# Low alloy solid wire



## Classification

| | |
|---|---|
| AWS A5.28-96 | : ER70S-A1 |
| EN 12070-99 | : W MoSi |
| EN 12070-99 | : G MoSi |
| EN 1660-97 | : W 46 3 W2Mo |
| EN 440-94 | : G 46 3 M G2Mo |

## General description

**Solid wire for welding creep resistant 0.5%Mo steels and fine grained steels for low temperature applications in the as welded condition with service temperatures in range -30°C to +500°C**

## Shielding gases (acc. EN 439)

| | | |
|---|---|---|
| GTAW | I1 | Inert gas Ar (100%) |
| GMAW | M21 | Mixed gas Ar+ >5 to 25% $CO_2$ |
| | C1 | Active gas 100% $CO_2$ |

## Approvals

| | CTL | DB | DNV | TÜV |
|---|---|---|---|---|
| GTAW | + | + | For NV 0,3 Mo | + |
| GMAW | + | | | + |

## Chemical composition (w%), typical, wire / rod

| C | Mn | Si | Mo |
|---|---|---|---|
| 0.12 | 1.2 | 0.6 | 0.5 |

## Mechanical properties, typical, all weld metal

| | Process | Shielding gas | Condition | Yield strength ($N/mm^2$) | Tensile strength ($N/mm^2$) | Elongation (%)1 | Impact ISO-V(J) +20°C | -20°C | -30°C | -40°C |
|---|---|---|---|---|---|---|---|---|---|---|
| Typical values | GTAW | I1 | AW | 500 | 620 | 24 | 150 | | | 40 |
| | GMAW | M21 | AW | 520 | 610 | 26 | 110 | 100 | 70 | |

## Materials to be welded

| Steel | Code | Type |
|---|---|---|
| Elevated temperature steel | EN 10028-2 | P295 G H, P355 G H, 16 Mo 2 |
| | EN 10222-2 | 17 Mo 3, 14 Mo 6 |
| Fine grained steel | EN 10113-2 | S275, S355, S420 |
| | EN 10113-3 | S275, S355, S420 |

## Packaging

| | | Sizes (mm) | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.0 |
|---|---|---|---|---|---|---|---|---|
| Process | Unit | | | | | | | |
| GTAW | 2 and 5 kg tube | | | | X | X | X | X |
| GMAW | 15 kg spool | | X | X | | | | |

Other sizes and packaging on request



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