SFA 312

Stainless steel wires (Gmaw)

Description

SFA 312 is a solid MAG welding wire ,supplied precision layer wound, depositing a C- 29 Chrome, 9 Nickel weld metal suitable for use with Ar + 2% O2 or Ar + 0.5.....5% CO2 mixed shielding gases.
SFA 312 used for welding of steels such as medium and high carbon steels and dissimilar steel combinations. SUPERMIG 312 offer a high tolerance to dilution and therefore particularly suitable for depositing buffer layers prior to surfacing.
The deposited weld metal contains ~ 30% delta ferrite in a tough austenitic matrix with high resistance to hot cracking.
Precision layer winding technologies ensure smooth, virtually trouble-free feeding.

Materials to be welded

Ferrite-Austenit heterogenous joints (Black-White).

Classification

AWS A 5.9 : ER 312

EN ISO 14343 : G 29 9

Typical weld metal chemical composition (%)

C	Mn	Si	Cr	Ni	Mo	Cu	S	P
0,15 max.	1,60 – 2,50	0,30 – 0,65	28,00 – 32,00	8,00 – 10,50	0,75 max.	0,75 max.	0,03 max.	0,03 max.

All weld metal mechanical properties (typical)

Yield Strength (N/mm2)	Tensile Strength (N/mm2)	Elongation A5 (%)	Impact energy ISO-V(J) 20°C
≥550	≥700	≥22%	≥30

Welding directions

MIG welding can be performed as short, spray or pulsed arc. Short arc is preferably used for thin gauges, both for horizontal and positional welding. Spray arc increases the deposition rate. Welding with pulsed arc gives excellent possibilities for a good result in varying plate thicknesses in all positions. The highest flexibility using pulsed arc is achieved with 1.20 mm.

Current conditions

DC (+)

Storage

Keep dry and avoid condensation

Recommended welding data

Operating range		Diameter (mm) 0.8	1.0	1.2
Ar+1~2%CO2	Amp	40~120	80~160	100~210
	Volt	15~20	16~22	17~22
Ar+1~2%O2	Amp	160~210	180~280	200~300
	Volt	24~28	24~30	24~30

Packing data

Size (mm)	0.80	0.90	1.00	1.10	1.20	1.60
Weight (kg)	12.50/15.00	12.50/15.00	12.50/15.00	12.50/15.00	12.50/15.00	12.50/15.00

Welding positions