



SLOVENSKI STANDARD
SIST EN 13480-2:2018/A2:2018
01-december-2018

Kovinski industrijski cevovodi - 2. del: Materiali - Dopnilo A2

Metallic industrial piping - Part 2: Materials

Metallsiche industrielle Rohrleitungen - Teil 2: Werkstoffe

Tuyauteries industrielles métalliques - Partie 2: Matériaux

Ta slovenski standard je istoveten z: EN 13480-2:2017/A2:2018

[SIST EN 13480-2:2018/A2:2018](https://standards.iteh.ai/catalog/standards/sist/940418b8-b02c-4600-bd8a-df6fbef22ecb/sist-en-13480-2-2018-a2-2018)

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ICS:

23.040.10	Železne in jeklene cevi	Iron and steel pipes
77.140.75	Jeklene cevi in cevni profili za posebne namene	Steel pipes and tubes for specific use

SIST EN 13480-2:2018/A2:2018 **en,fr,de**

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EUROPEAN STANDARD

EN 13480-2:2017/A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2018

ICS 23.040.01

English Version

Metallic industrial piping - Part 2: Materials

Tuyauteries industrielles métalliques - Partie 2 :
Matériaux

Metallische industrielle Rohrleitungen - Teil 2:
Werkstoffe

This amendment A2 modifies the European Standard EN 13480-2:2017; it was approved by CEN on 4 June 2018.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 13480-2:2017/A2:2018) has been prepared by Technical Committee CEN/TC 267 "Industrial piping and pipelines", the secretariat of which is held by AFNOR.

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 April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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 EN 13480-2:2017.

This document includes the text of the amendment itself. The amended/corrected pages of EN 13480-2:2017 will be published as Issue 2 of the European Standard.

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

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EN 13480-2:2017/A2:2018 (E)**1 Modification to Clause 2, Normative references**

Replace the last reference:

“CEN ISO/TR 15608, Welding — Guidelines for a metallic materials grouping system (ISO/TR 15608)”

with:

“CEN ISO/TR 15608:2017, Welding — Guidelines for a metallic materials grouping system (ISO/TR 15608:2013)”.

2 Modification to Annex A (normative), Grouping system for steels for pressure equipment

Replace the whole Annex A with the following one:

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“

Annex A (normative)

Grouping system for steels for pressure equipment

Steels shall be grouped as shown in Table A.1. The figures given in group 1 are referring to the ladle analysis of the materials. The figures given in groups 4 to 10 are based on the element content used in the designation of the alloys.

Table A.1 — Grouping system for steels (extract from CEN ISO/TR 15608:2013)

Group	Sub-group	Type of steel
1		Steels with a specified minimum yield strength $R_{eH} \leq 460$ MPa ^a and with analysis in %: $C \leq 0,25$ $Si \leq 0,60$ $Mn \leq 1,80$ $Mo \leq 0,70^b$ $S \leq 0,045$ $P \leq 0,045$ $Cu \leq 0,40^b$ $Ni \leq 0,5^b$ $Cr \leq 0,3$ (0,4 for castings) ^b $Nb \leq 0,06$ $V \leq 0,10^b$ $Ti \leq 0,05$
	1.1	Steels with a specified minimum yield strength $R_e \leq 275$ MPa
	1.2	Steels with a specified minimum yield strength 275 MPa $< R_e \leq 360$ MPa
	1.3	Normalized fine grain steels with a specified minimum yield strength $R_e > 360$ MPa
	1.4	Steels with improved atmospheric corrosion resistance whose analysis may exceed the requirements for the single elements as indicated under 1
2		Thermomechanically treated fine grain steels and cast steels with a specified minimum yield strength $R_e > 360$ MPa
	2.1	Thermomechanically treated fine grain steels and cast steels with a specified minimum yield strength 360 MPa $< R_e \leq 460$ MPa
	2.2	Thermomechanically treated fine grain steels and cast steels with a specified minimum yield strength $R_e > 460$ MPa

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Group	Sub-group	Type of steel
3		Quenched and tempered steels and precipitation hardened steels except stainless steels with a specified minimum yield strength $R_e > 360$ MPa
	3.1	Quenched and tempered steels with a specified minimum yield strength $360 \text{ MPa} < R_e \leq 690 \text{ MPa}$
	3.2	Quenched and tempered steels with a specified minimum yield strength $R_e > 690 \text{ MPa}$
	3.3	Precipitation hardened steels except stainless steels
4		Low vanadium alloyed Cr-Mo-(Ni) steels with $\text{Mo} \leq 0,7 \%$ and $\text{V} \leq 0,1 \%$
	4.1	Steels with $\text{Cr} \leq 0,3 \%$ and $\text{Ni} \leq 0,7 \%$
	4.2	Steels with $\text{Cr} \leq 0,7 \%$ and $\text{Ni} \leq 1,5 \%$
5		Cr-Mo steels free of vanadium with $\text{C} \leq 0,35 \%$
	5.1	Steels with $0,75 \% \leq \text{Cr} \leq 1,5 \%$ and $\text{Mo} \leq 0,7 \%$
	5.2	Steels with $1,5 \% < \text{Cr} \leq 3,5 \%$ and $0,7 < \text{Mo} \leq 1,2 \%$
	5.3	Steels with $3,5 \% < \text{Cr} \leq 7,0 \%$ and $0,4 < \text{Mo} \leq 0,7 \%$
	5.4	Steels with $7,0 \% < \text{Cr} \leq 10,0 \%$ and $0,7 < \text{Mo} \leq 1,2 \%$
6		High vanadium alloyed Cr-Mo-(Ni) steels
	6.1	Steels with $0,3 \% \leq \text{Cr} \leq 0,75 \%$, $\text{Mo} \leq 0,7 \%$ and $\text{V} \leq 0,35 \%$
	6.2	Steels with $0,75 \% < \text{Cr} \leq 3,5 \%$, $0,7 \% < \text{Mo} \leq 1,2 \%$ and $\text{V} \leq 0,35 \%$
	6.3	Steels with $3,5 \% < \text{Cr} \leq 7,0 \%$, $\text{Mo} \leq 0,7 \%$ and $0,45 \% \leq \text{V} \leq 0,55 \%$
	6.4	Steels with $7,0 \% < \text{Cr} \leq 12,5 \%$, $0,7 \% < \text{Mo} \leq 1,2 \%$ and $\text{V} \leq 0,35 \%$
7		Ferritic, martensitic or precipitation hardened stainless steels with $\text{C} \leq 0,35 \%$ and $10,5 \% \leq \text{Cr} \leq 30 \%$
	7.1	Ferritic stainless steels
	7.2	Martensitic stainless steels
	7.3	Precipitation hardened stainless steels
8		Austenitic steels, $\text{Ni} \leq 35 \%$
	8.1	Austenitic stainless steels with $\text{Cr} \leq 19 \%$
	8.2	Austenitic stainless steels with $\text{Cr} > 19 \%$
	8.3	Manganese austenitic stainless steels with $4 \% < \text{Mn} \leq 12 \%$
9		Nickel alloyed steels with $\text{Ni} \leq 10 \%$
	9.1	Nickel alloyed steels with $\text{Ni} \leq 3 \%$
	9.2	Nickel alloyed steels with $3 \% < \text{Ni} \leq 8 \%$
	9.3	Nickel alloyed steels with $8 \% < \text{Ni} \leq 10 \%$