Thermanit MTS 616 LNi - Marathon 543

SAW wire/flux combination, low-alloyed, creep resistant

Classifications

EN ISO 24598-A	AWS A5.23 / SFA-5.23
S S ZCrMoWVNb9 0.5 1.5 FB	F9PZ-EG-G-H4

Characteristics and typical fields of application

Thermanit MTS 616 LNi - Marathon 543 is a wire - flux combination for submerged arc welding. The 9Cr-1.8W-0.5Mo-V-Nb type weld metal exhibits a fully tempered martensitic microstructure with favorable mechanical properties in post weld heat treated condition. The range of application covers joint welding of similar alloyed creep strength enhanced ferritic steels like ASTM grade 92 tube, pipe, plate and forgings used in the thermal power industry. Thanks to the restricted Mn+Ni content of less than 1.0 wt. % the AC1 Temperature is certainly above 790ºC.
The chemical composition of the weld metal has been optimized to provide a high creep resistant and ductile weld metal after post weld heat treatment along with low level of trace elements.
Marathon 543 is an agglomerated welding flux of the fluoride basic type with high basicity and low amount of difusible hydrogen. For more information regarding Marathon 543 see our detailed data sheet.

Base materials

Similar alloyed creep resistant steels like 1.4901 - X10CrWMoVNb9-2, NF 616
ASTM A 213 Gr. T92 ; A 335 Gr. P92

Typical analysis

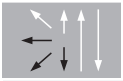
wt.-%	C	Si	Mn	Cr	Ni	Mo	W	V	Nb	N
wire	0.10	0.2	0.5	9.0	0.2	0.5	1.7	0.2	0.05	0.06
all-weld metal	0.10	0.2	0.7	9.0	0.2	0.5	1.7	0.2	0.05	0.05

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
a1, DC+	≥ 560	≥ 700	≥ 18	≥ 41

a1 = 4 hours 760 °C + furnace down to 300 °C + air

Operating data



Polarity	DC +

Dimension mm
3.0

Approvals

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