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English Version

**Metallic industrial piping - Part 8: Additional requirements
for aluminium and aluminium alloy piping**

Tuyauteries industrielles métalliques - Partie 8 :
Exigences complémentaires relatives aux tuyauteries
en aluminium et alliages d'aluminium

Metallische industrielle Rohrleitungen - Teil 8:
Zusatzanforderungen an Rohrleitungen aus Aluminium
und Aluminiumlegierungen

This European Standard was approved by CEN on 21 June 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a 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.

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Contents

	Page
European foreword.....	4
1 Scope	6
2 Normative references	6
3 Terms, definitions, symbols and units	8
4 General requirements	8
5 Materials.....	8
5.1 General.....	8
5.2 Material grouping system	8
5.3 Elongation after fracture	9
5.4 Chemical composition	10
5.5 Lamellar tearing	10
5.6 Design temperature and properties.....	10
5.7 Prevention of brittle fracture	10
5.8 Specific requirements for fasteners made of aluminium and aluminium alloys.....	11
5.9 Lined piping	11
5.10 Clad products.....	11
5.11 Technical delivery conditions for welding consumables	11
6 Design	11
6.1 General.....	11
6.2 Time-independent nominal design stress	11
6.3 Straight pipes.....	12
6.4 Pipe bends and elbows.....	12
6.5 Mitre bends.....	12
6.6 Socket welds.....	14
6.7 Designing with transition joints	14
6.7.1 Design considerations	14
6.7.2 Location of transition joints	14
6.7.3 Requirements for transition joints.....	14
6.8 Port-hole extruded tubes	14
6.9 Alternative methods	14
7 Fabrication and installation	15
7.1 General.....	15
7.2 Material grouping	15
7.3 Tolerances	15
7.3.1 Welded pipes and connection dimensions of pipe fittings	15
7.3.2 Welded piping construction	15
7.4 Cutting and bevelling.....	16
7.5 Bending and other forming	16
7.5.1 General.....	16
7.5.2 Definition of cold- and hot forming	16
7.5.3 Heat treatment after cold forming.....	16
7.5.4 Heat treatment after hot forming.....	18

7.6	Welding	19
7.6.1	Welding personnel	19
7.6.2	Welding processes.....	19
7.6.3	Weld joint preparation	19
7.6.4	Preheating.....	20
7.6.5	Backing rings and backing strips.....	21
7.6.6	Post-weld heat treatment (PWHT)	21
8	Inspection and testing.....	21
8.1	General	21
8.2	Formed pressure retaining parts.....	22
8.2.1	General	22
8.2.2	Testing of formed parts	22
8.2.3	Destructive testing of formed and heat treated parts	22
8.3	Welding	23
8.4	Visual and non-destructive testing of welds.....	23
8.4.1	Application of NDT	23
8.4.2	Circumferential, branch, socket and seal welds.....	23
8.4.3	Longitudinal welds and spiral welded tubes/pipes.....	24
8.5	VT and NDT Methods	24
8.6	Production test plates for welded pipes.....	25
9	Final assessment and documentation	26
9.1	General	26
9.2	Pneumatic pressure test	27
9.3	Documentation for components	27
Annex A (informative)	Dimensional tolerances	29
Annex B (normative)	Transition joints.....	31
Annex C (normative)	Nominal design stress values.....	36
Annex Y (informative)	History of EN 13480-8.....	43
Annex ZA (informative)	Relationship between this European Standard and the Essential Requirements of EU Directive 2014/68/EU aimed to be covered	44
Bibliography		45

European foreword

This document (EN 13480-8:2017) 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 December 2017, and conflicting national standards shall be withdrawn at the latest by December 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] 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 this document.

This European Standard EN 13480 for metallic industrial piping consists of eight interdependent and not dissociable Parts which are:

- *Part 1: General;*
- *Part 2: Materials;*
- *Part 3: Design and calculation;*
- *Part 4: Fabrication and installation;*
- *Part 5: Inspection and testing;*
- *Part 6: Additional requirements for buried piping;*
- *CEN/TR 13480-7, Guidance on the use of conformity assessment procedures;*
- *Part 8: Additional requirements for aluminium and aluminium alloy piping.*

Although these Parts may be obtained separately, it should be recognised that the Parts are inter-dependant. As such the manufacture of metallic industrial piping requires the application of all the relevant Parts in order for the requirements of the Standard to be satisfactorily fulfilled.

This European Standard will be maintained by a Maintenance MHD working group whose scope of working is limited to corrections and interpretations related to EN 13480.

The contact to submit queries can be found at <http://www.unm.fr> (en13480@unm.fr). A form for submitting questions can be downloaded from the link to the MHD website. After subject experts have agreed an answer, the answer will be communicated to the questioner. Corrected pages will be given specific issue number and issued by CEN according to CEN Rules. Interpretation sheets will be posted on the website of the MHD.

This document supersedes EN 13480-8:2012. This new edition incorporates the Amendments/the corrigenda which have been approved previously by CEN members, and the corrected pages up to Issue 4 without any further technical change. Annex Y provides details of significant technical changes between this European Standard and the previous edition.

Amendments to this new edition may be issued from time to time and then used immediately as alternatives to rules contained herein.

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, 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.

