

Innershield® NR-207

AWS E71T8-K6 • Low Alloy, All Position

Conformances

AWS A5.29/A5.29M: 2005	E71T8-K6-H16
ASME SFA-A5.29:	E71T8-K6-H16
ABS:	E71T-8-K6
DNV Grade:	III YMS H15
GL:	3YH15S
BV Grade:	SA3YMH

Key Features

- ▶ Vertical down hot, fill and cap passes on standard cross-country pipelines and arctic grade pipe
- ▶ Recommended for API grades X42 up to undermatching X70
- ▶ High deposition rates

Welding Positions

All

Typical Applications

- ▶ Standard cross-country pipelines
- ▶ Arctic grade pipe up to undermatched X70

DIAMETERS / PACKAGING

Diameter in (mm)	14 lb (6.4 kg) Coil 56 lb (25.4 kg) Hermetically Sealed Pail
0.068 (1.7)	ED016312
5/64 (2.0)	ED012438

MECHANICAL PROPERTIES⁽¹⁾ – As Required per AWS A5.29/A5.29M: 2005

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Hardness Rockwell B	Charpy V-Notch J (ft•lbf) @ -29°C (-20°F)
Requirements ⁽⁴⁾ - AWS E71T8-K6	400 (58) min.	480-620 (70-90)	20 min.	–	27 (20) min.
Typical Results ⁽³⁾	415-445 (60-64)	520-545 (75-79)	29-33	84-87	81-237 (60-175)

DEPOSIT COMPOSITION⁽¹⁾ – As Required per AWS A5.29/A5.29M: 2005

	%C	%Mn	%Si	%S	%P
Requirements - AWS E71T8-K6	0.15 max.	0.50-1.50	0.80 max.	0.030 max.	0.030 max.
Typical Results ⁽³⁾	0.05-0.07	0.87-0.96	0.23-0.27	≤0.003	0.004-0.008
	%Ni	%Cr	%Mo	%V	%Al
Requirements - AWS E71T8-K6	0.40-1.00	0.20 max.	0.15 max.	0.05 max.	1.8 max.
Typical Results ⁽³⁾	0.73-0.83	0.02-0.03	0.02-0.03	≤0.01	0.9-1.1

TYPICAL OPERATING PROCEDURES

Diameter, Polarity	CTWD mm (in)	Wire Feed Speed m/min (in/min)	Voltage (volts)	Approx. Current (amps)	Melt-Off Rate kg/hr (lb/hr)	Deposition Rate kg/hr (lb/hr)	Efficiency (%)
0.068 in (1.7 mm), DC-	25 (1)	2.0 (80)	17-18	190	1.7 (3.8)	1.3 (3.0)	79
		2.6 (105)	18-19	230	2.2 (5.3)	1.8 (4.0)	80
		3.0 (120)	19-20	245	2.5 (5.7)	2.0 (4.5)	79
		3.5 (140)	21-22	275	3.0 (6.8)	2.4 (5.5)	81
		4.4 (175)	21-22	295	3.6 (8.0)	2.9 (6.4)	80
5/64 in (2.0 mm), DC-	25 (1)	1.7 (70)	17-18	205	2.0 (4.5)	1.5 (3.4)	76
		2.0 (80)	18-19	225	2.3 (5.1)	1.7 (3.9)	76
		2.2 (90)	18-19	240	2.6 (5.8)	2.0 (4.5)	78
		2.7 (110)	20-21	275	3.1 (7.0)	2.4 (5.5)	79
		3.3 (130)	20-21	300	3.7 (8.3)	2.9 (6.5)	78

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer below.

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

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