NSAI
Standards

Irish Standard
I.S. EN 14276-2:2020

Pressure equipment for refrigerating systems and heat pumps - Part 2: Piping - General requirements

I.S. EN 14276-2:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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This document is based on:	*Published:*
EN 14276-2:2020	2020-02-26

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2020-03-15	23.020.30 27.080 27.200 NOTE: If blank see CEN/CENELEC cover page

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National Foreword

I.S. EN 14276-2:2020 is the adopted Irish version of the European Document EN 14276-2:2020, Pressure equipment for refrigerating systems and heat pumps - Part 2: Piping - General requirements

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14276-2

February 2020

ICS 23.020.30; 27.080; 27.200

Supersedes EN 14276-2:2007+A1:2011

English Version

Pressure equipment for refrigerating systems and heat pumps - Part 2: Piping - General requirements

Équipements sous pression pour systèmes de réfrigération et pompes à chaleur - Partie 2 : Tuyauteries - Exigences générales

Druckgeräte für Kälteanlagen und Wärmepumpen - Teil 2: Rohrleitungen - Allgemeine Anforderungen

This European Standard was approved by CEN on 1 December 2019.

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European foreword

This document (EN 14276-2:2020) has been prepared by Technical Committee CEN/TC 182 "Refrigerating systems, safety and environmental requirements", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by August 2020, and conflicting national standards shall be withdrawn at the latest by August 2020.

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 14276-2:2007+A1:2011.

This document has been prepared under a standardization request 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.

EN 14276, *Pressure equipment for refrigerating systems and heat pumps*, is currently composed of the following parts:

— *Part 1: Vessels - General requirements*;

— *Part 2: Piping - General requirements*.

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, 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, Turkey and the United Kingdom.

Introduction

This document recognizes the unique nature of piping for refrigerating systems or heat pumps and is intended to address the specific needs of the refrigeration and heat pump industry. This document should be read in conjunction with the various parts of the EN 13480 series and EN 14276-1:2020.

The unique nature of a refrigerating system is defined in the Introduction of EN 14276-1:2020.

1 Scope

1.1 This document specifies the requirements for material, design, manufacturing, testing and documentation for stationary piping intended for use in refrigerating systems, heat pumps and secondary cooling and heating systems. These refrigerating systems and heat pump systems are referenced in this document as refrigerating systems as defined in EN 378-1:2016.

The term “refrigerating system” used in this document includes heat pumps.

1.2 This document applies to piping, including welded or brazed attachments up to and including the flanges, screwed, welded or brazed connectors, or to the edge to be welded or brazed at the first circumferential joint connecting piping or other elements.

1.3 This document applies to the selection, application and installation of safety accessories intended to protect the piping during the various phases of the refrigeration cycle.

1.4 This document applies to the following piping:

— heat exchanger consisting of piping for the purpose of cooling or heating air where piping aspects are predominant;

— piping incorporated into an assembly (e.g. self-contained system, condensing unit);

— field erected piping.

1.5 This document applies to piping with an internal pressure down to –1 bar, to account for the evacuation of the piping prior to charging with refrigerant.

1.6 This document applies to both the mechanical loading conditions and thermal conditions as defined in EN 13445-3:2014/A5:2018 associated with refrigerating systems. It applies to piping subject to the maximum allowable temperatures for which nominal design stresses for materials are derived using EN 14276-1:2020 or as specified in this document. In addition, piping designed to this document will have a maximum design temperature not exceeding 200 °C and a maximum design pressure not exceeding 160 bar. Outside of these limits, the EN 13480 series can be used for the design construction and inspection of the piping. Under these circumstances, the unique nature of a refrigerating plant, as indicated in the introduction of EN 14276-1:2020, will also be taken into account.

1.7 This document applies to piping where the main pressure bearing parts are manufactured from metallic ductile materials as defined in Clause 4 and in EN 14276-1:2020.

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 378-1:2016, *Refrigerating systems and heat pumps — Safety and environmental requirements — Part 1: Basic requirements, definitions, classification and selection criteria*

EN 378-2:2016, *Refrigerating systems and heat pumps — Safety and environmental requirements — Part 2: Design, construction, testing, marking and documentation*

EN 378-3:2016, *Refrigerating systems and heat pumps — Safety and environmental requirements — Part 3: Installation site and personal protection*