Innershield® NR®-440Ni2

AWS E71T8-Ni2-JH8 • Low Alloy, All Position

Typical Applications

- Offshore

Welding Positions

All

Conformances

AWS 5.29/A5.29M:	E71T8-Ni2-JH8
ASME SFA-5.29	E71T8-Ni2-JH8
ABS	4YSAH10
DNV	IV YMS H10
LR	4YS H10

Key Features

- Designed to provide optimal weldability in narrow TKY joints and poor fit up conditions
- Expect fast travel speeds and a flat bead face when using vertical-up or vertical-down welding techniques
- Low temperature impact toughness, meets ABS 4YSA and AWS J classification
- Meets H8 diffusible hydrogen requirements over a range of humidity levels
- ProTech® hermetically sealed packaging
- Q2 Lot® - Certificate showing actual deposit chemistry and mechanical properties per lot available online.

DIAMETERS / PACKAGING

Diameter mm (in)	8 lb (3.6 kg) Spool 48 lb (21.8 kg) Hermetically Sealed Pail	14 lb (6.4 kg) Coil 56 lb (25.4 kg) Hermetically Sealed Pail
1.6 (1/16)	ED034365	ED034200
2.0 (5/64)	ED034195	ED033827

MECHANICAL PROPERTIES[1] – *As Required per AWS A5.29/A5.29M*

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) @-40°C (-40°F)
Requirements[4] - AWS E71T8-Ni2-JH8	400 (58) min.	480-655 (70-90)	22 min.	27 (20) min.
Typical Results[3]	400-485 (58-70)	490-570 (71-83)	22-36	215-460 (160-340)

DEPOSIT COMPOSITION[1] – *As Required per AWS A5.29/A5.29M*

	%C	%Mn	%Ni	%Si	%S	%P	%Al
Requirements AWS E71T8-Ni2-JH8	0.30 max.	1.75 max.	1.75-2.75	0.60 max.	0.030 max.	0.030 max.	1.8 max.
Typical Results[3,4]	0.01-0.03	0.74-1.12	1.77-2.10	0.13-0.17	0.002-0.004	0.007-0.012	0.84-1.07

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 (%)
1.6 mm (1/16 in), DC-	22 (7/8)	2.3 (90)	17-18	160	1.6 (3.6)	1.1 (2.5)	69
		2.5 (100)	18-19	170	1.6 (3.6)	1.2 (2.8)	72
		2.8 (110)	18-19	180	2.0 (4.4)	1.4 (3.1)	73
		3.0 (120)	19-20	195	2.2 (4.8)	1.6 (3.5)	73
		3.3 (130)	19-20	210	2.3 (5.1)	1.7 (3.7)	73
2.0 mm (5/64 in), DC-	25 (1)	1.8 (70)	16-17	205	1.9 (4.2)	1.5 (3.2)	76
		2.0 (80)	17-18	225	2.2 (4.7)	1.6 (3.6)	77
		2.3 (90)	18-19	240	2.4 (5.3)	1.9 (4.2)	78
		2.5 (100)	19-20	260	2.7 (5.9)	2.1 (4.7)	79
		2.8 (110)	20-21	260	3.0 (6.5)	2.4 (5.2)	80
		3.0 (120)	20-21	295	3.2 (7.1)	2.5 (5.6)	79

[1]Typical all weld metal. [2]Measured with 0.2% offset. [3]See test results disclaimer on pg. 16. [4]The strength and elongation properties reported were obtained from a 2.8 mm (0.505 in) tensile specimen artificially aged at 104°C (220°F) for 48 hours, as permitted by AWS A5.20-05. A naturally aged tensile specimen may take months to achieve the specified properties. See AWS A5.20-05, paragraph A8.3. The time required for the natural aging of weld deposits is dependent upon ambient conditions, weldment geometry, the metallurgical structure of the weld deposit and other factors.

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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Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

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Issue Date 02/13