SM-70

Mild Steel & 490 MPa high tensile steels

CE

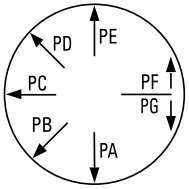
Conformances

AWS	A5.18 / ASME SFA5.18 ER70S-6
JIS	Z3312 YGW12
EN	ISO 14341-A G 42 2 C1 3Si1 / 14341-A G 42 4 M21 3Si1
KR	3SG, 3YSG(C), 3YSG(M2), 3YMG(M2)
ABS	3SA, 3YSA
LR	3YS, 3YM H15
TÜV	EN ISO 14341-A - G42 2 C1 3Si1 / G42 4 M21 3Si1
DB	DIN EN ISO 14341-A-G 42 2 C1 3Si1 DIN EN ISO 14341-A-G 42 4 M21 3Si1
BV	SA3, SA3YM
DNV·GL	IIIYMS
NK	KSW53G(C), KSW53G(M2), KSW53MG(M2)
CWB	CSA W48 B-G 49A 3 C1 S6
NAKS	
RINA	3YS
RS	3YSM
CE	

Applications

- Structural fabrication
- Automotive
- Machinery

Welding Position



Features

- All position welding by short-circuiting type transfer
- Stable arc and low spatter
- Good Bead Appearance

Current

DC +

Shielding Gas

100% CO_2

Ar + CO_2

Diameter / Packaging

Diameter	Spool			Ball Pac		
mm (in)	5kg (11lbs)	15kg (33lbs)	20kg (44lbs)	250kg (551lbs)	300kg (661lbs)	350kg (771lbs)
0.8 (0.033)	√	√	√	√	√	√
0.9 (0.035)	√	√	√	√	√	√
1.0 (0.040)	√	√	√	√	√	√
1.2 (0.045)	√	√	√	√	√	√
1.4 (0.052)	√	√	√	√	√	√
1.6 (1/16)	√	√	√	√	√	√

Typical Chemical Composition of the Wire(%)

C	Si	Mn	P	S
0.07	0.83	1.48	0.011	0.015

Typical Mechanical Properties of All-Weld Metal

	YS MPa(lbs/in²)	TS MPa(lbs/in²)	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft·lbs)
As welded with 100% CO_2	460 (67,000)	555 (80,000)	29.3	-29 (-20)	85 (63)
As welded with 80% Ar + CO_2	495 (72,000)	585 (85,000)	27.5	-29 (-20)	113 (83)
As welded with 90% Ar + CO_2	495 (72,000)	590 (85,600)	26.4	-29 (-20)	101 (74)

Typical Welding Parameters

Diameter, Polarity Shielding Gas	CTWD mm(in)	Wire Feed Speed m/min (in/min)	Amp. (A)	Volt. (V)	Deposition Rate kg/hr (lb/hr)
1.0mm (0.040in), DC +					
100% CO_2 Gas	15 (3/4)	4.2 (165)	100	20.5	1.3 (2.9)
		7.8 (307)	150	23	2.4 (5.3)
		11.0 (433)	200	26	3.5 (7.7)
Mixed Gas (80%Ar + CO_2)	15 (3/4)	3.3 (130)	100	16	1.0 (2.2)
		5.3 (209)	150	17	1.7 (3.7)
		8.6 (339)	200	321	2.7 (6.0)
1.2mm (0.045in), DC +					
100% CO_2 Gas	20 (3/4)	5.8 (230)	100	18.5	2.9 (6.4)
		9.0 (350)	150	25	4.5 (9.9)
		14.5 (570)	200	31	7.3 (16.1)
Mixed Gas (80%Ar + CO_2)	20 (3/4)	3.7 (145)	100	17.5	1.9 (4.2)
		6.2 (244)	150	24	3.1 (6.8)
		11.2 (440)	200	30	5.6 (12.3)