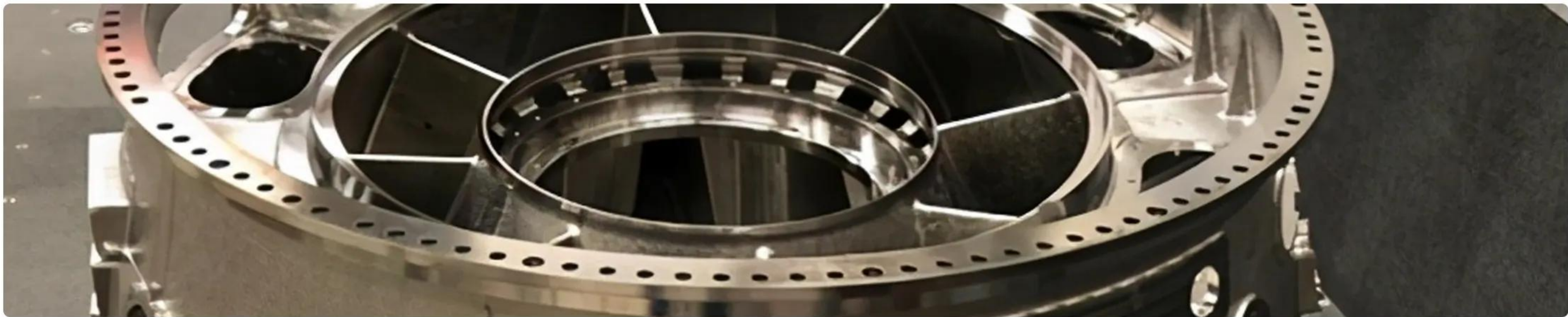




* Aircraft engine casing seal ring

Technical datasheet

Inconel 617

Major specifications

AMS 5887	AMS 5888	AMS 5889	ASTM B166	ASTM B167	ASTM B168	W.-Nr. 2.4663
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Available product forms

Plate,sheets and strips in AMS 5888+AMS 5889+ASTM B168.
 Bars in AMS 5887+ASTM B166.
 Seamless pipe in ASTM B167.
 The current stock range can be found on www.lorksteels.com/products/inconel.html.
 Further dimensions available upon request.
 Use our Service Centre to have the available sizes cut to your desired dimensions.

Key features

Inconel 617 is a high-performance nickel-chromium-cobalt-based high-temperature alloy with exceptional oxidation, creep, and fatigue resistance. It retains strength and stability at temperatures exceeding 1000°C (1832°F), making it suitable for high-temperature components like gas turbine blades. The material's excellent corrosion resistance in harsh environments, including sulfur-containing gases, is due to the protective oxide layer that forms on its surface. Despite its high strength, Inconel 617 is easy to process and can be formed, machined, and welded. Its production involves selecting high-purity alloy elements and smelting.

Chemical properties

Composition - limits in %

Fe	Al	Mo	Co	Cr	Ni
max3.00	0.80-1.50	8.00-10.00	10.00-15.00	20.00-24.00	min44.50

Mechanical properties (room temperature)

Yield strength	min. 290MPa
Tensile strength	min. 680MPa
Elongation	min. 35%

Applications in the aerospace sector

	Advantages
Flame tube, floating wall, transition duct	1100°C-class ultra-high-temperature strength and creep resistance
Turbine guide vanes, turbine outer ring	Maintains high yield strength above 1000°C
Nozzle extension, thrust chamber components	High-temperature oxidation resistance to kerosene combustion products
Engine casing sealing ring, heat shield	Long-term stable tissue without embrittlement phase