

Classifications

| EN ISO 16834-A | EN ISO 16834-B | AWS A5.28 | AWS A5.28M |
|-------------------------|-------------------|-----------|------------|
| G 79 5 M21 Mn4Ni1,5CrMo | G 83A 5 M21 N4M3T | ER110S-G | ER76S-G |

Characteristics and typical fields of application

Medium alloy solid wire electrode for shielded arc welding of quenched and tempered fine grained structural steels. Outstanding tough weld metal at low temperature when deposited with gas mixture. Good deformability; outstanding mechanical properties even at higher electric heat input per unit length of weld. Good resistance to cold cracking due to high purity of the wire surface. For use in crane and vehicle manufacturing.

Base materials

High strength steels like S690Q, S690QL, aldur 700Q, 700QL, alform® 700 M (wire is especially balanced for this plate steel)

ASTM A 514 Gr. F, H, Q; A 709 Gr. 100 Type E, F, H, Q; A 709 Gr. HPS 100W

Typical analysis of solid wire (wt.-%)

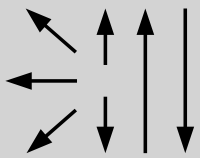
| | C | Si | Mn | Cr | Ni | Mo |
|-------|------|-----|------|------|------|------|
| wt.-% | 0.09 | 0.7 | 1.70 | 0.30 | 1.85 | 0.60 |

Mechanical properties of all-weld metal

| Condition | 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 | -50 °C |
| u | ≥ 790 | 880 – 1080 | ≥ 16 | ≥ 90 | ≥ 47 |

u untreated, as welded – shielding gas Ar + 15 – 25 % CO₂

Operating data

| | | | |
|---|-----------------------------|---|----------------------|
|  | Polarity DC (+) | Shielding gases: Argon + 15 – 25% CO ₂ | ø (mm) 1.0 |
| | | | ø (mm) 1.2 |

Preheating and interpass temperature as required by the base metal.

Approvals

NAKS