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AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

AMS 2203J

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Superseding AMS 2203H

TOLERANCES Aluminum Alloy Drawn Tubing

THIS REVISION CONTAINS ONLY EDITORIAL CHANGES

1. SCOPE: This specification covers established manufacturing tolerances applicable to aluminum alloy drawn tubing ordered to inch/pound dimensions. These tolerances apply to all conditions, unless otherwise noted. The term "excl" applies only to the higher figure of the specified range.

1.1 MAM 2203, specified in SI (metric) units, is the equivalent of this AMS.

2. DIAMETER, WIDTH, OR DEPTH:

2.1 Round:

TABLE I

Tolerance, Inch, Plus and Minus (See Note 2)
Diameter at Any Point (Ovality)
(See Note 3)

Specified OD or ID Inches (See Note 1)			Mean Diameter (See Note 4)	Non-Annealed and Non-Heat Treated Tube	Heat Treated Tube Annealed (See Note 5) Tube	
	Up to	0.500, incl	0.003	0.003	0.006	0.018
Over	0.500 to	1.000, incl	0.004	0.004	0.008	0.024
Over	1.000 to	2.000, incl	0.005	0.005	0.010	0.030
Over	2.000 to	3.000, incl	0.006	0.006	0.012	0.036
Over	3.000 to	5.000, incl	0.008	0.008	0.016	0.048
Over	5.000 to	6.000, incl	0.010	0.010	0.020	0.060
Over	6.000 to	8.000, incl	0.015	0.015	0.030	0.090
Over	8.000 to	10.000, incl	0.020	0.020	0.040	0.120
Over	10.000 to	12.000, incl	0.025	0.025	0.050	0.150

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2.2 Square, Rectangular, Hexagonal, and Octagonal:

TABLE II

Specified Width or Depth Inches (See Note 1)		Tolerance, Inch, Plus and Minus (See Note 2)		
		At Corners	Not at Corners (See Note 3 and 9)	
		Square and Rectangular	Square, Hexagonal, and Octagonal	Rectangular
Up to	0.500, incl	0.003	0.006	The tolerance for the width is the value in the preceding column for a dimension equal to the depth, and conversely, but in no case less than that for its own dimension at the corners (See Note 6).
Over	0.500 to 1.000, incl	0.004	0.008	
Over	1.000 to 2.000, incl	0.005	0.010	
Over	2.000 to 3.000, incl	0.006	0.012	
Over	3.000 to 5.000, incl	0.008	0.016	
Over	5.000 to 6.000, incl	0.010	0.020	
Over	6.000 to 8.000, incl	0.015	0.030	
Over	8.000 to 10.000, incl	0.020	0.040	
Over	10.000 to 12.000, incl	0.025	0.050	

2.3 Streamline, Oval, and Elliptical: The equivalent round diameter is the diameter of a circle having a circumference equal to the perimeter of the tube.

TABLE III

Equivalent Round Diameter Inches (See Note 1)		Tolerance, Inch			
		Major Axis		Minor Axis	
		Plus	Minus	Plus	Minus
Up to	2.500, incl	0.040	0.025	0.025	0.015
Over	2.500 to 4.250, incl	0.050	0.035	0.035	0.025
Over	4.250 to 6.000, incl	0.070	0.050	0.055	0.040
Over	6.000 to 8.000, incl	0.100	0.085	0.080	0.060
Over	8.000 to 10.000, incl	0.160	0.140	0.115	0.085