

SA Alloy 825 strip

CATEGORY ESAW Electroslag

TYPE Nickel-Chromium-Molybdenum alloyed strip for cladding overlay applications. .

APPLICATIONS SA Alloy 825 is a nickel-iron-chromium-molybdenum-copper cladding alloy for use in extremely corrosive environments.

PROPERTIES Fully austenitic weld metal with high resistance against stress corrosion cracking and pitting in media containing chloride ions. Good corrosion resistance against reducing acids due to the combination of Ni, Mo and Cu. Sufficient resistance against oxidizing acids. The weld metal is corrosion resistant in sea water. The nickel content of this alloy makes it resistant to chloride-ion stress-corrosion cracking. Additions of molybdenum and copper give alloy 825 resistance to pitting and to corrosion in reducing acid environments such as sulphuric or phosphoric acid solutions. The alloys chromium content gives it resistance to various oxidizing environments, such as nitrates, nitric acid solutions and oxidizing salts. The excellent corrosion-resistant properties of Alloy 825 make the alloy a suitable choice for a variety of difficult applications. Uses include fabricated equipment found in chemical and petro- chemical processing, pulp and paper manufacturing, flue gas desulphurization systems and metal pickling operations. SA Alloy 825 strip is developed for cladding lower alloyed or steel parts to obtain protection against the earlier mentioned attacks for high quality tank and apparatus construction in the chemical industry.

CLASSIFICATION AWS A 5.14: ~ER NiFeCr-1
EN ISO 18274: B Ni 8065 (NiFe30Cr21Mo3Cu3)

SUITABLE FOR SA Alloy 825 is specially designed for cladding lower alloyed parts to obtain a high quality clad layer against corrosion. Designations: 825 (2.4858, UNS N08825). 1.4500, 1.4529, 1.4539, 2.4858, 1.4563, G-X7NiCrMoCuNb 25 20, X1NiCrMoCuN25 20 6, X1NiCrMoCuN25 20 5, NiCr21Mo, X1NiCrMoCu 31 27 4, N08926, N08904, ALLOY 825, N08028, UNS N08825

APPROVALS CE approved

WELDING POSITIONS:



WELD DEPOSIT REQUIREMENTS (WT-%) ACC. VDTUV 432

C	Mn	Si	Cr	Ni	Mo	Fe	Ti	Cu	al
<0.025	<1.0	<0.5	19.5-23.5	38-46	2.5-3.5	bal.	1,0	1.5-3.0	<0.2

MECHANICAL PROPERTIES

Heat Treatment	Rp0,2 (N/mm ²)	Rm (N/mm ²)	A5 (%)	Impact Energy (J) ISO-V			Hardness HRC / HV
				+20°C	-40°C	-60°C	
AW	420	610	34	>110			

AW: as welded

WELDING PARAMETERS WITH FL 860 ESHC

Welding Parameters				Packing	
D (mm)	Voltage (V)	Current (A)	Travel speed (Cm/min)	kg / coil	internal coil size (mm)
30 x 0,5	22-25	450-650	15-27	25-50	500
60 x 0,5	22-25	900-1250	15-27	25-50	500
90 x 0,5	22-25	1350-1900	15-27	25-50	500

REDRYING TEMPERATURE not required

OTHER DELIVERY FORMS available on request.