Union S 3 NiMo - UV 420 TTR

SAW wire/flux combination, low-alloyed, high strength

Classifications

EN ISO 26304-A	AWS A5.23 / SFA-5.23
S 50 6 FB S3Ni1,5Mo H4	F9A8-EG-F1-H4 / F8P8-EG-F1-H4

Characteristics and typical fields of application

Union S 3 NiMo - UV 420 TTR is a wire flux combination for submerged arc welding of un and low-alloyed steel grades. It is suitable for single wire (DC) welding. Very good slag detachability also for narrow gap welding. Flux can especially be used for multi-pass butt welding of medium tensile steels. Very good impact toughness of weld metal at low temperatures.
UV 420 TTR is a fluoride-basic flux with high basicity and neutral metallurgical behaviour, designed for welding with DC+ polarity with a low level of diffusible hydrogen. For information regarding welding flux UV 420 TTR see our detailed data sheet.

Base materials

Quenched and tempered fine-grained steels
S460N, S460M, S460NL, S460ML, S460Q - S555Q, S460QL1 - S550QL1, P460N, P460NH, P460NL1, P460NL2, L415NB, L415MB - L555MB, L415QB - L555QB, alform 500 M, alform 550 M, aldur 500 Q, 500 QL, 500 QL1, aldur 550 Q, 550 QL, 550 QL120MnMoNi4-5, 15NiCuMoNb5-6-4,.
ASTM A572 Gr. 65; A633 Gr. E; A738 Gr. A; A852; API 5 L X60, X65, X70, X80, X60Q, X65Q, X70Q, X80Q

Typical analysis

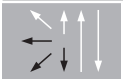
wt.-%	C	Si	Mn	Ni	Mo	S	P
wire	0.09	0.10	1.60	1.50	0.45	≤ 0.012	≤ 0.012
all-weld metal	0.05	0.20	1.60	1.45	0.40	≤ 0.015	≤ 0.015

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	%	-60°C	-40°C	-20°C	20°C
u, DC+	≥ 560	≥ 660	≥ 22	≥ 47	≥ 80	≥ 100	≥ 140
a1, DC+	≥ 560	≥ 660	≥ 22	≥ 47	≥ 47	≥ 100	≥ 150
a2, DC+	≥ 420	≥ 540	≥ 24				≥ 120

u untreated, as welded ; a1 = 2 hours 620 °C ; a2 = 920 °C + air + 2 hours 600 °C

Operating data



Polarity	DC +

Dimension mm
3.0
4.0

Preheating and interpass temperature: 100 – 220 °C

Approvals

TÜV (03442), CE