

Classification

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|--------------|-----------------|
| EN ISO 14343 | AWS A5.9 |
| W 23 12 2 L | ER309LMo (mod.) |

Characteristics and typical fields of application

Avesta P5 is a Mo-alloyed wire, type 309LMo for dissimilar joints of un-alloyed and stainless steels and for cladding on low-alloyed steels. The all-weld-metal ensures a high resistance against cracking and is also suitable for welding of high strength steels.

Corrosion resistance:

Comparable but slightly better than 316L

Structure: Austenit with 5 – 10 % Ferrit

Scaling temperature: 950 °C (air)

Base materials

Suitable for dissimilar joints of un- or low-alloyed steels with stainless steels as well as for cladding on low-alloyed steels.

Richtanalyse des Solid wirees (Gew.-%)

| | C | Si | Mn | Cr | Ni | Mo | Ferrit |
|--------|------|------|-----|------|------|-----|---------------|
| Gew.-% | 0.02 | 0.35 | 1.5 | 21.5 | 15.0 | 2.7 | 8 FN (WRC-92) |

Mechanical properties of all-weld metal

| Heat treatment | Yield strength $R_{p0.2}$ | Tensile strength R_m | Elongation A ($L_0=5d_0$) | Impact work ISO-V KV J | | Härte |
|----------------|------------------------------|---------------------------|--------------------------------|---------------------------|--------|---------|
| | | | | +20 °C | -40 °C | |
| | MPa | MPa | % | | | Brinell |
| u | 470 | 640 | 30 | 140 | 90 | 210 |

u untreated, Shielding gas Ar (99.95 %)

Operating data

| | | | |
|---|-----------------------------|---|-----------------------------|
|  | Polarity DC (+) | Shielding gas Ar (99.95 %) or Ar + 20 – 30 % He or 1 – 5 % H ₂ Gasmenge 4 – 8 l | ø (mm) 1.6 2.4 |
| | | | |

Preheating and heat treatment: In general none. For joints with low-alloyed steels stress relieved annealing is recommended in some cases. Please take care about the embrittlement of the base material in detail!

Interpass temperature max. 150°C

Heat input max. 2.0 kJ/mm

Approvals

TÜV, DB, DNV, CE