

Classifications

EN ISO 3581-A	AWS A5.4	Mat. No.
E 22 12 B 2 2	E309-15 (mod.)	1.4829

Characteristics and typical fields of application

Resistant to scaling up to 950 °C (1742 °F). For joining and surfacing applications on matching / similar heat resistant steels / cast steel grades.

Atmosphere

max. application temperature in °C (°F)

	sulphur-free	max. 2 g S/Nm ³	über 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

TÜV certified parent metal

1.4828 – X15CrNiSi20-12; AISI 305; AISI 309; ASTM A297HF

Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Ni
wt-%	0.11	1.0	0.9	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	320	340	550	30	70

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

Operating data

	Polarity: DC (+)	ø (mm)	L mm	Amps A
		2.5	300	55 – 75
		3.2	350	70 – 110
		4.0	350	90 – 140
		5.0	450	140 – 190

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 temperature the same or higher
Matching austenitic steels/cast steel grades	None	None

Approvals

TÜV (01249), CE