Union K 5 Ni

Solid wire, low-alloyed

Classifications

EN ISO 14341-A	EN ISO 14341-B	AWS A5.28
G 50 5 M21 3Ni1 G 46 3 C1 3Ni1	G 57A 5 M21 SZ G 55A 5 C1 SZ	ER80S-G

Characteristics and typical fields of application

Ni alloyed solid wire electrode for gas-shielded arc welding of cryogenic fine grained structural steels.

Extremely metallurgically pure weld metal with good low temperature toughness when deposited in combination with gas mixtures.

Grundwerkstoffe

Cryogenic fine-grained steels and high strength steels up to 500 MPa yield strength.

S275N-S500N, S275NL-S500NL, S275M-S500M, S275ML-S500ML, S460QL1, S500QL1, P355N, P460N, P355Q-P500Q, P275NL1-P460NL1, P275NL2-P460NL2, L360NB, L415NB, L290MB-L485MB, L360QB-L485QB

ASTM A 203 Gr. D, E; A 350 Gr. LF1, LF2, LF3; A 420 Gr. WPL3, WPL6; A 516 Gr. 60, 65, 70; A 572 Gr. 42, 50, 55, 60, 65; A 633 Gr. A, D, E; A 662 Gr. A, B, C; A 707 Gr. L1, L2, L3; A 738 Gr. A; A 841 A, B, C; API 5 L X52, X60, X65, X70

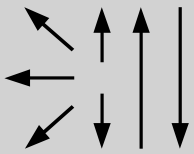
Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Ni
wt-%	0.10	0.70	1.40	1.40

Mechanical properties of all-weld metal

Heat-treatment	Shielding gas	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V KV J		
		MPa	MPa	%	+20 °C	–30 °C	–50 °C
aw	M21	500	590	24	130		47
aw	CO_2	460	560	24	110	47	

Operating data



Polarity:	Shielding gas:	ø mm	Spool:
DC (+)	(EN ISO 14175) M1 – M3 und C1	1.0 1.2	B300 B300

Approvals

TÜV (00514), DB (42.132.13), CE