



AEROSPACE MATERIAL SPECIFICATION

AMS5589™**REV. H**Issued 1966-09
Revised 2026-03

Superseding AMS5589G

(R) Nickel Alloy, Corrosion- and Heat-Resistant, Seamless Tubing,
52.5Ni - 19Cr - 3.0Mo - 5.1Cb (Nb) 0.90Ti - 0.50Al - 18Fe (Inconel® 718),
Consumable Electrode Remelted or Vacuum Induction Melted,
1775 °F (968 °C) Solution Heat Treated
(Composition similar to UNS N07718)

RATIONALE

AMS5589H is the result of a Five-Year Review and update of the specification. The revision adds the trade name to the Title (see 8.6), updates definitions (see 2.3.1), revises composition testing and reporting requirements (see 3.1 and 3.1.1), updates condition and fabrication methods consistent with other tubing specs (see 3.3 and 3.4), adds strain rate control during tensile testing (see 3.6.2.1.1), updates exceptions requirements (see 3.6.3, 4.4.1, and 8.5), updates quality and inspection requirements and addresses small sizes (see 3.7), adds NDT frequency (see 4.2.2), clarifies reporting adding NDT (see 4.4), updates identification (see 5.2), and revises ordering information based on the above changes (see 8.7).

1. SCOPE

1.1 Form

This specification covers a corrosion- and heat-resistant nickel alloy in the form of seamless tubing 0.125 inch (3.18 mm) and over in nominal OD with nominal wall thickness 0.015 inch (0.38 mm) and over.

1.2 Application

This tubing has been used typically for fluid lines and components requiring resistance to creep and stress rupture up to 1300 °F (704 °C) and oxidation resistance up to 1800 °F (982 °C), particularly those parts that are formed or welded and then heat treated to develop desired properties, 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 cancelled and no superseding document has been specified, the last published issue of that document shall apply.

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