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Glass-reinforced thermosetting plastics (GRP) pipes and fittings — Determination of the resistance to chemical attack for the inside of a section in a deflected condition

Tubes et raccords en plastiques thermodurcissables renforcés de verre (PRV) — Détermination de la résistance à une attaque chimique à l'intérieur d'un tronçon de tube soumis à déflexion

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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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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 6, *Reinforced plastics pipes and fittings for all applications.*

This fourth edition cancels and replaces the third edition (ISO 10952:2014), which has been technically revised.

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

— the tolerances for the dimensional measuring devices in 6.2 have been modified;

— the measurement of the mean wall thickness in 8.2 and the mean diameter in 8.3 have been specified.

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.

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Glass-reinforced thermosetting plastics (GRP) pipes and fittings — Determination of the resistance to chemical attack for the inside of a section in a deflected condition

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1 Scope

This document specifies a method for determining the chemical resistance properties of glass-reinforced thermosetting plastics (GRP) pipes and fittings in a deflected condition for nominal sizes DN 100 and larger.

In conjunction with ISO 10928, this document provides a method for evaluating the effect of a chemical environment on the interior of a pipe or fitting after a specified period of time. Test conditions and requirements are specified in the referring International Standard. ISO 23856 references this document.

NOTE It has been found that the effect of chemical environments can be accelerated by strain induced from deflection; hence, this type of effect is frequently referred to as strain corrosion.

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 10928, *Plastics piping systems — Glass-reinforced thermosetting plastics (GRP) pipes and fittings — Methods for regression analysis and their use*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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
mean diameter
d_m
diameter of the circle corresponding with the middle of the pipe wall cross-section

Note 1 to entry: The mean diameter is given by either of the following formulae:

$$d_m = d_i + e_m$$

$$d_m = d_e - e_m$$

where

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