Thermanit 20/25 CuW

Stick electrode, high-alloyed, stainless, rutile

Classifications

EN ISO 3581-A	AWS A5.4	Mat. No.
E 20 25 5 Cu N L R 3 2	E385-16	1.4519

Characteristics and typical fields of application

Stainless; resistant to intercrystalline corrosion – wet corrosion up to 350 °C (662 °F). Good corrosion resistance similar to matching steels / cast steel grades, above all in reducing environments. For joining and surfacing work with matching austenitic CrNiMoCu steels / cast steel grades. For joining this steels with unalloyed / low alloy steels / cast steel grades.

Base materials

TÜV certified parent metals

1.4465 – X1CrNiMoN25-25-2; 1.4505 – X4NiCrMoCuNb20-18-2

1.4539 – X2NiCrMoCuN25-20-5; UNS N08904, S31726

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

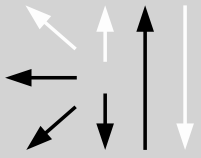
	C	Si	Mn	Cr	Mo	Ni	Cu
wt-%	< 0.03	< 0.7	1.3	20.0	4.5	25.0	1.5

Structure: Austenite

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	350	370	550	35	55

Operating data



Polarity:	ø (mm)	L mm	Amps A
DC (+) / AC	2.5	300	50 – 80
	3.2	350	80 – 110
	4.0	350	100 – 135
	5.0	450	140 – 180

Welding instruction

Materials	Preheating	Postweld heat treatment
Matching/similar steels/cast steel grades	None	None. If necessary solution annealing at 1120 °C (2048 °F)
Combinations with unalloyed/low alloy steels/cast steel grades	According to unalloyed/ low alloy parent metal mostly not necessary	None

Approvals

TÜV (04112), CE