Alloys INTERNATIONAL AUSTRALASIA PTY LTD

TECHNICAL DATASHEET
Version S19

AI-1717

Specifications

AWS/ASME A5.14, ERNiCrCoMo-1
AWS/ASME A5.11, ENiCrCoMo-1
DIN 17744

Description and Applications

AI-1717 is a solid-solution strengthened, nickel-chromium-cobalt-molybdenum alloy with an exceptional combination of high-temperature strength and oxidation resistance. The alloy also has excellent resistance to a wide range of corrosive environments, and it is readily formed and welded by conventional techniques. The high nickel and chromium contents make the alloy resistant to a variety of both reducing and oxidising media.

The combination of high strength and oxidation resistance at temperatures over 980°C makes **AI-1717** an attractive material for such components as ducting, combustion cans, and transition liners in both aircraft and land-based gas turbines. Because of its resistance to high-temperature corrosion, the alloy is used for catalyst-grid supports in the production of nitric acid, for heat-treating baskets, and for reduction boats in the refining of molybdenum. **AI-1717** also offers attractive properties for components of power-generating plants, both fossil-fuelled and nuclear.

Typical Weldmetal Analysis

Ni	Cr	Co	Mo	Al	C	Fe
44.5	20-24	10-15	8-10	0.8-1.5	0.05-0.16	3.0 max

Mn	Si	S	Ti	Cu	B
1.0 max	1.0 max	0.015 max	0.6 max	0.5 max	0.006 max

Mechanical Properties of Weldmetal

	As Welded
Density	8.36 g/cc
Tensile Strength	>750 MPa
Elongation A5	>56%
Melting Range	1332-1380 °C
Hardness	185 BHN
Specific Heat	419 j/kg °C
Shielding Gas	**Ar 98% + 2% O_2 or 100% Ar**

Welding Parameters

Diameter (mm)	Current type	Amps
1.2	DC(+)	150-220
1.6	DC(+)	180-300

Also available in TIG 1.6mm & 2.4mm diameter

ISO 9001 BUREAU VERITAS Certification

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Welding Positions

(1G, 1F) Downhand/flat position, (2F) Horizontal position, (2G) Horizontal vertical position

Disclaimer

All figures in this datasheet should be considered indicative only. No guarantee is made as to their accuracy.
All figures subject to change without notice. Batch analysis is available for all products sold. Should you require any further information, please contact us at sales@alloysint.com.au

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