

ICS 25.220
CCS A 29



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

GB/T 18226-2025

Replacing GB/T 18226-2015

**Specification for steel component anticorrosion of highway
traffic engineering**

公路交通工程钢构件防腐技术条件

Issued on: August 29, 2025

Implemented on: March 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Preface	III
1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Anti-corrosion coating classification	3
5 General Requirements	4
6 Technical Requirements	4
7 Test methods	19
Appendix A (Informative) Performance requirements and test methods for anti-corrosion coatings on other steel components	24
Appendix B (Normative) Test method for adhesion of hot-dip aluminum coating	26
Appendix C (Normative) Test method for uniformity of hot-dip aluminum coating	28
Appendix D (Normative) Test method for adhesion of metal coatings	29
Appendix E (Normative) Cathodic Disbonding Resistance Test Method	31
Reference	32

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 18226-2015 "Technical conditions for corrosion protection of steel components in highway traffic engineering".

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) Added terms and definitions for highway traffic engineering steel components and zinc-aluminum-magnesium alloy coatings (see 3.1 and 3.8);

b) Changed the following. hot-dip galvanized coating, hot-dip aluminum coating, hot-dip galvanized aluminum alloy coating, hot-dip aluminum-zinc alloy coating, zinc-chromium coating (Dacromet), powder galvanized coating, electrostatic spray polyester coating, fluidized bed plastic coating, hot dip galvanized polyester composite coating, hot dip Galvanized plastic-dip composite coating, hot-dip aluminum-polyester composite coating, hot-dip aluminum-dip plastic-dip composite coating, hot-dip galvanized aluminum alloy

polyester composite coating Composite coating, hot dip galvanized aluminum alloy plastic coating, hot dip aluminum zinc alloy polyester composite coating, hot dip aluminum zinc alloy plastic coating Definitions of composite coatings and epoxy zinc-based polyester composite coatings (see 3.2~3.7, 3.9~3.19, 3.1~3.14 of the 2015 edition, March 17 to March 19);

c) The terms and definitions of epoxy zinc-based powder coating and pure polyester powder coating have been deleted (see 3.15 and 3.16 of the 2015 edition);

d) The classification of anti-corrosion coatings has been changed (see Chapter 4, Chapter 4 of the 2015 edition);

e) The general requirements for corrosion protection of steel components have been changed (see Chapter 5, Chapter 5 of the 2015 edition);

f) Changed the hot-dip galvanized coating, hot-dip aluminum coating, electrostatic spray polyester coating, fluidized bed plastic coating, hot-dip galvanized aluminum alloy coating Material technical requirements for coatings, hot-dip aluminum-zinc alloy coatings, and epoxy zinc-based polyester composite coatings (see 6.1.1, 6.2.1, 6.3.1, 6.4.1, 6.9.1, 6.12.1, 6.15.1, and 6.1.1, 6.2.1, 6.3.1, 6.4.1, 6.9.1, 6.12.1, 6.15.1 of the 2015 edition);

g) Changed the hot-dip galvanized coating, hot-dip aluminum coating, electrostatic spray polyester coating, fluidized bed plastic coating, hot-dip galvanized aluminum alloy coating Technical requirements for the appearance quality of coatings, hot-dip aluminum-zinc alloy coatings, and epoxy zinc-based polyester composite coatings (see 6.1.2, 6.2.2, 6.3.2, 6.4.2, 6.9.2, 6.12.2, 6.15.3, and 6.1.3, 6.2.3, 6.3.2, 6.4.2, 6.9.3, 6.12.3, 6.15.5.1 of the 2015 edition);

