

GMAW Solid Wire for Stainless Steel

KMS-312

Classification

AWS	A5.9/A5.9M	ER312
JIS	Z3321	YS312
EN	14343-A	G 29 9
YB	T5092	H15Cr30Ni9

Shielding Gas: Ar+1~2%O₂(CO₂)

Applications and Features

- (1) Weld metal is austenitic structure with 29%Cr-9%Ni.
- (2) High Cr content provides excellent corrosion resistance.
- (3) High ferrite level in its austenitic structure provides better crack resistance.
- (4) Suitable for welding tool steels, hard to weld steels, cast and wrought alloys and dissimilar alloy.

Welding Position



Welding Instruction

- (1) Weld metal becomes brittle at high service temperature or interpass temperature
- (2) Use Ar+1~2%O₂ for spray transfer and Ar+1~2%CO₂ for short-circuit transfer.
- (3) For welding dissimilar alloy, please refer to Appendix I.
- (4) For other instructions, please refer to Appendix B and F .

Typical Chemical Composition of Weld Metal (wt%)

C	Si	Mn	P	S	Cr	Ni
0.12	0.49	1.62	0.012	0.011	28.98	10.09

Typical Mechanical Properties of Weld Metal

Tensile Strength N/mm ²	Yield Strength N/mm ²	Elongation %
740	600	25

Size and Suggested Operating Range (DC+)

Diameter (mm)	0.8	0.9	1.0	1.2	1.4	1.6	
Ar+1~2%CO ₂	Current (A)	40~120	60~140	80~160	100~210	-	-
	Voltage (V)	15~20	15~21	16~22	17~22	-	-
Ar+1~2%O ₂	Current (A)	160~210	170~260	180~280	200~300	210~320	220~330
	Voltage (V)	24~28	24~30	24~30	24~30	24~32	24~32