

Classifications

AWS A5.23 / SFA-5.23	EN ISO 14171-A
F8A6-EA2-A2 / F8P6-EA2-A2	S 46 4 FB S2Mo H5

Characteristics and typical fields of application

Union S 2 Mo - UV 418 TT is a wire/flux combination suited for fine-grained constructional steels of increased strength, specially used in boiler-, vessel- and pipeline construction. The metallurgical behaviour of the flux UV 418 TT is neutral. The wire/flux combination produces very good low temperature impact properties down to -40°C . Excellent slag detachability, smooth beads and good wetting are further important features. The flux can be used for tandem and multi wire welding on DC and AC.

UV 418 TT is an agglomerated fluoride-basic flux with high basicity and neutral metallurgical behavior. Detailed information about the flux can be found in the separate datasheet of the flux.

Base materials

Creep resistant steels and similar alloyed cast steels, ageing resistant and steels resistant to caustic cracking, creep resistant constructional steels with comparable yield strength.

16Mo3, S275JR, S275J2G3, S355J2G3, P275T1-P355T1, P275T2-P355T2, P255G1TH, S255N, P295GH, P310GH, P315N-P420N, P315NH-P420NH, BHW 2.5, WB 25

ASTM A335 Gr. P1; A161-94 Gr. T1; A182M Gr. F1, A204M Gr. A, B, C; A250M Gr. T1; A217 Gr. WC1, API 5L X52-X65

Typical analysis

wt.-%	C	Si	Mn	Mo
all-weld metal	0.07	0.25	1.10	0.50

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$ MPa	Tensile strength R_m MPa	Elongation A ($L_0=5d_0$) %	Impact energy ISO-V KV J		
				-40°C	-20°C	20°C
u, DC+	≥ 470	≥ 560	≥ 24	≥ 47	≥ 100	≥ 140
a1, DC+	≥ 470	≥ 550	≥ 24	≥ 47	≥ 100	≥ 140

u untreated, as welded; a1 = 1 hour 620°C

Operating data

	Polarity	DC / AC	Dimension mm
	Polarity	DC +	
			2.5
			3.0
			4.0
			4.8

Approvals

TÜV (11576), DB (51.132.05), LR, CE