Irish Standard
I.S. EN 15001-1:2009

Gas Infrastructure - Gas installation pipework with an operating pressure greater than 0,5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations - Part 1: Detailed functional requirements for design, materials, construction, inspection and testing

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Gas Infrastructure - Gas installation pipework with an operating pressure greater than 0,5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations - Part 1: Detailed functional requirements for design, materials, construction, inspection and testing

Infrastructures gazières - Canalisations d'installations de gaz avec une pression de service supérieure à 0,5 bar pour les installations industrielles et supérieures à 5 bar pour les installations industrielles et non industrielles (domestiques et commerciales) - Partie 1: Exigences fonctionnelles détaillées relative à la conception, aux matériaux, à la construction, à l'inspection et aux essais

Gasinfrastruktur - Gas-Leitungsanlagen mit einem Betriebsdruck größer 0,5 bar für industrielle Installationen und größer 5 bar für industrielle und nicht-industrielle Installationen - Teil 1: Detaillierte funktionale Anforderungen an Planung, Material, Bau, Inspektion und Prüfung

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

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Foreword

This document (EN 15001-1:2009) 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of an identical text or by endorsement, at the latest by January 2010, and conflicting national standards shall be withdrawn at the latest by January 2010.

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.

Annexes A to D are informative.

The normative Annex E of this document lists some suitable materials for pipework, in addition to the materials listed in Clause 5.

This standard includes requirements concerning current design practice and reflects the state of the art at the time of publication. It provides clear solutions for users of the standard. Other design solutions and construction materials, as well as new developments, may be used if equal or greater safety than that required by this EN can be demonstrated or established.

There is a complete suite of functional standards prepared by CEN/TC 234 “Gas infrastructure” to cover all parts of the gas supply system from the input of gas to the transmission system up to the inlet connection of the gas appliances, whether for residential, commercial or industrial purposes.

In preparing this standard, a basic understanding of gas supply by the user has been assumed.

Gas supply systems are complex and the importance on safety of their construction and use has led to the development of very detailed codes of practice and operating manuals in the member countries. These detailed statements embrace recognised standards of gas engineering and the specific requirements imposed by the legal structures of the member countries.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies detailed functional requirements for the design, selection of materials, construction, inspection and testing of

— industrial gas installation pipework and assemblies with an operating pressure greater than 0,5 bar, and

— non-industrial gas installation pipework (residential and commercial) with an operating pressure greater than 5 bar in buildings,

starting from the outlet of the network operator's point of delivery up to the inlet connection to the gas appliance; normally the inlet isolation valve. This standard also covers the inlet connection to the gas appliance comprising of the pipework that does not fall within the scope of the appliance standard.

NOTE The use of the term installation and pipework is interchangeable.

This standard applies to gas installations operating at ambient temperatures between - 20 °C and 40 °C and operating pressures up to and including 60 bar. For operating conditions outside these limitations, reference should additionally be made to EN 13480 for metallic pipework.

For industrial gas installations up to and including 0,5 bar and for non-industrial (residential and commercial) gas installations up to and including 5 bar in buildings, EN 1775 applies.

For gas installations that do not fall within the scope of EN 1775 or other European Standards, this standard applies.

In this standard, the term "gas" refers to combustible gases, which are gaseous at 15 °C and 1 013 mbar absolute atmospheric pressure (normal conditions). These gases are commonly referred to as manufactured gas, natural gas or Liquefied Petroleum Gas (LPG). They are also referred to as first, second or third family gases (see Table 1 of EN 437:2003). The given values are considered as normal conditions for all volumes given in this standard.

LPG storage vessels (including all ancillaries fitted directly to storage vessels) are excluded. Also excluded are LPG installations and sections of LPG installations operating at vapour pressure in the liquid state (e.g. between the storage vessel and any pressure regulator).

In this standard, all pressures are gauge pressures unless otherwise stated.

This standard has been harmonised to address the essential safety requirements of the Pressure Equipment Directive (PED, 97/23/EC) relevant for the joining of gas installation pipework (assemblies) falling within the scope of the PED. These are listed in Annex ZA. However, "this Directive does not cover the assembly of pressure equipment on the site and under the responsibility of the user, as in the case of industrial installations" (PED, Preamble, 5th recital, last paragraph).

Although in this respect, the standard takes into account the essential safety requirements of the PED, no inference can be drawn from this as to whether or not the installation or parts of the installation falls within the scope of the PED. Reference should be made to the PED and national legislation.

This European Standard specifies common basic principles for gas supply systems. 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 standard, the national legislation/regulation shall take precedence as illustrated in CR 13737.

This provision does not apply to requirements that are harmonised to directive 97/23/EC (see Annex ZA).

This CR 13737 gives:

— clarification of all legislations/regulations applicable in a country;

— if appropriate, more restrictive national requirements thereof;

— a national contact point for the latest information.

Functional requirements for commissioning, operation and maintenance of industrial gas installations and assemblies with an operating pressure greater than 0,5 bar and of gas installations greater than 5 bar in buildings and areas intended for non-industrial installations greater than 5 bar are described in EN 15001-2.

Generally, additional safety precautions may be necessary where non-odorized gas is used. For non industrial purposes, the gas should be odorized.