BÖHLER EMK 6

Solid Wire, mild steel

Classifications

EN ISO 14341-A
G 42 4 M21 3Si1
G 42 4 C1 3Si1

AWS A5.18 / SFA-5.18
ER 70S-6

Characteristics and typical fields of application

GMAW Copper-coated solid wire of the G 3Si1 / ER70-6 type for metal transfer with minimum spatter when welding with mixed-gases as well as with CO_2.

Due to the high current load capacity, the stable arc and the nearly residual free weld surface the wire offers the best conditions for productive welding processes. Excellent feeding characteristics provides high wire feed rates especially during robotic welding. The coppered solid wires of the EMK series can be provided in bulk packages from ECOdrum 250 up to SQUAREdrum 550.

Base materials

Steels with yield strength < 420 MPa (60 ksi)

S235JR-S355JR, S235J0-S355J0, 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 the solid wire

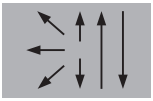
	C	Si	Mn
wt.-%	0.08	0.9	1.45

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R_e MPa	Tensile strength R_m MPa	Elongation A (L_0=5d_0) %	Impact values ISO-V KV J 20°C	-40°C
u	440 (≥ 420)	560 (≥ 500 – 640)	30 (≥ 20)	160	80 (≥ 47)
u2	440 (≥ 420)	540 (≥ 500 – 640)	29 (≥ 20)	120	50 (≥ 47)
s	380	490	30	160	

u untreated, as welded – shielding gas Ar + 15 – 25% CO_2
u2 untreated, as welded – shielding gas 100% CO_2
s stress relieved, 620 °C/2h – shielding gas Ar + 15 – 20% CO_2

Operating data



Dimension mm
0.8
1.0
1.2
1.6

Approvals

TÜV (03036), DB (42.132.80), ABS, DNV GL, LR, CE