



CEWELD ER 90 S-G (P92) Tig

certilas® THE FILLER METAL SPECIALIST

| TYPE | Medium alloyed, high-strength creep resistant 9% Chromium alloy. | | | | | | | | | | | | | | | | | | | | |
|---|--|----------------------|-------------------------|----------------------|--------|----------|-----------------|-----|------|----|-----|-----|------|-----|-------|-------|-----|-----|-----|-----|------|
| ANWENDUNGEN | TIG/GTAW wire for high temperature, creep resistant, modified 9%Cr1%Mo martensitic steel (T92/P92). Alloy T92/P92 is widely used in the power generating industry for fossil fuel ultra-supercritical (USC) power plant boilers and turbines; the alloy is also finding applications in the chemical and oil and gas industries. | | | | | | | | | | | | | | | | | | | | |
| EIGENSCHAFTEN | T92/P92 steel is commonly used at service temperatures up to 620°C. V, Nb and N additions provide this 'creep strength enhanced ferritic' (CSEF) alloy with improved high temperature creep resistance compared to standard CrMo creep resistant alloys. | | | | | | | | | | | | | | | | | | | | |
| KLASSIFIKATION | AWS A 5.28: ER 90S-G EN ISO 21952-A: W ZCrMoWVNb 9 0,5 1,5 F-nr 6 FM 3 | | | | | | | | | | | | | | | | | | | | |
| GEEIGNET FÜR | For matching P92, 9%Cr1.7%W0.5%Mo, creep resisting martensitic steels. X10CrWMoVNb 9 2 ASTM: A182 grade F92, A213 grade T92, A335 grade P92, A387 grade 92 | | | | | | | | | | | | | | | | | | | | |
| ZULASSUNGEN | CE | | | | | | | | | | | | | | | | | | | | |
| SCHWEISSPOSITIONEN | | | | | | | | | | | | | | | | | | | | | |
| TYPICAL CHEMICAL ANALYSIS OF THE FILLER METAL (%) | <table><thead><tr><th>C</th><th>Si</th><th>Mn</th><th>P</th><th>S</th><th>Cr</th><th>Ni</th><th>Mo</th><th>W</th><th>Nb</th></tr></thead><tbody><tr><td>0.1</td><td>0.35</td><td>0.5</td><td>0.008</td><td>0.008</td><td>9.1</td><td>0.5</td><td>0.8</td><td>1.6</td><td>0.05</td></tr></tbody></table> | C | Si | Mn | P | S | Cr | Ni | Mo | W | Nb | 0.1 | 0.35 | 0.5 | 0.008 | 0.008 | 9.1 | 0.5 | 0.8 | 1.6 | 0.05 |
| C | Si | Mn | P | S | Cr | Ni | Mo | W | Nb | | | | | | | | | | | | |
| 0.1 | 0.35 | 0.5 | 0.008 | 0.008 | 9.1 | 0.5 | 0.8 | 1.6 | 0.05 | | | | | | | | | | | | |
| MECHANISCHE GÜTEWERTE | <table><thead><tr><th>Heat Treatment</th><th>R_{P0,2} (MPa)</th><th>R_m (MPa)</th><th>A5 (%)</th><th>Hardness</th></tr></thead><tbody><tr><td>730°C- 760°C 3h</td><td>550</td><td>630</td><td>17</td><td>HRc</td></tr></tbody></table> | Heat Treatment | R _{P0,2} (MPa) | R _m (MPa) | A5 (%) | Hardness | 730°C- 760°C 3h | 550 | 630 | 17 | HRc | | | | | | | | | | |
| Heat Treatment | R _{P0,2} (MPa) | R _m (MPa) | A5 (%) | Hardness | | | | | | | | | | | | | | | | | |
| 730°C- 760°C 3h | 550 | 630 | 17 | HRc | | | | | | | | | | | | | | | | | |
| RÜCKTROCKNUNG | Not required | | | | | | | | | | | | | | | | | | | | |
| GAS ACC. EN ISO 14175 | I1 | | | | | | | | | | | | | | | | | | | | |