SLOVENSKI STANDARD
SIST EN ISO 11296-4:2018/oprA1:2020

01-september-2020

Cevni sistemi iz polimernih materialov za obnovo podzemnih omrežij za odvodnjavanje in kanalizacijo za obratovanje brez tlaka (vodi s prosto gladino) - 4. del: Oblaganje s cevmi, utrjenimi na mestu vgradnje - Dopolnilo A1: Posodobljene definicije, zahteve za označevanje in alternativno navajanje rezultatov upogibnega preskusa (ISO 11296-4:2018/DAM 1:2020)

Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks - Part 4: Lining with cured-in-place pipes - Amendment 1: Updated definitions, marking requirements and procedure for alternative expression of flexural test results (ISO 11296-4:2018/DAM 1:2020)

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN ISO 11296-4:2018/oprA1:2020
https://standards.iteh.ai/catalog/standards/sist/404616a6-2424-40e6-95d5-831800538903/sist-en-iso-11296-4-2018-opra1-2020

Kunststoff-Rohrleitungssysteme für die Renovierung von erdverlegten drucklosen Entwässerungsnetzen (Freispiegelleitungen) - Teil 4: Vor Ort härtendes Schlauch-Lining - Änderung 1: Aktualisierung von Begriffen, Anforderungen an Kennzeichnungen und Verfahren für die alternative Angabe von Ergebnissen des Biegeversuchs (ISO 11296-4:2018/DAM 1:2020)

Ta slovenski standard je istoveten z: EN ISO 11296-4:2018/prA1

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 11296-4:2018/oprA1:2020 en,fr,de

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

SIST EN ISO 11296-4:2018/oprA1:2020

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 11296-4:2018/oprA1:2020
https://standards.iteh.ai/catalog/standards/sist/404616a6-2424-40e6-95d3-83180b338903/sist-en-iso-11296-4-2018-opra1-2020

SIST EN ISO 11296-4:2018/oprA1:2020

DRAFT AMENDMENT
ISO 11296-4:2018/DAM 1

ISO/TC **138**/SC **8** Secretariat: **JISC**

Voting begins on:
2020-07-16

Voting terminates on:
2020-10-08

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

Part 4:
Lining with cured-in-place pipes

AMENDMENT 1: Updated definitions, marking requirements and procedure for alternative expression of flexural test results

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

Partie 4: Tubage continu par tubes polymérisés sur place

AMENDEMENT 1: Actualisation des définitions, des exigences de marquage, et de la procédure d'autre expression des propriétés de flexion

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN ISO 11296-4:2018/oprA1:2020
https://standards.iteh.ai/catalog/standards/sist/404616a6-2424-40e6-95d3-831806358903/sist-en-iso-11296-4-2018-opra1-2020

ICS: 23.040.45; 93.030; 91.140.80; 23.040.20

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

This document is circulated as received from the committee secretariat.

ISO/CEN PARALLEL PROCESSING

Reference number
ISO 11296-4:2018/DAM 1:2020(E)

© ISO 2020

SIST EN ISO 11296-4:2018/oprA1:2020

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN ISO 11296-4:2018/oprA1:2020
https://standards.iteh.ai/catalog/standards/sist/404616a6-2424-40e6-95d3-83180b338903/sist-en-iso-11296-4-2018-opra1-2020

COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

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
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

© ISO 2020 – All rights reserved

SIST EN ISO 11296-4:2018/oprA1:2020

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

This document was prepared by Technical Committee ISO/TC 138, Subcommittee SC 8, *Rehabilitation of pipeline systems.*

SIST EN ISO 11296-4:2018/oprA1:2020
https://standards.iteh.ai/catalog/standards/sist/404616a6-2424-40e6-95d3-
8518963890b2/sist-en-iso-11296-4-2018-opra1-2020

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.

© ISO 2020 – All rights reserved

SIST EN ISO 11296-4:2018/oprA1:2020

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 11296-4:2018/oprA1:2020
https://standards.iteh.ai/catalog/standards/sist/404616a6-2424-40e6-95d3-83180b338903/sist-en-iso-11296-4-2018-opra1-2020

SIST EN ISO 11296-4:2018/oprA1:2020

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

Part 4: Lining with cured-in-place pipes

AMENDMENT 1: Updated definitions, marking requirements and procedure for alternative expression of flexural test results

2 Normative references

Replace the references to ISO 178:2010+A1:2013, ISO 10467:–[1)], ISO 10468 and ISO 14125:1998+A1:2011 with the following:

ISO 178:2019, *Plastics — Determination of flexural properties*

ISO 10467:2018, *Plastics piping systems for pressure and non-pressure drainage and sewerage — Glass-reinforced thermosetting plastics (GRP) systems based on unsaturated polyester (UP) resin*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 10468, *Glass-reinforced thermosetting plastics (GRP) pipes — Determination of the ring creep properties under wet or dry conditions*

SIST EN ISO 11296-4:2018/oprA1:2020
https://standards.iteh.ai/catalog/standards/sist/4046f0a6-2424-40c0-9925-83180b338903/sist-en-iso-11296-4-2018-opra1-2020

ISO 14125:1998, *Fibre-reinforced plastic composites — Determination of flexural properties*

Delete ISO 7684 from the list. Delete footnote 1.

