



AEROSPACE MATERIAL SPECIFICATION	AMS5843™	REV. H
	Issued 1977-03 Revised 2022-09	
	Superseding AMS5843G	
Cobalt-Nickel Alloy, Corrosion- and Heat-Resistant, Bars 19Cr - 36Co - 25Ni - 7.0Mo - 0.50Cb (Nb) - 2.9Ti - 0.20Al - 9.0Fe Vacuum Induction Plus Vacuum Consumable Electrode Melted Solution Heat Treated, Work Strengthened, and Aged (Composition similar to UNS R30759)		

RATIONALE

AMS5843G is the result of a Five-Year Review and update of the specification. The revision prohibits unauthorized exceptions (3.6, 3.9, 4.4.2, 5.2.1, 8.6) and establishes associated size limits (1.1), updates composition testing and reporting (3.1, 3.1.1), prohibits bar cut from plate (3.3.1, 4.4.1), adds strain rate control for tensile tests (3.5.1.3), adds reporting requirement for stress rupture testing (3.5.4.3), and allows prior revisions (8.5).

1. SCOPE

1.1 Form

This specification covers a high strength, corrosion- and heat-resistant cobalt-nickel-chromium alloy in the form of bars 1-3/4 inches (44.4 mm) and under in nominal diameter.

1.2 Application

These bars have been used typically for applications requiring a combination of high strength up to 1100 °F (593 °C), good tension-tension fatigue strength, toughness, and ductility (see 8.2), but usage is not limited to such applications. This alloy exhibits exceptionally good resistance to corrosion, crevice corrosion, stress-corrosion cracking, and elevated temperature relaxation.

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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