
**Irrigation applications of ductile
iron pipelines — Product design and
installation**

*Canalisations en fonte ductile pour l'irrigation — Conception des
produits et installation*



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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Contents

Page

Foreword	v
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviated terms	1
3.1 Terms and definitions	1
3.2 Abbreviated terms	2
4 Piped network for irrigation applications	3
5 Technical requirements of DI pipeline components for irrigation applications	3
5.1 General	3
5.2 Material characteristics	3
5.3 Pressure class and dimensions	4
5.3.1 Preferred pressure classes	4
5.3.2 Allowable pressures	4
5.3.3 Diameter of socket and spigot pipes	5
5.3.4 Length of Socket and spigot pipes	6
5.3.5 Dimensions of flanged pipes and fittings	7
5.4 Coating and lining for pipes	7
5.4.1 General	7
5.4.2 External coatings	7
5.4.3 Internal linings	7
5.5 Coatings and linings for fittings and accessories	8
5.6 Abrasion resistance of lining	8
5.7 Marking	8
5.8 Joints and leak tightness requirements	8
5.8.1 Flexible joints	8
5.8.2 Restrained joints	8
6 Valves, irrigation hydrant, water meter	9
7 Designing factors of DI pipeline components for irrigation applications	9
7.1 General	9
7.2 Pipe layout	9
7.3 PIN classification	9
7.4 Hydraulic design	10
7.4.1 Water demand	10
7.4.2 Diameter selection and head loss calculation	11
7.4.3 Flow velocity	13
7.5 Mechanical design	13
7.5.1 Pressure resistance	13
7.5.2 Deflection resistance	13
7.6 Protection against soil corrosiveness	14
7.6.1 General	14
7.6.2 Metallic zinc-based coatings	14
7.6.3 Alternative coatings	14
7.7 Protection against water aggressiveness	14
7.7.1 General	14
7.7.2 Cement lining	14
8 Laying DI pipeline components for irrigation applications	15
8.1 laying calculations	15
8.2 laying operations	15
8.2.1 General	15
8.2.2 Layout	15
8.2.3 Handling	15
8.2.4 Laying in trench	15

8.2.5	Laying above ground	17
8.2.6	Laying in slope	17
8.2.7	Laying in an open canal	18
8.2.8	Trenchless laying	19
8.3	Pipeline assembling	19
8.3.1	General	19
8.3.2	Advantages of flexible push-on joint in inconsistent or unstable ground	20
9	Operation and total cost of ownership of a PIN	21
9.1	Operation and maintenance	21
9.2	Life cycle cost analysis	21
9.3	Key parameters for life cycle cost	21
9.4	Circular economy	22
Annex A (informative) Advantages of piped irrigation networks		23
Annex B (informative) Piped irrigation network planning		24
Annex C (informative) Efficiency factor		27
Annex D (informative) Push-in joints of DI pipes		28
Bibliography		30

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 5, *Ferrous metal pipes and metallic fittings*, Subcommittee SC 2, *Cast iron pipes, fittings and their joints*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Irrigation applications of ductile iron pipelines — Product design and installation

1 Scope

This document specifies the design factor, technical requirements, test methods, installation technologies and operation advices applicable to ductile iron pipes, fittings and accessories used in piped irrigation applications.

NOTE In this document, all pressures are relative pressures expressed in bars¹⁾.

This document also specifies materials, dimensions and tolerances, mechanical properties and standard coatings of pipes, fittings and accessories. It also gives performance requirements for all components including joints.

Joint design and gasket shapes are outside the scope of this document.

This document applies to pipes, fittings and accessories cast by any type of foundry process or manufactured by fabrication of cast components.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2531:2009, *Ductile iron pipes, fittings, accessories and their joints for water applications*

ISO 4633, *Rubber seals — Joint rings for water supply, drainage and sewerage pipelines — Specification for materials*

ISO 10802, *Ductile iron pipelines — Hydrostatic testing after installation*

ISO 10803, *Design method for ductile iron pipes*

ISO 10804, *Restrained joint systems for ductile iron pipelines — Design rules and type testing*

ISO 21051, *Construction and installation of ductile iron pipeline system*

ISO 21052, *Restrained joint systems for ductile iron pipelines — Calculation rules for lengths to be restrained*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

1) 1 bar = 0,1 MPa = 10⁵ Pa; 1 MPa = 1 N/mm².