Union MoNi

Solid wire, medium-alloyed, high strength

Classifications

EN ISO 16834-A	AWS A5.28 / SFA-5.28
G 62 5 M21 Mn3Ni1Mo	ER90S-G

Characteristics and typical fields of application

Solid wire for joining of quenched and tempered, thermomechanically rolled fine-grained structural steels and creep resistant structural steels with higher yield strength.
Outstanding toughness of the weld metal at low temperatures when deposited with CO_2 and gas mixture.

Base materials

S460N, S460M, S460NL, S460ML, S460Q-S555Q, S460QL-S550QL, S460QL1-S550QL1, 460N,P460NH, P460NL1, P460NL2, L415NB, L415MB-L555MB, L415QB-L555QB, 20MnMoNi4-5, 15NiCuMoNb5-6-4;
ASTM A 572 Gr. 65; A 633 Gr. E; A 738 Gr. A; A 852; API 5 L X60, X65, X70, X80, X60Q, X65Q, X70Q, X80Q

Typical analysis

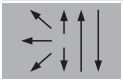
	C	Si	Mn	Ni	Mo
wt.-%	0.10	0.65	1.55	1.10	0.40

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	-40°C	-50°C
u1	600 (≥ 550)	680 (≥ 640)	22 (≥ 20)	100 (≥ 80)	65 (≥ 47)	-
u2	690 (≥ 620)	750 (≥ 700)	20 (≥ 18)	130 (≥ 100)		80 (≥ 47)

u1 untreated, as welded - shielding gas CO2
u2 untreated, as welded - shielding gas M21

Operating data



Polarity	DC+
Shielding gas (EN ISO 14175)	M2 M3 C1

Dimension mm
0.8
1.0
1.2

Avoid excessive heat input. A heat input below 2,0 kJ/mm is recommended.

Approvals

TÜV (00926), DB (42.132.09), DNV, WIWEB, VG 95132-1, CE