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

GB/T 25343.2-2026

Replacing GB/T 25343.2-2010

**Railway applications - Welding of rolling stock and components
- Part 2: Basic requirements**

轨道交通 机车车辆及其零部件的焊接 第2部分：基本要求

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 2 of GB/T 25343 "Welding of Rail Transit Locomotives and Rolling Stock and Their Components". GB/T 25343 has been... The following sections were published.

1. General Provisions;

2. Basic Requirements;

3. Design Requirements;

4. Production Requirements;

5. Inspection, Testing and Documentation. This document replaces GB/T 25343.2-2010 "Welding of Railway Applications - Rail Vehicles and Their Components - Part

2. Welding Manufacturing". The "Quality Requirements and Certification of Goods" standard, compared with GB/T 25343.2-2010, has undergone major technical changes, except for structural adjustments and editorial modifications. as follows:

- a) Added the terminology and definition of "security requirements" (see 3.1);
- b) The classification levels for welded components have been changed (see 4.1, Chapter 4 of the.2010 edition);
- c) Added welding activity types (see 4.2);
- d) The requirement for certification of welding manufacturers has been removed (see Chapter 4 of the.2010 edition);

e) Quality requirements for resistance welding and friction stir welding have been added (see

5.1.2 and 5.1.3);

1 Scope

GB/T 25343.2-2026 is the Chinese national standard covering welding a rail vehicle - the qualification of the manufacturer, the procedures and the welders, the weld classes tied to the consequence of failure, the inspection and the documentation, on structures with a thirty-year fatigue life. It replaces GB/T 25343.2-2010 and has been in force since 1 October 2026, under the National Railway Administration. It was issued on 31 March 2026 and takes effect on 1 October 2026, replacing GB/T 25343.2-2010. This page is published from the official record of the 2026 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 classification levels, activity types, basic requirements, and manufacturer declarations for welding of rail transit locomotives, rolling stock, and their components. And supervision of subcontractors. This document applies to the welding of metallic materials in rail transit locomotives, rolling stock, and their components.

2 Basic Requirements Published on 2026-03-

31 Implemented on October 1, 2026 State Administration for Market Regulation The State Administration for Standardization issued a statement.

4 Classification levels of welded components and types of welding activities

4.1 Classification of Welded Components The classification grades of welded components shall conform to the provisions of Table

1. The classification grades of rail transit locomotives and rolling stock and their components are shown in Appendix A.

4.2 Types of Welding Activities Welding activities for rail transit locomotives, rolling stock and their components are classified according to Table 2.

5.1 General Requirements

5.1.1 The welding quality of fusion-welded components shall conform to GB/T 12467.2 for CL1 grade and GB/T 12467.3 for CL2 grade. According to regulations, CL3 grade should comply with the provisions of GB/T 12467.4.

5.1.2 The welding quality of resistance welded components shall comply with the requirements of ISO 14554 (all parts).

5.1.3 The welding quality of components subjected to friction stir welding shall comply with the provisions of GB/T 34630 (all parts).

5.1.4 Welding manufacturers shall perform welding activities for components of the corresponding classification level. Manufacturers meeting CL1 requirements may perform CL2 or CL3. Activities for CL2-classified components. Manufacturers meeting CL2 requirements can perform the same activities for CL3-classified components. Meeting specific activities. The CL3 requirement stipulates that manufacturers can only perform the same activities on parts classified as CL3.

5.2 Welders and welding operators Welding manufacturers should have welders or welding operators who meet the requirements of GB/T 25343.4. The skills assessment for welders or welding operators should cover the welding processes, material groups, joint types, and welding positions required in production. The number of welders or welding operators should not be less than two.

5.3 Welding Responsible Personnel

5.3.1 General Requirements Welding activities shall be conducted under the supervision of a designated welding supervisor. The welding supervisor shall meet the requirements of GB/T 19419. Staff are divided into the following three levels.

---Level A. Personnel possessing the comprehensive technical knowledge and professional experience specified in GB/T 19419;

---Class B. Personnel with the specialized technical knowledge and professional experience specified in GB/T 19419;

---Level C. Personnel with the basic technical knowledge and professional experience specified in GB/T 19419. The responsibilities and division of labor of the welding personnel shall meet the requirements of Appendix B, and the number and level of the welding personnel shall meet the requirements of Appendix C. The technical skill level of the welding personnel is specified in Appendix D.

5.3.2 Management of Welding Personnel The tasks and responsibilities of welding personnel should comply with the provisions of GB/T 19419, clearly defining their powers and responsibilities to ensure their effectiveness. Unaffected by production or other factors. Welding personnel should ideally be directly employed by the welding manufacturer; if the manufacturer outsources welding personnel, Then it should meet the requirements of 5.3.3. The responsibilities, capabilities, and relationships of management, design, production, or inspection personnel who affect welding quality should be documented, and should at least include the following. content.

- a) The tasks and responsibilities of the welding personnel (when there are multiple welding personnel with equal authority, their work and responsibilities should be clearly defined).
- b) Regulations for the representative of the person in charge of welding (also applicable to externally hired welding personnel).
- c) Activities requiring the participation of the person responsible for welding, such as technical reviews.
- d) Measures to be taken when the person in charge of welding is absent (regulations regarding the representative of the person in charge of welding; welding work still permitted; requirements) (Welding work to be terminated).
- e) Other processes involving the welding personnel (such as quotation preparation, design, subcontracting). All personnel responsible for welding at welding sites must comply with the provisions of Appendix C.

5.3.3 Requirements for External Welding Personnel Externally hired welding personnel should meet the following requirements.

- a) The external welding personnel were able to complete their tasks in accordance with Appendix B;
- b) The work of the external welding personnel shall be performed and recorded in accordance with the requirements of 5.3.2, and the record shall include at least the date, location, duration, and... Information such as activity types.

5.4 Inspection personnel Welding inspectors shall comply with the provisions of GB/T 25343.5.

5.5 Technical Requirements

5.5.1 Equipment and Facility Requirements Welding manufacturing (P) or repair (M) activities shall have suitable equipment, facilities, and sites, and shall include at least the following.

- a) A roofed, dry, well-ventilated, and bright workshop and work area;
- b) A storage area for storing welding filler materials and auxiliary necessities;
- c) If welding different groups of materials (such as aluminum and aluminum alloys or stainless steel), each material should be welded using separate tools, processing equipment, and... Equipment, or materials, tools, and fixtures should be cleaned before use;
- d) Sufficient energy supply;
- e) Suitable testing equipment;