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Petroleum and natural gas industries - Glass-reinforced plastics (GRP) piping - Part 2: Qualification and manufacture (ISO 14692-2:2017)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

**Petroleum and natural gas industries - Glass-reinforced
plastics (GRP) piping - Part 2: Qualification and
manufacture (ISO 14692-2:2017)**

Industries du pétrole et du gaz naturel - Canalisations
en plastique renforcé de verre (PRV) - Partie 2:
Conformité aux exigences de performance et
fabrication (ISO 14692-2:2017)

Erdöl- und Erdgasindustrie - Glasfaserverstärkte
Kunststoffrohrleitungen (GFK) - Teil 2: Zulassung und
Herstellung (ISO 14692-2:2017)

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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN ISO 14692-2:2017) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" in collaboration with Technical Committee CEN/TC 12 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" the secretariat of which is held by NEN.

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Endorsement notice

The text of ISO 14692-2:2017 has been approved by CEN as EN ISO 14692-2:2017 without any modification.

**Petroleum and natural gas
industries — Glass-reinforced plastics
(GRP) piping —**

**Part 2:
Qualification and manufacture**

*Industries du pétrole et du gaz naturel — Canalisations en plastique
renforcé de verre (PRV) —*

Partie 2: Qualification et fabrication





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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 on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 6, *Processing equipment and systems*.

This second edition cancels and replaces the first edition (ISO 14692-2:2002), which has been technically revised. It also incorporates the Technical Corrigendum ISO 14692-2:2002/Cor 1:2005.

A list of all the parts of ISO 14692 can be found on the ISO website.

Introduction

The objective of this document is to enable the purchase of GRP components with known and consistent properties from any source. Main users of this document will be the principal and the manufacturer, certifying authorities and government agencies.

The qualification programme and the quality programme are the most significant clauses in this document.

Petroleum and natural gas industries — Glass-reinforced plastics (GRP) piping —

Part 2: Qualification and manufacture

1 Scope

This document gives requirements for the qualification and manufacture of GRP piping and fittings in order to enable the purchase of GRP components with known and consistent properties from any source.

It is applicable to qualification procedures, preferred dimensions, quality programmes, component marking and documentation.

This document is intended to be read in conjunction with ISO 14692-1.

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 834-1, *Fire-resistance tests — Elements of building construction — Part 1: General requirements*

ISO 1172, *Textile-glass-reinforced plastics — Prepregs, moulding compounds and laminates — Determination of the textile-glass and mineral-filler content — Calcination methods*

ISO 4901, *Reinforced plastics based on unsaturated-polyester resins — Determination of the residual styrene monomer content, as well as the content of other volatile aromatic hydrocarbons, by gas chromatography*

ISO 11357-2, *Plastics — Differential scanning calorimetry (DSC) — Part 2: Determination of glass transition temperature and glass transition step height*

ISO 11359-2, *Plastics — Thermomechanical analysis (TMA) — Part 2: Determination of coefficient of linear thermal expansion and glass transition temperature*

ISO 14130, *Fibre-reinforced plastic composites — Determination of apparent interlaminar shear strength by short-beam method*

ISO 14692-1:2017, *Petroleum and natural gas industries — Glass-reinforced plastics (GRP) piping — Part 1: Vocabulary, symbols, applications and materials*

ISO 14692-3:2017, *Petroleum and natural gas industries — Glass-reinforced plastics (GRP) piping — Part 3: System design*

ISO 14692-4:2017, *Petroleum and natural gas industries — Glass-reinforced plastics (GRP) piping — Part 4: Fabrication, installation, inspection and maintenance*

API 15HR, *Specification for high pressure fiberglass line pipe, Fourth Edition*

ASME RTP-1-2007, *Reinforced thermoset plastic corrosion-resistant equipment*

ASTM D638, *Standard test method for tensile properties of plastics*

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ASTM D696, *Standard test method for coefficient of linear thermal expansion of plastics between -30 °C and 30 °C with a vitreous silica dilatometer*

ASTM D1598, *Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure*

ASTM D2105, *Standard test method for longitudinal tensile properties of "fiberglass" (glass-fiber-reinforced thermosetting-resin) pipe and tube*

ASTM D2412, *Standard test method for determination of external loading characteristics of plastic pipe by parallel-plate loading*

ASTM D2583, *Standard test method for indentation hardness of rigid plastics by means of a barcol impressor*

ASTM D2992, *Standard practice for obtaining hydrostatic or pressure design basis for "fiberglass" (glass-fiber-reinforced thermosetting-resin) pipe and fittings*

ASTM D3567, *Standard practice for determining dimensions of "fiberglass" (glass-fiber-reinforced thermosetting resin) pipe and fittings*

ASTM E1529, *Standard test methods for determining effects of large hydrocarbon pool fires on structural members and assemblies*

IMO MSC.61(67), *Adoption of the International Code for application of fire test procedures*

IMO Resolution A.653(16), *Fire test procedures for surface flammability of bulkhead, ceiling and deck finish materials as amended by Resolution IMO MSC.61(67): Annex 1 Part 5*

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