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

GB/T 26500-2025

Replacing GB/T 26500-2011

**Structure, main size and basic parameters of steel pipes and
fitting lined with plastic**

塑料衬里复合钢管和管件结构型式、主要尺寸及基本参数

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Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	1
4.Basic Requirements	2
5.Classification and Codes	2
6.Selection, welding, and assembly of port flanges	3
6.1 N-type composite steel pipe and fittings port flanges	3
6.2 Welding method for composite steel pipes and fittings with port flanges	4
6.3 W-type composite steel pipe and fittings port flanges	7
6.4 Combination and matching forms of fixed flanges and loose flanges for composite steel pipes and fittings	7
7.1 N-type composite steel pipes and fittings	9
7.2 W-type composite steel pipes and fittings	27
39 References	42

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 supersedes GB/T 26500-2011 "General Technical Requirements for Fluoroplastic Lined Steel Pipes and Fittings" and is consistent with GB/T 26500-2011. Aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The scope of application has been changed to include polypropylene (PP) and polyethylene (PE) as lining materials (see Chapter 1,.2011 edition). Chapter 1);
- b) The requirements for raw materials, design, inspection and acceptance, packaging, transportation, and storage of composite steel pipes and fittings have been changed (see 4.1,.2011). (Chapters 5-10 of the.2008 edition)
- c) The criteria for determining operating temperature and operating pressure have been added (see 4.2);
- d) Increased the factors to be considered when determining specifications (see 4.3);
- e) Added classifications and codes based on major size series (see Chapter 5);

- f) The selection requirements for port flanges have been changed (see 4.4 in the 2011 edition);
- g) The welding method for composite steel pipes and fittings to port flanges has been added (see 6.2);
- h) The combination of fixed flanges and loose flanges for composite steel pipes and fittings has been added (see 6.4);
- i) The structural types and main dimensions of composite steel pipes, reducers, 45° elbows, tees, and crosses have been modified (see 7.1.1~7.1.5, 7.2.1~7.2.5 (4.2.1~4.2.5 in the 2011 version))
- j) The structural type and main dimensions of the composite instrument tee have been added (see

1 Scope

GB/T 26500-2025 is the Chinese national standard on structure, main size and basic parameters of steel pipes and fitting lined with plastic, in the field of chemical technology. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 29 August 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2026. Classification: ICS 71.120, CCS G94. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the basic requirements, classification and designation, and selection of port flanges for plastic-lined composite steel pipes and fittings used for transporting chemical fluids. Welding and assembly methods, structural type and main dimensions, minimum diameter and markings of the plastic liner of the flange sealing surface. This document applies to nominal sizes DN15~DN1200, with a plastic inner lining of polytetrafluoroethylene (PTFE) or fusible polytetrafluoroethylene. PFA, ethylene-tetrafluoroethylene copolymer (ETFE), perfluoroethylene propylene (FEP), polyvinylidene fluoride (PVDF), polypropylene (PP), polyethylene Plastic-lined composite steel pipes and fittings for transporting chemical fluids made of polyethylene (PE) thermoplastic (hereinafter referred to as "composite steel pipes and fittings").

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 9124.1 Steel pipe flanges - Part 1: PN series

HG/T 2437 General Technical Requirements for Plastic-Lined Composite Steel Pipes and Fittings

HG/T 20592 Steel Pipe Flanges (PN Series)

HG/T 20615 Steel Pipe Flanges (Class Series)

HG/T 20623 Large Diameter Steel Pipe Flanges (Class Series)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 isostatic molding Fluoroplastic resin is filled into the cavity formed by the steel mold and the elastic mold, and a static pressure of 25MPa~35MPa is applied to the entire mold cavity. Force is applied to form a dense preform of fluoroplastic resin, which is then sintered and molded. The molded fluoroplastic tubes and fittings are then inserted into steel pipes and fittings, thus forming... The process methods for producing composite steel pipes and fittings. Note

1.The code for isostatic pressing process is IM. Note

2.Isostatic pressing (including hot melt extrusion molding) is an advanced process for forming composite steel pipes and fittings. The resulting fluoroplastic lining is dense. With high strength and excellent mechanical properties, the finished composite steel pipes and fittings exhibit excellent temperature resistance, negative pressure resistance, and impermeability.

3.2 hot melt extrusion molding Within the cavity formed by the rigid outer mold and the rigid inner mold, fusible polytetrafluoroethylene (PTFE), perfluoroethylene propylene (FEP), etc., are heated and melted. Fluoroplastic resin is heated to the sintering temperature of fluoropolymer resin. Through processing methods, the molten fluoropolymer resin is extruded to make it denser, and after cooling, it becomes... The process involves molding fluoroplastic pipes and fittings, then inserting them into steel pipes and fittings to form composite steel pipes and fittings.

Note. The code for hot melt extrusion molding process is TM.