NSAI Standards

Irish Standard
I.S. EN ISO 8659:2020

Thermoplastics valves - Fatigue strength - Test method (ISO 8659:2020)

I.S. EN ISO 8659:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN ISO 8659:2020 is the adopted Irish version of the European Document EN ISO 8659:2020, Thermoplastics valves - Fatigue strength - Test method (ISO 8659:2020)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 8659

April 2020

ICS 23.060.01; 83.140.30

Supersedes EN 28659:1990

English Version

Thermoplastics valves - Fatigue strength - Test method (ISO 8659:2020)

Robinets en matériaux thermoplastiques - Résistance à la fatigue - Méthode d'essai (ISO 8659:2020)

Armaturen aus Thermoplasten - Ermüdungsfestigkeit - Prüfverfahren (ISO 8659:2020)

This European Standard was approved by CEN on 29 March 2020.

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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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN ISO 8659:2020) has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" in collaboration with Technical Committee CEN/TC 69 “Industrial valves” 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of an identical text or by endorsement, at the latest by October 2020, and conflicting national standards shall be withdrawn at the latest by October 2020.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 28659:1990.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 8659:2020 has been approved by CEN as EN ISO 8659:2020 without any modification.

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I.S. EN ISO 8659:2020

INTERNATIONAL STANDARD

ISO 8659

Second edition
2020-04

Thermoplastics valves — Fatigue strength — Test method

Robinets en matériaux thermoplastiques — Résistance à la fatigue — Méthode d'essai

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 7, *Valves and auxiliary equipment of plastics materials*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 69, *Industrial valves*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 8659:1989), which has been technically revised.

The main changes compared to the previous edition are as follows:

— updating of the normative references and terms and definitions clauses;

— specification of the type of valve in the test report and explanation note for the opening torque.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The aim of this document is to establish certain basic requirements for the endurance testing of plastics valves to ensure that uniform test methods are adopted. This document is intended to be considered in conjunction with any specific requirements, in particular product standards applicable to the individual types of valves.

Thermoplastics valves — Fatigue strength - Test method

1 Scope

This document specifies the endurance test necessary to confirm the ability of hand-operated plastics valves to withstand prolonged use, with repeated opening and closure. It does not specify the ability of valves to withstand adverse conditions, in particular those of chemically aggressive fluid media and/or environments, or excessive fluid velocities and cavitation.

NOTE Concerning the chemical aggression of the materials, a classification table is reported in ISO/TR 10358[1].

This document includes values of the parameters necessary for the proper performance of the endurance test, with the reservation that the parameters are different in particular product standards (see 5.1).

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.

ISO 161-1, *Thermoplastics pipes for the conveyance of fluids — Nominal outside diameters and nominal pressures — Part 1: Metric series*

ISO 16135, *Industrial valves — Ball valves of thermoplastics materials*

ISO 16136, *Industrial valves — Butterfly valves of thermoplastics materials*

ISO 16138, *Industrial valves — Diaphragm valves of thermoplastics materials*

ISO 16139, *Industrial valves — Gate valves of thermoplastics materials*

ISO 21787, *Industrial valves — Globe valves of thermoplastics materials*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 161-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
nominal pressure
PN
alphanumerical designation of pressure, used for reference purposes, which is related to the mechanical strength of the valve

Note 1 to entry: Usually nominal pressure (PN), measured in bar, corresponds to water pressure at 20 °C water temperature. See also ISO 161-1.