

AEROSPACE MATERIAL SPECIFICATION

SAE AMS5053

REV. J

Issued 1942-06
Reaffirmed 2006-02
Cancelled 2009-09

Superseding AMS5053H

Steel Tubing, Welded
0.13 Carbon, Maximum
Annealed

(Composition similar to UNS G10100)

RATIONALE

AMS5053J has been designated Cancelled based on results of a survey to aerospace users and producers.

CANCELLATION NOTICE

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of September 2009. 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.

Similar but not necessarily identical product is covered in the following specification. However, this listing is provided for information only and does not constitute authority to substitute this specification for the "CANCELLED" specification.

ASTM A513 ELECTRIC-RESISTANCE-WELDED CARBON AND ALLOY STEEL MECHANICAL TUBING - GRADE 1010

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1. SCOPE:

1.1 Form:

This specification covers a low-carbon steel in the form of welded tubing.

1.2 Application:

This tubing has been used typically for oil lines and other parts requiring high-quality tubing suitable for severe forming and for welding or brazing, but usage is not limited to such applications.

2. APPLICABLE DOCUMENTS:

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been canceled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AMS 2253 Tolerances, Carbon and Alloy Steel Tubing

MAM 2253 Tolerances, Metric, Carbon and Alloy Steel Tubing

AMS 2259 Chemical Check Analysis Limits, Wrought Low-Alloy and Carbon Steels

AMS 2370 Quality Assurance Sampling and Testing, Carbon and Low-Alloy Steel Wrought Products and Forging Stock

AMS 2807 Identification, Carbon and Low-Alloy Steels, Corrosion and Heat Resistant Steels and Alloys, Sheet, Strip, Plate, and Aircraft Tubing

2.2 ASTM Publications:

Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM E 8 Tension Testing of Metallic Materials

ASTM E 8M Tension Testing of Metallic Materials (Metric)

ASTM E 350 Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron

3. TECHNICAL REQUIREMENTS:

3.1 Composition:

Shall conform to the percentages by weight shown in Table 1, determined by wet chemical methods in accordance with ASTM E 350, by spectrochemical methods, or by other analytical methods acceptable to purchaser:

TABLE 1 - Composition

Element	min	max
Carbon	--	0.13
Manganese	0.30	0.60
Phosphorus	--	0.04
Sulfur	--	0.05

3.1.1 Check Analysis: Composition variations shall meet the applicable requirements of AMS 2259.

3.2 Condition:

Normalized or annealed.

3.2.1 Fabrication:

3.2.1.1 Tubing shall be produced by electrical-resistance, shielded-metal-arc, or gas welding the edges of formed sheet or strip.

3.2.1.2 Any surface finishing operation applied to remove objectionable pits and surface blemishes shall be performed prior to the last annealing. A light polish to improve surface appearance may be employed after annealing.