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

GB/T 17457-2019

Ductile iron pipes and fittings - Cement mortar lining

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Foreword

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

This standard replaces GB/T 17457-2009 "Cement Mortar Lining for Ductile Iron Pipes and Fittings", which is equivalent to

The main changes are as follows.

--- Modify the nominal value and minimum value of DN40 ~ DN300 lining thickness, modify the maximum crack width and radial displacement; increase

Lining thickness, maximum crack width and radial displacement of DN2800 and DN3000 (see Table 1);

--- Increased crack width measurement (see 5.3);

--- Added test requirements for type tests and chemical resistance, abrasion resistance (see Chapter 7).

This standard uses the redrafting method to modify and adopt ISO 4179..2005 "Nodular cast iron pipes and fittings for pressure and non-pressure pipelines.

Mud Mortar Lining.

Compared with ISO 4179..2005, this standard has more structural adjustments. Appendix A lists this standard and ISO 4179..2005 chapters.

Comparison table of bar number changes.

There are technical differences between this standard and ISO 4179..2005. The clauses related to these differences have passed the margins on the outer margins.

The installed vertical single line (?) is marked, and a list of the technical differences between this standard and ISO 4179..2005 and their causes is given in Appendix B.

for reference.

The following editorial changes have been made to this standard.

--- Change the standard name to "Cement Mortar Lining for Ductile Iron Pipes and Fittings".

This standard is proposed by China Iron and Steel Industry Association.

This standard is under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183).

This standard was drafted. Xinxing Casting Pipe Co., Ltd., Saint-Gobain Pipeline System Co., Ltd., Metallurgical Industry Information Standards Research Institute, China

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1 Scope

This standard specifies the cement mortar lining of ductile iron pipes and fittings in GB/T 13295-2019 and GB/T 26081-2010.

Materials, coating methods, lining thickness and surface condition, and corresponding test methods.

This standard is applicable to improve the hydraulic properties of ductile iron pipes and fittings (compared with non-lined ductile iron pipes and fittings) and anticorrosive performance.

The inner lining also gives the special requirements for the non-full-flow artesian sewage pipeline lining.

This standard is also applicable to the lining for transporting special corrosive liquids. At this time, the following methods can be used alone or in combination.

- Increase the thickness of the lining;
- Change the type of cement;
- Lining surface coating.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB 175 General Portland Cement

GB/T 201 Aluminate cement

GB/T 748 sulfate resistant portland cement

GB/T 13295-2019 Ductile iron pipes, fittings and accessories for water and gas (ISO 2531..2009, MOD)

GB/T 14684 Construction sand

GB/T 17219 Safety Evaluation Standards for Drinking Water Distribution Equipment and Protective Materials

GB/T 17671 Cement mortar strength test method (ISO method) (GB/T 17671-1999, idt ISO 679. 1989)

GB/T 26081-2010 Ductile iron pipes, fittings and accessories for sewage (ISO 7186..1996, MOD)

GB/T 32488 Ductile iron pipe and fittings cement mortar lining sealing coating (GB/T

32488-2016, ISO 16132.

(2004, MOD)

3.1 Cement

3.1.1 The cement used for lining of ductile iron pipes and fittings shall comply with the corresponding national standards according to its type. General Portland cement (including ordinary

Portland cement, slag portland cement, etc.) should meet the requirements of GB 175, aluminite cement should meet the requirements of GB/T 201, and be resistant to sulfuric acid

Salt Portland cement should meet the requirements of GB/T 748.

3.1.2 Unless otherwise specified, the type of cement used shall be given due consideration by the manufacturer in Appendix G of GB/T 13295-2019 and

On the basis of GB/T 26081-2010 Appendix D, the fluid that is determined to be suitable for transportation can also be determined by the supply and demand parties through consultation.

3.2 Sand

3.2.1 Sand is composed of inert, hard, solid and stable particles. Sand should be clean and have a controlled particle size distribution from fine to coarse. sand

The particle size curve shall meet the lining coating method, lining thickness, and surface condition requirements of Chapter 6.

3.2.2 Cleanliness shall be assessed according to the organic matter content and mud content in the sand. The organic matter content and mud content shall be inspected as follows.

--- Sampling should meet the requirements of GB/T 14684;

--- According to the requirements of GB/T 14684, the colorimetric method is used to test the content of organic matter. The sand should not produce any deeper than the standard solution.

Discoloration;

--- Determining the mud content of sand according to the requirements of GB/T 14684. Particles with a particle size of less than 75 μm in the sand do not have a mass fraction of Should exceed 2% of total sand.