

## Low alloy solid wire

### Classification

AWS A5.28-96 : ER90S-B3\*  
 EN 12070-99 : W CrMo2Si / G CrMo2Si

\* Nearest classification

### General description

Solid wire for welding creep and hydrogen resistant Cr-Mo steels  
 Service temperature up to 600°C

### Shielding gases (acc. EN 439)

|      |     |   |
|------|-----|---|
| GTAW | I1  | Inert gas Ar (100%)                     |
| GMAW | M21 | Mixed gas Ar+ >5 to 25% CO <sub>2</sub> |
|      | C1  | Active gas 100% CO <sub>2</sub>         |

### Approvals

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

| C    | Mn  | Si  | Cr  | Mo  |
|------|-----|-----|-----|-----|
| 0.09 | 1.0 | 0.6 | 2.5 | 0.9 |

### Mechanical properties, typical, all weld metal

|                | Process | Shielding gas | Condition   | Yield strength (N/mm <sup>2</sup> ) | Tensile strength (N/mm <sup>2</sup> ) | Elongation (%) | Impact ISO-V(J) +20°C | Notes! |
|----------------|---------|---------------|-------------|-------------------------------------|---------------------------------------|----------------|-----------------------|--------|
| Typical values | GMAW    | M21           | AW          | 460                                 | 620                                   | 22             | 90                    |        |
|                | GMAW    | M21           | SR 690°C/1h | 560                                 | 680                                   | 20             | 100                   |        |
|                | GTAW    | I1            | AW          | 560                                 | 640                                   | 22             | 140                   |        |

### Materials to be welded

| Steel                              | Code       | Type        |
|------------------------------------|------------|-------------|
| Creep and hydrogen resistant steel | EN 10028-2 | 10CrMo 9-10 |
|                                    | EN 10222-2 | 12CrMo 9-10 |

### Packaging

| Process | Unit             | Sizes (mm) |     |     |     |     |     |  |
|---------|------------------|------------|-----|-----|-----|-----|-----|--|
|         |                  | 0.8        | 1.0 | 1.2 | 2.0 | 2.4 | 3.0 |  |
| GTAW    | 2 and 5 kg tube  |            |     |     | X   | X   | X   |  |
| GMAW    | 15 kg spool B300 | X          | X   | X   |     |     |     |  |

Other sizes and packaging on request