



SLOVENSKI STANDARD SIST EN ISO 11295:2026

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Cevni sistemi iz polimernih materialov za obnovo cevovodov - Razvrstitev in pregled strateških, taktičnih in operativnih dejavnosti (ISO 11295:2026)

Plastics piping systems used for the rehabilitation of pipelines - Classification and overview of strategic, tactical and operational activities (ISO 11295:2026)

Rohrleitungssysteme aus Kunststoff für die Sanierung von Rohrleitungen - Klassifizierung und Überblick über strategische, taktische und operative Aktivitäten (ISO 11295:2026)

Systèmes de canalisation en plastique destinés à la réhabilitation des réseaux enterrés - Classification et vue d'ensemble des activités stratégiques, tactiques et opérationnelles (ISO 11295:2026)

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EUROPEAN STANDARD

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February 2026

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Supersedes EN ISO 11295:2022

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Plastics piping systems used for the rehabilitation of pipelines - Classification and overview of strategic, tactical and operational activities (ISO 11295:2026)

Systèmes de canalisation en plastique destinés à la réhabilitation des réseaux enterrés - Classification et vue d'ensemble des activités stratégiques, tactiques et opérationnelles (ISO 11295:2026)

Rohrleitungssysteme aus Kunststoff für die Sanierung von Rohrleitungen - Klassifizierung und Überblick über strategische, taktische und operative Aktivitäten (ISO 11295:2026)

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European foreword

This document (EN ISO 11295:2026) has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" in collaboration with Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems" the secretariat of which is held by NEN.

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**International
Standard**

ISO 11295

**Plastics piping systems used for
the rehabilitation of pipelines —
Classification and overview of
strategic, tactical and operational
activities**

*Systèmes de canalisation en plastique destinés à la réhabilitation
des réseaux enterrés — Classification et vue d'ensemble des
activités stratégiques, tactiques et opérationnelles*

**Fourth edition
2026-02**

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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 document 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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This document was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 8, *Rehabilitation of pipeline systems*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 155, *Plastics piping systems and ducting systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 11295:2022), which has been technically revised.

The main changes are as follows:

- references have been updated;
- twelve existing definitions have been modified ([3.1.3](#), [3.1.13](#), [3.1.14](#), [3.1.15](#), [3.1.16](#), [3.1.17](#), [3.1.18](#), [3.2.1](#), [3.2.2](#), [3.2.4](#), [3.2.6](#) and [3.3.2](#));
- fourteen new terms have been defined ([3.1.5](#), [3.1.6](#), [3.1.7](#), [3.1.8](#), [3.1.22](#), [3.1.23](#), [3.1.24](#), [3.1.25](#), [3.2.15](#), [3.2.17](#), [3.2.18](#), [3.2.26](#), [3.2.27](#) and [3.2.29](#)).

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Introduction

Pipeline systems are continuously required to satisfy physical, chemical, biochemical and biological demands. These demands depend on planning, material, construction, type and period of use.

When pipeline systems become operational, they constitute a valuable asset to the network owner. For this reason, adequate management, including monitoring the performance of the pipeline system, is common practice. For general guidelines and requirements on asset management, ISO 55000, ISO 55001 and ISO 55002 are applicable.

For the specific case of pipelines for water supply and wastewater collection, detailed information on the overall management of the networks is provided by ISO 24516-1 and ISO 24516-3.

In the case of loss of performance of a pipeline system, reactive measures initially focus on improving regular maintenance procedures, including cleaning. In case of deterioration or other serious defects, more stringent measures to rehabilitate the pipeline become necessary.

Rehabilitation is carried out when there is a need to restore or upgrade the performance of a pipeline system. Rehabilitation can consist of repair, renovation or replacement. In recent years, the rehabilitation of pipeline systems has become increasingly important and will continue to be so.

This document provides information on the design process when considering rehabilitation of an existing pipeline, in order of sequence:

- a) investigation and assessment of the deficiencies of current performance of the existing pipeline;
- b) determination of viable options, based on performance criteria and process-related factors;
- c) specification of the selected type of technique and the required pipe material;
- d) the installation;
- e) testing the performance before the pipeline is put back into service.

The techniques used for the renovation and trenchless replacement of existing pipelines are classified in technique families and the typical characteristics of each are described in general terms.

It is the responsibility of the designer to choose and design the renovation or trenchless replacement pipeline system.

