

STN	Potrúbné systémy z plastov používané na obnovu potrubí Triedenie a prehľad strategických a prevádzkových činností (ISO 11295: 2026)	STN EN ISO 11295 75 6127
------------	--	--

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

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/26

Obsahuje: EN ISO 11295:2026, ISO 11295:2026

Oznámením tejto normy sa ruší
STN EN ISO 11295 (75 6127) z mája 2022

142376

EUROPEAN STANDARD

EN ISO 11295

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2026

ICS 23.040.20

Supersedes EN ISO 11295:2022

English Version

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)

This European Standard was approved by CEN on 1 February 2026.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN ISO 11295:2026 (E)

Contents	Page
European foreword.....	3

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.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2026, and conflicting national standards shall be withdrawn at the latest by August 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 11295:2022.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 11295:2026 has been approved by CEN as EN ISO 11295:2026 without any modification.



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**

ISO 11295:2026(en)**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2026

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Published in Switzerland

ISO 11295:2026(en)**Contents**

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 General terms.....	2
3.2 Terms related to techniques.....	4
3.3 Terms related to service conditions.....	6
4 Abbreviated terms	7
5 Pipeline rehabilitation process	7
6 Investigation and condition assessment of the existing pipeline	8
6.1 Performance criteria.....	8
6.1.1 General.....	8
6.1.2 Hydraulic requirements.....	9
6.1.3 Structural requirements.....	9
6.1.4 Environmental requirements.....	9
6.1.5 Operational requirements.....	10
6.2 Investigation of performance.....	10
6.2.1 General.....	10
6.2.2 Hydraulic investigation.....	11
6.2.3 Structural investigation.....	11
6.2.4 Environmental investigation.....	12
6.2.5 Operational investigation.....	12
6.3 Condition assessment.....	12
6.4 Risk analysis.....	13
6.5 Control measures.....	13
7 Classification and characteristics of rehabilitation techniques	14
7.1 Overview.....	14
7.2 Classification of renovation techniques.....	16
7.2.1 General.....	16
7.2.2 Lining with continuous pipes.....	16
7.2.3 Lining with close-fit pipes.....	18
7.2.4 Lining with cured-in-place pipes.....	21
7.2.5 Lining with discrete pipes.....	25
7.2.6 Lining with adhesive-backed hoses.....	29
7.2.7 Lining with spirally-wound pipes.....	30
7.2.8 Lining with pipe segments.....	33
7.2.9 Lining with a rigidly anchored plastics inner layer.....	34
7.2.10 Lining with sprayed polymeric materials.....	36
7.2.11 Lining with inserted hoses.....	38
7.3 Classification of trenchless replacement techniques.....	40
7.3.1 General.....	40
7.3.2 Pipe bursting.....	40
7.3.3 Pipe removal.....	43
7.3.4 Horizontal directional drilling (HDD).....	46
7.3.5 Impact moling.....	49
7.3.6 Pipe jacking.....	51
8 Selection of rehabilitation techniques	54
8.1 General.....	54
8.2 Pipeline system layout.....	54
8.3 Hydraulic performance.....	55
8.4 Structural performance.....	56

ISO 11295:2026(en)

8.4.1	General	56
8.4.2	Non-pressure pipes	56
8.4.3	Pressure pipes	57
8.5	Environmental impact	60
8.6	Construction constraints	61
8.7	Project specification	61
9	Implementation of rehabilitation techniques	62
9.1	Preconstruction activities	62
9.2	Assessment of conformity of products	63
9.3	Inspection, storage and handling of the materials on site	63
9.4	Application of rehabilitation technique	63
9.4.1	Preparatory work	63
9.4.2	Construction	64
9.5	Acceptance control	64
9.5.1	General	64
9.5.2	Leaktightness testing	64
9.5.3	Sampling	66
9.6	Completion of the work	66
9.6.1	Finishing off the rehabilitation work	66
9.6.2	Lateral reinstatement	66
9.7	Documentation of the process	66
	Bibliography	67

ISO 11295:2026(en)**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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 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](#)).

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.

ISO 11295:2026(en)**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*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN