

SPOOLARC 82

AWS A5.18: ER70S-3 H4

FEATURES

Spoolarc 82 is a premium quality, general purpose MIG wire subjected to stringent quality control procedures required for certification to Military, Lloyds, and ABS specifications. Spoolarc 82 is recommended for pressure vessel and pipe fabrication, HVAC duct work, and general carbon steel structural welding.

WELDING PROCESS

- GTAW (TIG)
- GMAW (MIG)

CHARPY V-NOTCH PROPERTIES

Testing Temperature -20°F (-29°C)

As Welded 100% CO₂ Shielding Gas

75 ft-lb, 102 J

As Welded 98% Ar / 2% O₂ Shielding Gas

83 ft-lb, 112 J

TYPICAL MECHANICAL PROPERTIES

As Welded 98% Ar / 2% O₂ Shielding Gas

Yield Strength 62 ksi, 425 MPa

Tensile Strength 76 ksi, 525 MPa

Elongation in 2" 28%

As Welded 100% CO₂ Shielding Gas

Yield Strength 60 ksi, 415 MPa

Tensile Strength 73 ksi, 505 MPa

Elongation in 2" 28%

CLASSIFICATIONS AND APPROVALS

- LR: 3S, 3YS (H15)
- MIL-E-23765/1: MIL-70S-3
- ABS/AWS A5.18: ER70S-3 H4
- CAN/CSA-ISO14341,B-G 49A 2C G3 (ER49S-3)
- AWS/ASME SFA5.18: ER70S-3
- Certified by CWB to CSA W48

INDUSTRIES

- Automotive
- General Fabrication
- Pipeline
- Mobile Machinery

WELD METAL ANALYSIS

100% CO₂ Shielding

Gas

C 0.07%

Mn 0.9%

Si 0.4%

P 0.006%

S 0.008%

98% Ar / O₂ Shielding Gas

C 0.8%

Mn 1.0%

Si 0.5%

P 0.006%

S 0.008%

Typical Wire Analysis

C 0.09%

Mn 1.2%

Si 0.5%

P 0.007%

S 0.005%

Cu 0.07%

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DEPOSITION TABLE - Spray Transfer Welding Parameters

Diameter in (mm)	Amps	Volts	Wire Feed Speed ipm (cm/min)	Deposition Rate lb/hr (kg/hr)
.030 (0.8)	160	24	500 (1270)	5.8 (2.6)
	173	25	550 (1397)	6.4 (2.9)
	187	25	600 (1524)	7 (3.2)
	200	26	650 (1651)	7.6 (3.4)
.035 (0.9)	180	25	400 (1016)	6.3 (2.9)
	197	26	450 (1143)	7.1 (3.2)
	213	26	500 (1270)	7.9 (3.6)
	230	27	550 (1397)	8.7 (4)
.045 (1.2)	260	25	300 (762)	7.9 (3.6)
	280	26	350 (889)	9.2 (4.2)
	300	28	400 (1016)	10.5 (4.8)
	320	29	450 (1143)	11.8 (5.4)
	340	30	500 (1270)	13.1 (6)

DEPOSITION TABLE - Shortarc Transfer Welding Parameters

Diameter in (mm)	Amps	Volts	Wire Feed Speed ipm (cm/min)	Deposition Rate lb/hr (kg/hr)
.030 (0.8)	60	14	150 (381)	1.7 (0.8)
	80	15	200 (508)	2.2 (1)
	100	15	250 (635)	2.8 (1.3)
	120	16	300 (762)	3.3 (1.5)
	140	16	350 (889)	3.9 (1.8)
	144	16	350 (914)	4 (1.8)
.035 (0.9)	90	15	180 (457)	2.7 (1.2)
	113	16	220 (559)	3.3 (1.5)
	137	18	260 (660)	4 (1.8)
	160	19	300 (762)	4.6 (2.1)
.045 (1.2)	130	17	125 (318)	3.1 (1.4)
	163	18	160 (406)	4 (1.8)
	200	19	200 (508)	5 (2.3)

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PART NUMBER / PRODUCT INFORMATION

Part Number	Description
1212F04	82 030X44#SP
1212F05	82 035X44#SP
1212F07	82 045X44#SP