HYUNDAI WELDING

Rev. 00

SM-80G

GAS METAL ARC WELDING CONSUMABLES
FOR WELDING OF Mild & 550Mpa CLASS
HIGH TENSILE STEEL

HYUNDAI WELDING CO., LTD.

SM-80G

❖ Specification

AWS A5.28 ER80S-G

❖ Applications

Butt and fillet welding of steel structures and using 550kgf/mm_2 or 600 550kgf/mm_2 tensile steels such as construction machinery, building and pressure vessels

❖ Characteristics on Usage

SM-80G is a solid wire for flat and horizontal fillet welding position.

As the deposition rate is very high, highly efficient welding can be performed.

As the wire contains special elements, its bead appearance is excellent.

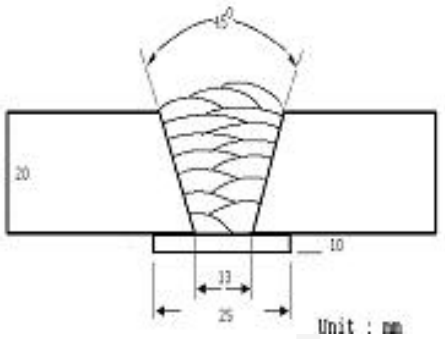
❖ Note on Usage

1. Use with CO_2 gas.
2. Flow quantity of shielding gas should be 25ℓ/min. approximately.
3. Use wind screen against wind.
4. Keep distance between tip and base metal 6~15mm for less than 250A, and 15~25mm for more than 250A of welding current.

Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Rules



[Joint Preparation & Layer Details]

Diameter(mm)	:	1.2mm (0.045in)
Shielding Gas	:	100%CO_2
Flow Rate(ℓ /min.)	:	20
Amp./ Volt.	:	280 / 32
Stick-Out(mm)	:	20~25
Pre-Heat(℃)	:	R.T .
Interpass Temp.(℃)	:	150±15
Polarity	:	DC(+)

❖ Mechanical Properties of the weld metal

Brand Name	Tensile Test Results			Charpy V-Notch Impact Value J (ft . lbs)	
SM-80G	Y.S. MPa(ksi)	T.S. MPa(ksi)	EL.(%)	-20℃(-4°F)	-30℃(-22°F)
	580 (84.1)	660 (95.7)	24.0	120 (89)	78 (58)
AWS A5.28 ER80S-G	N/S	≥ 550	N/S	As agreed between supplier and purchaser	

❖ Chemical Analysis of the weld metal(wt%)

Brand Name	C	Si	Mn	P	S	Mo
SM-80G	0.08	0.50	1.35	0.012	0.010	0.25
AWS A5.28 ER80S-G	Not Specified					

Proper Welding Condition

❖ Proper Current Range

Brand Name	Welding Position	Wire Dia. (mm)		
		1.2mm (0.045in)	1.4mm (0.052in)	1.6mm (1/16in)
SM-80G	Flat	200~350Amp	250~450Amp	300~550Amp
	H-Fillet	200~350Amp	250~450Amp	300~550Amp
	Vertical Up	100~180Amp	-	-

Chemical Composition of Wire

❖ Chemical Composition of Wire (Wt%)

Brand Name	C	Si	Mn	P	S	Ni	Cr	Mo	Ti
SM-80G	0.056	0.81	1.85	0.018	0.007	0.005	0.025	0.27	0.15
AWS A5.28 ER80S-G	Not Specified								

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