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Gasinfrastruktur – Rörledningar (pipelines) för maximalt arbetstryck högst 16 bar – Del 1: Allmänna funktionskrav

Gas infrastructure – Pipelines for maximum operating pressure up to and including 16 bar – Part 1: General functional requirements

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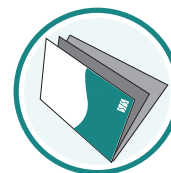
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Denna standard ersätter SS-EN 12007-1, utgåva 1.

The European Standard EN 12007-1:2012 has the status of a Swedish Standard. This document contains the official version of EN 12007-1:2012.

This standard supersedes the Swedish Standard SS-EN 12007-1, edition 1.

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EUROPEAN STANDARD

EN 12007-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2012

ICS 23.040.01

Supersedes EN 12007-1:2000

English Version

Gas infrastructure - Pipelines for maximum operating pressure up to and including 16 bar - Part 1: General functional requirements

Infrastructures gazières - Canalisations pour pression maximale de service inférieure ou égale à 16 bar - Partie 1: Exigences fonctionnelles générales

Gasinfrastruktur - Rohrleitungen mit einem maximal zulässigen Betriebsdruck bis einschließlich 16 bar - Teil 1: Allgemeine funktionale Anforderungen

This European Standard was approved by CEN on 24 May 2012.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 12007-1:2012) has been prepared by Technical Committee CEN/TC 234 “Gas infrastructure”, 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 February 2013, and conflicting national standards shall be withdrawn at the latest by February 2013.

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

This document supersedes EN 12007-1:2000.

Annex B provides details of significant technical changes between this European Standard and the previous edition.

EN 12007 *Gas infrastructure — Pipelines for maximum operating pressure up to and including 16 bar* consists of the following parts:

Part 1: General functional requirements

Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar)

Part 3: Specific functional requirements for steel

Part 4: Specific functional requirements for renovation

Part 5: Specific functional recommendations of new service lines¹

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

¹ To be published.

1 Scope

This European Standard describes the general functional requirements for pipelines up to the point of delivery, and also for buried sections of pipework after the point of delivery, for maximum operating pressures up to and including 16 bar for gaseous fuels in accordance with EN 437:1993+A1:2009, Table 1. It applies to their design, construction, commissioning, decommissioning, operation, maintenance, renovation, extension and other associated works.

This European Standard does not apply to the materials, design, construction, testing and commissioning of gas infrastructures in use prior to the publication of this European Standard. However, this European Standard does apply to the operation, maintenance, renovation and extension of all gas infrastructures.

Specific functional requirements for polyethylene pipelines are given in EN 12007-2, for steel pipelines in EN 12007-3 and for the renovation of pipelines in EN 12007-4. Functional recommendations for pipework for buildings are given in EN 1775. Functional requirements for service lines are given in prEN 12007-5.

Functional requirements for pressure testing, commissioning and decommissioning are given in EN 12327.

Functional requirements for measuring systems are given in EN 1776.

Functional requirements for pressure regulating stations are given in EN 12186.

Functional requirements for pressure regulating installations are given in EN 12279.

Functional requirements for gas transmission are given in EN 1594.

This European Standard specifies common basic principles for gas infrastructure. Users of this European Standard should be aware that more detailed national standards and/or code of practice may exist in the CEN member countries. This European Standard is intended to be applied in association with these national standards and/or codes of practice setting out the above-mentioned basic principles.

In the event of conflicts in terms of more restrictive requirements in national legislation/regulation with the requirements of this European Standard, the national legislation/regulation takes precedence as illustrated in CEN/TR 13737 (all parts).

CEN/TR 13737 (all parts) give:

- clarification of all legislations/regulations applicable in a member state;
- if appropriate, more restrictive national requirements;
- a national contact point for the latest information.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1776, *Gas supply systems — Natural gas measuring stations — Functional requirements*

EN 12007-3, *Gas supply systems — Pipelines for maximum operating pressure up to and including 16 bar — Part 3: Specific functional recommendations for steel*

prEN 12007-5, *Gas infrastructure — Pipelines for maximum operating pressure up to and including 16 bar — Part 5: Specific functional recommendations for new service lines*¹

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EN 12186, *Gas supply systems — Gas pressure regulating stations for transmission and distribution — Functional requirements*

EN 12279, *Gas supply systems — Gas pressure regulating installations on service lines — Functional requirements*

EN 12327, *Gas infrastructure — Pressure testing, commissioning and decommissioning procedures — Functional requirements*

3 Terms, definitions and abbreviations

For the purposes of this document, the following terms, definitions and abbreviations apply.

3.1 General terminology

3.1.1

gas infrastructure

pipeline systems including pipework and their associated stations or plants for the transmission and distribution of gas

3.1.2

pipeline

system of pipework with all associated equipment and stations up to the point of delivery

Note 1 to entry: This pipework is mainly below ground but includes also above ground parts.

3.1.3

gas

gaseous fuel which is in gaseous state at a temperature of 15 °C under atmospheric pressure (1,013 25 bar absolute)

3.1.4

point of delivery

point of a gas network where the gas is transferred to the user

Note 1 to entry: This can be at a means of isolation (e.g. at the outlet of a LPG storage vessel) or at a meter connection.

Note 2 to entry: For this European Standard, the point of delivery is typically nominated by the distribution system operator and can be defined in National Regulations or Codes of Practice.

3.1.5

pipeline operator

private or public organization authorized to design, construct and or operate and maintain the gas infrastructure

3.1.6

competent person

person who is trained, experienced and approved to perform activities relating to gas infrastructures

Note 1 to entry: Means of approval, if any, will be determined within each member country.

3.1.7

lower explosive limit

LEL

concentration of flammable gas or vapour in air, below which the gas atmosphere is not explosive

3.1.8 pipeline components

elements from which the pipeline is constructed

Note 1 to entry: The following are distinct pipeline elements:

- pipes, including cold formed bends;
- fittings;

EXAMPLE 1 Reducers, tees, factory-made elbows and bends, flanges, caps, welding stubs, mechanical joints.

- ancillaries;

EXAMPLE 2 Valves, expansion joints, insulating joints, pressure regulators, pumps, compressors.

- pressure vessels.

3.1.9 gas main

pipework in a gas infrastructure to which service lines are connected

3.1.10 service line

pipework from the gas main to the point of delivery of the gas into the installation pipework

3.1.11 installation pipework

pipework downstream of the point of delivery terminating at the appliance inlet connection

Note 1 to entry: This pipework is normally the property of the customer.

3.1.12 sleeve

purposely installed length of protective pipe through which a gas pipe passes

3.1.13 casing

protection by means of a construction around the pipeline in order to prevent external loads, or third party interference

3.1.14 carrier pipe

existing pipework in which a renovation system is installed

Note 1 to entry: The carrier pipe can be either a conduit pipe or a support pipe.

3.1.15 competent authority

body authorized by the member country to ensure that the pipeline operator fulfils the requirements of this and other relevant standards

3.2 Pressure related terminology

3.2.1 pressure

gauge pressure of the fluid inside the system, measured in static conditions