Plastics piping systems used for the rehabilitation of pipelines — Classification and overview of strategic, tactical and operational activities

1 Scope

This document establishes the steps of the overall process of pipeline rehabilitation, comprising:

- strategic and tactical activities:
 - a) investigation and condition assessment of the existing pipeline;
 - b) pipeline rehabilitation planning.
- operational activities:
 - c) project specification;
 - d) applications of techniques;
 - e) documentation of the design and application process.

This document defines general terms of pipeline rehabilitation and establishes the classification of families of renovation and trenchless replacement techniques, with description of their respective features.

This document is applicable to underground drains and sewers and underground water and gas supply networks.

This document does not apply to:

- new construction provided as network extensions;
- calculation methods to determine, for each viable technique, the characteristics of lining or replacement pipe material needed to secure the desired performance of the rehabilitated pipeline;
- techniques providing non-structural pipe liners;
- techniques for repair.

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 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1043-1 and the following 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>

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— IEC Electropedia: available at <https://www.electropedia.org/>

3.1 General terms

3.1.1

assessment

process, or result of this process, comparing a specified subject matter to relevant references

3.1.2

design working life

assumed period for which a structure or part of it is to be used for its intended purpose with anticipated *repair* (3.1.11) and *maintenance* (3.1.15) but without *renovation* (3.1.10) or *replacement* (3.1.12) being necessary

3.1.3

hazard

biological, chemical, physical or radiological agent in, or condition of, water with the potential danger to cause harm to public health

Note 1 to entry: Condition includes quantity.

[SOURCE: EN 15975-1:2011+A1:2015, 2.6]

3.1.4

pipeline system

interconnecting pipe network for the conveyance of fluids

3.1.5

drain

conduit which conveys wastewater, surface water or other unwanted liquids, including its connections to lateral pipes, *manhole chambers* (3.1.8), gullies and other network components

[SOURCE: ISO 6707-1:2020, 3.3.4.38, modified — details of connections have been added]

3.1.6

sewer

pipeline which conveys waste water, including its connections to lateral pipes, *manholes* (3.1.7), *manhole chambers* (3.1.8) and other network components

[SOURCE: ISO 6707-1:2020, 3.3.4.41, modified — details of connections have been added]

3.1.7

manhole

opening fitted with a removable cover, which permits entry of a person to a pipeline or closed vessel

[SOURCE: ISO 6707-1:2020, 3.3.4.19]

3.1.8

manhole chamber

chamber constructed on a *drain* (3.1.5), *sewer* (3.1.6), or pipeline, with a removable cover permitting entry of a person

[SOURCE: ISO 6707-1:2020, 3.3.4.20]

3.1.9

rehabilitation

measures for restoring or upgrading the performance of existing *pipeline systems* (3.1.4), including *renovation* (3.1.10), *repair* (3.1.11) and *replacement* (3.1.12)

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3.1.10**renovation**

work incorporating all or part of the original fabric of the pipeline, by means of which its current performance is improved

3.1.11**repair**

rectification of local damage

3.1.12**replacement**

construction of a new pipeline, on or off the line of an existing pipeline, where the function of the new *pipeline system* (3.1.4) incorporates that of the old

3.1.13**network extension**

new construction off the line of a pipeline or a network with the aim to expand service to unserved areas

3.1.14**trenchless replacement**

replacement (3.1.12) without opening trenches other than small excavations to provide access for the particular technique and for service and lateral connections

3.1.15**maintenance**

routine work undertaken to ensure the existing performance of an asset

3.1.16**independent pressure pipe liner**

liner (3.2.3) capable on its own of resisting without failure all applicable internal loads throughout its design life

Note 1 to entry: it can provide either *fully-structural renovation* (3.1.18) or *semi-structural renovation* (3.1.19) with respect to external loading

3.1.17**interactive pressure pipe liner**

liner (3.2.3) which relies on the existing pipeline for some measure of radial support in order to resist without failure all applicable internal loads throughout its design life

3.1.18**fully-structural renovation**

use of an *independent pressure pipe liner* (3.1.16) or non-pressure liner which is capable of resisting all external loads irrespective of the condition of the existing pipeline

3.1.19**semi-structural renovation**

use of an *interactive pressure pipe liner* (3.1.17) which is capable of long-term hole and gap spanning at operational pressure

3.1.20**non-structural renovation**

use of an *interactive pressure pipe liner* (3.1.17) which is not capable of long-term hole and gap spanning at operational pressure

3.1.21**flow diversion**

temporary isolation of the section of pipeline to be rehabilitated by the use of a temporary bypass or other means