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Trade Standard of Town Construction in PRC

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Steel pipes of lining plastic for water supply

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Foreword

Steel pipes of lining plastic for water supply is to line the internal wall of steel tube with thermoplastic tube such as polyethylene (PE), heat resisting polyethylene (PE-RT), cross-linked polyethylene (PE-X), polypropylene (PP-R), rigid polyvinyl chloride (PVC-U) and chlorinated polyvinyl chloride (PVC-C) etc. according to conveying medium. Based on CJ/T 136-2001 *Steel Pipes of Lining Plastic for Water Supply*, the standard is revised according to the improvement, upgrading, development and market actual demand of steel pipe of lining plastic manufacturing engineering in recent years. The main revisions are as follows:

1. The specification is expanded to DN500, besides galvanized steel pipes, the base tube can also use straight seam welding steel pipes, spiral seam submerged-arc welding steel pipes and seamless steel pipes, and it also stipulated standards and requirements shall be implemented for all kinds of base tubes;
2. Based on the original external hot galvanizing steel pipes of lining plastic for external corrosion prevention, external coating plastic steel pipes of lining plastic are added, and it also stipulated standards and requirements shall be implemented for all kinds of external corrosion prevention;
3. Stipulate the applied range of all kinds of lining plastic and the standards and requirements shall be implemented for lining plastic and adhesives;
4. The wall thickness and permissible deviation of external coating layer and welded flange coating layer is added;
5. Pretreatment requirements for steel pipes of lining plastic are added;
6. Required value of bond strength of cold water pipe is improved;
7. Test requirements and test methods for hydraulic pressure test are added;
8. Test method for thickness of external coating layer is added;
9. Requirements and test methods for peel strength of external coating layer are added.

Annex A of the standard is informative annex, and annex B is normative annex.

The standard is revised basing on the standard JWWA K116-2004 *Steel Pipes of Lining Rigid PVC for Water Supply* of Japan Water Works Association; the wall thickness and tolerance of lining plastic layer, requirements and test methods for bond strength test, flattening test and bending test, and inspecting regulations for steel pipes of lining plastic in the standard apply the regulations in JWWA K116-2004. The regulations on varieties of lining plastic, specifications for diameters and types of base tube are enlarged than that in JWWA K116-2004, and the bond strength value is improved.

The standard was proposed by the Research Institute of Standards & Norms at the Ministry of Construction of PRC.

CJ/T 136-2007

The standard has been given by the Ministry of Construction of PRC to the Drainage Department Technical Standard and Norms Committee for verification.

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Steel pipes of lining plastic for water supply

1 Scope

This standard prescribes the scope, product classifications and marks, material, requirements, test methods, inspection regulations, symbol, packing, transportation and storage of steel pipes of lining plastic for water supply (short for steel pipes of lining plastic).

The standard is suitable for steel pipes of lining plastic for water supply with nominal diameter no larger than 500mm, mainly used for delivering domestic hot/cold water. Medium for other purposes can refer to it.

2 Normative references

Terms in the following references become terms of this standard through quotation. For dated references, the afterwards revision (not including corrigendum) or the revised edition are not applicable to this standard. However, the agreements achieved within all professional institutions are encouraged that the latest version of these documents can or cannot apply to the standard. For undated references, applies the latest edition of the publication.

GB/T 241 Metal Tubes--Hydrostatic Pressure Testing Methods

GB/T 244 Metallic Materials--Tube--Bend Test Methods

GB/T 246 Metal Materials-Tube - Flattening Test Methods

GB/T 2102-1988 Acceptance, Packing, Marking and Quality Certification of Steel Pipe

GB/T 3091 Welded Steel Pipe for Low Pressure Liquid Delivery

GB/T7306.2 Sealed Pipe with 55° Thread Angle --Part 2: Taper Internal and External Threads

GB/T 8163 Seamless Steel Pipes for Liquid Delivery

GB/T 9119 Slip-on-welding Plate Steel Pipe Flanges with Flat Face or Raised Face

GB/T 9124 Specification for Steel Pipe Flanges

GB/T 9711.1 Petroleum and Natural Gas Industries-Steel pipe for Pipelines-Technical Conditions for Delivery -Part 1: Class A Steel Pipes

GB/T 10002.1 Unplasticized Polyvinyl Chloride (PVC-U) Pipe for Water Supply

GB/T 12611 Technical Requirements of Quality Control for Metal Parts before Being Coated

GB/T 13295 Ductile Iron Pipes, Fittings and Accessories for Water or Gas Applications

GB/T 13663 Polyethylene Pipes for Water Supply

CJ/T 136-2007

GB/T 15558.1 Polyethylene (PE) Valves for Gas Distribution Systems

GB/T 1721 9 Standard for Safety Evaluation of Equipment and Protective Materials in Drinking Water System

GB/T 17395 Dimensions, Shapes, Masses and Tolerances of Seamless Steel Tubes

GB/T 18742.2 Polypropylene Piping Systems for Hot and Cold Water Installation-Part 2: Pipes

GB/T 18992.2 Cross-linked Polyethylene (PE-X) Piping Systems for Hot and Cold Water Installations--Part 2: Pipes

GB/T 18993.2 Chlorinated Polyvinyl Chloride Piping Systems for Hot and Cold Water Installations--Part 2: Pipes

CJ/T 120 Coating Plastic Steel Pipe for Water Supply

CJ/T 156 Grooved Couplings

CJ/T 175 Polyethylene of Raised Temperature Resistance (PE-RT) Piping Systems for Hot and Cold Water Installations

QB/T 3834 Thickness Testing Method of the Metal Deposits and Conversion Coatings for the Light Industrial Products--Magnetic Method

SY/T 0413 Technical Standard of Polyethylene Coating for Buried Steel Pipeline

SY/T 5037 Spiral Submerged Arc-welded Steel Pipe for Pipelines for Low Pressure Field Fluid

WFJF (2001) No. 161 Specification for Hygienic Safety Evaluation of Water Delivery Equipment and Protective Materials for Drinking Water.