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**Ductile iron pipes for trenchless application
(English Translation)**

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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 is modified to adopt ISO 13470:2012 "Design and installation of ductile iron pipe systems for trenchless installation".

Compared with ISO 13470:2012, this document has undergone many structural adjustments. A comparison table of the structural numbering changes between the two documents is provided.

See Appendix A.

This document differs significantly from ISO 13470:2012 in several technical aspects. The relevant clauses are indicated in vertical single-line format on the outer margin.

The lines (I) are marked. A summary of these technical differences and their causes can be found in Appendix B.

The following editorial changes have been made to this document.

---To align with existing standards, the standard name has been changed to "Ductile Iron Pipes for Trenchless Laying";

---The note regarding pressure units has been deleted (see Chapter 1 of ISO 13470:2012);

---The relevant concern regarding the permissible pull force of horizontal directional drilling has been removed (see 6.2.4 of ISO 13470:2012);

---Added a note regarding the socket outer diameter of pipes used in the interlocking (IM) method (see 4.3.3);

---The allowable deflection angle of the pipe interface for the drag-and-pull method is shown in a table (see Table 5, 6.2.5 of ISO 13470:2012);

---Added Appendix D (Informative) "Types of Flanged Pipe Jacking Products".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Iron and Steel Association.

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

1 Scope

This document specifies ductile iron pipes for trenchless laying, manufactured using any type of casting process or assembled from cast iron components.

The technical requirements, interface performance, markings, and quality certificates for pipe fittings and accessories are described, along with the corresponding test methods.

The ductile iron pipes, fittings and accessories specified in this document apply to.

---Transportation of water, rainwater and sewage, hot water, and water for other purposes;

---Pressed or unpressurized conveying.

This document applies to ductile iron pipes, fittings, and accessories with a specification range of DN80~DN3000.

This document does not include interface design or rubber ring technical requirements.

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 13295 Ductile iron pipes, fittings and accessories for water and gas (GB/T 13295-2019, ISO 2531:2009, MOD) GB/T 26081 Ductile iron pipes, fittings and accessories for drainage works (GB/T 26081-2022, ISO 7186:2011, MOD) GB/T 36173 Design specifications and type tests for self-anchoring joint systems for ductile iron pipelines (GB/T 36173-2018, ISO 10804:2010, MOD) GB/T 43492 Pre-insulated ductile iron pipes, fittings and accessories (GB/T 43492-2023, ISO 9349:2017, MOD) GB/T 50107 Standard for Testing and Evaluation of Concrete Strength

3 Terms and Definitions

The terms and definitions defined in GB/T 13295, GB/T 26081, and GB/T 43492, as well as the following terms and definitions, apply to this document.

Trenchless technology A technology for laying underground pipelines without excavating trenches.

Trenchless technology for horizontal directional drilling and pipeline laying using drilling rigs (3.1).

Pipe bursting method A trenchless technique involving longitudinal fracturing and replacing the original pipeline with a new one was adopted (3.1).

Casing method

Trenchless technology of embedding the working pipe inside the already installed casing (3.1).