SLOVENSKI STANDARD
SIST EN 13611:2002/A1:2005

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Varnostne in kontrolne naprave za plinske gorilnike in plinske aparate – Splošne zahteve – Dopolnilo A1

Safety and control devices for gas burners and gas-burning appliances - General requirements - Amendment A1

Sicherheits-, Regel- und Steuereinrichtungen für Gasbrenner und Gasgeräte - Allgemeine Anforderungen

Equipements auxiliaires pour bruleurs à gaz et appareils à gaz - Exigences générales

Ta slovenski standard je istoveten z: **EN 13611:2000/A1:2004**

ICS:

23.060.40	Tlačni regulatorji	Pressure regulators
27.060.20	Plinski gorilniki	Gas fuel burners

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English version

Safety and control devices for gas burners and gas-burning appliances - General requirements

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This amendment A1 modifies the European Standard EN 13611:2000; it was approved by CEN on 12 November 2004.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 13611:2000/A1:2004) has been prepared by Technical Committee CEN/TC 58 “Safety and control devices for gas-burners and gas-burning appliances”, the secretariat of which is held by BSI.

This Amendment to the European Standard EN 13611:2000 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

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 for Gas Appliances Directive and new with this Amendment Annex ZB for Pressure Equipment Directive.

Addition to the foreword:

This amendment depends on the original standard EN 13611:2000 for its basic technical content. The amendment and the original standard should be read together.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Annex F
(normative)

Additional requirements for safety accessories and pressure accessories as defined in EU Directive 97/23/EC

EN 13611:2000 applies with the following supplements or modifications of the corresponding clauses:

F.1 Scope

according to Clause 1 and addition:

This standard applies also for safety accessories and pressure accessories with a product of the maximum allowable pressure PS and the volume V of less than 6 000 bar litres or with a product of PS and DN of less than 3 000 bar mm, as defined by EU directive 97/23/EC. For these devices additional requirements of the new Annex F apply.

The risk philosophy adopted in this standard is based on the analysis of hazards on account of pressure. The standard applies to principles to eliminate or reduce hazards. Where these hazards cannot be eliminated appropriate protection measures are specified.

Any residual hazard are identified and communicated to the user where appropriate.

Depending on the installation situation additional requirements may apply to cover the risks arising from traffic, wind, earthquake loading and external fire.

F.3 Definitions

F.3.9 The Definition of *"maximum inlet pressure" in EN 13611 corresponds to the definition of "maximum allowable pressure" in the PED.*

F.6.1 General

according to 6.1 and addition:

The safety function(s) of a control shall be independent of other functions, unless its safety function(s) cannot be affected adversely by such other functions.

F.6.2 Construction

according to 6.2 and addition:

F.6.2.10 Design of pressurized parts

Pressurized parts shall be designed for loadings appropriate to their intended use and other reasonably foreseeable operating conditions.

Pressurized parts shall withstand a pressure strength test according to F.7.9 without calculation.

F.6.3 Materials

F.6.3.9 Materials for pressurized parts

Materials of pressurized parts, which are subject to a maximum allowable pressure > 0,5 bar, shall be suitable for the scheduled lifetime of the control unless replacement is foreseen. Such materials shall be verified according to the following requirements:

Materials

— shall comply with harmonized standards (see Table G.1), or

— shall be covered by a European approval of pressure equipment materials, or

— shall be subject of a particular material appraisal.

Materials used in similar applications under similar operating conditions, which have been recognized as being safe to use before 29 November 1999 may also be regarded as suitable. The safety of controls using such materials shall be verified in combination with the design assessment according to F.6.2.10.

NOTE 1 For a list of materials used for the construction of pressure equipment and recognized as being safe to use before 29 November 1999, see Table G.2 and G.3.

NOTE 2 An official list of European approved materials will be published by the European Commission, see e.g. http://ped.eurodyn.com/materials/published.html.

F.7 Performance

according to Clause 7 and addition:

F.7.9 Pressure strength test

F.7.9.1 General

The pressure strength test shall be performed by using a safety factor ***f*** for the test pressure where ***f*** is the multiplication factor for the maximum inlet pressure.

If not otherwise defined by harmonized design standards, a safety factor ***f* = 4** shall be considered.

NOTE Experimental test factors dependent on the type of the device and on the material are given in appropriate design standards for pressurized parts, harmonized with EU directive 97/23/EC, e. g. EN 12516-3.

F.7.9.2 Performance test

A pressure of ***f*** times the maximum inlet pressure is applied to the control at maximum ambient temperature for a minimum of 5 min. Then the control is cooled to (20 ± 5) °C.

Following this, an external leak-tightness test according to 7.3 shall not exhibit significant leaks. Deformation exceeding a determined threshold shall not occur.

F.8.11

Only EN 60730-1 is applicable.

F.9.2 Installation and operating instructions

according to Clause 9.2 and addition:

The instructions shall also include all relevant information on mounting and maintenance. If appropriate, these instructions shall also refer to hazards arising from misuse.

Information to the user shall be given of residual hazards to take appropriate special measures at the time of installation and/or use.

