

ER110S-G

ER110S-G is a stable burning, low spatter wire that produces a soft arc and WAM® deposits that have high impact toughness.

Generally used in the manufacture of tools that require higher tensile strength, ER110S-G is often seen in the fabricating of pressure vessels, construction machinery and hoisting devices.

The high impact strength of this alloy makes it suitable for Offshore, Chemical and Petrochemical industries.

Wire Classification

AWS/ASME-SFA A5.28, ER110S-G

Wire Diameter

1.2 mm

Shielding Gas

Argon Mix

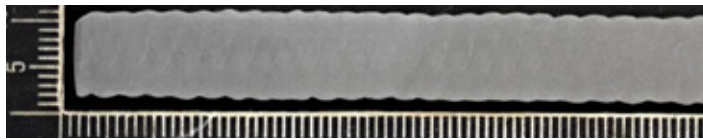
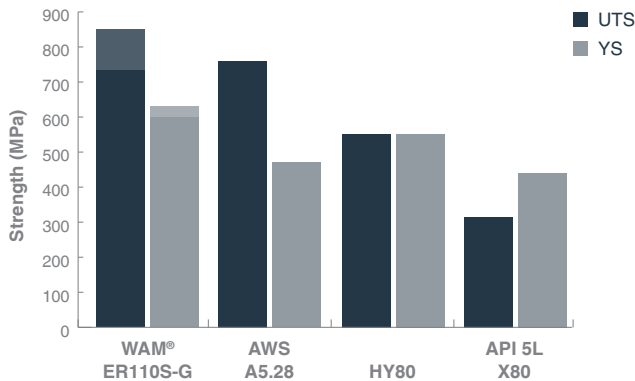
Process

WAM® – DED-Arc

Equivalent Designations

A 514, A 517, HY80, HY90, HY100, API 5LX X65, API 5LX X70, API 5LX X80, API 5LX L80.

WAM® ER110S-G Tensile Strength Comparison

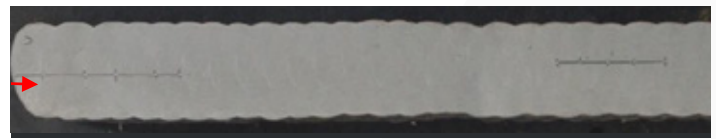


ER110S-G macro examination photo.

Properties

Composition	Amount %
Carbon	≤ 0.10
Manganese	1.5 - 2.8
Nickel	1.2 - 1.6
Chromium	0.20 - 0.40
Molybdenum	0.20 - 0.30
Silicon	0.40 - 0.70
Copper	≤ 0.15
Iron	Rem
Vanadium	0.05 - 0.10
Phosphorus	≤ 0.015
Sulfur	≤ 0.015

Mechanical	WAM® X & Z Typical	AWS Typical
Ultimate Tensile Strength (MPa)	730 - 850	760
0.2% Proof stress (MPa)	600 - 630	660
Reduction in area (%)	30 - 65	-
Elongation (%)	15 - 20	> 15
Condition	as built	
Classification	AWS A5.28	
Density (kg/m³)	7800	
Peak Vickers Hardness (HV)	256	
Charpy Impact Test (J)	100 ambient	
Stress Analysis (mm) (Neutron Detection)	Comp. > 25	



ER110S-G showing top and mid thickness hardness survey locations.

WAM® Test Number 180151AM-18. Mechanical property values for the 'as-deposited WAM' values are based on the median value and repeatability testing. Deposited density can be lower than wire density. AWS data source: D20.1/D20.1M:2019 Specification for Fabrication of Metal Components Using Additive Manufacturing.



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