# TIGWELD 307Si

TIG Rods [GTAW]

Stainless and high alloyed steels

| CLASSIFICATION: | APPROVALS: | APPLICATION: |
|---|---|---|
| EN ISO 14343-A : W 18 8 Mn<br>DIN 8556 : SG-X15 CrNiMn18 8<br>AWS A-5.9 : ER 307<br>W.Nr. : 1.4370 | | Power generation industry<br>Constructions & Engineering<br>Petrochemical and chemical industry |

- Austenitic rod for gas shielded welding in the TIG method.
- Recommended for welding dissimilar, armored, austenitic-manganese and difficult-to-weld steels.
- Used as a buffer layer for hardfacing.
- Corrosion resistant weld, high impact strength, good mechanical properties.
- The weld deposit provides exceptionally high ductility and elongation along with excellent fracture toughness.

## Application

Making dissimilar joints or joining difficult-to-weld materials (Hardox Milux sheets, etc.), joints in Hadfield steel, tool steels, buffer layers, welding steel with high content of sulfur and phosphorus. Welding of armor plates, rails, turnouts, crane wheels, tensioners. Construction of exhaust manifolds, parts of heat exchangers, devices for processing cellulose pulp, papers, textiles. Used for joining or surfacing in dredging or mining machine parts.

## Base material

| DIN | W.Nr. |
|---|---|
| X120 Mn12 | 1.3401 |
| X2 CrTi 12 | 1.4512 |
| X20 Cr 13 | 1.4021 |
| X6 Cr 13 | 1.4000 |
| High alloyed steels | |
| High tensile steels | |
| Austenitic-manganese steels | |
| Difficult to weld steels | |

## Typical chemical composition %

| C | Si | Mn | Cr | Ni |
|---|---|---|---|---|
| 0,08 | <1,00 | 7,00 | 18,50 | 9,00 |

## Typical mechanical properties

| | |
|---|---|
| **Yield strength Re [N/mm2]** | >380 |
| **Tensile strength Rm [N/mm2]** | 560-660 |
| **Elongation A5 [%]** | >35 |
| **Impact energy Kv [J]** | >40J (20°C) / |
| **Wire/rod type** | solid |
| **Welding current** |  |

| | |
|---|---|
| |  |
| **Shielding gases acc. to EN ISO 14175** | I1 - Ar / I3 - Ar + >0-95% He / |

## Welding parameters and packing

| ø | Length [mm] | Weight of packet [kg] |
|---|---|---|
| 1,6 | 1000 / | 5,0 |
| 2,0 | 1000 / | 5,0 |
| 2,4 | 1000 / | 5,0 |
| 3,2 | 1000 / | 5,0 |

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