PIPELINER® AUTOSHIELD® HW

Low Alloy, All Position · AWS E91T8-G H8, E91T8-A2-K12-H8

KEY FEATURES

- Automated solution provides increased weld productivity and repeatability compared to stick electrodes
- Mechanized Pipe Welding electrode designed for use WITHOUT shielding gas, simplifying logistics and reducing fabrication costs compared to gas-shielded processes
- Designed for vertical-down welding for lower heat inputs and consistent mechanical properties, including impact toughness down to -20°F
- Low diffusible hydrogen levels (H8) for reduced risk of cold cracking
- Q2 Lot® Certificate - Every lot of material is tested and certified with actual deposit chemistry and mechanical properties on a Simulated Pipe Joint (SPJ)
- ProTech® hermatically sealed foil bag packaging
- Pipe Test Reports available upon request

CONFORMANCES

AWS A5.29, ASME SFA-A5.29: E91T8-G H8

AWS A5.36, ASME SFA-A5.36: E91T8-A2-K12-H8

TYPICAL APPLICATIONS

- Welding of API Grade X-70 pipe in cross country pipeline applications
- Hot, Fill and Cap Passes
- Typically used when wall thickness is ½ in. or greater

WELDING POSITIONS

All, except vertical up

DIAMETERS / PACKAGING

Diameter in (mm)	10 lb (4.5 kg) Plastic Spool 40 lb (18.1 kg) Master Carton
0.052 (1.3)	ED037533

MECHANICAL PROPERTIES[1]

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpoy V-Notch J (ft-lbf) @ -29°C (-20°F)
Requirements AWS A5.29: E91T8-G	540 (78) min.	620-760 (90-110)	17 min.	Not Specified
Requirements AWS A5.36: E91T8-A2-K12-H8	540 (78) min.	620-760 (90-110)	17 min.	27 (20) min.
Typical Results[3] As-Welded	689 (100)	752 (109)	24	84 (62)

DEPOSIT COMPOSITION

	%C	%Mn	%Si	%S	%P	%Cu
Requirements AWS A5.18: E70C-GM-H4	Not Specified	0.50 min	1.0 max	0.030 max	0.030 max	Not Specified
Requirements AWS A5.36: E91T8-A2-K12-H8	0.15 max	1.50-2.75	0.80 max	0.030 max	0.030 max	Not Specified
Typical Results[3] As-Welded	0.050	2.18	0.22	0.005	0.015	0.031
	%Ni	**%Cr**	**%Mo**	**%V**	**%Al**	**Diffusible Hydrogen (mL/100g weld deposit)**
Requirements AWS A5.18: E70C-GM-H4	0.50 min	0.30 min	0.20 min	0.10 min	1.8 max	8.0
Requirements AWS A5.18: E70C-GM-H4	0.75 2.00	0.20 max	0.50 max	0.05 max	1.8 max	8.0
Typical Results[3] As-Welded	1.39	0.06	0.01	0.004	1.0	7.6

[1] Typical all weld metal. [2] Measured with 0.2% offset. [3] See test results disclaimer.

TYPICAL OPERATING PROCEDURES

Diameter, Polarity, Shielding Gas	CTWD in (mm)	Wire Feed Speed m/min (in/min)	Approx. Voltage (Volts)	Approx. Current (Amps)	Melt-Off Rate kg/hr (lb/hr)	Deposition Rate kg/hr (lb/hr)	Efficiency (%)
0.052 in (1.3mm), DC-	1 (25.4)	3.8 (150)	16.5-17.5	185	1.8 (4.0)	1.2 (2.6)	65
		5.1 (200)	18.5-19.5	230	2.6 (5.8)	1.9 (4.2)	73
		6.4 (250)	20.0-21.0	260	3.3 (7.2)	2.6 (5.8)	80
		7.6 (300)	21.0-22.0	300	3.9 (8.6)	3.2 (7.1)	82

For application specific procedures and data, please contact your Lincoln Electric Technical Sales Representative.

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

FUMES AND GASES can be hazardous to your health.

- Fumes from the normal use of this product contain significant quantities of potentially hazardous compounds. See consumable product label/insert.
- Keep your head out of the fumes.
- Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area.
- An approved respirator should be used unless exposure assessments are below applicable exposure limits.

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.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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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