


| Classifications | | | | | | |
|---|----------------------------------|-------------|---------------------------------|--------------------|---|--------------------------|
| EN ISO 14343-A | | | | AWS A5.9 / SFA-5.9 | | |
| W 25 20 | | | | ER310 | | |
| Characteristics and typical fields of application | | | | | | |
| TIG rod of W 25 20 / ER310 type for welding high temperature steels such as ASTM 310S. Can as be used for welding ferritic chromium steels, 14 %-Mn steels and stainless to mild steel connections. Provides a fully austenitic weld metal and is therefore somewhat more sensitive to hot cracking than 316 grades. Welding should be performed with low heat input, interpass temperature and dilution with parent metal. Corrosion resistance: Initially intended for constructions running at high temperatures. Wet corrosion properties are moderate. | | | | | | |
| Max. application temperature | | Sulfur-free | Max. 2 g S/Nm³ | | | |
| Air and oxidizing combustion gases | | 1150°C | 1100°C | | | |
| Reducing combustion gases | | 1080°C | 1040°C | | | |
| Base materials | | | | | | |
| EN ASTM BS NF SS 4845, 1.4845, 310S, 310S16, Z8 CN 25-20 2361 | | | | | | |
| Typical analysis | | | | | | |
| | C | Si | Mn | Cr | Ni | Ferrit |
| wt.-% | 0.12 | 0.35 | 1.6 | 25.5 | 21.0 | 0 FN |
| Mechanical properties of all-weld metal - typical values (min. values) | | | | | | |
| Condition | Yield strength R _{p0.2} | | Tensile strength R _m | | Elongation A (L ₀ =5d ₀) | Impact energy ISO-V KV J |
| | MPa | | MPa | | % | 20°C |
| u | 420 (≥350) | | 610 (≥ 550) | | 33 (≥20) | 120 (≥ 75) |
| u untreated, as welded - shielding gas Ar | | | | | | |
| Operating data | | | | | | |
|  | Polarity | | DC- | | Dimension mm | |
| | Shielding gas (EN ISO 14175) | | I1 | | 1.6 × 1000 | |
| | | | | | 2.0 × 1000 | |
| | Rod marking | | + ER 310 | | 2.4 × 1000 | |
| Heat treatment: Generally none. Interpass temperature: Max. 100°C. Heat input: Max. 1.0 kJ/mm | | | | | | |
| Approvals | | | | | | |
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