

Plastics piping systems — Thermoplastics valves — Test method for the integrity of a valve after temperature cycling under bending

The European Standard EN 1704 : 1997 has the status of a
British Standard

ICS 23.060.01

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee PRI/61, Plastics piping systems 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 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 represented in the drafting of this standard, through subcommittees and panels:

- ERA Technology Ltd.
- Engineering Equipment and Materials Users' Association
- 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 June 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 1704 : 1996 *Plastics piping systems — Thermoplastics valves — Test method for the integrity of a valve after temperature cycling under bending*, published by the European Committee for Standardization (CEN).

It is incorporated into BS 2782 *Methods of testing plastics: Part 11: Thermoplastics pipes, fittings and valves*, as Method 1133B : 1997, for association with related test methods for plastics materials and plastics piping components.

This test method has been prepared for reference by other standards under preparation by CEN for specification of plastics piping and ducting systems and components. It has been implemented to enable experience of the method 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.

Cross-references

Publication referred to	Corresponding British Standard
EN 837-1 : 1996	BS EN 837 : 1997 <i>Pressure gauge — Part 1: Bourdon tube pressure gauges — Dimensions, metrology, requirements and tests</i>
EN 28233	BS EN 28233 : 1992 <i>Thermoplastics valves — Torque — Test method</i> [BS 2782 : Part 11 : Method 1131 : 1992]
EN 45501 : 1993	BS EN 45501 : 1994 <i>Specification for metrological aspects of non-automatic weighing instruments</i>

NOTE 1. In the descriptors, the term 'cocks' should be read as 'valves'.

NOTE 2. In 4.1, the specification of the bending frame given in the first paragraph corresponds to that for testing a length of pipe under bending, for which a constant bending radius can be achieved. This cannot be achieved for a test piece in which a significant portion comprises a relatively stiff valve body. It is necessary therefore to interpret figure 1 as requiring displacement of the valve body by the specified radial distance from its position between two straight pipes before bending is applied. Depending on the relative lengths and stiffness of the valve body and the two adjacent pipes which complete the span shown in figure 1, the radius of bending of the actual pipes may differ from and cannot be expected or required to conform to a constant radius of $25d_n$.

NOTE 3. In 4.1, reference has been introduced to a specific classification in accordance with EN 45501, which should therefore have been listed as a dated reference in clause 2.

NOTE 4. In 5.1.1, reference has been introduced to the 'MRS-class' of the materials of the pipes and the valve, without reference to the basis thereof. The Technical Committee considers this to be a reference to the classification number according to EN ISO 12162 : 1995 (= BS EN ISO 12162 : 1996 and BS 2782 : Part 11 : Method 1121 : 1996)

Warning note. This British Standard, which is identical with EN 1704 : 1997, 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.

In particular, it is the opinion of UK Technical Committee PRI/61 that the method as written gives test conditions known to be appropriate and required for some applications, including polyethylene valves for gas distribution. For testing of valves of more brittle materials and/or intended for other applications, the test conditions may be inappropriate, *e.g.* conditioning to $-20\text{ }^{\circ}\text{C}$ as required for 6.3 and 6.6. The Technical Committee therefore draws particular attention to clause 3 and the note thereto, including item c), and to the note which follows 6.9.

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

Summary of pages

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