h) Changed the hot-dip galvanized coating, hot-dip aluminum coating, hot-dip galvanized polyester composite coating, hot-dip galvanized plastic composite coating, hot-dip Aluminum polyester composite coating, hot dip aluminum dip plastic composite coating, hot dip galvanized aluminum alloy coating, hot dip galvanized aluminum alloy polyester composite coating layer, hot dip galvanized aluminum alloy dip plastic composite coating, hot dip aluminum zinc alloy coating, hot dip aluminum zinc alloy polyester composite coating, hot dip Technical requirements for adhesion and thickness of aluminum-zinc alloy plastic-coated composite coatings (see 6.1.3, 6.2.3, 6.5.1, 6.6.1, 6.7.1, 6.8.1, 6.9.3, 6.10.1, 6.11.1, 6.12.3, 6.13.1, 6.14.1, 6.1.2, 6.2.2, 6.5.1, 6.6.1, 6.7.1, 6.8.1 of the 2015 edition, 6.9.2, 6.10.1, 6.11.1, 6.12.2, 6.13.1, 6.14.1);

i) Changed the hot-dip galvanized coating, hot-dip aluminum coating, electrostatic spray polyester coating, fluidized bed plastic coating, hot-dip galvanized aluminum alloy coating Technical requirements for uniformity of hot-dip aluminum-zinc alloy coating (see 6.1.4, 6.2.4, 6.3.4, 6.4.4, 6.9.4, 6.12.4, 2015 Versions 6.1.4, 6.2.4, 6.3.4, 6.4.4, 6.9.4, and 6.12.4);

j) Changed the hot-dip galvanized coating, hot-dip aluminum coating, electrostatic spray

polyester coating, fluidized bed plastic coating, hot-dip galvanized aluminum alloy coating Adhesion technical requirements for coatings, hot-dip aluminum-zinc alloy coatings, and epoxy zinc-based polyester composite coatings (see 6.1.5, 6.2.5, 6.3.5, 6.4.5, 6.9.5, 6.12.5, 6.15.5, and 6.1.5, 6.2.5, 6.3.5, 6.4.5, 6.9.5, 6.12.5, 6.15.5.3 of the 2015 edition);

k) Changes to the anti-bending performance technology of hot-dip galvanized coating, hot-dip aluminum coating, electrostatic spray polyester coating, and fluidized bed plastic coating Requirements (see 6.1.6, 6.2.6, 6.3.6, 6.4.6, and 6.1.6, 6.2.6, 6.3.6, 6.4.6 of the 2015 edition);

l) Changed the hot-dip galvanized coating, hot-dip aluminum coating, electrostatic spray polyester coating, fluidized bed plastic coating, hot-dip galvanized aluminum alloy coating Technical requirements for salt spray corrosion resistance of hot-dip aluminum-zinc alloy coatings (see 6.1.7, 6.2.7, 6.3.10, 6.4.10, 6.9.6, 6.12.6, 6.1.7, 6.2.7, 6.3.10, 6.4.10, 6.9.6, and 6.12.6 of the 2015 edition);

m) Modified the thickness technical requirements for electrostatic spray polyester coating, fluidized bed dipping coating, and epoxy zinc-based polyester composite coating (see 6.3.3, 6.4.3, 6.15.4, and 6.3.3, 6.4.3, 6.15.5.2 of the 2015 edition);

n) Changed the technical requirements for wear resistance of electrostatic spray polyester coating, fluidized bed dipping coating, and epoxy zinc-based polyester composite coating (see 6.3.7, 6.4.7, 6.15.6, and 6.3.7, 6.4.7, 6.15.5.6 of the 2015 edition);

o) Changed the technical requirements for impact resistance of electrostatic spray polyester coating, fluidized bed dipping coating, and epoxy zinc-based polyester composite coating (see 6.3.8, 6.4.8, 6.15.7, and 6.3.8, 6.4.8, 6.15.5.7 of the 2015 edition);

p) Changed the chemical solvent corrosion resistance performance of electrostatic spray polyester coating, fluidized bed dipping coating, and epoxy zinc-based polyester composite coating.

Technical requirements (see 6.3.9, 6.4.9, 6.15.8, 6.3.9, 6.4.9, 6.15.5.8 of the 2015 edition);

q) Changed the weather resistance (xenon arc light source) of electrostatic spray polyester coating, fluidized bed dipping coating, and epoxy zinc-based polyester composite coating.

