

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 274

COPPER TUBES OF CIRCULAR SECTION
DIMENSIONS: METRIC SERIES

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BRIEF HISTORY

The ISO Recommendation R 274, *Copper Tubes of Circular Section – Dimensions: Metric Series*, 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 by the Technical Committee began in 1952 and led, in 1960, to the adoption of a Draft ISO Recommendation.

In December 1960, this Draft ISO Recommendation (No. 420) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Australia	Greece	Poland
Belgium	Hungary	Portugal
Brazil	India	Romania
Chile	Iran	Spain
Colombia	Israël	Sweden
Czechoslovakia	Italy	Switzerland
Denmark	Japan	Turkey
Finland	Netherlands	United Kingdom
France	Norway	Yugoslavia
Germany		

Three Member Bodies opposed the approval of the Draft:

Argentina, New Zealand, U.S.S.R.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in September 1962, to accept it as an ISO RECOMMENDATION.

COPPER TUBES OF CIRCULAR SECTION

DIMENSIONS: METRIC SERIES

1. DIMENSIONS

The dimensions which follow are applicable to all copper tubes of circular section, whatever their method of manufacture and their condition of delivery.

1.1 Definitions

The *outside diameter* of a tube is the arithmetic mean of any two mutually perpendicular outside diameters in the same right section.

The *thickness* of a tube is the arithmetic mean of the two thicknesses traversed by the same diameter.

1.2 Dimensions

Dimensions in millimetres

Outside diameter chosen from approximate series of preferred numbers *			Thickness
Ra 10	Ra 20	Ra 40	
2			0.5
2.5			0.5 — 0.6
		3	0.5 — 0.6 — 0.8
4			0.5 — 0.6 — 0.8 — 1
5			0.5 — 0.6 — 0.8 — 1 — 1.2
		6	0.6 — 0.8 — 1 — 1.2 — 1.5
8			0.6 — 0.8 — 1 — 1.2 — 1.5
10			0.6 — 0.8 — 1 — 1.2 — 1.5
12			0.6 — 0.8 — 1 — 1.2 — 1.5
	14		1
		15	1
16			0.6 — 0.8 — 1 — 1.2 — 1.5
	18		1
20			0.8 — 1 — 1.2 — 1.5 — 2
	22		1 — 1.2 — 1.5
25			1 — 1.2 — 1.5 — 2 — 2.5
	28		1 — 1.2 — 1.5
32			1.2 — 1.5 — 2 — 2.5 — 3
	35 **		1.2 — 1.5
	36 **		1.2 — 1.5
40			1.5 — 2 — 2.5 — 3 — 4
		42	1.2 — 1.5
50			1.5 — 2 — 2.5 — 3 — 4 — 5
63			1.5 — 2 — 2.5 — 3 — 4 — 5 — 6
80			1.5 — 2 — 2.5 — 3 — 4 — 5 — 6 — 8
100			1.5 — 2 — 2.5 — 3 — 4 — 5 — 6 — 8 — 10
125			2 — 2.5 — 3 — 4 — 5 — 6 — 8 — 10 — 12
160			2.5 — 3 — 4 — 5 — 6 — 8 — 10 — 12
200			8 — 10 — 12
250			8 — 10 — 12
315			8 — 10 — 12 — 16 — 20

Length: Length specified, or lying between 3 and 6 m.

* See ISO Recommendations R 3, *Preferred Numbers. Series of Preferred Numbers* and R 17, *Guide to the Use of Preferred Numbers and of Series of Preferred Numbers*.

** Diameters 35 and 36 are the values approximating to the same basic diameter 35.5.