

Pipelin[®] NR-208-XP

Low Alloy, All Position • AWS E81T8-G

Key Features

- ▶ Vertical down hot, fill and cap pass welding of up to X80 grade pipe
- ▶ Capable of producing weld deposits with impact toughness exceeding 153 - 302 J (113 - 223 ft•lbf) @ -29°C (-20°F)
- ▶ Q2 Lot[®] - Certificate showing actual deposit chemistry and mechanical properties available online
- ▶ ProTech[®] hermetically sealed packaging

Typical Applications

- ▶ Hot, fill and cap pass welding of up to X80 grade pipe
- ▶ Cold temperature cross country pipe applications

Conformances

AWS A5.29/A5.29M: 2005 E81T8-G
ASME SFA-A5.29: E81T8-G

Welding Positions

All, except vertical up

DIAMETERS / PACKAGING

Diameter mm (in)	14 lb (6.4 kg) Coil 56 lb (25.4 kg) Hermetically Sealed Pail
2.0 (5/64)	ED031968

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

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength ⁽⁴⁾ MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) @ -29°C (-20°F)
Requirements - AWS E81T8-G	470 (68) min.	550 - 690 (80 - 100)	19 min.	Not Specified
Typical Results ⁽³⁾ - As-Welded	485 - 515 (70 - 75)	550 - 585 (80 - 85)	27 - 29	153 - 302 (113 - 223)

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

	%C	%Mn ⁽⁴⁾	%Si	%P	%S
Requirements - AWS E81T8-G	Not Specified	0.50 min	1.00 max.	0.030 max.	0.030 max.
Typical Results ⁽³⁾	≤ 0.02	2.10-2.20	0.12-0.13	0.004-0.007	< 0.003
	%Ni ⁽⁴⁾	%Cr ⁽⁴⁾	%Mo ⁽⁴⁾	%V ⁽⁴⁾	%Al ⁽⁴⁾
Requirements - AWS E81T8-G	0.50 min.	0.30 min.	0.20 min.	0.10 min.	1.8 max.
Typical Results ⁽³⁾	0.74-0.80	0.04-0.05	0.01-0.03	< 0.004	0.9-1.1

TYPICAL OPERATING PROCEDURES

Diameter, Polarity	CTWD ⁽⁵⁾ mm (in)	Wire Feed Speed m/min (in/min)	Voltage (volts)	Approx. Current (amps)	Melt-Off Rate kg/hr (lb/hr)
2.0 mm (5/64 in), DC-	19 (3/4)	1.7-3.3 (70-130)	17-20	195-295	1.8-3.5 (4.0-7.6)

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer below. ⁽⁴⁾In order to meet the alloy requirements of the "G" group, the undiluted weld metal shall have not less than the minimum of at least one of the elements listed. ⁽⁵⁾For electrical stickout (ESO) subtract 6.4 mm (1/4 in) from contact tip to work distance (CTWD).

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

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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