

# Thermanit 25/09 CuT

Stick electrode, high-alloyed, duplex, stainless

EN ISO 3581-A	AWS A5.4	Mat. No.
E 25 9 4 N L B 2 2	E2595-15	≈1.4501

### Characteristics and typical fields of application

Basic coated, core wire alloyed stick electrode designed for welding of superduplex steel and equivalent steel grades. These steels are particularly popular for desalination, pulp & paper, flue gas desulphurization and sea water systems.

Resistance to intercrystalline corrosion. Service temperature from - 50 °C up to 220 °C.

Very good resistance to pitting corrosion and stress corrosion cracking due to the high CrMo(N) content (pitting index > 40). Well suited for offshore applications.

### **Base materials**

1.4515 - GX3CrNiMoCuN26-6-3;

1.4517 - GX3CrNiMoCuN26-6-3-3

25 % Cr-superduplex steels

Typical analysis of all-weld metal									
	С	Si	Mn	Cr	Мо	Ni	Ν	Cu	W
wt%	0.03	0.5	1.2	25.0	3.7	9.0	0.2	0.7	0.6

Structure: Austenite/ferrit

## 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 <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J	
	MPa	MPa	MPa	%	+20 °C	–50 °C
aw	600	650	750	25	70	40

**Operating data** 

	Polarity:	ø mm	L mm	Amps A
	DC (+)	2.5	300	55 - 80
←		3.2	350	80 – 105
		4.0	350	90 - 140

#### Welding instruction

Materials	Preheating	Postweld heat treatment
Matching / similar steels / cast steel grades	Mostly none. 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	Mostly none; if necessary, solution annealing at 1120 °C / water.