

# **SM-100**

2022. 04



## ❖ Specification

AWS A5.28/ ASME SFA-5.28 ER100S-G  
EN ISO 16834-B G 69A 4 M21 G

## ❖ Applications

Heavy Equipment, Offshore structures, Energy & Power Plants,  
Steel Fabrication, Process industry

## ❖ Features

SM-100 is a 0.3Cr-1.7Ni-0.25Mo alloyed, solid wire for the GMAW of high strength steels with low-temperature impact toughness requirements.

## ❖ Shielding gas

Ar+CO<sub>2</sub> (M21)

## ❖ Polarity

GMAW : DC+

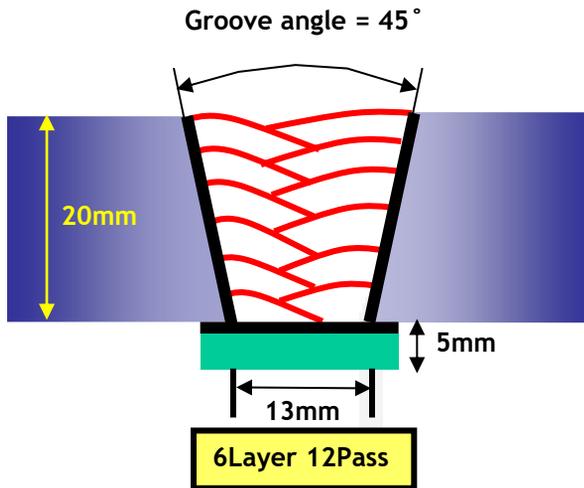
## ❖ Packaging

SM-100 (GMAW)	Size(mm)	1.0	1.2	1.4	1.6
	Weight	Spool : 15kg			



## Chemical Composition & Mechanical Properties of All Weld Metal

### ❖ Welding Conditions



Diameter(mm)	: 1.2mm (0.045in)
Shielding gas	: 80%Ar+20%CO2
Flow rate(ℓ /min.)	: 20~25
Amp.(A)/Volt.(V)	: 300/27
Stick-Out(mm)	: 20
Traveling speed(cpm)	: 30

### ❖ Chemical Composition (Wt%)

ITEM	C	Si	Mn	P	S	Ni	Cr	Mo
Wire	0.065	0.52	1.71	0.007	0.008	1.78	0.29	0.22
Weld metal	0.055	0.34	1.26	0.008	0.008	1.67	0.27	0.20



## Chemical Composition & Mechanical Properties of All Weld Metal

❖ **Shielding gas: 80%Ar + 20%CO<sub>2</sub>**

Brand Name	Tensile Test		
SM-100	YS MPa(ksi)	TS MPa(ksi)	EL(%)
	793	850 (123.3)	18.4
AWS A5.28 ER100S-G	-	≥690	-

Brand Name	Charpy V-Notch Impact Value Joule (ft . lbs)				
SM-100	Temp.	X1	X2	X3	Avg.
	-20°C (-4°F)	68	73	68	70 (52)
	-40°C (-40°F)	39	38	38	38 (29)
AWS A5.28 ER100S-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***