Technical requirements (see 6.3.11, 6.4.11, 6.15.11, and 6.3.12, 6.4.13, and 6.15.5.13 of the 2015 edition);

r) Modified the technical requirements for moisture and heat resistance of electrostatic spray polyester coating and fluidized bed dipping coating (see 6.3.12, 6.4.12, 2015 Version 6.3.11, 6.4.11);

s) Added technical requirements for low-temperature resistance of electrostatically sprayed polyester coatings and fluidized bed dipping coatings (see 6.3.13 and 6.4.13);

t) Deleted the technical requirements and test methods for low temperature embrittlement

resistance of fluidized bed plastic dipping coating (see 6.4.12, 2015 edition) 7.16);

u) Changed the hot-dip galvanized polyester composite coating, hot-dip galvanized plastic composite coating, hot-dip aluminum-coated polyester composite coating, hot-dip aluminum-coated Plastic composite coating, hot dip galvanized aluminum alloy polyester composite coating, hot dip galvanized aluminum alloy dip plastic composite coating, hot dip aluminum zinc alloy Technical requirements for inner and outer coatings of polyester composite coatings and hot-dip aluminum-zinc alloy plastic-coated composite coatings (see 6.5.2, 6.5.3, 6.6.2, 6.6.3, 6.7.2, 6.7.3, 6.8.2, 6.8.3, 6.10.2, 6.10.3, 6.11.2, 6.11.3, 6.13.2, 6.13.3, 6.14.2, 6.14.3, 2015 version 6.5.2, 6.5.3, 6.6.2, 6.6.3, 6.7.2, 6.7.3, 6.8.2, 6.8.3, 6.10.2, 6.10.3, 6.11.2, 6.11.3, 6.13.2, 6.13.3, 6.14.2, 6.14.3);

v) Deleted the hot-dip galvanized polyester composite coating, hot-dip galvanized plastic composite coating, hot-dip aluminum-coated polyester composite coating, hot-dip aluminum-coated Plastic composite coating, hot dip galvanized aluminum alloy polyester composite coating, hot dip galvanized aluminum alloy dip plastic composite coating, hot dip aluminum zinc alloy Technical requirements and test methods for temperature alternating resistance of polyester composite coatings and hot-dip aluminum-zinc alloy plastic-coated composite coatings (see 2015 edition (6.5.4, 6.6.4, 6.7.4, 6.8.4, 6.10.4, 6.11.4, 6.13.4, 6.14.4, 7.18));

w) Changed the cyclic salt spray resistance of hot-dip aluminum-coated polyester composite coating, hot-dip aluminum-coated plastic composite coating, and epoxy zinc-based polyester composite coating Corrosion performance technical requirements (see 6.7.4, 6.8.4, 6.15.10, and 6.7.5, 6.8.5, and 6.15.5.10 of the 2015 edition);

x) The technical requirements for epoxy zinc-based coatings have been deleted (see 6.15.4 of the 2015 edition);

y) Deleted the technical requirements for wet adhesion, bending resistance and heat and humidity resistance of epoxy zinc-based polyester composite coating (see the 2015 edition 6.15.5.4, 6.15.5.5, 6.15.5.11);

z) Modified the technical requirements for cathodic stripping resistance and low temperature resistance of epoxy zinc-based polyester composite coatings (see 6.15.9, 6.15.13, 2015 Edition, 6.15.5.9 and 6.15.5.12);

aa) Added technical requirements and test methods for hot water immersion resistance of epoxy zinc-based polyester composite coatings (see 6.15.12 and 7.17);

ab) Modified the technical requirements for zinc-chromium coating (Dacromet) (see 6.16, 6.16 of the 2015 edition);

ac) The technical requirements for powder galvanized coating have been changed (see 6.17, 6.17 of the 2015 edition);