Turvamehhanismid gaasi rõhku reguleerivatele jaamadele ja paigaldistele. Sisendrõhule kuni 100 baari mõeldud gaasisüsteemide turva-sulgurseadmed KONSOLIDEERITUD TEKST

Safety devices for gas pressure regulating stations and installations - Gas safety shut-off devices for inlet pressures up to 100 barCONSOLIDATED TEXT

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 14382:2005+A1:2009 sisaldab Euroopa standardi EN 14382:2005+A1:2009 ingliskeelset teksti.	This Estonian standard EVS-EN 14382:2005+A1:2009 consists of the English text of the European standard EN 14382:2005+A1:2009.
Standard on kinnitatud Eesti Standardikeskuse 29.05.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 29.05.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 18.03.2009.	Date of Availability of the European standard text 18.03.2009.
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English Version

Safety devices for gas pressure regulating stations and installations - Gas safety shut-off devices for inlet pressures up to 100 bar

Dispositifs de sécurité pour postes et installations de détente-régulation de pression de gaz - Clapets de sécurité pour pressions amont jusqu'à 100 bar

Sicherheitseinrichtungen für Gas-Druckregelanlagen und -einrichtungen - Gas-Sicherheitsabsperreinrichtungen für Eingangsdrücke bis 100 bar

This European Standard was approved by CEN on 30 December 2004 and includes Amendment 1 approved by CEN on 12 January 2009.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 14382:2005+A1:2009) has been prepared by Technical Committee CEN/TC 235 “Gas pressure regulators and associated safety devices for use in gas transmission and distribution”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by September 2009, and conflicting national standards shall be withdrawn at the latest by September 2009.

This document includes Amendment 1, approved by CEN on 2009-01-12.

This document supersedes ▌A1⟩ EN 14382:2005 ⟨A1▐.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ▌A1⟩ ⟨A1▐.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 97/23/EC.

For relationship with EU Directive 97/23/EC, see informative Annex ZA, which is an integral part of this document.

Safety shut-off devices dealt with in this document are standard safety shut-off devices and, when used in pressure regulating stations complying with EN 12186 or EN 12279, they are considered as standard pressure equipment in accordance with Clause 3.1 of Art. 1 of Pressure Equipment Directive (PED).

For standard safety shut-off devices used in pressure regulating stations complying with EN 12186 or EN 12279, Table ZA.1 given in Annex ZA includes all applicable Essential Requirements given in Annex I of PED ▌A1⟩ except the external corrosion resistance in case of environmental conditions where corrosion is likely to occur ⟨A1▐.

The normative Annex J of this document lists some suitable materials for pressure containing parts, inner metallic partition walls, fasteners and connectors. Other materials may be used when complying with the restrictions given in Table 5.

▌A1⟩ *deleted text* ⟨A1▐

▌A1⟩ Continued ⟨A1▐ integrity of safety shut-off devices is assured by periodic functional checks. For periodic functional checks it is common to refer to national regulations/standards where existing or users/manufacturers practices.

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 United Kingdom.

1 Scope

[A1] This document specifies constructional, functional, testing and marking requirements, sizing and documentation of gas safety shut-off devices used in the pressure regulating stations in accordance with EN 12186 or EN 12279: [A1]

— for inlet pressures up to 100 bar and nominal diameters up to DN 400;

— for an operating temperature range from –20 °C to +60 °C,

which operate with fuel gases of the 1st and 2nd family in accordance with EN 437 in transmission and distribution networks and also in commercial and industrial installations.

"Gas safety shut-off devices" will hereafter be called "SSDs" except in titles.

[A1] For standard safety shut-off devices when used in pressure regulating stations complying with EN 12186 or EN 12279, Annex ZA lists all applicable Essential Requirements except the external corrosion resistance in case of environmental conditions where corrosion is likely to occur. [A1]

[A1] This document considers the following classes/types of SSDs: [A1]

temperature classes:

— class 1: operating temperature range from –10 °C to 60 °C;

— class 2: operating temperature range from –20 °C to 60 °C;

functional classes:

— [A1] class A: SSDs that close when damage to the pressure detector element occurs (applicable to overpressure SSDs only) or when external power fails and whose re-opening, after an intervention for overpressure, is possible only manually;

— class B: SSDs that do not close when damage to the pressure detector element occurs and whose re-opening, after an intervention for overpressure, is possible only manually;

SSDs types:

— type IS: (integral strength type);

— type DS: (differential strength type). [A1]

SSDs complying with the requirements of this document may be declared as “in conformity with EN 14382“ and bear the mark “EN 14382”.

