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## **Glass-reinforced thermosetting plastics (GRP) pipes and fittings — Test methods to prove the design of bolted flange joints**

*Tubes et raccords en plastiques thermodurcissables renforcés de  
verre (PRV) — Méthodes d'essai pour confirmer la conception des  
assemblages à brides boulonnées*



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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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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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](http://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 second edition cancels and replaces the first edition (ISO 8483:2003), which has been technically revised. It also incorporates the Amendment ISO 8483:2003/Amd1:2012. The main changes compared to the previous edition are as follows:

- changed the Scope to mention that the test procedure is a destructive test and that the bending test is limited up to DN 600;
- changed the Scope to cover the proof of structural design of bolted flange joints;
- the Terms and definitions clause was added to this document;
- changed testing sequences from mandatory to recommended;
- modified test sequence for the proof of the design ([Clause 9](#));
- changes in [Table 1](#) with modified testing sequences for the proof of the design of joints;
- modification of bending test sequence;
- addition of an alternative bending test (Method B).

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](http://www.iso.org/members.html).

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## Introduction

In a pipework system, pipes and fittings of different nominal pressures and nominal stiffness may be used. A joint may be made between pipes and/or fittings and should be designed such that its performance is equal to or better than the requirements of the pipeline, but not necessarily of the components being joined.

The requirements for the assembly of the joint are not included in this document, but they should be in accordance with the manufacturer's recommendations.

The material-dependent parameters and/or performance requirements are stated in the referring standard.