

ICS 75.180.10

CCS E 92



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

GB/T 46429.2-2025

**Petroleum, petrochemical and natural gas industries - External
corrosion protection of risers by coatings and linings - Part 2:
Maintenance and field repair coatings for riser pipes**

石油、石化和天然气工业 用涂层和包覆对立管的外腐蚀防护 第2部分：立管防腐
层的维护和现场修复

(English Translation)

Issued on: October 31, 2025

Implemented on: May 1, 2026

Issued by: State Administration for Market Regulation

Table of Contents

Preface	
Introduction	
1 Scope	
2 Normative References	
3 Terms and Definitions	
4 Symbols and Abbreviations	6.
4.1 Symbol	
4.2 Abbreviations	
5 Types of anti-corrosion coatings	7.
6 General Rules	
6.1 Customer Requirements	
6.2 Contractor Requirements	
6.3 Rounding Requirements	
6.4 Compliance Requirements	
6.5 Criteria for Assessing the Condition of In-Service Corrosion Protection Coatings	
7 Evaluation process and construction procedures	9.
7.1 General Requirements	
7.2 APS and ITP	
7.3 Compliance Assessment of Anti-corrosion Coating	
7.4 Process Qualification Test	
7.5 Trial Production Test	
7.6 Construction, Testing and Inspection	
8 Selection Criteria for Anti-corrosion Coatings	
8.1 General Rules	
8.2 Construction Restrictions	
8.3 Operating Conditions	
9 Test Program	
9.1 Sample Requirements	
9.2 Testing Items and Frequency	
9.3 Thickness Inspection	
9.4 Retest	
10 Amorphous low-viscosity polyolefin-based coating	

- 10.1 Coating Marking
- 10.2 Coating Type
- 10.3 Surface Pretreatment
- 10.4 Coating Application
- 10.5 Coating Test
- 11 Vaseline tape and wax-based tape wrapping systems
 - 11.1 Anti-corrosion coating marking
 - 11.2 Tape wrapping system type
 - 11.3 Surface Pretreatment
 - 11.4 Construction of Anti-corrosion Coating
 - 11.5 Anti-corrosion coating test
- 12 Polychloroprene rubber-based elastic coating
 - 12.1 Coating Marking
 - 12.2 Coating Type
 - 12.3 Surface Pretreatment
 - 12.4 Coating Application
 - 12.5 Coating Test
- 13 Liquid epoxy coating
 - 13.1 Coating Marking
 - 13.2 Coating Type
 - 13.3 Surface Pretreatment
 - 13.4 Coating Application
 - 13.5 Anti-corrosion coating test
- Appendix A (Informative) Probability of Exposure in Splash Zone
- Appendix B (Informative) Testing of Anti-corrosion Coatings on Damp Substrates
 - B.1 Overview
 - B.2 Test Program
 - B.3 Non-crystalline low-viscosity polyolefin-based anti-corrosion layer
 - B.4 Vaseline and wax-based tape wrapping systems
 - B.5 Liquid epoxy coating
- References

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 46429 "External Corrosion Protection of Risers with Coatings and Coatings for Petroleum, Petrochemical and Natural Gas Industries".

GB/T 46429 has published the following parts.

---Part 1: Elastomer-based corrosion protection system. polychloroprene or ethylene propylene diene monomer (EPDM) rubber;

---Part 2: Maintenance and on-site repair of riser anti-corrosion coating.

This document is modified to adopt ISO 18797-2:2021 "Coatings and claddings for external corrosion protection of risers in the petroleum, petrochemical and gas industries".

Part 2: Maintenance and on-site repair of riser corrosion protection layer.

The technical differences between this document and ISO 18797-2:2021, and the reasons therefor, are as follows.

---ISO 80000-1 (see 6.3) has been replaced by the normatively referenced GB/T 3101-1993, and GB/T 533 has been replaced by the normatively referenced GB/T 533.

ISO 2781 (see 12.5.8) has been replaced, and ISO 1183-1 (see Table 5) has been replaced with the normatively referenced GB/T 1033.1.

The normative reference GB/T 1040.1 replaces ISO 527-1 (see Table 6), and the normative reference GB/T 1040.2 replaces [the previous one].

ISO 527-2 (see 10.5.12.6) replaces ISO 527-3 (see Chapter 10) with the normatively referenced GB/T 1040.3.

The normatively referenced GB/T 1408.1 replaces ASTM D149 (see Chapter 11), and the normatively referenced GB/T 1690 replaces...

ISO 1817 (see Chapter 12) was replaced by the normatively referenced GB/T 2411, replacing ISO 868:2003 (see Chapter 12).

The normatively referenced GB/T 2423.19 replaces ASTM D149 (see Chapter 12), and is replaced by the normatively referenced GB/T 2941.

It replaces ISO 23529:2004 (see Chapter 12) and replaces ISO 3801:1977 (see Chapter 12) with the normatively referenced GB/T 4669.

Chapter 11) replaces ISO 4624:2002 with the normatively referenced GB/T 5210 (see

Chapter 11), and uses the normatively referenced...

GB/T 6031 replaces ISO 48:2010 (see Chapter 12), and the normatively referenced GB/T 6672 replaces ISO 4593.

ISO 1993 (see Chapter 10), ISO 2811-1:1997 (see Chapter 11) was replaced by the normatively referenced GB/T 6750.

GB/T 7790, a normative reference, replaces ASTM D1141 (see Chapter 12, Appendix B).

GB/T 8923.1 replaces ISO 8501-1:2007 (see 7.2.2 and Table 3) and replaces the normatively referenced GB/T 8923.4.

ISO 8501-4:2007 (see 7.2.2 and Table 3) has been replaced by the normatively referenced GB/T 13021, replacing ISO 6964:2019.

(See Chapters 10 and 11) ISO 8503-2:1988 (see 7.2.2) has been replaced by the normatively referenced GB/T 13288.2.

ISO 8503-5:2003 (see 7.2.2) has been replaced by the normatively referenced GB/T 13288.5.

GB/T 13452.2 replaces ISO 2808 (see Table 9), and the normatively referenced GB/T 14522 replaces ISO 16474-3.

(See Chapter 12) ISO 4892-2:2013 has been replaced by the normatively referenced GB/T 16422.2 (see Chapters 10 and 11).

Chapter 12 replaces ISO 10474:2013 with the normatively referenced GB/T 16422.3 (see Chapter 12).

GB/T 21775 replaces ISO 1523 (see Chapter 11) to facilitate the use of this document;

---The normative reference GB/T 1689 (see 12.1) has been added to meet domestic requirements;

---The definition of "surface" has been removed (see 3.26 in ISO 18797-2:2021). People in related fields in China are very familiar with the concept of "surface." Known, no definition is needed;

---The terminology and definition of "riser" have been changed (see 3.19), as the terminology for risers differs between domestic and international contexts;

---The abbreviations NACE and SSPC in the original text have been removed, the abbreviation TDS has been added, and all PDS values in the entire text have been unified.

The previous version was changed to TDS (see 4.2) for easier application of this document;

---Change "temperature probe" to "infrared thermometer" (see 9.2, Table 3) for easier application of this document;