

Wire Welding alloys



IMPHY 59 is a low-carbon Nickel-Chromium alloy with high Molybdenum content which shows:

- Outstanding resistance to a wide range of corrosive media under oxidizing and reducing conditions.
- Excellent resistance to pitting and crevice corrosion, to stress corrosion cracking in chloride environment, and to intergranular attack in oxidizing environment.

Typical analysis

C	Mn	Fe	P	S	Si	Cu	Ni	Co	Al	Cr	Mo
0.01	0.5	1.5	<0.015	<0.01	0.1	0.5	Bal	0.3	0.1	22	15
									0.4	24	16.5

Specifications

AWS A5.14 – ERNiCrMo-13; UNS N06059; Werkstoff Nr 2.4607

Mechanical properties

Hot rolled and solution annealed	Delivery condition at 20°C	Tensile strength (MPa)	Elongation %	Red. of area %
		800	> 40	> 60

Welding

IMPHY 59 is used for welding of duplex, super duplex and super austenitic stainless steels, alloy 22, alloy 625, alloy 276, alloy 686.

IMPHY 59 is useful for the surfacing of wide range of steels in particularly aggressive environment. The weld metal has a high strength over a large temperature range.

Typical applications

Cladding of water wall sections and super heaters tubes in waste incineration plants by overlay welding. IMPHY 59 has been demonstrated to have higher corrosion resistance than conventional Ni-Cr-Mo alloys such as alloy 625, alloy 22 and alloy 276.

Welding of plates, sheets and tubes in the chemical process industry (chloride environment) in a pulp and paper industry, in flue gas desulphurisation equipment, pollution control equipment for environmental protection.

The data enclosed in this document are only given as indicative values and correspond to our standard product. Different specific requirements are subject to discussion and formal approval by Aperam Alloys Imphy. For further information or special request, please contact us.

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