The material and functional requirements specified in this document may be applied to SSDs which use thermal energy or the effects of electrical energy to trip the operation of the closing member. For these SSDs the operational parameters are not specified in this document.

This document does not apply to:

— SSDs upstream from/on/in domestic gas-consuming appliances which are installed downstream of domestic gas meters;

— [A1] SSDs incorporated into pressure-regulating devices used in service lines with volumetric flow rate ≤ 200 m^3/h at normal conditions and inlet pressure ≤ 5 bar. [A1]

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including amendments) applies.

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[A1] EN 287-1:1992, *Approval testing of welders – Fusion welding – Part 1: Steel* [A1]

EN 334:2005, *Gas pressure regulators for inlet pressures up to 100 bar*

[A1] EN 473:2000 [A1], *Non destructive testing – Qualification and certification of NDT personnel – General principles*

[A1] *deleted text* [A1]

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[A1] *deleted text* [A1]

[A1] EN 1092-1:2007, *Flanges and their joints – Circular flanges for pipes, valves, fittings and accessories, PN designated – Part 1: Steel flanges*

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EN 1092-3:2005, *Flanges and their joints – Circular flanges for pipes, valves, fittings and accessories, PN designated – Part 3: Copper alloy flanges*

EN 1092-4:2004, *Flanges and their joints – Circular flanges for pipes, valves, fittings and accessories, PN designated – Part 4: Aluminium alloy flanges* [A1]

EN 1349, *Industrial process control valves*

[A1] EN 1418:1997 [A1], *Welding personnel – Approval testing of welding operators for fusion welding and resistance weld setters for fully mechanized and automatic welding of metallic materials*

[A1] *deleted text* [A1]

[A1] EN 1759-1, *Flanges and their joints – Circular flanges for pipes, valves, fittings and accessories, Class-designated – Part 1: Steel flanges, NPS ½ to 24*

EN 1759-3, *Flanges and their joints – Circular flanges for pipes, valves, fittings and accessories, Class designated – Part 3: Copper alloy flanges*

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EN 10045-1, *Metallic materials – Charpy impact test – Part 1: Test method*

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

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[A1] EN 12516-1:2005, *Industrial valves – Shell design strength – Part 1: Tabulation method for steel valve shells*

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[A1] *deleted text* [A1]

EN 12627, *Industrial valves – Butt welding ends for steel valves*

EN 13445-4, *Unfired pressure vessels – Part 4: Fabrication*

EN 13906-1, *Cylindrical helical springs made from round wire and bar – Calculation and design – Part 1: Compression springs*

EN 13906-2, *Cylindrical helical springs made from round wire and bar – Calculation and design – Part 2: Extension springs*

EN 60534-1:1993, *Industrial-process control valves – Part 1: Control valve terminology and general considerations (IEC 60534-1:1987)*

EN ISO 175:2000, *Plastics – Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175:1999)*

[A1] EN ISO 9606-2:2004, *Qualification test of welders – Fusion welding – Part 2: Aluminium and aluminium alloys (ISO 9606-2:2004)*

EN ISO 9606-3:1999, *Qualification test of welders – Fusion welding – Part 3: Copper and copper alloys (ISO 9606-3:1999)*

EN ISO 9606-4:1999, *Qualification test of welders – Fusion welding – Part 4: Nickel and nickel alloys (ISO 9606-4:1999)*

EN ISO 15607:2003, *Specification and qualification of welding procedures for metallic materials – General rules (ISO 15607:2003)*

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EN ISO 15611:2003, *Specification and qualification of welding procedures for metallic materials – Qualification based on previous welding experience (ISO 15611:2003)*

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EN ISO/IEC 17025:2000, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:1999)*

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ISO 1817, *Rubber, vulcanized – Determination of the effect of liquids*

ISO 7005 (all parts), *Metallic flanges*

ANSI/ASME B1.20.1:1983, *Pipe threads, general purpose (inch)*

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MSS SP 55:1985, *Quality standard for steel castings for valves, flanges and fittings and other piping components (Visual method)*