INTERNATIONAL STANDARD ISO 3608

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Chlorinated polyvinyl chloride (CPVC) pipes — Tolerances on outside diameters and wall thicknesses

Tubes en polychlorure de vinyle chloré (PVCC) — Tolérances sur le diamètre extérieur et l'épaisseur de paroi

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

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.

International Standard ISO 3608 was drawn up by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, and was circulated to the Member Bodies in December 1974.

It has been approved by the Member Bodies of the following countries :

Austria	Italy	Spain
Belgium	Mexico	Sweden
Finland	Netherlands	Switzerland
France	Norway	Turkey
Germany	Poland	U.S.A.
India	Portugal	U.S.S.R.
Ireland	Romania	Yugoslavia
Israel	South Africa, Rep. of	

The Member Body of the following country expressed disapproval of the document on technical grounds :

United Kingdom

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Chlorinated polyvinyl chloride (CPVC) pipes — Tolerances on outside diameters and wall thicknesses

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the permissible deviations of the outside diameters and the wall thicknesses of pipes complying with ISO 161/I and ISO 161/II.

This International Standard applies to chlorinated polyvinyl chloride (CPVC) pipes of circular section for the transport of fluids.

Attention is drawn to ISO 3126.

2 REFERENCES

ISO 161/I, *Thermosplastics pipes for the transport of fluids — Nominal outside diameters and nominal pressures — Part I : Metric series.*

ISO 161/II, *Thermosplastics pipes for the transport of fluids — Nominal outside diameters and nominal pressures — Part II : Inch series.*

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

3 TOLERANCES ON OUTSIDE DIAMETERS

3.1 Definitions

3.1.1 nominal outside diameter (d_e) : The outside diameter of the pipe stated in table 1 of either ISO 161/I or ISO 161/II, as appropriate.

3.1.2 *outside diameter at any point* (d_i) : The measurement of any diameter of any cross-section of the pipe, rounded to the next higher 0,1 mm.

3.1.3 mean outside diameter (d_m) : The quotient of the measurement of the outside circumference of the pipe and 3,142, rounded to the next higher 0,1 mm.

3.2 Tolerances

3.2.1 *Mean outside diameter*[1)]

3.2.1.1 PIPES IN ACCORDANCE WITH ISO 161/I

The permissible variation ($d_m - d_e$) between the mean outside diameter (d_m) and the nominal diameter (d_e) of a pipe as given in ISO 161/I shall be positive, in the form $^{+\,x}_{0}$, where x is less than or equal to the greater of the two following values :

a) 0,3 mm;

b) 0,003 d_e rounded to the next higher 0,1 mm.

3.2.1.2 PIPES IN ACCORDANCE WITH ISO 161/II

The total permissible variation is identical to that given in 3.2.1.1; however, the tolerance may be applied positively and/or negatively, depending upon size. The precise figures would normally be quoted in the appropriate national standards or International Standards.

3.2.2 *Diameter at any point*

The permissible variation ($d_i - d_e$) between the outside diameter at any point (d_i) and the nominal outside diameter (d_e) of a pipe (also called tolerance on ovality) shall not exceed the greater of the two following values :

a) 0,5 mm;

b) 0,012 d_e rounded to the next higher 0,1 mm.

For pipes for which the ratio $e : d_e$ is smaller than 0,035, there is no requirement to be satisfied in respect of this tolerance.

(e is the wall thickness of the pipe, expressed in millimetres.)

1) Further studies are being undertaken to determine the possibility of reducing the values a) and b).