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Thermoplastics piping systems for non-pressure applications — Test method for watertightness

Systèmes de canalisations thermoplastiques pour applications sans pression — Méthode d'essai de l'étanchéité à l'eau

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Foreword

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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.

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Thermoplastics piping systems for non-pressure applications — Test method for watertightness

1 Scope

This International Standard specifies a test method for watertightness of thermoplastics products fabricated from more than one piece for non-pressure applications, and joints of thermoplastics piping systems for non-pressure applications.

2 Principle

A test assembly comprising either a fabricated product or an assembly of pipes and/or fittings is subjected to a given internal hydrostatic pressure for a given time period during which the leaktightness of the fabricated product or the joint is verified by inspection.

NOTE It is assumed that the following test parameters are set by the referring standard:

a) the sampling procedure (see 4.1 and Clause 5);

b) the number of test pieces (see 4.2).

3 Apparatus

3.1 End-sealing devices, having a size and using a sealing method that are appropriate to the type of joint assembly under test. The devices shall be restrained in such a manner that does not exert longitudinal forces on the joint assembly and prevents the devices or the assembly under test from separating under pressure. The mass of the devices shall not be permitted to influence the angular deflection to be applied (see 5.2).

3.2 Hydrostatic pressure source, connected to one end of at least one end-sealing device, capable of applying the required pressure gradually and evenly in accordance with 5.4, and then of keeping it constant to within $^{+2}_{-1}$ % for the required duration of test (see Clause 5).

3.3 Bleed valve, capable of venting air when the hydrostatic pressure is applied to the test piece.

3.4 Pressure-measuring device, capable of checking conformity to the required test pressure (see 3.2 and Clause 5).

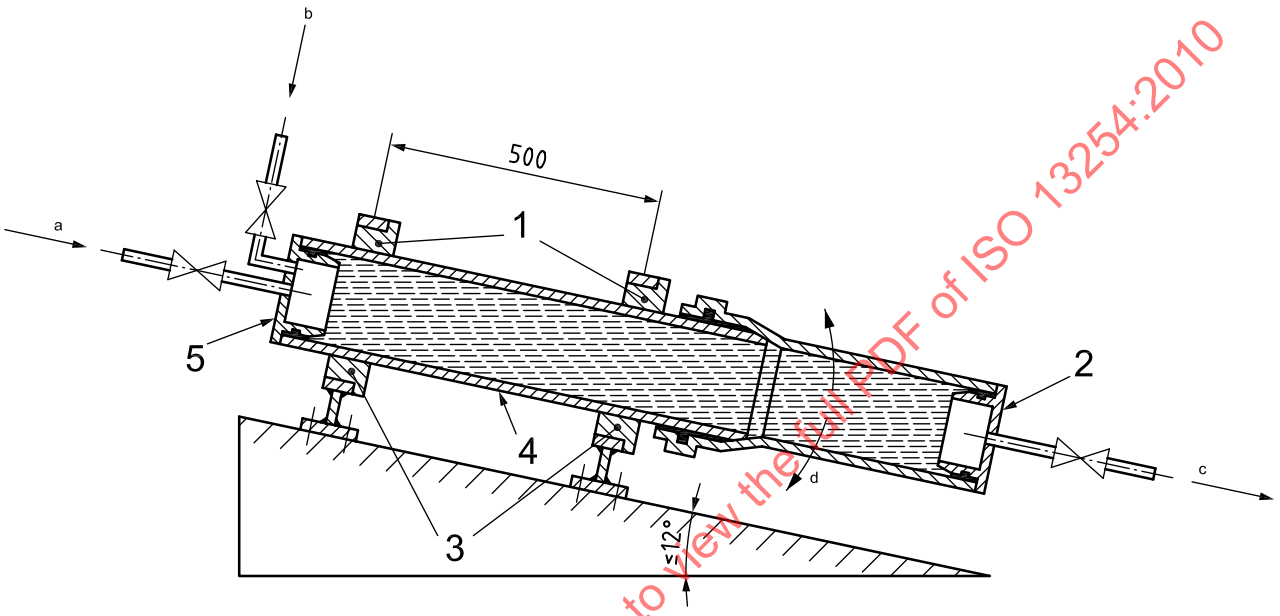
4 Test pieces

4.1 Preparation of test pieces

The test piece shall comprise either a fabricated fitting or an assembly of (a) pipe section(s) (with or without sockets) and/or fitting(s), including at least one joint of the type under test (see Figure 1).

To assist air removal, the test pieces may be inclined by up 12°.

Dimensions in millimetres



Key

1 fixed points
2 sealing plug with water outlet and end restraint (see 3.1)
3 loose bushes enabling all sizes of pipes to be accommodated on the same test fixture
4 fixed component
5 sealing plug with water inlet, air outlet and end restraint

a Water inlet.
b Air outlet.
c Water outlet.
d Direction of movement for angular deflection, if applicable (see 5.2).

Figure 1 — Typical arrangement

The assembly of the joint(s) shall be carried out in accordance with the manufacturer's instructions.

The assembly shall comprise the combination of the smallest available spigot end and the largest available socket or socket groove diameter within the applicable tolerance(s) and obtained by sampling in accordance with the referring standard.

The relevant diameters of the selected spigots and sockets shall be measured and recorded.

4.2 Number of test pieces

The number of test pieces shall be specified in the referring standard.