
Cevni sistemi iz polimernih materialov za obnovo podzemnih omrežij za odvodnjavanje in kanalizacijo za obratovanje brez tlaka (vodi s prosto gladino) - 9. del: Oblaganje s trdno zasidrano notranjo plastjo iz plastike (ISO 11296-9:2022)

Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks - Part 9: Lining with a rigidly anchored plastics inner layer (ISO 11296-9:2022)

Kunststoff-Rohrleitungssysteme für die Renovierung von erdverlegten drucklosen Entwässerungsnetzen (Freispiegelleitungen) - Teil 9: Lining mit einer fest verankerten Kunststoffsaukleidung (ISO 11296-9:2022)

Systèmes de canalisations en plastique pour la rénovation des réseaux de branchements et de collecteurs d'assainissement enterrés sans pression - Partie 9: Tubage par coffrage plastique interne rigidement ancré (ISO 11296-9:2022)

Ta slovenski standard je istoveten z: EN ISO 11296-9:2022

ICS:

23.040.05	Cevovodi za zunanje sisteme za odpadno vodo in njihovi deli	Pipeline and its parts for external sewage systems
91.140.80	Drenažni sistemi	Drainage systems
93.030	Zunanji sistemi za odpadno vodo	External sewage systems

SIST EN ISO 11296-9:2023

en,fr,de

EUROPEAN STANDARD

EN ISO 11296-9

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2022

ICS 23.040.20; 23.040.45; 91.140.80; 93.030

English Version

Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks - Part 9: Lining with a rigidly anchored plastics inner layer (ISO 11296-9:2022)

Systèmes de canalisations en plastique pour la rénovation des réseaux de branchements et de collecteurs d'assainissement enterrés sans pression - Partie 9: Tubage par coffrage plastique interne rigidement ancré (ISO 11296-9:2022)

Kunststoff-Rohrleitungssysteme für die Renovierung von erdverlegten drucklosen Entwässerungsnetzen (Freispiegelleitungen) - Teil 9: Lining mit einer fest verankerten Kunststoffauskleidung (ISO 11296-9:2022)

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European foreword

This document (EN ISO 11296-9:2022) 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 165 "Waste water engineering" the secretariat of which is held by DIN.

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 April 2023, and conflicting national standards shall be withdrawn at the latest by April 2023.

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INTERNATIONAL
STANDARD

ISO
11296-9

First edition
2022-09

**Plastics piping systems for renovation
of underground non-pressure
drainage and sewerage networks —**

**Part 9:
Lining with a rigidly anchored plastics
inner layer**

*Systèmes de canalisations en plastique pour la rénovation des réseaux
de branchements et de collecteurs d'assainissement enterrés sans
pression —*

Partie 9: Tubage par coffrage plastique interne rigidement ancré

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Reference number
ISO 11296-9:2022(E)

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Published in Switzerland

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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 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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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 165, *Waste water engineering*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 11296 series can be found on the ISO website.

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.

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Introduction

This document is a part of a family of system standards for plastics piping systems of various materials used for the renovation of existing pipelines in a specified application area. System standards for renovation deal with the following applications:

- the ISO 11296 series, *Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks (this series)*;
- the ISO 11297 series, *Plastics piping systems for renovation of underground drainage and sewerage networks under pressure*;
- the ISO 11298 series, *Plastics piping systems for renovation of underground water supply networks*;
- the ISO 11299 series, *Plastics piping systems for renovation of underground gas supply networks*.

These system standards are distinguished from those for conventionally-installed plastics piping systems by the requirement to verify certain characteristics in the “as-installed condition”, after site processing. This is in addition to specifying requirements for plastics piping system components “as manufactured”.

Each of the system standards series comprises a:

- *Part 1: General*

and all applicable renovation technique family-related parts, which for non-pressure drainage and sewerage networks includes or potentially includes the following:

- *Part 2: Lining with continuous pipes*;
- *Part 3: Lining with close-fit pipes*;
- *Part 4: Lining with cured-in-place pipes*;
- *Part 5: Lining with discrete pipes*;
- *Part 7: Lining with spirally-wound pipes*;
- *Part 8: Lining with pipe segments*;
- *Part 9: Lining with rigidly anchored plastics inner layer (this document)*;
- *Part 10: Lining with sprayed polymeric materials*.

