



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 14692-2:2003

Petroleum and natural gas industries -  
Glass-reinforced plastics (GRP) piping -  
Part 2: Qualification and manufacture (ISO  
14692-2:2002)

## I.S. EN ISO 14692-2:2003

*Incorporating amendments/corrigenda issued since publication:*

EN ISO 14692-2:2002/AC:2006

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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English version  
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Petroleum and natural gas industries - Glass-reinforced plastics (GRP)  
piping - Part 2: Qualification and manufacture (ISO 14692-  
2:2002/Cor.1:2005)

Industries du pétrole et du gaz naturel -  
Canalisations en plastique renforcé de  
verre (PRV) - Partie 2: Conformité aux  
exigences de performance et fabrication  
(ISO 14692-2:2002/Cor.1:2005)

Erdöl- und Erdgasindustrie -  
Glasfaserverstärkte Kunststoffrohrleitungen  
(GFK) - Teil 2: Zulassung und Herstellung  
(ISO 14692-2:2002/Cor.1:2005)

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Ce corrigendum prendra effet le 1 mars 2006 pour incorporation dans les trois versions linguistiques officielles de la EN.

Die Berichtigung tritt am 1.März 2006 zur Einarbeitung in die drei offiziellen Sprachfassungen der EN in Kraft.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

**I.S. EN ISO 14692-2:2003**  
**EN ISO 14692-2:2002/AC:2006 (E/F/D)**

## **English version**

### **Endorsement Notice**

The text of ISO 14692-2:2002/Cor.1:2005 has been approved by CEN as a European Corrigendum without any modifications.

## **Version française**

### **Notice d'entérinement**

Le texte de l'ISO 14692-2:2002/Cor.1:2005 a été approuvé par le CEN comme Corrigendum européen sans aucune modification.



**I.S. EN ISO 14692-2:2003  
INTERNATIONAL STANDARD ISO 14692-2:2002(E)  
TECHNICAL CORRIGENDUM 1**

Published 2005-10-01

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

**Part 2:**

### **Qualification and manufacture**

TECHNICAL CORRIGENDUM 1

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

*Partie 2: Conformité aux exigences de performance et fabrication*

*RECTIFICATIF TECHNIQUE 1*

Technical Corrigendum 1 to ISO 14692-2 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*.

Page 25, 6.8.2.2:

Include the following note at the end of the subclause:

NOTE An exception to the maximum design temperature is presented in D.2.

Page 49, D.2:

Replace the 3rd paragraph with the following:

If the effects of temperature alone are being considered, it is acceptable to linearly extrapolate a value of  $A_1$  between a value of 1 at the qualification test temperature (minimum test temperature is 65 °C),  $T_{\text{qual}}$ , and 0 at the  $T_g$ , i.e.

$$A_1 = \frac{T - T_g}{T_{\text{qual}} - T_g} \quad (\text{D.1})$$

where  $T$  is the required design temperature.

If  $A_1$  is extrapolated from the qualification test temperature, then the maximum design temperature limitations as defined in 6.8.2.2 shall apply.

As an exception to the maximum design temperature limitations of 6.8.2.2, if  $A_1$  is interpolated between two sets of full regression data in accordance with 6.3.2, then the maximum design temperature shall be within 30° of  $T_g$ ; however the maximum design temperature shall not exceed the maximum qualification test temperature.

ICS 75.200; 83.140.30

English version

**Petroleum and natural gas industries - Glass-reinforced plastics  
(GRP) piping - Part 2: Qualification and manufacture (ISO  
14692-2:2002)**

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-  
2:2002)

This European Standard was approved by CEN on 2 December 2002.

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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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## I.S. EN ISO 14692-2:2003

### EN ISO 14692-2:2002 (E)

#### Foreword

This document (EN ISO 14692-2:2002) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum and natural gas industries" in collaboration with Technical Committee CEN/TC 12 "Materials, equipment and offshore structures for petroleum and natural gas industries", 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 June 2003, and conflicting national standards shall be withdrawn at the latest by June 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

**NOTE FROM CMC** The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

#### Endorsement notice

The text of ISO 14692-2:2002 has been approved by CEN as EN ISO 14692-2:2002 without any modifications.



I.S. EN ISO 14692-2:2003  
**INTERNATIONAL  
STANDARD**

**ISO  
14692-2**

First edition  
2002-12-15

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**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: Conformité aux exigences de performance et fabrication*



Reference number  
ISO 14692-2:2002(E)

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14692-2 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*.

ISO 14692 consists of the following parts, under the general title *Petroleum and natural gas industries — Glass-reinforced plastics (GRP) piping*:

- *Part 1: Vocabulary, symbols, applications and materials*
- *Part 2: Qualification and manufacture*
- *Part 3: System design*
- *Part 4: Fabrication, installation and operation*

## **Introduction**

The objective of this part of ISO 14692 is to enable the purchase of GRP components with known and consistent properties from any source. Main users of the document will be the principal and the manufacturer, certifying authorities and government agencies.

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

## Part 2: Qualification and manufacture

### 1 Scope

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

### 2 Normative references

The following referenced documents are indispensable for the application 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 resin — Determination of residual styrene monomer content*

ISO 6721-1, *Plastics — Determination of dynamic mechanical properties — Part 1: General principles*

ISO 7822:1990, *Textile glass reinforced plastics — Determination of void content — Loss on ignition, mechanical disintegration and statistical counting methods*

ISO 10467:—<sup>1)</sup>, *Plastics piping systems for pressure and non-pressure drainage and sewerage — Glass-reinforced thermosetting plastics (GRP) systems based on unsaturated polyester (UP) resin*

ISO 10639:—<sup>1)</sup>, *Plastics piping systems for water supply, with or without pressure — Glass-reinforced thermosetting plastics (GRP) systems based on unsaturated polyester (UP) resin*

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

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