# BÖHLER EMK 6

TIG rod, unalloyed

## Classifications

| EN ISO 636-A | EN ISO 636-B | AWS A5.18 | AWS A5.18M |
|---|---|---|---|
| W 42 5 W3Si1 | W 49A 5U W6 | ER70S-6 | ER48S-6 |

## Characteristics and typical fields of application

GTAW rod with high silicon content. The welding rod is suited for joints in boiler and vessel fabrication as well as in structural steel engineering.

BÖHLER EMK 6 can be used in sour gas applications (HIC-Test acc. to NACE TM-02-84). Test values for SSC-test are available too.

## Base materials

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

S235J2G3-S355J2G3, E360, P235T1-P355T1, P235G1TH, L210, L290MB, P255G1TH, P235GH, P265GH, P295GH, P310GH, P255NH, S235JRS1-S235J4S, S355G1S-S355G3S, S255N-S385N, P255NH-P385NH, GE200-GE260

ASTM A27 a. A36 Gr. all; A214; A 242 Gr.1-5; A266 Gr. 1, 2, 4; A283 Gr. A, B, C, D; A285 Gr. A, B, C; A299 Gr. A, B; A328; A366; A515 Gr. 60, 65, 70; A516 Gr. 55; A570 Gr. 30, 33, 36, 40, 45; A 572 Gr. 42, 50; A606 Gr. all; A607 Gr. 45; A656 Gr. 50, 60; A668 Gr. A, B; A907 Gr. 30, 33, 36, 40; A841; A851 Gr. 1, 2; A935 Gr.45; A936 Gr. 50;

API 5 L Gr. B, X42 – X60

## Typical analysis of the TIG rods (wt.-%)

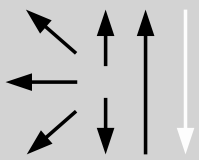
| | C | Si | Mn |
|---|---|---|---|
| wt.-% | 0.08 | 0.9 | 1.45 |

## Mechanical properties of all-weld metal

| Condition | Yield strength $R_e$ | Tensile strength $R_m$ | Elongation A ($L_0$=5$d_0$) | Impact work ISO-V KV J | | |
|---|---|---|---|---|---|---|
| | MPa | MPa | % | +20 °C | –40 °C | –50 °C |
| u | **450** (≥ 420) | **560** (500 – 640) | **28** (≥ 20) | **180** | **80** | ≥ 47 |
| s | **400** | **510** | **28** | **180** | **110** | |

u untreated, as welded – shielding gas Argon
s stress relieved, 600 °C/2h – shielding gas 100 % Argon

## Operating data



| Polarity: | Shielding gas: | Rod marking: | ø (mm) |
|---|---|---|---|
| DC ( – ) | Argon | front: W3Si1<br>back: ER70S-6 | 1.6<br>2.0<br>2.4 |

## Approvals

TÜV (09717.), LTSS, SEPROZ, CE