Thermanit 1720

Solid wire, high-alloyed, ferritic stainless

Classifications

EN ISO 14343-A	EN 14700
G Z 17 Mo	S Fe 7

Characteristics and typical fields of application

Solid wire of G Z 17 Mo type for surfacing on sealing faces of gas, water and steam valves and fittings made from unalloyed or low-alloyed steels, for service temperatures up to 450ºC. The weld deposit is normally machinable. Scaling resistant up to 900ºC. Also suited for joint welding of stainless ferritic steels containing 13 – 18% chromium, above all for applications where uniform color of the base metal and weld seam is required. For thick-walled components it is recommended to use Thermanit X wire for the filler passes in order to improve the ductility behavior of the joint weld.

Base materials

Surfacing can be performed on all weldable base materials, unalloyed and low-alloyed.
Welding of corrosion resistant chromium steels as well as other similar-alloyed steels with C-contents up to 0.20% (repair welding).
1.4122 X39CrMo17-1, 1.4113 X6CrMo17-1, 1.4513 X2CrMoTi17-1
UNS SS43400, S43600
AISI 440C, 434, 436

Typical analysis

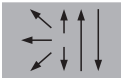
	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.20	0.65	0.55	17	0.4	1.1

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)	Hardness
	MPa	MPa	%	HB
a	(≥ 500)	(≥ 700)	(≥ 15)	200
u				350
u – 1. layer				400 – 500
u – 2. layer				380 – 450
u – 3. layer				330 – 400

u untreated, as-welded – shielding gas Ar + 8% CO_2
s heat treated, annealed – shielding gas Ar + 8% CO_2, 720°C for 2 h

Operating data



Polarity	DC+
Shielding gas (EN ISO 14175)	I1 M13 (Ar, 1% O_2)

Dimension mm
1.2
1.6

Approvals

TÜV (08107), NAKS, CE