Thermanit MTS 616

TIG rods, high-alloyed, creep resistant

Classifications

EN ISO 21952-A	AWS A5.28
WZ CrMoWVNb 9 0,5 1,5	ER90S-G [ER90S-B9(mod.)]

Characteristics and typical fields of application

High temperature resistant. Suited for joining and surfacing applications with matching high temperature resistant parent metal P92 according to ASTM A 335.

Base materials

1.4901 – X10CrWMoVNb9-2; NF 616;
ASTM A 213 Gr. T92; A 355 Gr. P92;

Typical analysis of the TIG rods (wt.-%)

	C	Si	Mn	Cr	Mo	Ni	W	V	Nb	N
wt-%	0.1	0.25	0.5	8.5	0.4	0.5	1.6	0.2	0.06	0.04

Structure: Martensite, suitable for quenching and tempering

Mechanical properties of all-weld metal

Heat-treatment	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
760 °C / ≥ 2 h	560	720	15	41

Creep rupture properties: According to matching high temperature resistant parent metal

Operating data

Polarity:	Shielding gas:	Marks:	ø mm	L mm
DC (–)	(EN ISO 14175) I1	P92	2.0 2.4	1000 1000

Welding instruction

Materials	Preheating / Interpass temperature	Cool down before PWHT	PWHT
Matching steels/ cast steel grades	200 – 250 °C (392 – 482 °F) / 200 – 300 °C (392 – 572 °F)	≥100 °C (≥ 212 °F)	760 °C (1400 °F) – at least 2 h / air

Approvals

TÜV (09290), CE