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

CJ/T 120-2016

Replacing CJ/T 120-2008

**Coating plastic steel pipe for water supply
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard is a revision of CJ/T 120-2008 "Plastic-coated Composite Steel Pipe for Water Supply". Compared with CJ/T 120-2008, the main technology the content changes are as follows.

- Increase the scope of application of plastic-coated composite steel pipe;
- The classification and marking of plastic coated steel pipes are divided;
- Modified the requirements for the materials used in plastic-coated composite steel pipes;
- Added the requirements for base pipe processing and surface treatment before plastic coating;
- Modified the specifications and coating wall thickness of the plastic-coated composite steel pipe;
- Supplement the relevant provisions of the test method for intercepting samples;
- Added the inspection items of the external coating in the factory inspection;
- Added regulations on repairing defects in plastic-coated steel pipe coating.

This standard was proposed by the Standard Rating Institute of the Ministry of Housing and Urban-Rural Development.

This standard is under the jurisdiction of the Technical Committee for Standardization of Building Water Supply and Drainage of the Ministry of Housing and Urban-Rural Development.

Drafting organizations of this standard. China Construction Metal Structure Association, Tianjin Youfa Steel Pipe Group Co., Ltd., Tianjin Haohang Composite Pipe Industry Co., Ltd., Zhejiang Jinzhou Pipeline Technology Co., Ltd., Weifang Dongfang Steel Pipe Co., Ltd., Hangzhou Chunyuan Steel Plastic Pipe Co., Ltd., Shanghai De Water Purification Pipeline Co., Ltd., Tianjin Juncheng Steel Pipe Technology Group Co., Ltd., Tianjin Lida Steel Pipe Group Co., Ltd., Guangdong Liansu Technology Industrial Co., Ltd., Shanghai Haoli Plastic Coated Steel Pipe Co., Ltd., Tianjin Tsinghua Hengsen Pipe Manufacturing Co., Ltd., Tianjin Jiusheng Tongda Technology Co., Ltd., Chongqing Minghao Pipe Industry Co., Ltd., Jiangyin Huaxi Jieai Steel Plastic Pipe Co., Ltd., Tianjin Ruiyuan Powder Coating Co., Ltd., Shan Dongwofeng Green Pipe Co., Ltd., Axalta Huajia Chemical Co., Ltd., Changzhou Tengda Pipe Co., Ltd., Shandong Juli Pipe Co., Ltd., Langfang Xinli Powder Coating Co., Ltd., Shanghai Shipbuilding Technology Research Institute, Guangdong Ronggang Iron and Steel Co., Ltd., Hubei Xinhantong Pipe Industry Co., Ltd.

Division, Huangshan Ruibang Polymer Material Co., Ltd., Jinan Mike Pipeline Technology Co., Ltd., Haicheng Liaohe Large Steel Pipe Co., Ltd.

1 Scope

This standard specifies the terms and definitions, classification and markings, materials, requirements, and tests of plastic-coated composite steel pipes for water supply (hereinafter referred to as plastic-coated steel pipes) Methods, inspection rules, marking, packaging, transportation and storage.

This standard is applicable to the design, manufacture and manufacture of plastic-coated steel pipes for water supply whose nominal size is not greater than DN2000 and the temperature of the conveying medium is lower than 45°C.

test. For the non-threaded connection of plastic-coated steel pipe fittings, the plastic coating process and coating requirements can refer to this standard.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 1033 Plastic Non-foam Plastic Density Determination Part 1: Immersion Method,

Liquid Pycnometer Method and Titration Method GB/T 1040.1 Determination of tensile properties of plastics Part 1: General GB/T 1633 Thermoplastics Determination of Vicat Softening Temperature (VST) GB/T 2914 Plastic Vinyl Chloride Homopolymer and Copolymer Resin Volatile (including Water) Determination GB/T 3091 Welded steel pipe for low pressure fluid transportation GB/T 6554 Resin-based reactive compounds for electrical insulation Part 2: Test methods for electrical powder coating GB/T 7306 (all parts) 55° sealed pipe thread GB/T 8163 Seamless steel pipe for conveying fluid GB/T 8923.1-2009 Visual assessment of surface cleanliness of steel surface treatment before coating. Part 1: Rust grade and treatment grade of uncoated steel surface and steel surface after comprehensive removal of the original coating GB/T 9119 plate flat welded steel pipe flange GB/T 9124 Steel pipe flange technical conditions GB/T 13295 Ductile iron pipes, fittings and accessories for water and gas GB/T 17219 Safety evaluation standard for drinking water distribution equipment and protective materials CJ/T 156 groove type pipe joint SY/T 5037 Submerged arc welded steel pipe for ordinary fluid transportation pipeline

3 Terms and definitions

The following terms and definitions apply to this document.

Base tube

Steel pipe before powder coating.

Plastic coated steel pipe the steel pipe is used as the base pipe, and the plastic powder is used as the coating material. The plastic layer is melt-coated on its inner surface through the plastic coating process such as suction coating and spraying.

The outer surface of the steel-plastic composite pipe is melt-coated with a plastic layer or another process is used to coat the outer surface with an anti-corrosion layer of other materials.

4.1 Classification

4.1.1

According to the inner coating material, it is divided into polyethylene coating and epoxy resin coating.

4.1.2

According to the outer coating (plating) layer material, it is divided into hot-dip galvanized layer, epoxy resin coating and polyethylene coating.

4.2 Marking

4.2.1

The product mark consists of the code of the plastic-coated steel pipe, the code of the inner coating material, the code of the outer coating material and the nominal size.

Steel-plastic composite pipe code, SP Coating code, T Code of inner coating material, polyethylene is PE, epoxy resin is EP)-DN the outer coating material code, polyethylene is PE, epoxy resin is EP, Hot-dip galvanizing is not marked Nominal size

4.2.2

The categories and expression methods of plastic-coated steel pipes are shown in Table 1.

5.1 Base pipe

5.1.1

When welded steel pipe is used as the base pipe, it shall meet the requirements of GB/T 3091.

5.1.2

When the spiral seam submerged arc welded steel pipe is used as the base pipe, it shall meet the requirements of SY/T 5037.

5.1.3

When seamless steel pipes are used as base pipes, they shall meet the requirements of GB/T 8163.

5.2 Flange

5.2.1

The type and size of steel pipe flanges used for the connection of plastic-coated steel pipes should comply with GB/T 9119 or other corresponding standards.

5.2.2

The material and tolerance of steel pipe flanges should meet the requirements of GB/T 9124.

5.3 Polyethylene powder

5.3.1

The properties of the polyethylene powder used for coating should meet the requirements of Table 2.

5.3.2

For each grade of polyethylene powder, a third party with inspection qualification should provide a powder performance inspection report that meets the requirements of Table 2.