

S-312.16

TYPE : Rutile

AWS A5.4 / ASME SFA5.4 E312-16
JIS Z3221 ES312-16
EN 1600 - E 29 9 R

SMW

Applications

S-312.16 is a lime-titania type electrode, has an excellent usability and weldability. Chemical composition of all-weld metal is 29%Cr-9%Ni. Owing to the austenite structure containing large contents of ferrite, S-312.16 has a good crack resistibility. Excellent buffer effect against outer stress.

Characteristics on Usage

- Bond welding of dissimilar metals such as stainless steel, carbon steel and low alloy steel.
- Welding of stainless clad steel.
- Under laying of the build-up welding of high alloyed tool steel and hardfacing.

Notes on Usage

- ① Preheat the base metal at over 200°C(392°F) to prevent cracking in welding of high alloyed steel, having good hardenability such as tool steel.
- ② Keep the current as low as possible and length as short as possible.
- ③ Dry the electrodes at 350°C(662°F) for 60 minutes before use.

Welding Position



1G (PA) 2F (PB) 3G (PF) 4G (PE)

Current

AC or DC +

Typical Chemical Composition of All-Weld Metal (%)

C	Si	Mn	P	S	Cr	Ni
0.11	0.49	1.41	0.021	0.013	29.5	9.5

Typical Mechanical Properties of All-Weld Metal

TS MPa(lbs/in ²)	EL (%)
803 (116,600)	22.0

Approval

I Packing

Packet 2.5 kg (5.5 lbs)
Carton 2.5 kg (5.5 lbs) × 4 : 10kg(22 lbs)

Sizes Available and Recommended Currents (Amp.)

Size mm (in)	2.0 (5/64)	2.6 (3/32)	3.2 (1/8)	4.0 (5/32)	5.0 (3/16)
Length mm(in)	300 (12)	300 (12)	350 (14)	350 (14)	350 (14)
F	25~55	50~85	70~115	95~150	135~180
V-up, OH	20~50	45~80	65~110	85~135	-