



<b>AEROSPACE MATERIAL SPECIFICATION</b>	<b>AMS5713™</b>	<b>REV. L</b>
	Issued 1960-06 Reaffirmed 2012-10 Revised 2022-08	
Superseding AMS5713K		
Nickel Alloy, Corrosion- and Heat-Resistant, Bars, Forgings, and Rings 53Ni - 19Cr - 11Co - 9.8Mo - 3.2Ti - 1.6Al - 0.006B Vacuum Melted, Solution and Precipitation Heat Treated (Composition similar to UNS N67041)		

### RATIONALE

AMS5713L is the result of a Five-Year Review and update of the specification. The revision prohibits unauthorized exceptions (3.8, 4.4.2, 5.2.1.1, 8.5), clarifies size limits (1.1), updates composition testing and allowable elements (3.1, 3.1.1), expands allowable cooling rate (3.4.2), clarifies transverse testing requirements (3.1.2.1), removes product specific exceptions (3.5.1.2.2), adds strain rate control (3.5.1.2.4), updates cut bar requirements (4.3), updates reporting (4.4.1, 4.4.4), allows prior revisions (8.4), adds additional options for forging stock, and removes engineering approval requirement (8.6).

### 1. SCOPE

#### 1.1 Form

This specification covers a corrosion- and heat-resistant nickel alloy in the form of bars 3.00 inches (76.2 mm) and under in nominal diameter, thickness or for hexagons least distance between parallel sides, forgings, flash welded rings 3.00 inches (76.2 mm) and under in nominal radial thickness, and stock of any size for forging, flash welded rings, or heading.

#### 1.2 Application

These products have been used typically for parts, such as turbine rotors, shafts, bolts, dowels, and fittings, requiring high strength up to 1600 °F (871 °C) and oxidation resistance up to 1800 °F (982 °C), but usage is not limited to such applications.

#### 1.3 Classification

Alloy supplied to this specification is classified as follows:

Type 1 - Vacuum induction melted followed by vacuum arc consumable electrode remelting

Type 2 - Vacuum induction melted followed by electroslag remelting

1.3.1 Unless a specific type is ordered, either type may be supplied.

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