward-moving forklifts shall comply with the provisions of JB/T 3244; -- Battery-powered leg-type forklifts shall comply with the provisions of JB/T 3340; -- Side-loading trucks shall comply with the provisions of JB/T 9012; -- Battery pallet-stacking trucks shall comply with the provisions of JB/T 3341; -- Battery pallet trucks shall comply with the provisions of GB/T 27542; -- High-position picking vehicles shall comply with the provisions of JB/T 14948; -- Electric fixed height load-carrying trucks shall comply with the provisions of JB/T 3811; -- Towing tractors shall comply with the provisions of JB/T 10750.

Note. If the above clauses conflict with the explosion-proof requirements specified in 4.2 ~ 4.5, the explosion-proof requirements shall take precedence.

4.2.1 Surface temperature

4.2.1.1 General requirements The maximum surface temperature shall be lower than the minimum ignition temperature of the explosive gas atmosphere present in the vehicle's operating environment. Heat insulation measures shall not be used to reduce the surface temperature of components. non-metallic materials (e.g., rubber). The stainless steel shall contain no less than 16.5% chromium and no more than 0.07% carbon by mass. -- Class IIC vehicles. The working equipment shall be made of copper-zinc (brass), copper, or stainless steel, or coated with copper-zinc (brass), copper, stainless steel, or non-metallic materials (e.g., rubber). The stainless steel shall contain no less than 16.5% chromium and no more than 0.07% carbon by mass. The aluminum by mass in the above materials shall be less than 10%. -- For vehicles used in environments containing acetylene. If the coating material is made of copper or a copper alloy, it shall comply with the provisions of

8.5 of GB/T 3836.1-2021. The coating of the working equipment shall allow for easy inspection of wear and cracks in critical locations of the forks. Appendix A provides typical examples of the coating of the working equipment.

Note. The classification of IIA, IIB, and IIC is given in

4.3 of GB/T 3836.1-2021.

4.2.2.2 Moving parts The seals shall comply with the provisions of

5.3 in GB/T 3836.29-2021. The bearings shall comply with the provisions of

5.7 in GB/T 3836.29-2021. The gap between unlubricated moving parts and stationary parts shall be designed to prevent ignition of hot surfaces or mechanical sparks caused by friction. Moving parts requiring lubrication shall comply with the provisions of 5.3.3, 5.4, or

5.6.3 in GB/T 3836.29-2021.

4.2.3 Static electricity

4.2.3.1 Potential equalization 4.2.3.1.1 General requirements All conductive and dissipative

parts shall be connected to the chassis to maintain electrical potential equalization. Note

1.Conductive parts, for example metal parts or conductive plastic materials, with a surface resistance not greater than 104 Omega. Note

2.Dissipative parts, for example plastic materials with a surface resistance in the range of 104 Omega ~ 109 Omega when measured at 50% relative humidity, or with a surface resistance not greater than 1011 Omega when measured at 30% relative humidity, with a test voltage of at least DC (500 ± 25) V. If metal parts are securely fixed and have good electrical contact with the chassis, a separate conductor connection to the chassis is not required. This requirement also applies to components installed on the vehicle (for example. lamps, weighing equipment, attachments, side shifters, or bucket clamps, etc.). 4.2.3.1.2 Insulated metal parts For insulated metal parts with a maximum permissible capacitance not exceeding the following values, they may not be connected to the chassis if a high-efficiency electrostatic generation mechanism does not occur.

a) Class IIA. 10 pF;

b) Class IIB. 10 pF;

c) Class IIC. 6 pF. If insulated metal parts are likely to be subject to a high-efficiency electrostatic generation mechanism or if their capacitance exceeds the above specified value, such parts shall be connected to the chassis. Insulating bolts and nuts with a size not exceeding M6 may be left unattached to the chassis.

4.2.3.2 Earthing To prevent the accumulation of electrostatic charge, the vehicle earthing resistance shall not exceed 106 Omega, and shall be achieved through any of the following methods. -- Install at least two conductive wheels; -- Install at least two earthing straps (the distance between the earthing straps shall be as large as possible, and they shall extend as far as possible into the ground and make contact with it); -- Install at least one conductive wheel and one earthing strap. The chassis shall be permanently and reliably earthed, and the number and location of conductive wheels or earthing straps shall be clearly and permanently marked on the chassis.

Note. During normal operation, conductive wheels and earthing straps may become contaminated. Loss of conductivity can be prevented by installing two or more conductive wheels or earthing straps, or by using a combination of conductive wheels and earthing straps.

4.2.3.3 Wheels

a) The surface resistance shall not be greater than 109 Omega at 50% relative humidity, or not greater than 1011 Omega at 30% relative humidity, and shall be connected to the chassis.

b) Dangerous electrostatic charges shall not be generated by means of dimensions, shape