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ISO RECOMMENDATION

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R 1330

PLASTICS PIPES FOR THE TRANSPORT OF FLUIDS

UNPLASTICIZED POLYVINYL CHLORIDE (PVC) PIPES

TOLERANCES ON OUTSIDE DIAMETERS

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 1330, *Plastics pipes for the transport of fluids – Unplasticized polyvinyl chloride (PVC) pipes – Tolerances on outside diameters*, was drawn up by Technical Committee ISO/TC 5, *Pipes and fittings*, the Secretariat of which is held by the Association Suisse de Normalisation (SNV).

Work on this question led to the adoption of Draft ISO Recommendation No. 1330, which was circulated to all the ISO Member Bodies for enquiry in November 1967. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Ireland	Spain
Belgium	Israel	Sweden
Canada	Italy	Switzerland
Chile	Korea, Dem. P. Rep. of	Turkey
Czechoslovakia	Netherlands	U.A.R.
Denmark	New Zealand	U.S.S.R.
France	Norway	Yugoslavia
Greece	Poland	
India	South Africa, Rep. of	

The following Member Bodies opposed the approval of the Draft :

Germany
Japan
United Kingdom

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.

PLASTICS PIPES FOR THE TRANSPORT OF FLUIDS
UNPLASTICIZED POLYVINYL CHLORIDE (PVC) PIPES
TOLERANCES ON OUTSIDE DIAMETERS

1. SCOPE AND FIELD OF APPLICATION

This ISO Recommendation specifies the permissible deviations of the outside diameters given in the following ISO Recommendations :

- ISO/R 161, *Pipes of plastics materials for the transport of fluids (Outside diameters and nominal pressures) — Part I : Metric series;*
ISO/R 330, *Pipes of plastics materials for the transport of fluids (Outside diameters and nominal pressures) — Part II : Inch series.*

This ISO Recommendation applies to pipes of unplasticized polyvinyl chloride of circular section for the transport of fluids.

2. DEFINITIONS

- 2.1 *Nominal outside diameter (d_e).* The outside diameter of the pipe taken from the series given in ISO Recommendations R 161 and R 330.
2.2 *Outside diameter at any point (d_i).* The result of measurement in any cross-section of the pipe of any outside diameter therein, rounded off to the nearest 0.1 mm (0.004 in).
2.3 *Mean outside diameter (d_m).* The quotient of the measurement of the outside circumference of the pipe and 3.142, rounded off to the nearest 0.1 mm (0.004 in).

3. TOLERANCES

- 3.1 The maximum permissible variation between the mean outside diameter (d_m) and the nominal outside diameter (d_e) of a pipe as given in ISO Recommendations R 161 and R 330 ($d_m - d_e$) should be positive, in the form $+ \frac{x}{0}$, where x is equal to the greater of the following two values :
(a) 0.3 mm (0.012 in);
(b) $0.003 d_e$ rounded off to the next higher 0.1 mm (0.004 in).
3.2 The maximum permissible variation between the outside diameter at any point (d_i) and the nominal outside diameter (d_e) of a pipe (also called *tolerance on ovality*) is equal in absolute value to the greater of the following two values :
(a) 0.5 mm (0.02 in);
(b) $0.012 d_e$ rounded off to the next higher 0.1 mm (0.004 in).

For pipes for which the ratio $\frac{e}{d_e}$ 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).