

ICS 45.080
CCS S 12



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

GB/T 47260.6-2026

**Test method for rail fastening systems - Part 6: Test method for
resistance to severe environmental conditions**

钢轨扣件系统试验方法 第6部分：耐恶劣环境条件试验方法

(English Translation)

Issued on: March 31, 2026

Implemented on: October 1, 2026

Issued by: State Administration for Market Regulation

Table of Contents

Preface
Introduction
1 Scope
2 Normative References
3 Terms and Definitions
4 Principle
5 Test Equipment
6 Specimens
7 Experimental Procedure
8 Test Report

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 6 of GB/T 47260 "Test Methods for Rail Fastening Systems". GB/T 47260 has already published the following parts.

---Part 6: Test methods for tolerance to harsh environmental conditions.

This document is modified to adopt ISO 22074-6:2021 "Railway infrastructure - Rail fastening systems - Part 6: Testing under harsh environmental conditions".

"Test Methods".

The technical differences between this document and ISO 22074-6:2021, and the reasons therefor, are as follows.

---Terms and definitions from ISO 22074-6:2021 have been removed to better reflect my country's national conditions;

---ISO 9227 has been replaced with the normatively referenced GB/T 10125 (see 5.1, Chapter 7) to adapt to my country's technical conditions, and has been expanded.

Operability;

---Change "sleeper or base plate" to "sleeper, turnout sleeper or track slab unit" (see Chapter 7) to increase operability;

---The test report now includes the standard name and requirements for test personnel, and "foundation for fastener assembly" has been changed to "test".

Use sleeper, turnout sleeper or track slab models (see Chapter 8) to adapt to my country's technical conditions and increase operability.

The following editorial changes have been made to this document.

---To align with existing standards, the standard title has been changed to "Test Methods for Rail Fastening Systems Part 6: Resistance to Harsh Environments".

Test methods for parts.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Railway Administration.

Introduction

GB/T 47260 aims to establish a universally applicable, accurate, and unified test method for rail fastening systems, and is proposed to consist of eight parts.

---Part 1: Vocabulary. The purpose is to standardize the terminology used in testing methods for rail fastening systems.

---Part 2: Test Methods for Longitudinal Resistance of Rails. The purpose is to standardize the test methods for the longitudinal resistance of rails in rail fastening systems.

---Part 3: Pull-out force test methods. The purpose is to standardize the pull-out force test methods for embedded parts in rail fastening systems.

---Part 4: Assembly Fatigue Performance Test Methods. The purpose is to standardize the assembly fatigue performance test methods for rail fastener systems.

---Part 5: Insulation Resistance Test Methods. The purpose is to standardize the insulation resistance test methods for rail fastening systems.

---Part 6: Test methods for resistance to harsh environmental conditions. The purpose is to standardize test methods for rail fastening systems to withstand harsh environmental conditions.

---Part 7: Test Methods for Clamping Force and Lifting Stiffness. The purpose is to standardize the testing methods for clamping force and lifting stiffness of rail fastening systems.

Verification method.

---Part 8: Vertical Stiffness Test Methods. The purpose is to standardize the vertical stiffness

test methods for rail fastening systems and elastic elements.

Test methods for rail fastening systems Part 6: Test methods for tolerance to harsh environmental conditions

1 Scope

This document specifies laboratory test methods for rail fastening systems to withstand harsh environmental conditions.

This document applies to complete rail fastening systems, including mechanical fastening systems for embedded rails.

This document does not apply to adhesive components used for fixing embedded rails.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 10125 Corrosion test in artificial atmosphere - Salt spray test (GB/T 10125-2021, ISO 9227:2017, MOD)

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Principles

The assembled rail fastening system was placed in a salt spray environment to inspect and record the ease of disassembly and reassembly of each component.

state.

5.1 Salt spray equipment

Salt spray equipment shall comply with the provisions of GB/T 10125 regarding neutral salt spray testing.

5.2 Tools

Hand tools typically used for installing and removing rail fastening systems.

6 Test specimens

Each test piece should include a complete rail fastening system and its matching sleeper, turnout sleeper or track slab unit and short rail.

7 Test Procedure

Visually inspect and record the condition of each component, then assemble the short rails onto a section of sleeper, turnout sleeper, or rail using fasteners according to standard assembly methods.