Thermanit 1740

Solid wire, high-alloyed, stainless

Classifications

EN ISO 14343-A	Mat. No.
G Z 17 Mo H	1.4122

Characteristics and typical fields of application

Stainless; corrosion-resistant similar to matching 17 % Cr steels / cast steel grades (water, steam, seawater, diluted organic acids).

For joining and surfacing with matching and similar stainless Cr steels / cast steel grades. For surfacing sealing faces of water, steam and gas valves made of unalloyed/low-alloy steels / cast steel grades.

Designed for service temperatures up to 450 °C (842 °F).

Base materials

1.4122 – (G)X35CrMo17

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Mo	Ni
wt-%	0.40	< 0.5	< 0.5	16.5	1.0	0.50

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)	Hardness	
	MPa	MPa	%	HB30	HRC
760 °C / 2 h (1400 °F)	600	800	12	230	
aw					48

Operating data

Polarity:	Shielding gas:	ø (mm)	Spool:
DC (+)	(EN ISO 14175) M12, M13	1.0	B300
		1.2	B300
		1.6	B300

Welding instruction

Materials	Preheating	Postweld heat treatment
Joining: matching (ferritic) steels / cast steel grades	300 – 400 °C (572 – 752 °F)	Cooling to around 120 °C (248 °F), then tempering or quenching and tempering
Surfacing: unalloyed / low-alloy steels / cast steel grades	Acc. to wall thickness: 150 – 350 °C (302 – 662 °F)	None; if necessary tempering to required hardness
Surfacing: higher-strength steels / cast steel grades	350 °C (662 °F)	None; if necessary tempering to required hardness

Approvals

DB (43.132.07), CE