CEWELD®

# 310 Tig

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| CATEGORY | GMAW-GTAW Solid wires |
| TYPE | High heat resistant stainless steel welding wire for Tig welding. |
| APPLICATIONS | Common applications include industrial furnaces, annealing chambers, fused salt treatment installations and boiler parts, as well as heat exchangers. |
| PROPERTIES | Solid drawn ,corrosion-resistant, chromium-nickel wire for welding heat-resistant austenitic steels of the 25% Cr, 20% Ni types. 310 has good general oxidation resistance, especially at high temperatures, due to its high Cr content. The alloy is fully austenitic and is therefore sensitive to hot cracking. The temperature limits for use under intermittent oxidation depend on cycle frequency. In no case shall a temperature of 1000°C be exceeded. This alloy can withstand relatively severe thermic shock, and is superior to type 309 L. |
| CLASSIFICATION | AWS A 5.9: ER 310<br>EN ISO 14343-A: W 25 20 Mn<br>14343-B: SSZ 310<br>DIN: W.Nr. 1.4842<br>DIN 8556: SG X12CrNi 25 20 |
| SUITABLE FOR | Heat resistant stainless steels: 1.4823, 1.4826, 1.4828, 1.4832, 1.4835, 1.4840, 1.4841, 1.4846, 1.4848, 1.4837, 1.4710, 1.4713, 1.4724, 1.4726, 1.4742, 1.4745, 1.4762, 1.4845, 1.4849, 253MA X15CrNiSi 25 20, G-X40CrNiSi 25 12, G-X15CrNi 25 20 |
| APPROVALS | CE approved |
| WELDING POSITIONS: |   |

## WELD METAL ANALYSIS

| C | Mn | Si | Cr | Ni | Mo | Cu |
|---|---|---|---|---|---|---|
| 0.10 | 1.8 | 0.5 | 26 | 21 | <0,3 | <0,3 |

## MECHANICAL PROPERTIES

| Heat Treatment | $R_{P0,2}$ (N/mm$^2$) | Rm (N/mm$^2$) | A5 (%) | Impact Energy (J) ISO-V +20°C | -40°C | -196°C | Hardness HRc / HV |
|---|---|---|---|---|---|---|---|
| AW | 390 | 590 | 45 | 175 | | 60 | |

AW: as welded

## WELDING PARAMETERS / PACKING

| Welding Parameters | | Packing (kg) | |
|---|---|---|---|
| D (mm) | Current (A) DC- | single | master |
| 1.6 x 1000 | 50-80 | 5 | 25 |
| 2.0 x 1000 | 70-110 | 5 | 25 |
| 2.4 x 1000 | 110-180 | 5 | 25 |
| 3.2 x 1000 | 150-250 | 5 | 25 |

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| REDRYING TEMPERATURE | not required |
| GAS ACC. EN ISO 14175: | I1 |