Thermanit 25/04 - Marathon 431

SAW wire/flux combination, high-alloyed, stainless, heat resistant

Classifications

EN ISO 14343-A	EN ISO 14174
S 25 4	S A FB 2 DC

Characteristics and typical fields of application

Thermanit 25/04 - Marathon 431 is a wire/flux combination for submerged arc welding for welding of heat resistant, matching or similar Mo-free 25Cr(Ni)-steels and cast steel grades. The low Ni-content renders this filler metal especially suitable for applications involving of sulfurous oxidizing or reducing combustion gases. Scaling resistant up to 1100ºC.
Applications in furnaces as well as for final passes of weld joints in heat resistant, ferritic CrSiAl-steels. Scaling resistant up to 1100ºC.
The former product name of the SAW wire was "BÖHLER FA-UP".
Marathon 431 is an agglomerated basic flux that ensures good welding properties with nice bead appearance and good slag detachability. For more information regarding this sub-arc welding flux, see the separate datasheet.

Base materials

1.4828 X15CrNiSi20-12, 1.4826 GX40CrNiSi22-10, 1.4833 X12CrNi23-13, 1.4821 X15CrNiSi25-4, 1.4822 GX40CrNi24-5, 1.4823 GX40CrNiSi27-4, 1.4713 X10CrAlSi7, 1.4724 X10CrAlSi13, 1.4742 X10CrAlSi18, 1.4710 GX30CrSi7, 1.4740 GX40CrSi17, 1.4347 GX8CrCrNiN26-7, 1.4340 GX49CrNi27-4, 1.4745 GX40CrSi23, 1.4746 X8CrTi25, 1.4762 X10CrAlSi25, 1.4776 GX40CrSi29
AISI 327, ASTM A297 HC

Typical analysis

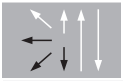
wt.-%	C	Si	Mn	Cr	Ni	S	P
wire	0.07	0.80	1.2	26.0	4.5	≤ 0.010	≤ 0.025
all-weld metal	0.06	0.90	0.9	25.5	4.5	≤ 0.010	-

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	%	
u	500	650	20	180

u untreated, as welded

Operating data



Dimension mm
2.0

Preheating and interpass temperatures 200 – 400ºC, depending on the relevant base metal and material thickness. For parent metals susceptible to embrittlement, interpass temperature must not be allowed to exceed 300ºC

Approvals

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