Thermanit 20/25 Cu

Solid wire, high-alloyed, austenitic stainless

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
G 20 25 5 Cu L	ER385

Characteristics and typical fields of application

Solid wire of G 20 25 5 Cu L / ER385 type for joining and surfacing of matching austenitic CrNiMoCu-steels. For joining these steels with unalloyed / low-alloyed steels. Good corrosion resistance similar to matching steels and cast steel grades, above all in reducing environment. Max. service temperature 350ºC.

Base materials

1.4465 X1CrNiMoN25-25-2, 1.4505 X4NiCrMoCuNb20-18-2, 1.4506 X5NiCrMoCuTi20-18, 1.4537 X1CrNiMoCuN25-25-5 1.4538 X2NiCrMoCuN20-18, 1.4539 X2NiCrMoCuN25-20-5, 1.4586 X5NiCrMoCuNb22-18
UNS N08904
AISI 904L

Typical analysis

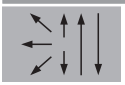
	C	Si	Mn	Cr	Ni	Mo	Cu
wt.-%	< 0.025	0.2	2.5	20.5	25.0	4.8	1.5

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact energy ISO-V KV J
	MPa	MPa	%	20°C
u	350	550	35	55

u untreated, as-welded – shielding gas Ar + 2.5% CO_2

Operating data



Polarity	DC+
Shielding gas (EN ISO 14175)	M12 M13

Dimension mm
1.0
1.2

Suggested heat input is max. 1.5 kJ/mm, interpass temperature max. 150ºC.
No preheating unless required by the parent material.
Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1120ºC.
Shielding gas: Ar + 2 – 3% CO_2, Ar + 1 – 2% O_2

Approvals

TÜV (04302), CE