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

GB 26255.1-2010

**Steel-plastic-transition fittings for polyethylene(PE) piping
systems for the supply of gaseous fuels
(English Translation)**

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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 of Standardization Documents" drafted.

This document replaces GB/T 26255.1-2010 "Mechanical fittings for polyethylene piping systems for gas - Part 1: The nominal outer diameter is not large Steel-plastic conversion pipe fittings for pipes up to 63mm" and GB/T 26255.2-2010 "Mechanical pipe fittings for polyethylene piping systems for gas, No. 2 Part. Steel-plastic conversion pipe fittings for pipes with a nominal outer diameter greater than 63mm", and GB/T 26255.1-2010 and GB/T 26255.2-2010 in contrast, except for structural adjustments and editorial changes, the main technical changes are as follows.

- a) Added the content that the purchaser is concerned about (see Chapter 1, GB/T 26255.1-2010 and GB/T 26255.2-2010, Section 1 chapter);
- b) Added and deleted related terms, definitions, symbols and abbreviations (see Chapter 3, GB/T 26255.1-2010 and Chapter 3 of GB/T 26255.2-2010);
- c) Changed the requirements for the classification and naming of polyethylene compounds (see 4.1.2, GB/T 26255.1-2010 and GB/T 26255.2-5.3 of 2010);
- d) Changed the material requirements for metal parts (see 4.2.2, GB/T 26255.1-2010 and 5.2 of GB/T 26255.2-2010);
- e) Added the material requirements for anti-corrosion layer (see 4.2.3);
- f) Changed the material requirements of elastic sealing ring (see 4.2.4, GB/T 26255.1-2010 and GB/T 26255.2-2010 5.4);
- g) Added the requirements for recycled materials of polyethylene parts (see 4.3);
- h) Added the chapter "Product Classification" (see Chapter 5);
- i) Changed the design requirements for steel-plastic conversion (see 6.1.1, 6.1.2 and 6.1.3, GB/T 26255.1-2010 and GB/T 26255.2-6.1 of 2010);

- j) The design requirements for surface pretreatment and polyethylene heat-shrinkable jacket before coating of fusion-bonded epoxy powder coating are added (see 6.1.4);
 - k) Changed the appearance requirements (see 6.2, GB/T 26255.1-2010 and 6.2 of GB/T 26255.2-2010);
 - l) Changed the size requirements of PE parts (see 6.4.2, 6.7 of GB/T 26255.1-2010 and GB/T 26255.2-2010);
 - m) Added the specification and size of the steel-plastic conversion (see 6.4.3);
 - n) Change the minimum inner diameter requirements (see 6.4.4, GB/T 26255.1-2010 and GB/T 26255.2-2010 6.8);
 - o) Deleted the requirement for gas flow rate under constant pressure drop, changed to Note (see 6.4.4, Clause 8 of GB/T 26255.1-2010 chapter);
 - p) The thickness requirements for the anti-corrosion coating of steel pipe components are added (see 6.4.5);
 - q) Changed the performance requirements for anti-corrosion coating of steel pipe components (see 6.6, GB/T 26255.1-2010 and GB/T 26255.2-2010 Section 1).
- Chapter 8 Table 1);
- r) The requirement for the number of sealing rings has been increased (see 6.9);
 - s) Delete the sample preparation requirements (GB/T 26255.1-2010 and Chapter 7 of GB/T 26255.2-2010);
 - t) Deleted the tightness test in the production process, and changed it to the description of the inspection rules (see 8.3.3, 6.8, 6.8 of GB/T 26255.1-2010).
- 6.9 of GB/T 26255.2-2010);
- u) Change the requirements for the preparation of hydrostatic samples (see 7.4.1, GB/T 26255.1-2010 and 9.4 of GB/T 26255.2-2010);
 - v) Changed the inspection requirements for internal pressure sealing performance after tensile load at 23°C (see 7.6, GB/T 26255.1-2010 and 9.3.1 of GB/T 26255.2-2010);
 - w) Changed the axial tension in the sealing test after tensile load at 80°C (see 7.7, GB/T 26255.1-2010 and 9.3.2 of GB/T 26255.2-2010);
 - x) Added the test method for the performance of FBE steel-plastic conversion and 3PE steel-plastic conversion anti-corrosion coating (see 7.11);
 - y) Changed the size grouping (see 8.2.2, 10.3.1.1 of GB/T 26255.2-2010);
 - z) The way of expressing the items of factory inspection and type inspection has been added (see 8.3.1);