3 Terms and definitions

Replace 3.1.2, 3.1.3, 3.1.4, 3.1.12 and 3.1.15 with the following:

3.1.2
carrier material
porous component of the *lining tube* (3.1.11), which carries the liquid *resin system* (3.1.16) during insertion into the pipe being renovated and forms part of the installed lining system once the resin has been cured

3.1.3
CIPP product
cured-in-place pipe of a particular design, produced from a *lining tube* (3.1.11) of specified materials, with a wall structure which is uniquely defined for each diameter/wall thickness combination, and which is impregnated with a specific *resin system* (3.1.16) and installed by a specific process

3.1.4
CIPP unit
specific cured-in-place pipe produced from a continuous *lining tube* (3.1.11), which has been impregnated in one process and installed as a single length

© ISO 2020 – All rights reserved

SIST EN ISO 11296-4:2018/oprA1:2020

3.1.12
nominal CIPP wall thickness ("M" stage)
one of a range of discrete *lining tube* (3.1.11) wall thicknesses dictated by the sum of the thicknesses of the individual layers of materials used for tube construction at the "M" stage, excluding any internal or external membranes

3.1.15
reinforcement
fibres incorporated in the *lining tube* (3.1.11) which enhance the dimensional stability of the lining tube and/or the structural properties of the cured *composite* (3.1.6)

Note 1 to entry The reinforcement can be incorporated in the *carrier material* (3.1.1), constitute the carrier material, or can be a separate layer

Add the following new term and definition:

3.1.13
nominal CIPP wall thickness ("I" stage)
one of a range of discrete *CIPP product* (3.1.3) wall thicknesses at the "I" stage, dictated by the sum of the thicknesses of the individual layers of materials used for *lining tube* (3.1.11) construction, excluding any internal or external membranes

Renumber subsequent terms and definitions in 3.1.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

4.1 Symbols

Add the following new symbols:

SIST EN ISO 11296-4:2018/oprA1:2020
https://standards.iteh.ai/catalog/standards/sist/...6-2424-40e6-95d3-83180b338903/sist-en-iso-11296-4-2018-opra1-2020

EI section bending stiffness per unit length of the pipe wall

EI_c apparent section bending stiffness of a curved 3-point test piece before correction for curvature

M section moment capacity per unit length of the pipe wall

M_c apparent section moment capacity of a curved 3-point test piece before correction for curvature

© ISO 2020 – All rights reserved

SIST EN ISO 11296-4:2018/oprA1:2020

4.2 Abbreviated terms

Replace the description of PPTA with:

PPTA Poly(p-phenylene terephthalamide)

Add the following new abbreviated term:

PP Polypropylene

5.1, Table 1

In the row "Carrier material/reinforcement" replace the term "PPTA" with "PPTA aramid".

5.4 Geometric characteristics

Replace the entire text of the subclause with the following:

Where the manufacturer elects to mark the lining tube with nominal CIPP wall thickness ("M" stage), see 5.8, the thickness of the lining tube shall be measured by a method documented in the manufacturer's quality plan. The thicknesses of any membranes shall be deducted.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

The total nominal CIPP wall thickness ("M" stage) may be determined as the sum of the similarly measured thicknesses of individual layers of material.

NOTE 1 Such measurement is possible only where the lining tube is marked before impregnation with the resin system.

SIST EN ISO 11296-4:2018/oprA1:2020
https://standards.iteh.ai/catalog/standards/sist/404616a6-2424-40e6-95d3-831801a338d3/sist-en-iso-11296-4-2018-opra1-2020

NOTE 2 The "I" stage wall thickness achieved (see 8.4.3) will depend not only on the "M" stage thickness, but also on the volume, rheology and curing characteristics of the resin system used, the internal dimensions and condition of the pipe to be lined, and details of the installation process applied.

Where the manufacturer elects to mark the lining tube with nominal CIPP wall thickness ("I" stage), see 5.8, this thickness shall represent the minimum value of the mean thickness, $e_{c,m}$, of the composite achieved when the lining tube is installed by a prescribed process in a circular pipe of internal diameter equal to the declared nominal outside diameter, d_n, of the lining tube.

In all cases the perimeter of the lining tube should be dimensioned such that when installed, it forms a close fit to the existing sewer wall or as otherwise required by the design. The manufactured length and thickness of the lining tube should include allowances for any longitudinal and circumferential stretch during installation.

5.8 Marking

Replace the third paragraph with the following:

For compliance with ISO 11296-1:2018, 5.8 d), the dimension marked shall be either the nominal CIPP wall thickness ("M" stage) or nominal CIPP wall thickness ("I" stage), making clear which is intended.

6.8 Marking

Replace the second and third paragraphs with the following:

© ISO 2020 – All rights reserved