

METALLIST TÖÖSTUSTORUSTIK. OSA 1: ÜLDIST

Metallic industrial piping - Part 1: General

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 13480-1:2024 sisaldab Euroopa standardi EN 13480-1:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 24.07.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 13480-1:2024 consists of the English text of the European standard EN 13480-1:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 24.07.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
--	---

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 23.040.03

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele. Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis- ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation: Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Metallic industrial piping - Part 1: General

Tuyauteries industrielles métalliques - Partie 1:
GénéralitéMetallische industrielle Rohrleitungen - Teil 1:
Allgemeines

This European Standard was approved by CEN on 9 July 2024.

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.

This European Standard 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

Contents

Page

European foreword	3
1 Scope	4
2 Normative references	5
3 Terms, definitions, symbols and units	6
3.1 Terms and definitions	6
3.2 Symbols and units	8
4 Interdependency of the parts of the series	9
5 Classification of piping	9
5.1 General	9
5.2 Piping of category 0	11
5.3 Piping operating $\leq 0,5$ bar	11
5.4 Special cases	11
6 Requirements for Piping systems	11
7 Accessories	11
7.1 Industrial valves	11
7.2 Safety systems	11
Annex Y (informative) History of EN 13480-1	12
Y.1 Differences between EN 13480-1:2017 and EN 13480-1:2024	12
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2014/68/EU aimed to be covered	13
Bibliography	14

European foreword

This document (EN 13480-1:2024) 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 2024, and conflicting national standards shall be withdrawn at the latest by December 2024.

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 supersedes EN 13480-1:2017.

This new edition incorporates the Amendments which have been approved previously by CEN members, and the corrected pages up to Issue 2 without any further technical change. Annex Y provides details of significant technical changes between this European Standard and the previous edition.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, 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 recognized 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 <https://unm.fr/en/maintenance-agencies/maintenance-agency-en-13480/>. 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. Interpretation sheets will be posted on the website of the MHD.

Amendments to this new edition may be issued from time to time and then used immediately as alternatives to rules contained herein. These amendments will be consolidated within EN 13480:2024 in accordance with the maintenance system of EN 13480 series approved by CEN/BT Decision C172/2021.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

This document is a preview generated by EVS

1 Scope

This document specifies the requirements for industrial piping systems and supports, including safety systems, made of metallic materials with a view to ensure safe operation.

This document is applicable to metallic piping above ground, ducted or buried, irrespective of pressure.

This document is not applicable to:

- Pipelines and their accessories;
- Stream waterways such as penstocks, pressure tunnels, pressure shaft for hydro-electric-installations and their related specific accessories;
- Piping for vehicles covered by the EEC type approval procedures as laid down in Directives 70/156/EEC [1], 74/150/EEC [2] and 92/61/EEC [3];
- Items specifically designed for nuclear use, failure of which can cause an emission of radioactivity;
- Well-control equipment used in the petroleum, gas or geothermal exploration and extraction industry and in underground storage which is intended to contain and/or control well pressure, including the piping;
- Piping of blast furnaces including the furnace cooling, hot blast recuperators, dust extractors and blast furnace exhaust gas scrubbers and direct reducing cupolas including the furnace cooling, gas converters and vacuum furnaces and pans for melting, re-melting de-gassing and casting of steel and non ferrous metals;
- Enclosures for high voltage electrical equipment such as switchgear, control gear and transformers;
- Pressurized pipes for the containment of transmission systems such as for electrical power and telephone cables;
- Permanently fixed piping for ships, rockets, aircraft and mobile offshore units;
- Internal piping in medical devices as specified in the Directive 93/142/EEC [4] concerning medical devices;
- Internal piping of boilers and piping integral to pressure vessels.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 764-1:2015+A1:2016, *Pressure equipment — Part 1: Vocabulary*

EN 764-2:2012, *Pressure equipment — Part 2: Quantities, symbols and units*

EN 764-7:2002, *Pressure equipment — Part 7: Safety systems for unfired pressure equipment*

EN 13480-2:2024, *Metallic industrial piping — Part 2: Materials*

EN 13480-3:2024, *Metallic industrial piping — Part 3: Design and calculation*

EN 13480-4:2024, *Metallic industrial piping — Part 4: Fabrication and installation*

EN 13480-5:2024, *Metallic industrial piping — Part 5: Inspection and testing*

EN 13480-6:2024, *Metallic industrial piping — Part 6: Additional requirements for buried piping*

CEN/TR 13480-7:2017, *Metallic industrial piping — Part 7: Guidance on the use of conformity assessment procedures*

EN 13480-8:2024, *Metallic industrial piping — Part 8: Additional requirements for aluminium and aluminium alloy piping*

EN 16668:2016+A1:2018, *Industrial valves — Requirements and testing for metallic valves as pressure accessories*

EN ISO 4126-1:2013¹, *Safety devices for protection against excessive pressure — Part 1: Safety valves (ISO 4126-1:2013)*

3 Terms, definitions, symbols and units

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 764-1:2015+A1:2016 and the following apply.

Specific definitions are given in the relevant Parts of this European Standard.

3.1.1

ambient temperature

temperature of the surrounding atmosphere in the immediate vicinity of the piping system

3.1.2

piping system

piping

pipe or system of pipes for the conveyance of fluids within an industrial site

Note 1 to entry A piping system can be regarded as one single system provided it conveys substances having the same properties and it is as a whole designed for the same allowable pressure.

Note 2 to entry Interruption by different components such as pumps, machines, vessels etc. does not preclude the integration to one single piping.

3.1.3

fluid

gases, liquids and vapours in pure phase as well as mixtures thereof

Note 1 to entry A fluid can contain a suspension of solids.

¹ As impacted by EN ISO 4126-1:2013/A1:2016 and EN ISO 4126-1:2013/A2:2019.