

ALLOY 188 COBALT ALLOY - AMS 5772

Alloy 188 is known for its superior resistance to corrosion and oxidation at elevated temperatures, this is due to Its composition, containing significant quantities of cobalt and chromium. This allows Alloy 188 to be well suited for high temperature environments. The alloy maintains structural integrity when exposed to extreme heat, oxidising agents, and corrosive media that would rapidly degrade many conventional materials.

Cobalt Alloy 188 falls under the category of superalloys - an elite family of metallic composites purpose-engineered to endure extraordinarily hostile operating environments and withstand severe mechanical stresses. Standard alloys would rapidly deteriorate under such punishing conditions, yet this superalloy exhibits remarkable resilience in the face of extraordinarily hostile environments that would compromise ordinary materials. Cobalt Alloy 188 exhibits exceptional resilience where standard materials would simply fail.

The presence of chromium, a key component at roughly 22%, allows a tenacious oxide layer to form on the alloy's surface, this acts as a barrier, which prevents corrosion. Cobalt itself is highly resistant to chloride-induced corrosion, a type of degradation that plagues many other alloys.

Industries that rely on Cobalt Alloy 188 include aviation, where it sees use in aircraft engines and hot section components and in the gas industry where it used in turbine engines.

						Spe	cific	Gravi	ty				
						9	9.14g	/cm³					
		Typical	l Applic	ations						Related	d Spe	cificat	ions
Aerosp	ace						AN	MS 56	80				
Gas Tu	rbine Er	ngines					Al	MS 57	72				
					Chem	nical C	omp	ositio	on (Wt %	%)			
	С	Mn	Si	Р	s	Cr	Ni	W	La	В	Fe	Со	
Min	0.05	-	0.20	-	-	20	20	13	0.02	-	-	-	
Max	0.15	1.25	0.50	0.02	0.015	24	24	16	0.12	0.015	3	Bal	

Typical Mechanical Properties

0.2% Proof Stress	Tensile Strength	Elongation	Hardness	
MPa	MPa	4D	НВ	

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Bars	379	862	45%	302

^{*} This data has been supplied in good faith and is indicative only. It has been provided for general information purposes only and is not to be relied upon in place of the full specification. Mechanical properties can vary considerably with different supply conditions such as heat treatment or temper and product dimensions.

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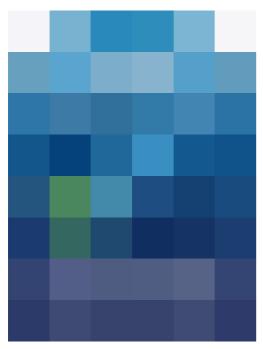
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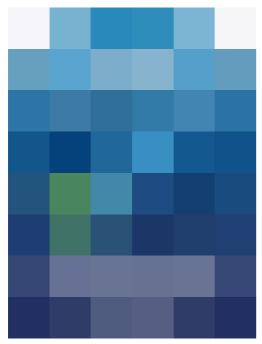
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