INTERNATIONAL STANDARD 2964

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Aircraft — Tubing outside diameters and thicknesses — Metric dimensions

Aéronefs — Diamètres extérieurs et épaisseurs des tubes — Dimensions métriques

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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.

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

Australia	Germany	Romania
Austria	India	South Africa, Rep. of
Belgium	Italy	Spain
Brazil	Japan	Thailand
Canada	Mexico	Turkey
Czechoslovakia	Netherlands	United Kingdom
Egypt, Arab Rep. of	New Zealand	U.S.A.
France	Portugal	U.S.S.R.

No Member Body expressed disapproval of the document.

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Aircraft — Tubing outside diameters and thicknesses — Metric dimensions

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the outside diameters and thicknesses of tubes, for all metallic materials, to be selected for all uses in aircraft structural and system design.

2 REFERENCE

ISO 497, *Guide to the choice of series of preferred numbers and of series containing more rounded values of preferred numbers.*

3 DIMENSIONS

The outside diameters and thicknesses of the tubes shall be selected from those specified in the table.

NOTE — The dimensions given in the table have been selected from the series of preferred numbers and rounded according to ISO 497. They are arranged in columns and lines in the order of the series of preferred numbers.

Whenever possible the tube size requirements shall be rationalized on the R10 series of dimensions. The R20 and R40 series of dimensions have been introduced to cater for the mainly structural problems of mating tubes and shall only be used when absolutely essential; the R20 series shall then be considered before the R40 series.

4 TOLERANCES

The tolerances shall be specified in the relevant standards appropriate to the material and intended application.

TABLE – Tubing outside diameters and thicknesses for aircraft use

Dimensions in millimetres

Outside diameters			Thicknesses																			
R10			0,4	0,5	0,6	0,8	1	1,2	–	–	1,6	–	2	–	2,5	–	3,2	4	5	6	8	10
	R20		0,4	0,5	0,6	0,8	1	1,2	1,4	–	1,6	1,8	2	2,2	2,5	(3)	3,2	4	5	6	8	10
		R40	0,4	0,5	0,6	0,8	1	1,2	1,4	(1,5)	1,6	1,8	2	2,2	2,5	(3)	3,2	4	5	6	8	10
3,2	3,2	3,2	(x)	(x)	(x)																	
4	4	4	(x)	(x)	(x)	(x)	(x)															
5	5	5	(x)	(x)	(x)	(x)	(x)															
6	6	6	(x)	(x)	(x)	(x)	(x)	(x)														
8	8	8	(x)	(x)	(x)	(x)	(x)	(x)		(x)		(x)	(x)	(x)	(x)							
10	10	10	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)							
12	12	12		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)						
–	14	14		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)									
–	–	15		(x)	(x)	(x)	(x)	(x)	(x)		(x)	(x)	(x)									
16	16	16		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)				
–	18	18		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)						
20	20	20		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)			
–	22	22			(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)						
25	25	25		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)			
–	28	28			(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)				
32	32	32		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)		
–	36	36			(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)				
–	–	38			(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)							
40	40	40		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	
–	45	45				(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)		
50	50	50				(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	
–	56	56				(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)		
63	63	63				(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
–	70	70				(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
80	80	80				(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
–	90	90						(x)		(x)	(x)		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
100	100	100						(x)		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)

NOTE – Whenever possible the selection of dimensions shall be made from the R10 series. (See clause 3.)