

Diameter: .052

AWS D1.8 Seismic Certificate of Conformance

This is to certify that the product stated below is of the same classification, manufacturing process, and material requirements as the electrode used for the testing on the date stated. All tests required by the specifications for classification were performed and the material met all requirements. It was manufactured and supplied according to the quality management system of Select-Arc, Inc., which meets the requirements of ISO 9001 and other applicable specifications. This certificate complies with the requirements of EN 10204, Type 2.2.

Product: Select 820-Ni1

Test Completion Date: 4/23/2020

Diameter(s): .052

Lot Numbers: (.052) 4568 4569 4571

Lot Class: 'T4' per AWS A5.01

Certificate Expiration Date: 4/23/2023

Specifications: AWS D1.8: 2016

Classification: E81T1-NiMJ

Weld Parameters - High Heat Input

Lot Number:	4568	4569	4571
Electrode Diameter:	.052	.052	.052
Shielding Gas	75%Ar / 25%CO2	75%Ar / 25%CO2	75%Ar / 25%CO2
Amperage:	272.0	270.0	271.0
Arc Voltage:	27.0	27.0	27.0
Current Polarity:	DCEP	DCEP	DCEP
CTWD (in):	3/4"	3/4"	3/4"
No. of Passes/Layers:	10/5	10/5	8/4
Interpass Temperature(°F):	450	450	450
Heat Input Avg.(kJ/in.):	68.4	67.1	69

Mechanical Properties - High Heat Input

Lot Number:		4568	4569	4571
Shielding Gas		75%Ar / 25%CO2	75%Ar / 25%CO2	75%Ar / 25%CO2
Requirements		Results	Results	Results
Test Condition:	As-Welded	As-Welded	As-Welded	As-Welded
PWHT Temperature:	-	-	-	-
Tensile Strength (psi):	80000 min	82000	86000	82000
Yield Strength (psi):	68000 min	71000	75000	69000
Elongation (%):	19 min	25	28	28
Charpy V-Notch Impacts:		117, 119, 117	107, 107, 104	111, 116, 117
ft-lb f @ 70°F	40 avg.	118 avg	106 avg	115 avg
Charpy V-Notch Impacts:		116, 78, 95	87, 93, 88	89, 91, 79
ft-lb f @ 32°F	40 avg.	96 avg	89 avg	86 avg

Weld Parameters - Low Heat Input

Lot Number:	4568	4569	4571
Electrode Diameter:	.052	.052	.052
Shielding Gas	75%Ar / 25%CO2	75%Ar / 25%CO2	75%Ar / 25%CO2
Amperage:	290.0	268.0	243.0
Arc Voltage:	27.0	27.0	27.0
Current Polarity:	DCEP	DCEP	DCEP
CTWD (in):	3/4"	3/4"	3/4"
No. of Passes/Layers:	18/9	18/9	18/9
Interpass Temperature(°F):	250	250	250
Heat Input Avg.(kJ/in.):	27.2	26.8	24.5

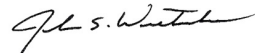
Mechanical Properties - Low Heat Input

Lot Number:		4568	4569	4571
Shielding Gas		75%Ar / 25%CO2	75%Ar / 25%CO2	75%Ar / 25%CO2
Requirements		Results	Results	Results
Test Condition:	As-Welded	As-Welded	As-Welded	As-Welded
PWHT Temperature:	-	-	-	-
Tensile Strength (psi):	80000 min	93000	95000	96000
Yield Strength (psi):	68000 min	84000	86000	89000
Elongation (%):	19 min	25	24	26
Charpy V-Notch Impacts:		81, 81, 78	93, 97, 94	112, 115, 115
ft-lb f @ 70°F	40 avg.	80 avg	95 avg	114 avg
Charpy V-Notch Impacts:		74, 79, 73	84, 75, 81	89, 94, 90
ft-lb f @ 32°F	40 avg.	75 avg	80 avg	91 avg

This product meets the requirements for a 2 week exposure at 80°F, 80% humidity (per Annex E of AWS D1.8:2016)

The undersigned certifies that the product supplied will meet the requirements of the applicable AWS Filler Metal Specification when tested in accordance with that specification.

Signed By: _____



Joshua S Westerheide, Quality Manager