

AI-1825

Description and Applications

AI-1825 is made exclusively for arc spraying. The material is extremely effective against corrosion and stress cracking in caustic mediums. It is also very corrosion resistant in a broad range of acidic and chloride environments at a range of temperatures.

AI-1825 Nickel-Chrome-Moly wire has proven very effective as a coating material in paper mill digestors. Traditionally, weld overlay of high nickel alloys has been used to prevent caustic stress corrosion cracking of the carbon steel substrate in continuous digestors. Weld overlay has proven effective but extremely costly. Arc sprayed

AI 1825 is an economical alternative to overlay.

Applications: **AI 1825** coupled with an appropriate sealer should also be considered for service in many acidic environments. It is particularly effective in a phosphoric acid environment.

TYPICAL ANALYSIS

Nb+Ta	Cr	Ni	Fe	Mo
3.5	22.0	62.5	2.0	10.0

PROPERTIES

	As Sprayed
Deposit Efficiency	70%
Melting Point	1,316°C (2,400°F) approx..
Bond Strength	48 MPa (7000 psi)
Coating Tensile Strength	165.5 MPa (24,000 psi)
Coating Texture	Variable
Macro-hardness	92 Rb
Coating Density	7.2 gm/cm ³
Spray Rate	5kg/hr/100 amps
Coverage (Wire consumption)	0.98kg/m ² /100 micron

SPRAY PARAMETERS

	VOLTS	AMPS	AIR	DISTANCE
BOND PASS	<i>Use AI 1800 Bond Arc for bond wire</i>			
BUILD UP	26-30	100-250	414-621kPa (60-90psi)	150-175mm

NOTE: Be sure not to overheat substrate as this reduces coating quality. If necessary, stop to allow cooling or use air jet cooling if greater speed is required.

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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