

INTERNATIONAL STANDARD

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Polyolefin pipe assemblies with or without jointed fittings — Resistance to internal pressure — Test method

Assemblages de tubes en polyoléfines comportant ou non des raccords — Résistance à la pression intérieure — Méthode d'essai



Reference number
ISO 9356:1989(E)

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 9356 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*.

Annex A of this International Standard is for information only.

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Polyolefin pipe assemblies with or without jointed fittings — Resistance to internal pressure — Test method

1 Scope

This International Standard specifies a test method for determining the resistance to pressure of polyolefin assemblies obtained by fusion welding of polyolefin pipes and fittings (for example, by socket fusion, butt fusion or electrofusion) for the transport of fluids with or without pressure.

It enables, in particular, the resistance of fittings and saddles to internal pressure to be tested.

NOTE 1 For testing of individual (unjointed) pipes, attention is drawn to ISO 1167 (see bibliography).

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3126:1974, *Plastics pipes — Measurement of dimensions*.

3 Principle

Test pieces, made up from fittings welded to lengths of pipe or from pipes butt-welded to each other, are conditioned and then submitted to a constant internal pressure for a specified period of time or to failure.

Throughout the test, the test pieces are kept in an environment at a specified constant temperature;

this environment may be water ("water in water" test), another liquid ("water in liquid" test) or air ("water in air" test).

4 Apparatus

The apparatus consists essentially of the following components:

4.1 End caps, fixed to the ends of the test piece.

They shall, by means of an appropriate system, maintain the pressure-tightness of the assembly and provide a means of connection to the pressurizing unit.

The material from which the end caps are made shall not have any adverse effect on the pipe under test; for example, copper end caps are not to be used for testing polypropylene (PP) pipes.

The following three types of end cap are permitted.

- a) Fittings rigidly connected to the test piece [see figure 1a)].
- b) Female parts, made of metal, fitted with joints ensuring sealing onto the external surface of the test piece and connected to one another by a metal rod (with a central hole) allowing longitudinal movement at the ends of the test piece. Pressure is applied through the rod [see figure 1b)].
- c) Male parts, made of metal, fitted with joints ensuring sealing onto the internal surface of the test piece and connected to one another by a metal rod (with a central hole) allowing longitudinal movement at the ends of the test piece [see figure 1c)].