



* Ocean Engineering

Technical datasheet

Inconel 792

Major specifications

AMS 5387 DIN 2.4667 UNS N07792

Available product forms

Castings in AMS 5387.

 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 792 is a nickel-based, cast superalloy strengthened by γ' phase precipitation. Introduced in the early 1970s, it was designed to combine excellent hot-corrosion resistance—suitable for harsh environments such as marine settings—with high-temperature strength comparable to that of IN100; consequently, it is primarily used for hot-section components of gas turbines, such as turbine blades and rotors. The alloy retains high resistance to deformation and creep at elevated temperatures around 850°C. However, due to its high titanium and aluminum content, it exhibits poor castability and weldability; classified as a difficult-to-weld alloy, it demands extremely rigorous manufacturing and repair processes.

Chemical properties

Composition - limits in %

Ti	Ta	W	Co	Cr	Ni
3.00-4.50	3.50-4.20	3.80-4.70	8.00-11.00	11.50-14.00	balance

Mechanical properties (room temperature)

Yield strength (0.2%)	min. 930 MPa
Tensile strength	min. 1100 MPa
Elongation	min. 10%

Applications in the aerospace sector

	Advantages
Industrial gas turbine guide vanes	Excellent resistance to high-temperature hot corrosion
Aero-engine turbine blade	Excellent high-temperature strength and fatigue resistance
Power generation sector	Thermal fatigue resistance and long-term microstructural stability
Deepwater Oil and Gas Engineering	Resistance to corrosion in complex environments