LINCOLNWELD® 822™

SUBMERGED ARC (SAW) FLUX

LINCOLN ELECTRIC®

Durable, Dry and Tough

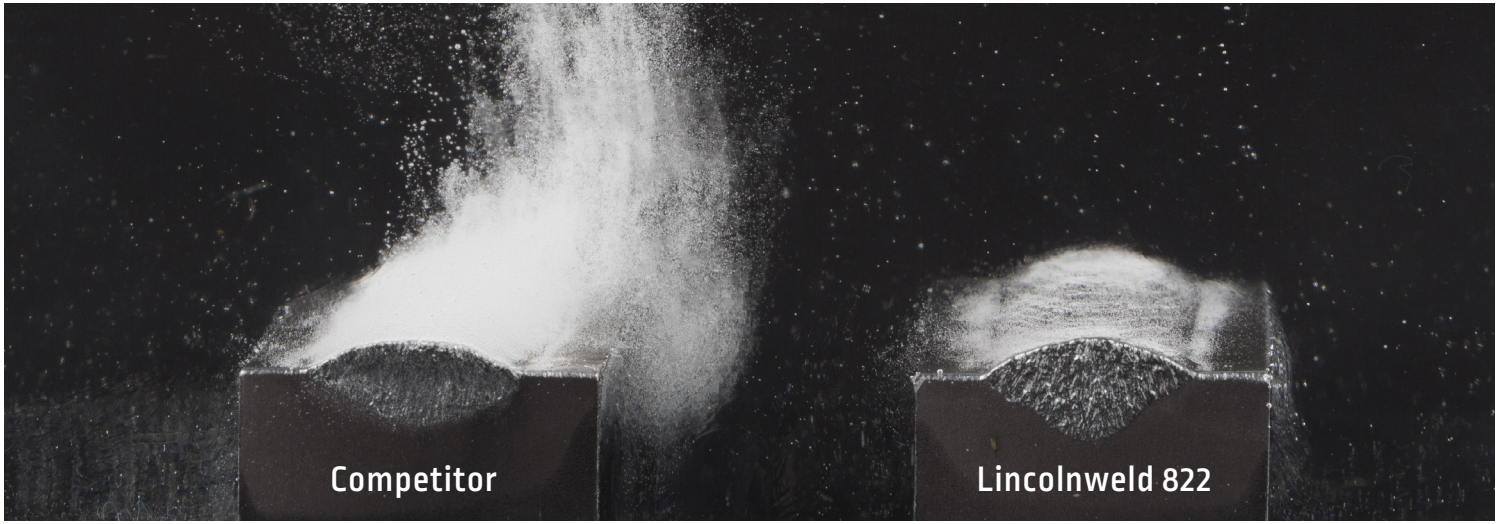
Lincolnweld® 822™

Building reactors, pressure vessels and columns in the oil and gas and chemical process industries is a challenging business. Pressure vessel walls can range in thickness from 2 to 8 inches, and when fully operational, the reactions within take place at extreme temperatures. In the production of these vessels, quality and durability need to be an integral part of the welding and fabrication process.

Lincolnweld® 822™ flux with Lincolnweld wires promote clean, strong weld metal that's critical to the integrity of chemical and refinery vessels. Designed for use with Lincolnweld LA-92 (LNS-150) and LA-93 (LNS-151) electrodes, Lincolnweld 822 ensures a low Bruscato factor (X factor), provides toughness at low temperatures and maintains strength after long post-weld heat treatments.

Diffusible hydrogen increases the risk of weld cracking and failure. Lincolnweld 822 helps reduce these risks when used with Lincolnweld LA-71™, LA-92, and LA-93 electrodes. Lincolnweld 822 does this with no flux baking required, saving you time and money.

Get tough and stay tough with Lincolnweld 822.



Lincolnweld 822 has better diffusible hydrogen when compared to the competition. Picture shows hydrogen gas escaping from the weld.

Quality in the Weld, Integrity in the Vessel

Low-Temperature Toughness

Welds in vessels that normally operate at high temperatures still may see very low temperatures during installation and downtime. Lincolnweld 822 helps maintain ductility in the weld, even at low temperatures, providing extra assurance during these critical times.

X Marks the Spot

Many applications in the power generation and process industries are at extreme temperatures over an extended period of time. This can be problematic to the base material and weld metal. Lincolnweld 822 provides a low Bruscato factor (X<10) when paired with Lincolnweld LA-92 and LA-93, which provides resistance to temper embrittlement during service.

Keep it Dry, Keep it Simple

Lincolnweld 822 maintains a lower diffusible hydrogen level than competing fluxes. No need for conditioning the flux prior to use nor holding the flux in drying ovens that can lead to errors and consume valuable production time. The two-step process is as fast as it is simple: pull it out of the bag and start welding.

Typical Applications »
Power Generation,Process Chemical, Pressure Vessels

Recommended Wire »

Mild Steel
- Lincolnweld LA-71

Low Alloy Steel
- Lincolnweld LA-92, LA-93

Product Information »
- Basicity Index: 2.6
- Density: 1.3

PACKAGING

50 lb (22.7 kg) Plastic Bag
ED036223

FLUX COMPOSITION[1]

	% SiO_2	%MnO	%MgO	%CaF_2	%Na_2O	%Al_2O_3	%CaO	% Metal Alloys
Lincolnweld® 822	15	2	32	21	3	18	5	3 max

AWS TEST RESULTS[1]

Flux/Wire Combination	Weld Condition	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation (%)	Charpy V-Notch J (ft·lbf)	Charpy V-Notch @ °C (°F)	AWS Classification (A5.17/A5.23)
LA-92	As-welded	640 (92)	710 (102)	24	95 (70)	-29 (-20)	F9A2-EB2R-B2R-H4
LA-92	Stress-relieved[3]	480 (70)	580 (85)	29	200 (148)	-40 (-40)	F8P4-EB2R-B2R-H4
LA-93	As-welded	760 (110)	880 (128)	20	35 (26)	-18 (0)	F11A0-EB3R-B3R-H4
LA-93	Stress-relieved[3]	550 (80)	660 (96)	23	156 (115)	-40 (-40)	F9P4-EB3R-B3R-H4
LA-71	As-welded	480 (70)	580 (85)	27	151 (111)	-62 (-80)	F7A8-EM14K-H4
LA-71	Stress-relieved[4]	430 (63)	560 (81)	31	127 (93)	-62 (-80)	F7P8-EM14K-H4

[1]See test results disclaimer. [2] Measured with 0.2% offset. [3] Stress-relieved for 1 hour at 691°C (1275°F). [4] Stress-relieved for 1 hour at 620°C (1150°F).

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