

GM 309



IDENTIFICATION :ER 309

CLASSIFICATION :AWS A 5.9 ER309 BS2901-90 309S92 DIN 8556-86 WSGX2CrNi 24.12

CHARACTERISTICS :

Solid wire deposits a 24 % Cr / 13 % Ni austenitic stainless steel weld metal with a ferrite content about FN 12. The high alloy level and high ferrite content enables the weld metal to tolerate dilution from carbon and low alloy steels without hot cracking. Deposited weld metal is of radiographic quality.

TYPICAL USES :

Buffer layer on mild steel or low alloy steels. Joining of clad steels and dissimilar joints between stainless and mild or low alloy steels. Joining of ferrite ? martensitic stainless steels. Welding of similar composition, 309 type stainless steel. Joining type 304/304L, 347, 321, 316/316L and duplex stainless steel to mild and low alloy steels.

WELD METAL ANALYSIS (RANGE) %:

C	Mn	Si	Cr	Cu	Ni	Mo	S	P
0.12 max	1.0 -2.50	0.30-0.65	23.0-25.0	0.50 max	12-14	0.50 max	0.03 max	0.03 max

MECHANICAL PROPERTIES (RANGE) :

Tensile Strength MPa	Yield Stress MPa	Elongation(%)(L=4D)	Charpy V-notch impact strength (joules)
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540-650	360-480	30-40	Temp	Joules
			0°C	50-100

SHIELDING GAS : Argon 99.99% 6-12 l/min.

FERRITE CONTENT IN THE WELD METAL : 8 - 16 FN.

WELDING CURRENT : DC (-)

CORROSION RESISTANCE

Good resistance to general and intergranular corrosion. Also good resistance to oxidising acids and cold reducing acids.

PACKING DATA :

SIZE (mm)	Wt. Of the spool (Dia. Of spool : 300mm layer to layer winding)KG(approx)
0.80	12.50
1.00	12.50
1.20	12.50