The requirements for any given renovation technique family are specified in Part 1, applied in conjunction with the relevant other part. For example, both ISO 11296-1 and this document together specify the requirements relating to lining with a rigidly anchored plastics inner layer. For complementary information, see ISO 11296-1. Not all technique families are pertinent to every area of application and this is reflected in the part numbers included in each system standard series.

A consistent structure of clause headings has been adopted for all parts of the ISO 11296 series in order to facilitate direct comparisons across renovation technique families.

[Figure 1](#) shows the common part and clause structure and the relationship between ISO 11296-1 and the system standards for other application areas.

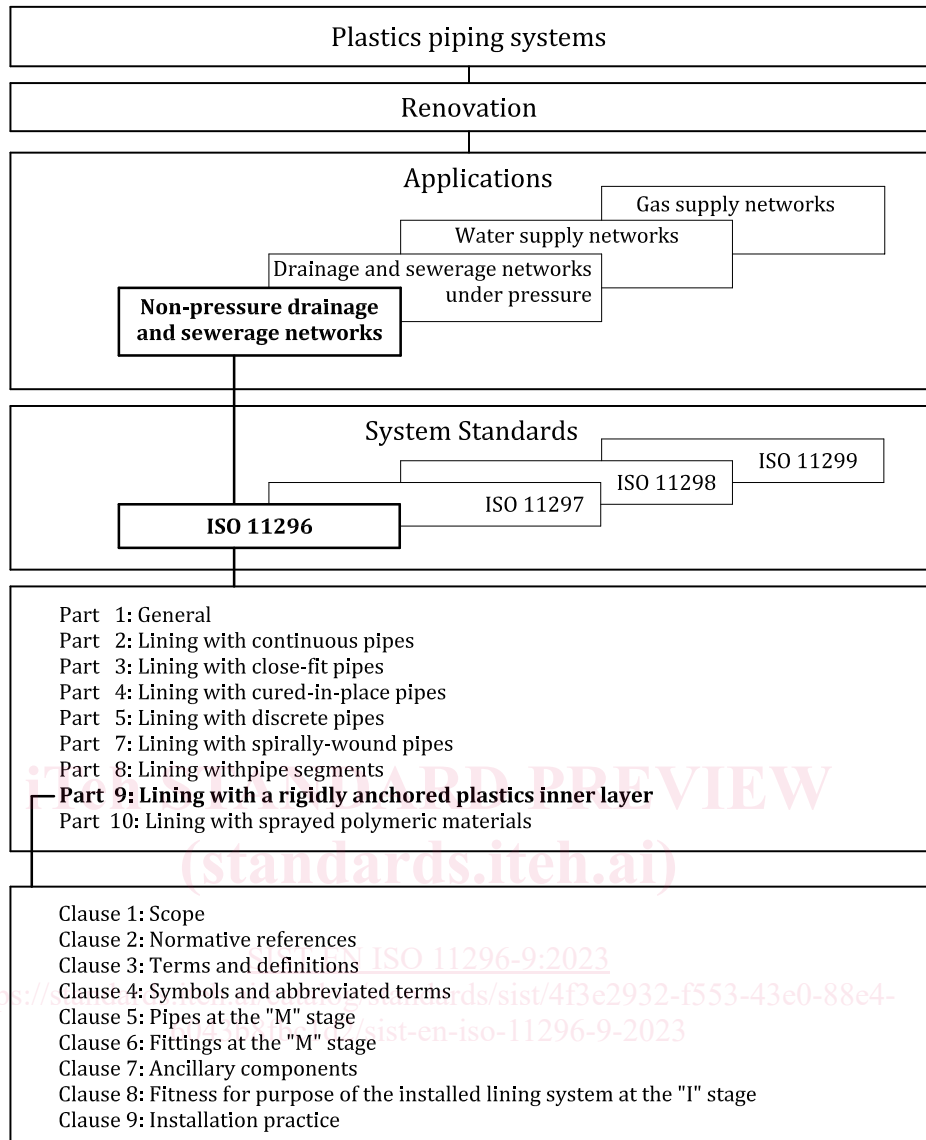


Figure 1 — Format of the renovation system standards