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First edition
2002-12-15

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

Part 1:

Vocabulary, symbols, applications and materials

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

Partie 1: Vocabulaire, symboles, applications et matériaux



Reference number
ISO 14692-1:2002(E)

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Published in Switzerland

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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 14692-1 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*

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Introduction

ISO 14692 (all parts) for the use of glass-reinforced plastics (GRP) piping in oil and natural gas industries is based on the document *Specifications and recommended practice for the use of GRP piping offshore* published by the United Kingdom Offshore Operators Association (UKOOA) in 1994. The objective of ISO 14692 (all parts) is to provide the oil and gas industry, and the supporting engineering and manufacturing industry, with mutually agreed specifications and recommended practices for the design, purchase, manufacturing, qualification testing, handling, storage, installation, commissioning and operation of GRP piping systems.

ISO 14692-2, ISO 14692-3 and ISO 14692-4 follow the individual phases in the life cycle of a GRP piping system, i.e. from design through manufacture to operation. Each part is therefore aimed at the relevant parties involved in that particular phase. It is primarily intended for offshore applications on both fixed and floating topsides facilities, but it may also be used as guidance for the specification, manufacture, testing and installation of GRP piping systems in other similar applications found onshore, e.g. produced-water and firewater systems.

- *Part 1: Vocabulary, symbols applications and materials.* It defines terms and symbols, and identifies the applications that ISO 14692 (all parts) is intended to cover, together with anticipated end users. It also defines limits on the material used for the construction of components and describes the pressure terminology used throughout ISO 14692 (all parts). Main users are envisaged to include all parties in the life cycle of a typical GRP piping system. ISO 14692-1 should be used in conjunction with the part of specific relevance.
- *Part 2: Qualification and manufacture.* Its objective is to enable the purchase of GRP components with known and consistent properties from any source. Main users of the document are envisaged to be the principal and the manufacturer, certifying authorities and government agencies.
- *Part 3: System design.* Its objective is to ensure that piping systems, when designed using the components qualified in ISO 14692-2, meet the specified performance requirements. Main users of the document are envisaged to be the principal, design contractors, suppliers contracted to do the design, certifying authorities and government agencies.
- *Part 4: Fabrication, installation and operation.* Its objective is to ensure that installed piping systems meet the specified performance requirements throughout their operational life. Main users of the document are envisaged to be the principal, fabrication/installation contractors, repair and maintenance contractors, certifying authorities and government agencies.