Annex G
(informative)

Materials for pressurized parts

Table G.1 — List of materials covered by harmonized standards

Materials			Restrictions				
Group	Type	Relevant standard	Regulator / safety device				
			Operating temperature		PS$_{max}$	[PS x DN [b]]$_{max}$	DN$_{max}$ [b]
			-10 °C to 60 °C [a]	-20 °C to 60 °C	bar	bar x mm	mm
Pressure containing parts and inner metallic partition walls							
Rolled and forged steel	S235JR / 1.0037 with thickness ≤ 40 mm, S275JR / 1.0044 with thickness ≥ 1,5 mm, S355JR/ 1.0045 with thickness ≥ 1,5 mm	EN 10028	x		100	-	-
	S235J2G3 / 1.0116 & S235J2G4 / 1.0117 both with nominal thickness ≤ 150 mm, S275J2G3 / 1.0144 & S275J2G4 / 1.0145 & S355J2G3 / 1.0570 all with 1,5 mm < nominal thickness ≤150 mm			x			
	S275JO / 1.0143 & S355JO / 1.0553 both with 1,5 mm < nominal thickness ≤ 250 mm and at –20 °C KV 27 J av. of three and 20 J min						
	P235GH / 1.0345, P265GH / 1.0425, P295GH/ 1.0481, P355GH / 1.0473 all with thickness ≤ 150 mm	EN 10028-2 [c]	x				
	P275NH / 1.0487, P355NH / 1.0565 with thickness ≤ 150 mm, P355NL1 / 1.0566 with thickness ≤ 150 mm	EN 10028-3 [c]		x			
	All types	EN 10028-4 [c], 10028-5 [c]		x			
	All grades from P355.. to P 500... with thickness ≤ 150 mm	EN 10028-6 [c]		x			
	All steel designation with A_{min} ≥ 16 %	EN 10028-7 [c]		x			
	All steel designations with A_{min} ≥ 16 % and at –20 °C KV 27 J av. of three and 20 J min	EN 10222-1 [c]					
	All steel designations martensitic type	EN 10222-5 [c]	x				
	All steel designations austenitic type			x			
	All steel designations with A_{min} ≥ 16 %, and at –20 °C KV 27 J av. of three and 20 J min	EN 10272 [c]		x			
Cast Steel	All steel designations	EN 10213-3 [c]		x			

Table G.2 — List of materials not based on harmonized standards but inherently meeting PED

Materials			Restrictions				
			Regulator / safety device				
Group	Type	Relevant standard	Operating temperature		PS_{max}	$[PS \times DN^{b}]_{max}$	DN_{max} [b]
			-10 °C to 60 °C [a]	-20 °C to 60 °C	bar	bar x mm	mm
Pressure containing parts and inner metallic partition walls							
Rolled and forged steel	25 CrMo4 / 1.7218 & 25CrMoS4 / 1.7213 both with 100 mm < d ≤ 160 mm or 60 mm < t ≤ 100 mm, 36CrNiMo4 / 1.6511 with A_{min} = 16 %. All types shall be quenched and tempered (+QT) and with cast analysis C≤0.25% or, when 0.25% < C ≤ 0.40, Ni≥1%.	EN 10083-1 + A1	x		100	-	
	36CrNiMo4 / 1.6511 quenched and tempered (+QT) with A_{min} = 16 % and KV 27 J av. of three and 20 J min. at –20 °C..			x			
	All steel designations quenched and tempered (+QT) with A_{min} ≥ 16 % and with cast analysis C ≤ 0.25%.	EN 10083-2 + A1	x				
	11SMn30 / 1.0715, 11SMn37 / 1.0736, 11SMnPb30 / 1.0718, 11SMnPb37 / 1.0737 all with 16 ≤ d ≤ 100 and A_{min} 16 %	EN 10277-3 [d]	x				25
	As above and types 35S20 / 1.0726, 35SPb20 / 1.0756, 36SMn14 / 1.0764, 36SMnPb14 / 1.0765, 38SMn28 / 1.0760, 38SMnPb28 / 10761, 44SMn28 / 1.0762, 44SMnPb28 / 1.0763, 46SPb20 / 1.0757 with KV 27 J av. of three and 20 J min at –20 °C			x			
	All austenitic steel designations with longitudinal A_{min} ≥ 16 % and other steel designations with longitudinal A_{min} ≥ 16 % and KV 27 J av. of three and 20 J min. at –20 °C	EN 10088-3		x			-
	DD11 / 1.0332, DD12 /1.0398, DD13 / 1.0335	EN 10111	x				
	All steel designations used for skin-pass	EN 10130	x				
	All low carbon content types	EN 10214	x				
	All steel designations with A_{min} ≥ 16 % and at –20 °C KV 27 J av. of three and 20 J min	EN 10250-1		x			
	All steel designations with cast analysis C ≤ 0,25 % and with longitudinal A_{min} ≥ 16 %	EN 10250-2	x				
	S235J2G3 / 1.0116, S355J2G3 / 1.0570 with t_R ≤ 500 mm			x			