1 Scope

This Part of EN 13480 specifies requirements for industrial piping systems made of aluminium and aluminium alloys in addition to the general requirements for industrial piping according to the series of standards EN 13480 and CEN/TR 13480-7.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 485-2:2013, *Aluminium and aluminium alloys — Sheet, strip and plate — Part 2: Mechanical properties*

EN 485-3, *Aluminium and aluminium alloys — Sheet, strip and plate — Part 3: Tolerances on dimensions and form for hot-rolled products*

EN 485-4, *Aluminium and aluminium alloys — Sheet, strip and plate — Part 4: Tolerances on shape and dimensions for cold-rolled products*

EN 573-3:2013, *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Part 3: Chemical composition and form of products*

EN 586-2:1994, *Aluminium and aluminium alloys — Forgings — Part 2: Mechanical properties and additional property requirements*

EN 754 (all parts), *Aluminium and aluminium alloys — Cold drawn rod/bar and tube*

EN 755 (all parts), *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles*

EN 764-3, *Pressure equipment — Part 3: Definition of parties involved*

EN 1779:1999, *Non-destructive testing — Leak testing — Criteria for method and technique selection*

EN 10204:2004, *Metallic products — Types of inspection documents*

EN 12392:2000, *Aluminium and aluminium alloys — Wrought products — Special requirements for products intended for the production of pressure equipment*

EN 13445-4:2014, *Unfired pressure vessels — Part 4: Fabrication*

EN 13480-1:2017, *Metallic industrial piping — Part 1: General*

EN 13480-2:2017, *Metallic industrial piping — Part 2: Materials*

EN 13480-3:2017, *Metallic industrial piping — Part 3: Design and calculation*

EN 13480-4:2017, *Metallic industrial piping — Part 4: Fabrication and installation*

EN 13480-5:2017, *Metallic industrial piping — Part 5: Inspection and testing*

EN ISO 148-1:2010, *Metallic materials — Charpy pendulum impact test — Part 1: Test method (ISO 148-1:2009)*

EN ISO 3452-1:2013, *Non-destructive testing — Penetrant testing — Part 1: General principles (ISO 3452-1:2013)*

EN ISO 3834-2:2005, *Quality requirements for fusion welding of metallic materials — Part 2: Comprehensive quality requirements (ISO 3834-2:2005)*

EN ISO 3834-3:2005, *Quality requirements for fusion welding of metallic materials — Part 3: Standard quality requirements (ISO 3834-3:2005)*

EN ISO 4063:2010, *Welding and allied processes — Nomenclature of processes and reference numbers (ISO 4063:2009, Corrected version 2010-03-01)*

EN ISO 4136:2012, *Destructive tests on welds in metallic materials — Transverse tensile test (ISO 4136:2012)*

EN ISO 5173:2010 + A1:2011, *Destructive tests on welds in metallic materials — Bend tests (ISO 5173:2009 + Amd 1:2011)*

EN ISO 6892-1:2009, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature (ISO 6892-1:2009)*

EN ISO 6892-2:2011, *Metallic materials — Tensile testing — Part 2: Method of test at elevated temperature (ISO 6892-2:2011)*

EN ISO 7438:2005, *Metallic materials — Bend test (ISO 7438:2005)*

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

EN ISO 10042:2005, *Welding — Arc-welded joints in aluminium and its alloys — Quality levels for imperfections (ISO 10042:2005)*

EN ISO 10893-8:2011, *Non-destructive testing of steel tubes — Part 8: Automated ultrasonic testing of seamless and welded steel tubes for the detection of laminar imperfections (ISO 10893-8:2011)*

EN ISO 10893-11:2011, *Non-destructive testing of steel tubes — Part 11: Automated ultrasonic testing of the weld seam of welded steel tubes for the detection of longitudinal and/or transverse imperfections (ISO 10893-11:2011)*

EN ISO 11666:2010, *Non-destructive testing of welds — Ultrasonic testing — Acceptance levels (ISO 11666:2010)*

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)*

EN ISO 16810:2014, *Non-destructive testing — Ultrasonic testing — General principles (ISO 16810:2012)*

EN ISO 16811:2014, *Non-destructive testing — Ultrasonic testing — Sensitivity and range setting (ISO 16811:2012)*

EN ISO 16823:2014, *Non-destructive testing — Ultrasonic testing — Transmission technique (ISO 16823:2012)*

EN ISO 16826:2014, *Non-destructive testing — Ultrasonic testing — Examination for discontinuities perpendicular to the surface (ISO 16826:2012)*

EN ISO 16827:2014, *Non-destructive testing — Ultrasonic testing — Characterization and sizing of discontinuities (ISO 16827:2012)*

EN ISO 16828:2014, *Non-destructive testing — Ultrasonic testing — Time-of-flight diffraction technique as a method for detection and sizing of discontinuities (ISO 16828:2012)*

EN ISO 17636-1:2013, *Non-destructive testing of welds — Radiographic testing — Part 1: X- and gamma-ray techniques with film (ISO 17636-1:2013)*

EN ISO 17636-2:2013, *Non-destructive testing of welds — Radiographic testing — Part 2: X- and gamma-ray techniques with digital detectors (ISO 17636-2:2013)*

EN ISO 17637:2011, *Non-destructive testing of welds — Visual testing of fusion-welded joints (ISO 17637:2003)*

EN ISO 17639:2013, *Destructive tests on welds in metallic materials — Macroscopic and microscopic examination of welds (ISO 17639:2003)*

EN ISO 17640:2010, *Non-destructive testing of welds — Ultrasonic testing — Techniques, testing levels, and assessment (ISO 17640:2010)*

EN ISO 23277:2009, *Non-destructive testing of welds — Penetrant testing of welds — Acceptance levels (ISO 23277:2006)*

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

ISO 857-1:1998, *Welding and allied processes — Vocabulary — Part 1: Metal welding processes*

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