

SM-110

AWS A5.28/ ASME SFA5.28 ER110S-G



❖ Specification

AWS A5.28/ ASME SFA5.28 ER110S-G

❖ Applications

SM-110 is a 0.3Cr-1.9Ni-0.5Mo-alloyed, bare, solid wire for the GMAW of high strength steels with low-temperature impact toughness requirements.

❖ Features

1. Use with 100%Ar or Ar+2~20%CO₂ gas.
2. Flow quantity of shielding gas should be 25ℓ/min. approximately.
3. Use the wind-screen against wind.

❖ Shielding gas

Ar+CO₂ (M21)

❖ Polarity

GMAW : DC+

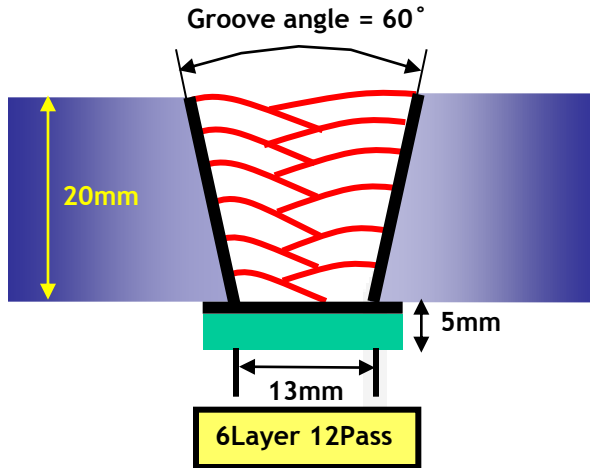
❖ Packaging

SM-110 (GMAW)	Size(mm)	1.0	1.2	1.4	1.6
	Weight	Spool : 15kg			



Mechanical Properties & Chemical Composition of All Weld Metal (GMAW)

❖ Welding Conditions



Diameter(mm)	: 1.2mm (0.045in)
Shielding gas	: 80%Ar+20%CO ₂
Flow rate(ℓ /min.)	: 20-25
Amp.(A)/Volt.(V)	: 280/30
Stick-Out(mm)	: 20
Traveling speed(cpm)	: 30

❖ Chemical Composition of Wire (Wt%)

Brand Name	C	Si	Mn	P	S	Ni	Cr	Mo
SM-110	0.088	0.82	1.83	0.015	0.010	1.90	0.34	0.52
AWS A5.28 Spec.	[One composition has to be in the regulated range of Ni,Cr,Mo at least]					≥0.50	≥0.30	≥0.20

❖ Chemical Composition of the weld metal (Wt%)

Brand Name	C	Si	Mn	P	S	Ni	Cr	Mo
SM-110	0.087	0.59	1.48	0.015	0.010	1.70	0.30	0.49



Mechanical Properties & Chemical Composition of All Weld Metal (GMAW)

❖ **Shielding gas: 80%Ar + 20%CO₂**


Brand Name	Tensile Test Results.		
SM-110	Y.S. MPa(ksi)	T.S. MPa(ksi)	EL.(%)
	825 (119.7)	887 (128.6)	19.4
AWS A5.28 ER110S-G	-	≥760	-

Brand Name	Charpy V-Notch Impact Value Joules (ft. lbs)					
SM-110		X1	X2	X3	Avr	PWHT
	0 (32°F)	105	111	122	113 (83)	Not required
	-20 (-4°F)	89	98	114	100 (74)	
AWS A5.28 ER110S-G	Not Specified					



Bead Appearance (GMAW)

❖ Welding bead appearance (H-Fillet Position)

Brand Name	Welding condition : 280A/30V, Wedling position : Horizontal-fillet(2F, PB) Shielding gas : 80%Ar+20%CO2
SM-110	

Notice

***This test report is made for giving general information, and it's not meaning guarantee.
Test results are changeable by several welding
- parameter including base materials***