



SLOVENSKI STANDARD
SIST EN 10213:2008/oprA1:2014
01-julij-2014

Jekleni ulitki za tlačne posode

Steel castings for pressure purposes

Stahlguss für Druckbehälter

Pièces moulées en acier pour service sous pression

Ta slovenski standard je istoveten z: EN 10213:2007/prA1

ICS:

77.140.30	Jekla za uporabo pod tlakom	Steels for pressure purposes
77.140.80	Železni in jekleni ulitki	Iron and steel castings

SIST EN 10213:2008/oprA1:2014 **en,fr,de**

EUROPEAN STANDARD
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ICS 77.140.30

English Version

Steel castings for pressure purposes

Pièces moulées en acier pour service sous pression

Stahlguss für Druckbehälter

This draft amendment is submitted to CEN members for second enquiry. It has been drawn up by the Technical Committee ECISS/TC 111.

This draft amendment A1, if approved, will modify the European Standard EN 10213:2007. 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Contents

Page

Foreword.....	3
1 Modification to Clause 2 "Normative references"	4
2 Modification to Clause 5 "Designation"	4
3 Modification to sub clause 6.1.1 "Melting"	4
4 Modification to sub clause 7.2.1 "Chemical composition"	4
5 Modification to sub clause 7.3.3 "Non destructive testing"	4
6 Modification to sub clause 7.3.3.5 "Non destructive testing"	4
7 Modification to Table 1	4
8 Modification to Clause 8 "Testing and documents on material testing"	5
9 Modification to sub clause 8.2.....	5
10 Modification to sub clause 8.3.....	5
11 Modification to sub clause 8.4.....	5
12 Modification to sub clause 8.5.....	5
13 Modification to sub clause 8.6.....	5
14 Modification to Table 2.....	6
15 Modification to Table 3.....	6
16 Modification to Table 6.....	6
17 Modification to Table A.1	7
18 Modification to Table B.1	10
19 Modification to Table C.1	11
20 Bibliography	12
21 Inclusion of the corrigendum (August 2008)	12

Foreword

This document (EN 10213:2007/prA1:2014) has been prepared by Technical Committee ECISS/TC 111 “Steel castings and forgings”, the secretariat of which is held by AFNOR.

This document is currently submitted to the second CEN Enquiry.

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).

EN 10213:2007/prA1:2014 (E)**1 Modification to Clause 2 "Normative references"**

Replace "EN 287-1:2004" with "EN 287-1:2011";

Replace "EN 462-1:1994, Non-destructive testing — Image quality of radiographs — Part 1: Image quality indicators (wire type) — Determination of image quality value" with "EN ISO 19232-1:2013, Non-destructive testing — Image quality of radiographs — Part 1: Determination of the image quality value using wire-type image quality indicators"

Replace "EN 571-1:1997" with "EN ISO 3452-1:2013, Non-destructive testing — Penetrant testing — Part 1: General principles"

Replace "EN 583-1:1998" with "EN 583-1:1999"

Replace "EN 1369:1996" with "EN 1369:2012, Founding - Magnetic particle testing"

Replace "EN 1371-1:1997" with "EN 1371-1:2011, Founding - Liquid penetrant testing - Part 1: Sand, gravity die and low pressure die castings"

Replace "EN 1371-2:1998" with "prEN 1371-2:2013, Founding — Liquid penetrant testing — Part 2: Investment castings"

Replace "EN 1559-2:2000" with "FprEN 1559-2: 2014"

Replace "EN 12454:1998, Founding — Visual examination of surface discontinuities — Steel sand castings" with "EN 1370:2011, Founding - Examination of surface condition"

Replace "EN ISO 11970:2007" with "prEN ISO 11970:2013"

2 Modification to Clause 5 "Designation"

In clause 5, replace "EN 1559-2:2000" with "FprEN 1559-2: 2014"

3 Modification to sub clause 6.1.1 "Melting"

In sub clause 6.1.1, replace "EN 1559-2:2000" with "FprEN 1559-2: 2014"

4 Modification to sub clause 7.2.1 "Chemical composition"

In sub clause 7.2.1 (lines 1 and 6), replace "EN 1559-2:2000" with "FprEN 1559-2: 2014"

5 Modification to sub clause 7.3.3 "Non destructive testing"

Replace the title of sub clause 7.3.3 "Non destructive testing" with "Outer and inner conditions (non-destructive testing)"

6 Modification to sub clause 7.3.3.5 "Non destructive testing"

In sub clause 7.3.3.5, replace "EN 1559-2:2000" with "FprEN 1559-2: 2014"

7 Modification to Table 1

Replace "EN 571-1" with EN "ISO 3452-1"

Replace "EN 462-1" with "EN ISO 19232-1"

Replace "EN 12454" with "EN 1370"

8 Modification to Clause 8 "Testing and documents on material testing"

Replace the present title of this Clause with "Inspection"

9 Modification to sub clause 8.2

Replace the present title of this sub clause with "Type of inspection documents and type of inspection"

10 Modification to sub clause 8.3

Replace the present title of this sub clause with "Test unit"

11 Modification to sub clause 8.4

Replace the present title of this sub clause with "Samples"

Replace "EN 1559-2:2000" with "FprEN 1559-2: 2014"

12 Modification to sub clause 8.5

Replace the present title of this sub clause with "Test procedures"

13 Modification to sub clause 8.6

Replace the present title of this sub clause with "Invalidation of test results"

EN 10213:2007/prA1:2014 (E)

14 Modification to Table 2

Add to Table 2 the following steel grade GX12CrMoVNbN9-1, after GX4CrNi13-4

Designation		C	Si	Mn	P max.	S max.	Cr	Mo	Ni	Cu	N	V	Others
Name	Number												
GX12CrMoVNbN9-1	?	0,10 to 0,14	0,20 to 0,50	0,30 to 0,80	0,020	0,010	8,00 to 9,50	0,85 to 1,05	max. 0,40	-	0,030 to 0,070	0,18 to 0,25	Nb: 0,06 to 0,10 Al: max. 0,020

15 Modification to Table 3

Add to Table 3 the following steel grade GX12CrMoVNbN9-1, after GX4CrNi13-4

Designation		Heat treatment ^a			Thickness t mm	Tensile test				Impact test
Name	Number	Symbol ^c	Normalizing (+N) or Quenching (+Q) or solution annealing (+AT) °C	Tempering °C		R _{p0,2} MPa* min.	R _{p1,0} MPa* min.	R _m MPa*	A % min.	KV J Min.
GX12CrMoVNbN9-1	?	QT	1040 to 1070	730 to 760	t ≤ 200	460	-	600 to 750	15	27

16 Modification to Table 6

Add to Table 6 the following steel grades:

- G20Mn5 (1.6220), quenched and tempered (+QT), after GP280GH;
- GX12CrMoVNbN9-1(QT), after GX4CrNi13-4.

Ferritic and martensitic	Designation		Heat treatment	Proof strength test at elevated temperature $R_{p0,2}$ MPa * min.										
	Name	Number		Symbol	20 °C	100 °C	200 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C	600 °C
	G20Mn5	1.6220	+ QT			270	254	244	236	225	210	189	-	-
GX12CrMoVNbN9-1	?	QT	460	417	390	378	373	365	352	331	300	255	227	

17 Modification to Table A.1

Add to Table A.1:

- the following steel grade GX12CrMoVNbN9-1, after GX4CrNi13-4;
- a supplementary column "Welding group", after the column titled "Post heat treatment", with a table footnote "k"