- aa) The tightness test and leak detection test in the production process are added (see 8.3.3);
- bb) Changed the content of the logo (see Chapter 9, Chapter 11 of GB/T 26255.1-2010 and GB/T 26255.2-2010);
- cc) Changed the internal pressure tightness test method (see Appendix A, GB/T 26255.1-2010 and GB/T 26255.2-2010 appendix Record A);
- dd) Changed the test method of resistance to bending internal pressure sealing (see Appendix B, Appendix B of GB/T 26255.1-2010);
- ee) Added the adhesion test method (see Appendix C);
- ff) Added the cathodic disbondment test method (see Appendix D);
- gg) Added peel strength test method (see Appendix E).

This document is drafted with reference to ISO 17885:2015 "Specification for Mechanical Fittings for Pressure Piping Systems in Plastic Piping Systems", the degree of consistency is not equivalent.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document specifies the steel-plastic conversion fittings for transitional connection between PE pipes and metal pipes in polyethylene (PE) piping systems for gas (the following (referred to as steel-plastic conversion) materials, product classification, requirements, test methods, inspection rules, marking, packaging, transportation and storage.

This document is applicable to the PE pipeline system and its components for gas transmission and distribution with a working temperature of -20°C~40°C.

The end of the part can be connected with other metal pipes by thread, welding or flange, and the end of the PE part can be connected with PE by means of hot-melt butt, electro-fusion connection, etc.

Pipe connection.

Note: This document specifies the steel-plastic conversion parts and their overall performance and requirements. Its purpose is to ensure the pressure resistance, sealing and the ability of the connection end to resist the load, the steel-plastic joint part in the steel-plastic transformation will not be pulled out before the pipe section at the end of the PE part yields (breaks) under tension or compression.

It is the responsibility of the purchaser to properly select the products specified in this

document according to their specific application requirements and in combination with relevant regulations, standards or specifications. Manufacturing According to the product use or field, conveying medium, maximum working pressure (MOP), component material, rigid element used, the ability of the connection end to resist load, resistance Corrosion, operating temperature range for installation and use, etc., are declared in the technical file.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 2828.1 Counting Sampling Inspection Procedure Part 1: Lot-by-Lot Inspection
Sampling Plan Retrieved by Acceptance Quality Limit (AQL) GB/T 2918 Standard
Environment for Conditioning and Testing of Plastic Specimens GB/T 6111 Determination of internal pressure resistance of thermoplastic piping systems for fluid transportation GB/T 7306.2 55° sealing pipe thread part 2.conical internal thread and conical external thread
GB/T 8163 Seamless steel pipes for conveying fluids GB/T 8806 Determination of dimensions of plastic parts of plastic piping systems GB/T 8923.1 Visual assessment of surface cleanliness of steel surface preparations before coating - Part 1: Uncoated steel the rust grade and treatment grade of the surface and the steel surface after the full removal of the original coating GB/T 15558.1 Buried Polyethylene (PE) Pipeline System for Gas - Part 1: Pipe GB/T 15558.2 Buried Polyethylene (PE) Pipeline System for Gas - Part 2: Pipe Fittings GB/T 18252 Plastic piping systems Determination of long-term hydrostatic strength of thermoplastic materials in tubular form by extrapolation GB/T 18475 Material Grading and Nomenclature for Thermoplastic Pressure Pipes and Fittings General Use (Design) Factor GB/T 18570.3 Evaluation test for surface cleanliness of steel surface treatment before coating - Part 3: Steel before coating Surface Dust Assessment (Pressure Sensitive Adhesive Tape Method) GB/T 18570.9 Test for the evaluation of surface cleanliness of steel surface treatment before coating - Part 9: Field of water-soluble salts Conductivity determination GB/T 19278-2018 General terms and definitions for thermoplastic pipes, fittings and valves GB/T 23257 Buried steel pipeline polyethylene anti-corrosion coating GB/T 23258 Specification for Internal Corrosion Control of Steel Pipes GB/T 23658 Elastomer sealing ring Material requirements for sealing rings for pipelines and fittings for conveying gaseous fuels and hydrocarbon liquids GB 50236 Construction Specifications for Field Equipment and Industrial Pipeline Welding Engineering SY/T 0315 Technical Specification for Fusion Bonded Epoxy Powder Coating for Steel Pipes