



SLOVENSKI STANDARD
SIST EN 14382:2005/kprA1:2008
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Varnostne naprave za plinske regulacijske postaje in napeljave - Plinske varnostne zaporne naprave za vstopne tlake do 100 bar

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

Sicherheitseinrichtungen für Gas-Druckregelanlagen und –einrichtungen - Gas-Sicherheitsabsperreinrichtungen für Eingangsdrücke bis 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

Ta slovenski standard je istoveten z: EN 14382:2005/prA1

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**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

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einrichtungen - Gas-Sicherheitsabsperreinrichtungen für
Eingangsdrücke bis 100 bar

This draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 235.

This draft amendment A1, if approved, will modify the European Standard EN 14382:2005. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN 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 Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 14382:2005/prA1:2008) 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 document is currently submitted to the Unique Acceptance Procedure.

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(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This document specifies the additions and changes to EN 14382:2005 concerning mainly the extension of harmonized part to differential strength safety devices and to various combinations including a pressure regulator and a safety device and the extension of the non-applicability to the safety shut off devices incorporated into pressure-regulating device used in service lines. Further the Clause 3 dealing with terms, symbols and definitions has been partially re-organized.

EN 14382:2005/prA1:2008**1 Modification to Foreword**

Replace in the 7th paragraph "except the external resistance to environmental conditions where corrosion occurs" with "except the external corrosion resistance in case of environmental conditions where corrosion is likely to occur" to read:

"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 except the external corrosion resistance in case of environmental conditions where corrosion is likely to occur."

Delete the third-last paragraph.

Replace in the second-last paragraph "The continuing" with "Continued" to read:

"Continued 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."

2 Modification to Clause 1, Scope

Replace the 1st sentence of the 1st paragraph with the following:

"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."

Replace the 3rd paragraph with the following:

"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."

Replace the 1st line of 4th paragraph with the following:

"This document considers the following classes/types of SSDs:"

Replace the last two indents of the 4th paragraph with the following four new indents: "

- 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)."

Add at the end of last paragraph the following new indent and corresponding footnote to text: "

- SSDs incorporated into pressure-regulating devices used in service lines¹ with volumetric flow rate $\leq 200 \text{ m}^3/\text{h}$ at normal conditions and inlet pressure $\leq 5 \text{ bar}$."

3 Modification to Clause 2, Normative references

Delete the following standards:

"EN 287 (all parts), *Qualification test of welders – Fusion welding*."

EN 288 (all parts), *Specification and approval of welding procedures for metallic materials*."

"EN 571-1, *Non-destructive testing – Penetrant testing – Part 1: General principles*."

"EN 1289, *Non-destructive examination of welds – Penetrant testing of welds – Acceptance levels*."

EN 1290, *Non-destructive examination of welds – Magnetic particle examination of welds*."

EN 1291, *Non-destructive examination of welds – Magnetic particle testing of welds – Acceptance levels*."

"EN 1435, *Non-destructive examination of welds – Radiographic examination of welded joints*."

EN 1712, *Non-destructive examination of welds – Ultrasonic examination of welded joints – Acceptance levels*."

EN 1713, *Non-destructive examination of welds – Ultrasonic examination – Characterization of indications in welds*."

EN 1714, *Non-destructive examination of welds – Ultrasonic examination of welded joints*."

"EN 12517, *Non-destructive examination of welds – Radiographic examination of welded joints – Acceptance levels*." and

"ASME B16.34:1996, *Valves – Flanged, threaded and welding end*."

Add the following standards:

"EN 287-1:1992, *Approval testing of welders – Fusion welding – Part 1: Steel*."

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

EN 1092-2:1999, *Flanges and their joints – Circular flanges for pipes, valves, fittings and accessories, PN designated – Part 2: Cast iron flanges*

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*."

"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*

¹ The services lines are those defined into EN 12279.

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EN 1759-4, *Flanges and their joint – Circular flanges for pipes, valves, fittings and accessories, class designated – Part 4: Aluminium alloy flanges*",

"EN 10226-1, *Pipe threads where pressure tight joints are made on the threads – Part 1: Taper external threads and parallel internal threads – Dimensions, tolerances and designation*

EN 10226-2, *Pipe threads where pressure tight joints are made on the threads – Part 2: Taper external threads and taper internal threads – Dimensions, tolerances and designation*",

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

EN 12516-2:2004, *Industrial valves – Shell design strength – Part 2: Calculation method for steel valve shells*

EN 12516-4:2008, *Industrial valves – Shell design strength – Part 4: Calculation method for valve shells in metallic materials other than steel*" and

"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)*

EN ISO 15609-1:2004, *Specification and qualification of welding procedures for metallic materials – Welding procedure specification – Part 1: Arc welding (ISO 15609-1:2004)*

EN ISO 15610:2003, *Specification and qualification of welding procedures for metallic materials – Qualification based on tested welding consumables (ISO 15610:2003)*

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

EN ISO 15612:2004, *Specification and qualification of welding procedures for metallic materials – Qualification by adoption of a standard welding procedure (ISO 15612:2004)*

EN ISO 15613:2004, *Specification and qualification of welding procedures for metallic materials – Qualification based on pre-production welding test (ISO 15613:2004)*

EN ISO 15614-1:2004, *Specification and qualification of welding procedures for metallic materials – Welding procedure test – Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys (ISO 15614-1:2004)*

EN ISO 15614-2:2005, *Specification and qualification of welding procedures for metallic materials – Welding procedure test – Part 2: Arc welding of aluminium and its alloys (ISO 15614-2:2005)*".

Replace "EN 473" with "EN 473:2000", "EN 970" with "EN 970:1997", "EN 1418" with "EN 1418:1997" and "EN 10204" with "EN 10204:2004".

