

Select 78-Ni1

Description:

Select 78-Ni1 is a self-shielded, low alloy steel, flux cored electrode. It is intended for the all position welding of carbon and certain low alloy steels where excellent low temperature toughness is required. A fast freezing slag facilitates welding in all positions. It has a smooth globular transfer, excellent bead shape and easily removed slag. **Select 78-Ni1** is designed for critical structural applications such as offshore platforms, shipbuilding, heavy wall tubular construction and general structural fabrication.

Classification & Approvals:

- E71T8-Ni1J H16 per AWS A5.29, SFA 5.29
- ABS 3YSA, DNV III YMS H10, Lloyd's Register 3YS H10
- CWB E491T8-Ni1J-H16

Advantages:

- Operates on straight polarity (DCEN) with no external shielding gas.
- Fast freezing slag facilitates excellent weldability in all positions.
- Exhibits a smooth globular transfer, excellent bead shape and easily removed slag.
- Excellent low temperature toughness properties

Typical Mechanical Properties:

Ultimate Tensile Strength (psi)	84,400
Yield Strength (psi)	67,700
Percent Elongation	25
CVN (ft•lb f) @ -20° F	59
@ -40° F	50

Typical Deposit Composition (wt%):

<u>C</u>	<u>Mn</u>	<u>Si</u>	<u>P</u>	<u>S</u>	<u>Al</u>	<u>Ni</u>
.05	1.35	.25	.010	.005	.70	1.01

Recommended Welding Parameters (DCEN):

Diameter	WFS (in/min)	Amperage	Voltage	CWTD (in.)
5/64"	50	140	16-17	3/4
	75	200		3/4
	100	230		1
	125	255		1
	150	275		1
.072"	125	150	17-18	5/8
	175	210		3/4
	200	240		1
	225	265		1
	250	290		1
1/16"	120	180	17-18	3/4
	170	215		3/4
	220	245		1
	270	280		1

*These parameters may be used in all positions. The ability to weld out of position at the higher current levels will depend on plate thickness and welder skill.

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Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field.