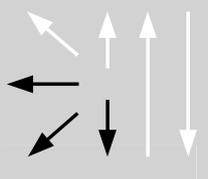


Classifications					
SAW solid wire:			SAW flux:		
EN ISO 14343-A		AWS A5.9		EN ISO 14174	
S 23 12 L		ER309L		S A FB 2 DC	
Characteristics and typical fields of application					
<p>Thermanit 25/14 E-309L / Marathon 431 is a wire - flux combination for submerged arc welding. This is a standard combination for welding dissimilar joints, and the first layer in weld overlay (wire cladding). The average ferrite content is 16 FN. Suitable up to service temperatures of +300 °C.</p> <p>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 our detailed data sheet.</p>					
Base materials					
<p>Dissimilar joint welds: of and between high-strength, mild steels and low-alloyed QT-steels, stainless, ferritic Cr- and austenitic Cr-Ni- steels, manganese steels</p> <p>Surfacing: for the first layer of corrosion resistant weld surfacing on ferritic-pearlitic steels in boiler and pressure vessel parts up to fine-grained steel S500N, as well as of high temperature steels like 22NiMoCr4-7, 20MnMoNi5-5 and GS-18NiMoCr3-7.</p>					
Typical analysis of the wire and of all-weld metal (wt.-%)					
	C	Si	Mn	Cr	Ni
Wire	≤ 0.02	0.5	1.8	24.0	13.2
Weld metal	0.015	0.6	1.3	23.5	13.2
Mechanical properties of all-weld metal					
Heat-treatment	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact work ISO-V CVN J	
	MPa	MPa	%	+20 °C	
aw	>380	>600	>25	>100	
Operating data					
		Polarity: DC +	Preheat and interpass temperatures as required by the base metal.		
Approvals					
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