Thermanit 25/09 CuT

TIG rods, high-alloyed, stainless

Classifications

EN ISO 14343-A	AWS A5.9	Mat. No.
W 25 9 4 N L	ER2594	≈1.4501

Characteristics and typical fields of application

Super duplex stainless steel; resistant to inter-crystalline corrosion.

Very good resistance to pitting corrosion and stress corrosion cracking due to the high CrMo(N) content (pitting index ≥40). Well suited for conditions in offshore application, particularly for welding of super-martensitic stainless steels (13 % Cr); extra low hydrogen in the filler material available on request.

Service temperature: –50 °C to 220 °C (-58°F to 428 °F).

Base materials

1.4515 – GX3CrNiMoCuN26-6-3; 1.4517 – GX2CrNiMoCuN25-6-3-3;

25 % Cr-superduplex steels such as Zeron 100, SAF 25/07, FALC 100

UNS S 32750, S 32760

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

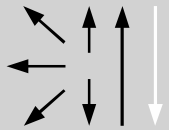
	C	Si	Mn	Cr	Mo	Ni	N	Cu	W
wt-%	0.02	0.3	0.8	25.3	3.7	9.5	0.22	0.6	0.6

Structure: Austenite/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 CVN J	
	MPa	MPa	MPa	%	+20 °C	–50 °C
aw	600	650	750	25	80	50

Operating data



Polarity:	Shielding gas:	Marks:	ø mm	L mm
DC (–)	(EN ISO 14175) I1	W 25 9 4 NL	1.6	1000
			2.0	1000
			2.4	1000
			3.2	1000

Welding instruction

Materials	Preheating	Postweld heat treatment
Matching / similar steels / cast steel grades	None	Mostly none; if necessary, solution annealing at 1120 °C (2048 °F) / water.
		Welding of root pass with “thick layer”. Next two passes with thin layers and low heat input to avoid precipitation and too high ferrite content