

AEROSPACE MATERIAL SPECIFICATION



MAM 2243D

Issued	JUL 1980
Revised	JAN 1990
Reaffirmed	OCT 2000
Noncurrent	MAR 2003
Cancelled	SEP 2007
Superseded by AMS 2243	

Tolerances, Metric Corrosion and Heat Resistant Steel Tubing

RATIONALE

MAM 2243C has been designated Cancelled and Superseded because equivalent technical requirements are provided by AMS 2243.

CANCELLATION NOTICE

This specification has been declared "CANCELLED" and superseded by the Aerospace Materials Division, SAE, as of September, 2007, and has been superseded by AMS 2243. The requirements of the latest issue of AMS 2243 shall be fulfilled whenever reference is made to the cancelled MAM 2243C. By this action, this document will remain listed in the Numerical Section of the Index of Aerospace Material Specifications indicating that it has been "CANCELLED".

Cancelled specifications are available from SAE.

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NONCURRENT NOTICE

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of March, 2003. It is recommended, therefore, that this specification not be specified for new designs.

"NONCURRENT" refers to those materials which have previously been widely used and which may be required on some existing designs in the future. The Aerospace Materials Division, however, does not recommend these as standard materials for future use in new designs. Each of these "NONCURRENT" specifications is available from SAE.

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1. SCOPE:

This specification covers manufacturing tolerances applicable to seamless and welded tubing of corrosion and heat resistant steel ordered to metric dimension. These tolerances apply to all conditions and are based on individual measurements, unless otherwise noted. Tubing may be specified by two dimensions only (OD and wall thickness, ID and wall thickness, or OD and ID).

1.1 These tables are based on logical metric values and preferred metric sizes.

1.2 Throughout this specification the term "metric" is intended to refer to the SI system.

1.3 AMS 2243, specified in inch/pound units, is the equivalent of this MAM.

2. DIAMETER:

2.1 Tubing Other than Pressure Tubing; Welded (See 2.1.1) or Seamless (See 2.1.2):

TABLE I

Specified OD or ID Millimetres	Tolerance, Millimetre Including Ovality (See 2.3) Plus and Minus
Up to 14, excl	0.10
14 to 38, excl	0.10
38 to 90, excl	0.20
90 to 140, excl	0.30
140 and over	0.75

2.1.1 Welded Tubing: Shall be bead-reduced or shall be cold finished by tube-reducing, cold-drawing, machining, or grinding.

2.1.2 Seamless Tubing: Shall be cold-finished by tube-reducing, cold-drawing, machining, or grinding.

2.2 Pressure Tubing (See 6.1.5); Cold Drawn or Cold Reduced (Seamless or Welded):

TABLE II

Specified OD or ID Millimetres		OD or ID Tolerance, Millimetres Including Ovality (See 2.3) Plus and Minus
	Up to 14, incl	0.08
Over	14 to 25, excl	0.10
	25 to 38, excl	0.13
	38 to 50, excl	0.15
	50 to 65, excl	0.18
	65 to 90, excl	0.25
	90 to 140, excl	0.40
	140 to 200, excl	0.75
	200 to 215, incl	1.12

2.2.1 Half Tolerances: When half tolerances are specified the tolerances of Table II shall be plus only; the minus side of the tolerance range shall not be applicable.

2.3 Ovality, All Tubing:

All of the tolerances shown in Tables I and II include ovality except on light-walled tubing where the specified wall thickness is 3% or less of the specified OD. On such light-walled tubing, there is an additional ovality tolerance (in addition to the tabular tolerances) equal to $\pm 0.5\%$ of the specified OD (or ID); however, the average diameter shall be within the tabular tolerances.

3. WALL THICKNESS:

3.1 Tubing Other than Pressure Tubing; Welded or Seamless: