Union K 52

Solid wire, unalloyed

Classifications

EN ISO 14341-A	EN ISO 14341-B	AWS A5.18
G 42 2 C1 3Si1 G 42 4 M21 3Si1	G 49A 2 C1 S12 G 49A 4 M21 S12	ER70S-6

Characteristics and typical fields of application

GMAW solid wire electrode for welding unalloyed and low alloy steels with shielding gas.
All-purpose useable with gas mixture or CO_2, low-spatter transfer in the short and spray arc range.
Used in boiler and pipeline construction, shipbuilding, vehicle manufacturing and structural engineering.

Base materials

Steels up to a yield strength of 420 MPa (60 ksi)

S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S275N-S420N, S275M-S420M, P235GH-P355GH, P275NL1-P355NL1, P215NL, P265NL, P355N, P285NH-P420NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L245MB-L415MB, GE200-GE240, ship building steels: A, B, D, E, A 32-E 36

ASTM A 106 Gr. A, B, C; A 181 Gr. 60, 70; A 283 Gr. A, C; A 285 Gr. A, B, C; A 350 Gr. LF1; A 414 Gr. A, B, C, D, E, F, G; A 501 Gr. B; A 513 Gr. 1018; A 516 Gr. 55, 60, 65, 70; A 573 Gr. 58, 65, 70; A 588 Gr. A, B; A 633 Gr. C; A 662 Gr. B; A 711 Gr. 1013; A 841 Gr. A; API 5 L Gr. B, X42, X52, X56, X60

Typical analysis of solid wire (wt.-%)

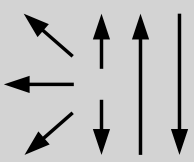
	C	Si	Mn
wt-%	0.08	0.85	1.50

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	–20 °C	–40 °C
aw	CO_2	420	540	25	85	47	
aw	M21	440	560	24	95	60	47

Creep rupture properties: According to matching high temperature resitant parent metal

Operating data



Polarity:	Shielding gas:	ø mm	Spool:
DC (+)	(EN ISO 14175) M1 – M3 und C1	0.8 1.0 1.2 1.6	B300 B300 B300 B300

Approvals

TÜV (00106), DB (42.132.02) ABS, DNV, GL, LR, VG 95132-1, CE