

Classifications

EN ISO 14171-A
AWS A5.23 / SFA-5.23

S 46 4 FB S2Mo H5

F8A4-EA2-A2-H8 / F8P4-EA2-A2-H8

Characteristics and typical fields of application

Union S 2 Mo - UV 420 TT-LH wire-flux combination for submerged arc welding of fine-grained constructional steels with increased strength and also 0.5% Mo alloyed boiler, plate and tube steel grades. Approved in long-term condition up to +550°C service temperature. The wire/flux combination produces very good low temperature impact properties down to -40°C. Excellent slag detachability, smooth beads, good wetting and low hydrogen contents (5 ml/100 g) are further important features. The combination is ideally suited for multi-pass welding of thick plates.

UV 420 TT-LH is metallurgical Mn-neutral fluoride-basic flux. For information regarding the welding flux UV 420 TT-LH see our detailed data sheet.

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
wire	0.10	0.15	1.05	0.55
all-weld metal	0.07	0.25	1.05	0.45

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

Condition	Yield strength	Tensile strength	Elongation A	Impact energy ISO-V KV J		
	$R_{p0.2}$	R_m	$(L_0=5d_0)$	0°C	-20°C	-30°C
	MPa	MPa	%			
u	≥ 470	≥ 550	≥ 24	140	80	47
a	≥ 470	≥ 550	≥ 24	140		

u untreated, as welded ; a annealed 1 hour 620°C

Operating data

	Polarity	DC	Dimension mm	
				2.0
				2.5
				3.0
				4.0
				4.8

Approvals

TÜV (01793), CE