

Classifications					
EN ISO 14343-A	EN ISO 14343-B	AWS A5.9	Mat. No.		
W 22 12 H	SSZ309Si	ER309(mod.)	1.4829		
Characteristics and typical fields of application					
For joining and surfacing applications with matching/similar heat resistant steels / cast steel grades.					
Atmosphere	max. application temperature in °C (°F)				
	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 the TIG rods (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	420	470	600	30	85
Creep rupture properties: In the range of matching heat resistant parent metals					
Operating data					
Polarity: DC (–)	Shielding gas: (EN ISO 14175) I 1	Marks: ✦ W 22 12 H / 1.4829		ø (mm)	L mm
				1.6	1000
				2.0	1000
				2.4	1000
				3.2	1000
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			