Thermanit D

Solid wire, high-alloyed

Classifications

EN ISO 14343-A	EN ISO 14343-B	AWS A5.9	Mat. No.
G 22 12 H	SSZ309Si	ER309(mod.)	1.4829

Characteristics and typical fields of application

Zunderbeständig bis 950 °C. Verbindungen und Auftragungen an artgleichen / artähnlichen hitzebeständigen Stählen / Stahlgusssorten.

Atmosphäre	**max. Verwendungstemperatur in °C**		
	sulphur-free	max. 2 g S/Nm^3	over 2 g S/Nm^3
Air and oxidizing combustion gases	950 (1742)	930 (1706)	850 (1562)
Reducing combustion gases	900 (1652)	850 (1562)	

Base materials

1.4828 – X15CrNiSi20-12; AISI 305; ASTM A297HF

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Ni
wt-%	0.11	1.2	1.2	22.0	11.0

Structure: Austenite with part ferrite

Mechanical properties of all-weld metal

Heat-treatment	Yield strength $R_{p0.2}$	Yield strength $R_{p1.0}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V KV J
	MPa	MPa	MPa	%	+20 °C
aw	350	370	550	30	70

Creep rupture properties: In the range of matching heat resistant parent metals

Operating data

Polarity:	**Shielding gas:**	**ø (mm)**	**Spool:**
DC (+)	(EN ISO 14175) M12, M13	0.8	BS300
		1.0	B300
		1.2	B300

Welding instruction

Materials	Preheating	Postweld heat treatment
Heat resistant Cr steels/cast steel grades	According to parent metal	Annealing according to parent metal is not necessary, if service tempera-tures are the same or higher
Matching austenitic steels/cast steel grades	None	None