HYUNDAI WELDING

SM-70HT

High Performance Solid Wire for Mild and 490MPa High Tensile Steel

Introduction

SM-70HT is a high-performance solid wire designed for all-position welding with short-circuiting transfer. Its high deposition efficiency and deep penetration provide stable and efficient welding, making it suitable for butt and fillet welding of steel structures such as vehicles, machinery, and bridges.
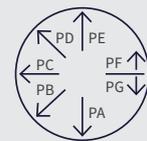
Compatible with CO_2 or mixed shielding gas (Ar + 10–20% CO_2), SM-70HT ensures consistent weld quality. Its reliable arc stability and adaptability make it an ideal choice for high-quality structural welding operations.

Specifications

- AWS A5.18 ER70S-6A
- EN ISO 14341-A G 42 3 C1 3Si1
  - G 46 4 M20/M21 3Si1

Welding Position

- All position welding

PD | PE
PC | PF
PB | PG
PA

Approvals

Shielding gas	Welding Position	Register of Shipping & Certifications
C1	All	CE
M20, M21		

Mechanical Properties of All Weld Metal

Item	Tensile Test			CVN Impact Value	
	YS MPa(ksi)	TS MPa(ksi)	EL (%)	Temp °C(°F)	Avg. J(ft-lbs)
Ar + 10% CO2	500 (73)	600 (87)	30	-30 (-20)	110 (81)
				- 40 (-40)	80 (59)
Ar + 20% CO2	480 (70)	590 (86)	28	-30 (-20)	115 (85)
				- 40 (-40)	60 (44)
100% CO2	445 (65)	555 (80)	29	-30 (-20)	70 (52)
				- 40 (-40)	40 (30)
AWS A5.18 ER70S-6A	≥ 400	≥490	≥ 22	Avg. ≥ 27J at -30°C	
EN ISO 14341-A G 46 4 M20, M21 3Si1	≥ 460	530~680	≥ 20	Avg. ≥ 47J at -40°C	
EN ISO 14341-A G 42 3 C1 3Si1	≥ 420	500~640	≥ 20	Avg. ≥ 47J at -30°C	

Consumable : SM-70HT   Diameter : 1.0mm (0.039in)   Amp/Volt: 240A/26V (Ar+10% CO2, Ar+20% CO2), 240A/28V (100% CO2)

Chemical Composition of Wire

Item	Chemical Composition of Wire (wt%)											
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu	Al	V	Ti+Zr
SM-70HT	0.07	0.83	1.49	0.018	0.003	0.01	0.03	0.01	0.25	0.02	0.01	0.01
AWS A5.18 ER70S-6A	0.06~0.15	0.80~1.15	1.40~1.85	≤0.025	≤0.035	≤0.15	≤0.15	≤0.15	≤0.50	-	≤0.03	-
EN ISO 14341-A 3Si1	0.06~0.14	0.70~1.00	1.30~1.60	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.35	≤0.02	≤0.03	≤0.15

Chemical Composition of Wire

Diameter mm (in)	Spoolkg (lbs)	Drumkg (lbs)
0.8 (0.030)		
0.9 (0.035)		
1.0 (0.040)	5 (11) 15 (33) 20 (44)	250 (551) 300 (661) 400 (881)
1.2 (0.045)		
1.6 (1/16)		