DSE ER420 SAW

Specifications:

ASME SFA 5.9 / AWS A5.9 ER420
UNS S42080

Description:

ER420 is similar to ER410 except it contains a higher carbon content and a semi higher hardness of weld deposits, which increases wear resistance. ER420 is often used for surfacing applications that require a resistance to corrosion and abrasion. This alloy requires preheat and interpass temperatures no lower than 400°F followed by slow cooling.

Typical Mechanical Properties:

Yield: ≥ 235MPa
UTS: ≥ 794MPa
Elongation: 24 -34%
Hardness: 432 BHN

Note: Mechanical properties are greatly influenced by changes in welding parameters such as preheat and inter-pass temperatures.

Chemical Composition (Wt%):

C	Si	Mn	Cr	S	P	Ni	Mo	Cu
0.25-0.40	0.5	0.60	12.0-14.0	0.03	0.03	0.60	0.75	0.75

Note: Single values are maximum unless otherwise noted.

Recommended Welding Parameters

SAW "Submerged Arc Welding Process" — Reversed Polarity Suggested

Wire Diameter	Amps	Volts
2.4	250-450	28-32
3.2	300-500	29-34
4.0	400-600	30-35

Both Agglomerated and fused fluxes can be used for submerged arc welding.

Note: The chemical composition of the flux mainly affects the chemistry of the weld metal and consequently its corrosion resistance and Mechanical properties.

Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of material being welded.