

Classifications

AWS A5.22 / SFA-5.22

EC409

Characteristics and typical fields of application

Metal-cored wire of EC409 type for joints in catalyzers, silencers, exhaust mufflers and inlet mani-folds with same-type or of similar composition. Stabilized with titanium to reduce tendency to grain coarsening. The easy handling and high deposition rate result in high productivity with excellent welding performance and very low spatter formation. The wire shows good wetting behavior and results in a finely rippled surface pattern. The wide arc ensures even penetration and side-wall fusion to prevent lack of fusion. The focus application is robotic welding of exhaust systems for the automotive industry, especially for thin sheet one-layer joints with a high travel speed.

Base materials

AISI 409

Typical analysis

	C	Si	Mn	Cr	Ti	S
wt.-%	0.03	0.55	0.63	11.3	1.10	0.012

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Hardness
	HB
u	150

u - untreated, as welded – shielding gas M12 (Ar + 2.5% CO₂)

Operating data

Polarity	DC +	Dimension mm
Shielding gas (EN ISO 14175)	M12	1.2

Welding with conventional or pulsed power sources using DC+ polarity, but pulsed arc may be advantageous and especially when welding out of position. Forehand (pushing) technique preferred with a work angle of appr. 80°. The preferred shielding gas is Ar + 2 – 3% CO₂. The gas flow should be 15 – 20 l/min and the wire stick-out 15 – 20 mm. When welding out of position, the metal-cored wires are similar to solid wires and pulsed arc welding is recommended. Preheating and interpass temperature as required by the base metal.

Approvals

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