MIGWELD 307Si

MIG/MAG Wires [GMAW]

Stainless and high alloyed steels

CLASSIFICATION:	APPROVALS:	APPLICATION:
EN ISO 14343-A : G 18 8 Mn DIN 8556 : SGX15 CrNiMn18 8 AWS A-5.9 : ~ER 307 W.Nr. : 1.4370	TUV DB	Power generation industry Hardfacing and repairing Constructions & Engineering Metallurgy (Steelworks) Mining

- Austenitic welding wire for gas shielded MIG welding.
- Recommended for welding dissimilar, armored, austenitic-manganese and difficult-to-weld steels.
- Used as a buffer layer for hardfacing.
- The weld is corrosion-resistant, resistant to high mechanical stress.
- Good mechanical properties and excellent ductility of the weld metal.
- High resistance to cracks.
- Used for joining difficult-to-weld steels without preheating.
- Achieved hardnesses of 200 HV to 450 HV.
- Resistant to brittleness at temperatures from -100[C°] to +500[°C].

Application

Making dissimilar joints or joining difficult-to-weld materials (Hardox Milux sheets, etc.), joints in Hadfield steel, tool steels, buffer layers, welding steel with high content of sulfur and phosphorus. Welding of armor plates, rails, turnouts, crane wheels, tensioners. Construction of exhaust manifolds, parts of heat exchangers, devices for processing cellulose pulp, papers, textiles. Used for joining or hardfacing in dredging or mining machine parts.

Base material

EN 10088-1-2 EN 10213-4
X120 Mn 12
X2 CrTi 12
X20 Cr 13
X6 Cr 13
Dissimilar connections: S235-S355
13 – 17% chromium-plated and heat-resistant steels up to +850 °C, armor plates, high-carbon plates, hardfacing of gears, valves, turbine blades

Typical chemical composition %

C	Si	Mn	Cr	Ni
0,08	<1,00	7,00	18,50	9,00

Typical mechanical properties

Yield strength Re [N/mm2]	>380
Tensile strength Rm [N/mm2]	560-660
Elongation A5 [%]	>35
Impact energy Kv [J]	>32J (-196°C) /
Wire/rod type	solid
Welding current	

	
Welding position	Structure: Austenite
Shielding gases acc. to EN ISO 14175	I1 - Ar / M12 - Ar + 0.5 - 5% CO2 / M13 - Ar + 0.5 - 3% O2 /

Welding parameters and packing

⌀	Welding current [A]	Voltage [V]	Weight of packet [kg]
0,8	100-160	18-22	15,0
1,0	140-200	18-24	15,0
1,2	170-260	20-28	15,0
1,6	220-350	24-36	15,0

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