

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T Z19 9 H P M21 1	TS 308H-F M21 1	E308HT1-4
T Z19 9 H P C1 1	TS 308H-F C1 1	E308HT1-1

Characteristics and typical fields of application

Rutile flux cored welding wire with fast freezing slag providing excellent positional welding characteristics with fast travel speeds. It is designed for welding of creep resistant austenitic CrNi-steel like 1.4989 / AISI 304H and service temperatures up to 700 °C. It is easy to use and operates with a powerful penetrating spray arc transfer and minimum spatter formation. This flux cored welding wire offers many economical and quality advantages over solid wire pulse arc welding. High deposition rates and productivity gains are easily achievable. Additional cost effective benefits are offered through use of less expensive shielding gases, good wetting characteristics (less grinding), little bead oxidation (less pickling expenses), easy operation and safe penetration (reduces the risk of weld defects and associated repair work costs), and smooth and clean weld finish (less post weld work). The weld deposit is scaling resistant, and because of the controlled low delta ferrite content high resistant against sigma phase embrittlement.

Base materials

Similar alloyed creep resistant steels
1.4948 X6CrNi18-11, 1.4878 X12CrNiTi18-9
AISI 304, 304H, 321H, 347H

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

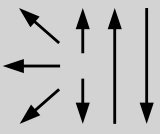
	C	Si	Mn	Cr	Ni		FN
w.t-%	0.05	0.6	1.2	19.4	10.1		3-8

Mechanical properties of all-weld metal

Condition	Yield strength $R_{p0,2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
u	390 (≥ 350)	585 (≥ 550)	42 (≥ 25)	90 (≥ 32)

u untreated, as welded – shielding gas Ar + 18 % CO₂

Operating data

	Polarity: DC (+)	Shielding gases: Argon + 15 – 25 % CO ₂ 100 % CO ₂	Redrying possible 150°C / 24 h	∅ (mm) 1.2	Amps A 110 – 210	Voltage V 20 – 31
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Welding with standard GMAW-facilities possible, slightly pulling torch position (angel appr. 80°), slight weaving is recommended for all welding positions; when using 100 % CO₂ as shielding gas it is necessary to increase the voltage by 2 V; the gas flow should be 15 – 18 l/min

Approvals

TÜV (11151.), CE