Delete all full stops.

4 Modification to Clause 3, Terms, definitions and symbols

Delete following actual terms or sub-clause titles:

3.1.16, 3.2.1, 3.2.2, 3.2.2.3.1, 3.2.2.3.2, 3.4.1.1, 3.4.6, 3.4.7 and 3.4.9.

Add the following standard paragraph and NOTE after the title of Clause 3:

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

NOTE Annex L list all definitions and terms in alphabetic order for English language, the relevant translation in French and German language and the relevant sub clause of this clause."

Replace the title of actual sub-clause 3.1 with the following:

"General terms and definition of type of safety devices"

and delete the relevant standard paragraph.

Replace in the text of the definition of term 3.1.1 the bracket expression with the following:

"(over-pressure and/or under-pressure)" to read:

"device whose function is to stay in the open position under normal operating conditions and to shut-off the gas flow automatically and completely when the monitored pressure exceeds the pre-set values (over-pressure monitoring and/or under-pressure monitoring)".

In 3.1.7, the 3rd line, delete "Nominal size DN".

Replace the text of the definition of actual term 3.1.12 with the following (this term will be re-numbered as 3.1.2):

"SSD in which the pressure detector element is directly connected to the trip mechanism (see Figure 1)".

Replace the text of the definition of the actual term 3.1.10 with the following (this term will be re-numbered as 3.2.1.8):

"device which includes:

- a setting element to adjust the set value of the trip pressure;
- a pressure detector element which has the function to detect the feedback of the monitored pressure (e.g. a diaphragm);
- a unit which compares the set value of the trip pressure with the monitored pressure;
- a system which gives the energy to operate the trip mechanism".

Replace the text of the definition of the actual term 3.1.16.3 with the following (this term will be re-numbered as 3.2.5):

"line connecting the controller and/or actuator of the SSD to atmosphere for the safe exhausting of fuel gas in the event of failure of any part".

Replace the text of the definition of the actual term 3.1.16.4 with the following (this term will be re-numbered as 3.2.6):

"line connecting the atmospheric side of the pressure detector element to atmosphere

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NOTE In the event of a fault in the pressure detector element this line may become an exhaust line."

Replace the title of actual sub-clause 3.2 with the following:

"Terms and definition of components of safety devices".

Replace the 1st indent in the EXAMPLES of the actual term 3.2.2.2 with the following (this term will be re-numbered as 3.3.2.2): "

— changes in flow rate;".

Add the symbols and replace the text of the definition of the actual term 3.2.2.3 as follows (this term will be re-numbered as 3.3.2.3):

" p_{do} (for over-pressure monitoring)

p_{du} (for under-pressure monitoring)

pressure value at which the closing member moves to closed position".

Replace the symbols and the text of the definition of the actual term 3.2.3.1 as follows (this term will be re-numbered as 3.3.3.1):

" p_{dio} (for over-pressure monitoring)

p_{diu} (for under-pressure monitoring)

pressure value at which the closing member of an SSD starts to move".

Replace the title of actual sub-clause 3.2.4 with the following (this sub-clause will be re-numbered as 3.3.4):

"Terms, symbols and definitions related to the set value of the trip pressure".

Replace the symbols and the text of the definition of the actual term 3.2.4.1 as follows (this sub-clause will be re-numbered as 3.3.4.1):

" p_{dso} (for over-pressure monitoring)

p_{dsu} (for under-pressure monitoring)

nominal trip pressure value under specified conditions".

Replace the symbols and the text of the definition of the actual term 3.2.4.2 as follows (this term will be re-numbered as 3.3.4.2):

" W_{do} (for over-pressure monitoring)

W_{du} (for under-pressure monitoring)

whole range of set points which can be obtained with a SSD by adjustment and/or the replacement of some components (e.g. replacement of the setting mean, or pressure detector element)".

Replace the symbols and the text of the definition of the actual term 3.2.4.3 as follows (this term will be re-numbered as 3.3.4.3):

" W_{dso} (for over-pressure monitoring)

W_{dsu} (for under-pressure monitoring)

whole range of set points which can be obtained with a SSD by adjustment and without replacement of any component".

Replace the title of actual sub-clause 3.2.5 with the following (this sub-clause will be re-numbered as 3.3.5):

"Terms, symbols and definitions related to the flow".

Replace the title of sub-clause 3.3 with the following:

"Terms, symbols and definitions related to the functional performance"

In the actual term 3.3.1 delete the symbol and replace the text of the definition with the following (this sub-clause will be re-numbered as 3.3.6.1):

"difference between the actual value of the trip pressure and the set point as a percentage of the set value (see Figure 4)".

Replace the title of sub-clause 3.4 with the following:

"Terms, symbols and definitions related to the design and tests".

Replace the sub-clause title 3.4.1 with the following term and definition:

**"3.4.1
component operating pressure**

p
gas pressure occurring in any part of a SSD during operation".

Replace the text of the definition of the actual term 3.4.1.3 with the following (this term will be re-numbered as 3.4.3):

"maximum pressure for which the body, its inner metallic partition walls and some other pressure containing parts are designed in accordance with the strength requirements in this document".

Replace the text of the definition of actual term 3.4.1.7 with the following (this term will be re-numbered as 3.4.7):

"pressure applied to a section of the SSD for a limited period of time in order to prove certain characteristics".

Replace the text of the definition of actual term 3.4.2 with the following (this term will be re-numbered as 3.4.9):

"ratio of the limit pressure p_l to the maximum allowable pressure PS or to specific maximum allowable pressure PSD applied to:

- SSD body: S_b (only PS);
- other pressure containing part of the SSD: S (PS or PSD)".