SLOVENSKI STANDARD
oSIST prEN ISO 16486-5:2020

01-september-2020

Cevni sistemi iz polimernih materialov za oskrbo s plinastimi gorivi - Cevni sistemi iz nemehčanega poliamida (PA-U) z zvari in mehanskimi spoji - 5. del: Ustreznost sistema namenu (ISO/DIS 16486-5:2020)

Plastics piping systems for the supply of gaseous fuels - Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing - Part 5: Fitness for purpose of the system (ISO/DIS 16486-5:2020)

Kunststoffe-Rohrleitungssysteme für die Gasversorgung - Rohrleitungssysteme aus weichmacherfreiem Polyamid (PA-U) mit Schweißverbindungen und mechanischen Verbindungen - Teil 5: Gebrauchstauglichkeit des Systems (ISO/DIS 16486-5:2020)

Systèmes de canalisations en matières plastiques pour la distribution de combustibles gazeux - Systèmes de canalisations en polyamide non plastifié (PA-U) avec assemblages par soudage et assemblages mécaniques - Partie 5: Aptitude à l'emploi du système (ISO/DIS 16486-5:2020)

Ta slovenski standard je istoveten z: **prEN ISO 16486-5**

ICS:

75.200	Oprema za skladiščenje nafte, naftnih proizvodov in zemeljskega plina	Petroleum products and natural gas handling equipment
83.140.30	Polimerne cevi in fitingi za snovi, ki niso tekočine	Plastics pipes and fittings for non fluid use

oSIST prEN ISO 16486-5:2020 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN ISO 16486-5

June 2020

ICS 75.200; 83.140.30

English Version

Plastics piping systems for the supply of gaseous fuels - Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing - Part 5: Fitness for purpose of the system (ISO/DIS 16486-5:2020)

Systèmes de canalisations en matières plastiques pour la distribution de combustibles gazeux - Systèmes de canalisations en polyamide non plastifié (PA-U) avec assemblages par soudage et assemblages mécaniques - Partie 5: Aptitude à l'emploi du système (ISO/DIS 16486-5:2020)

Kunststoffe-Rohrleitungssysteme für die Gasversorgung - Rohrleitungssysteme aus weichmacherfreiem Polyamid (PA-U) mit Schweißverbindungen und mechanischen Verbindungen - Teil 5: Gebrauchstauglichkeit des Systems (ISO/DIS 16486-5:2020)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 155.

If this draft becomes a European Standard, 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.

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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.

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

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European foreword

This document (prEN ISO 16486-5) 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 document is currently submitted to the parallel Enquiry.

Endorsement notice

The text of ISO/DIS 16486-5 has been approved by CEN as prEN ISO 16486-5 without any modification.

Annex
(informative)

A-deviation

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN-CENELEC national member.

This European Standard does not fall under any Directive of the EU.

In the relevant CEN-CENELEC countries these A-deviations are valid instead of the provisions of the European Standard until they have been removed.

Country	Clause	Deviation
ITALY	§1 Scope	According to Italian legislation concerning the safety of gas installation - DM 16 April 2008 (DSO) prescribes that piping and components used in distribution system shall be in accordance with national standard UNI 9034 (pipes with MOP below 5 bar). In case of MOP greater than 5 bar DM 17 April 2008 shall be followed. (Official Journal Italian Republic GU n. 107 of 8th May 2008 https://www.gazzettaufficiale.it/eli/id/2008/05/08/08A02871/sg) - DM 17 April 2008 (TSO) prescribes that piping and components used in transmission system shall be made of steel (art. 3.1 of Technical Annex A to Decree). (Official Journal Italian Republic GU n. 107 of 8th May 2008 https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2008-05-08&atto.codiceRedazionale=08A02872&elenco30giorni=false)

DRAFT INTERNATIONAL STANDARD

ISO/DIS 16486-5

ISO/TC **138**/SC **4** Secretariat: **NEN**

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Plastics piping systems for the supply of gaseous fuels — Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing —

Part 5: Fitness for purpose of the system

Systèmes de canalisations en matières plastiques pour la distribution de combustibles gazeux — Systèmes de canalisations en polyamide non plastifié (PA-U) avec assemblages par soudage et assemblages mécaniques —

Partie 5: Aptitude à l'emploi du système

ICS: 83.140.30; 75.200

This document is circulated as received from the committee secretariat.

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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).

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).

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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/TC138, Plastics pipes, fittings and valves for the transport of fluids, Subcommittee SC 4, Plastics pipes and fittings for the supply of gaseous fuels.

This second edition cancels and replaces the first edition (ISO 16486-5:2012), which has been technically revised.

The main changes compared to the previous edition are as follows:

— For transition fittings, reference is made to ISO 17885;

— New chapter 5 design coefficient is added;

— Normative Annex A refers to ISO 11414 for test piece assemblies by butt fusion and is brought in line with ISO 12176-1 for butt fusion equipment

— Normative Annex A is brought in line with ISO 21307, with definition of PA fusion parameters for the single low-pressure and the single high pressure butt fusion jointing procedures (the dual low-pressure procedure is not investigated so far for PA-U);

— In Table A.2 for the single low pressure butt fusion procedure, the pressure p_1 is changed from 0,3 ± 0,1 MPa to 0,3 ± 0,05 MPa to rise the minimal pressure from 0,2 MPa to 0,25 MPa

— Normative Annex B refers to ISO 11413 for test piece assemblies by electro fusion and to ISO 12176-2 for electro fusion equipment;

— Normative Annex C of ISO 16486-5:2012 Assessment of fitness for purpose of transition fittings is deleted.

— New normative Annex C derating coefficients for operating temperatures is transferred from part -6 of this standard

— New normative Annex D rapid crack propagation (RCP) resistance of pipe at temperature less than 0 °C is added.

ISO 16486 consists of the following parts, under the general title *Plastics piping systems for the supply of gaseous fuels — Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing*:

Part 1: General

Part 2: Pipes

Part 3: Fittings

Part 4: Valves

Part 5: Fitness for purpose of the system

Part 6: Code of practice for design, handling and installation

Assessment of conformity of the system is to form the subject of a future part 7.

A list of all parts in the ISO 16486 series can also be found on the ISO website.

Parts 1, 2. 3, 5 (this document), and 6 have been prepared by ISO/TC138/SC4, and a future part 7: *Assessment of conformity* is under preparation. Part 4 has been prepared by Technical Committee ISO/TC138/SC 7 *Valves and auxiliary equipment of plastics materials*.

Part 6 will not be implemented as European Standard under the Vienna Agreement.

NOTE Future CEN/TS 12007-x, Gas infrastructure — Pipelines for maximum operating pressure up to and including 16 bar — Part x: Design, handling, installation and operation of unplasticized polyamide (PA-U) piping systems with fusion joining and mechanical jointing - Functional recommendation, to be prepared by Technical Committee CEN/TC234 Gas infrastructure will deal with the recommended practice for installation of plastics pipes system in accordance with EN ISO 16486 (all parts except for part 6).

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.