

Plastics piping systems — Glass-reinforced thermosetting plastics (GRP) components — Test methods to prove the design of bolted flange joints

The European Standard EN 1450:1996, with the incorporation of amendment A1:1998, has the status of a British Standard

ICS 23.040.45; 23.040.60; 83.140.30

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee PRI/61, Plastics piping and components, upon which the following bodies were represented:

- British Gas plc
- British Plastics Federation
- British Plumbing Fittings Manufacturers' Association
- British Valve and Actuator Manufacturers' Association
- Chartered Institution of Water and Environmental Management
- Department of the Environment (British Board of Agrément)
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property and Buildings Directorate)
- Department of Transport
- Electricity Association
- Health and Safety Executive
- Institute of Building Control
- Institute of Materials
- Institution of Civil Engineers
- Institution of Gas Engineers
- National Association of Plumbing, Heating and Mechanical Services Contractors
- Pipeline Industries Guild
- Plastics Land Drainage Manufacturers' Association
- Society of British Gas Industries
- Society of British Water Industries
- Water Companies Association
- Water Services Association of England and Wales

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Association of Consulting Engineers
- Engineering Equipment and Materials Users' Association
- Institution of Mechanical Engineers
- RAPRA Technology Ltd.

This British Standard, having been prepared under the direction of the Sector Board for Materials and Chemicals, was published under the authority of the Standards Board and comes into effect on 15 May 1997

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National foreword

This British Standard has been prepared by Technical Committee PRI/61 and is the English language version of EN 1450:1996 *Plastics piping systems — Glass-reinforced thermosetting plastics (GRP) components — Test methods to prove the design of bolted flange joints* including amendment A1:1998, published by the European Committee for Standardization (CEN).

It is incorporated into BS 2782 *Methods of testing plastics — Part 12: Reinforced plastics pipes, fittings and valves*, as Method 1224F:1997, for association with related test methods for plastics materials and plastics piping components.

This standard has been prepared for reference by other standards under preparation by CEN for specification of reinforced plastics piping systems and components. It has been implemented to enable experience of the methods to be gained and for use for other fresh applications.

It is also for use for the revision or amendment of other national standards as practicable, but it should not be presumed to apply to any existing standard or specification which contains or makes reference to a different test method until that standard/specification has been amended or revised to make reference to this method and adjust any requirements as appropriate.

WARNING NOTE 1. This method includes requirements for the assembly of flanged joints (see, for example, 4.2 and 6.6 and associated notes). Attention is drawn to the need when *dismantling* flanged joints for appropriate procedures always to be applied, such as the manufacturers' recommended sequence for releasing an annular array of bolts. Joints which have been assembled to contain relatively high pressures (see 6.4.3) or apply enhanced bolt torque (see 6.6.3) will involve correspondingly higher elastic strain in the joint components (e.g. bolts, flanges, gaskets). In such circumstances excessive relaxation of one or more bolts when dismantling in accordance with e.g. 6.4.4 and 6.6.4 could overload adjacent bolts to the point where they fail in rapid succession. Precautions are necessary accordingly.

WARNING NOTE 2. This British Standard, which is identical with EN 1450:1996, does not necessarily detail all the precautions necessary to meet the requirements of the Health and Safety at Work etc. Act 1974. Attention should be paid to any appropriate safety precautions and the method should be operated only by trained personnel.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

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