Union S 2 CrMo - UV 420 TT-LH

Classifications

EN ISO 24598-A	AWS A5.23 / SFA 5.23
S S CrMo1 FB	F7P2-EB2R-B2-H8

Characteristics and typical fields of application

Union S 2 CrMo - UV 420 TT-LH is a wire - flux combination for submerged arc welding of low alloyed creep resistant steel grades (especially with 1-1.5 % Cr and 0.5 % Mo). Approved in long-term condition up to +570 ºC service temperature.
Nice bead appearance with a good wetting, with excellent slag detachability. The combination is suited for multi-pass welding of thick plates (also narrow gap) and finds its applications in power generation like boiler construction. It is suited for single wire technology (DC+) and tandem (DC+/AC).
UV 420 TT-LH is a high basic flux with a neutral metallurgical behaviour and low hydrogen level. For detailed information regarding the flux see our detailed flux data sheet.

Base materials

Creep resistant steels and similar alloyed cast steels, case hardening and nitrating steels of similar chemical composition, like:
1.7335 – 13CrMo4-5, 1.7262 – 15CrMo5, 1.7728 – 16CrMoV4, 1.7218 – 25CrMo4, 1.7225 – 42CrMo4, 1.7258 – 24CrMo5, 1.7354 – G22CrMo5-4, 1.7357 – G17CrMo5-5;
ASTM A 182 Gr. F12; A 193 Gr. B7; A 213 Gr. T12; A 217 Gr. WC6; A 234 Gr. WP11; A335 Gr. P11, P12; A 336 Gr. F11, F12; A 426 Gr. CP12

Typical analysis

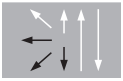
wt.-%	C	Si	Mn	Cr	Mo
wire	0.12	0.10	0.80	1.25	0.55
all-weld metal	0.08	0.25	0.95	1.15	0.50

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	-20°C	-29°C
a1, DC+	420 (≥ 400)	530 (510 - 650)	27 (≥ 24)	≥ 140	140 (≥ 47)	≥ 27
a2, DC+	≥ 330	480 - 650	≥ 30	≥ 120		

a1 = annealed 670°C - 690°C ; a2 = normalised 920°C/air + annealed 670°C - 690°C

Operating data



Polarity	DC+

Dimension mm
1.6
2.0
2.5
3.0
4.0
5.0
Körnung / Grain Size 3 - 20

Preheating, interpass temperature and post weld heat treatment are determined by the base metal (application).

Approvals

TÜV (01794), CE