Union S 3 NiMo 1 - UV 420 TTR-W

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

Classifications

EN ISO 26304-A	AWS A5.23 / SFA-5.23
S 55 6 FB S3Ni1Mo H5-H8	F9A8-EF3-F3 / F9P8-EF3-F3-H8

Characteristics and typical fields of application

Union S 3 NiMo 1 - UV 420 TTR-W is a wire flux combination for submerged arc welding non-alloyed and low-alloyed steel grades with high strength. Very good impact toughness of weld metal at low temperatures. Very good slag detachability also for narrow gap welding. It is suitable for single (AC or DC) and tandem (DC and AC) welding. Applications can be found in as welded condition (e.g. off shore) and PWHT condition (pressure vessels).
UV 420 TTR-W is an agglomerated fluoride-basic flux with high basicity and neutral metallurgical behaviour and a low level of diffusible hydrogen : H5 verified acc. ISO 3690 with DCEP. More detailed information is available in the separate datasheet of the flux.

Base materials

Quenched and tempered fine-grained steels
S460N, S460M, S460NL, S460ML, S460Q-S555Q, S460QL-S550QL, S460QL1-S550QL1, P460N, P460NH, P460NL1, P460NL2, 20MnMo-Ni4-5, 15NiCuMoNb5-6-4, L415NB, L415MB-L555MB, L415QB-L555QB, alform 500 M, aldur 500 Q, 500 QL, 500 QL1, aldur 550 Q, 550 QL, 550 QL1,
ASTM A572 Gr. 65; A633 Gr. E; A738 Gr. A; A852; API 5 L X60 - X80, X60Q, X65Q, X70Q, X80Q

Typical analysis

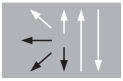
wt.-%	C	Si	Mn	Ni	Mo
all-weld metal	0.08	0.25	1.60	0.90	0.50

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	%	-60°C	-40°C
u, DC+	580 (≥ 550)	690 (≥ 640)	24 (≥ 20)	70 (≥ 47)	90
a1, DC+	560 (≥ 550)	670 (≥ 640)	25 (≥ 20)	70 (≥ 47)	90

u untreated, as welded; a1 = 2 hours 560 -620 °C

Operating data



Polarity	DC / AC

Dimension mm
1.6
2.0
2.5
3.0
3.2
4.0
5.0

Preheating and interpass temperature: 180 – 220ºC

Approvals

-