# Thermanit 13/04 Si

TIG rods, high-alloyed, stainless

## Classifications

| EN ISO 14343-A | EN ISO 14343-B | AWS A5.9 | Mat. No. |
|---|---|---|---|
| W 13 4 | SSZ410NiMo | ER410NiMo(mod.) | 1.4351 |

## Characteristics and typical fields of application

Stainless; corrosion-resistant similar to matching 13 % Cr(Ni) steels/cast steel grades. High resistance to corrosion fatigue cracking. For joining and surfacing applications with matching 13 % Cr(Ni) and 13 % Cr-steels/cast steel grades.

## Base materials

1.4313 – (G)X5CrNi13-4; 1.4002 – X6CrAl13; ACI Gr. CA 6 NM

## Typical analysis of the TIG rods (wt.-%)

| | C | Si | Mn | Cr | Mo | Ni |
|---|---|---|---|---|---|---|
| wt-% | 0.02 | 0.7 | 0.7 | 12.3 | 0.5 | 4.7 |

**Structure**: Martensite, suitable for quenching and tempering

## Mechanical properties of all-weld metal

| Heat-treatment | Yield strength $R_{p0.2}$ | Tensile strength $R_m$ | Elongation A ($L_0$=5$d_0$) | Impact work ISO-V KV J | Hardness | |
|---|---|---|---|---|---|---|
| | MPa | MPa | MPa | J | HB30 | HRC |
| 600 °C / 8 h | 720 | 800 | 18 | 50 | 250 | |
| aw | | | | | | 38 |

## Operating data

| Polarity: | Shielding gas: | Marks: | ø (mm) | L mm |
|---|---|---|---|---|
| DC ( – ) | (EN ISO 14175) I1 | W 13 4 | 2.0 | 1000 |
| | | | 2.4 | 1000 |

## Welding instruction

| Materials | Preheating | Postweld treatment |
|---|---|---|
| Matching steels / cast steel grades | Up to 10 mm wall thickness: none, over 10 mm wall thickness: 100 – 150 °C (212 – 302 °F) | Tempering or quenching and tempering, according to parent metal |
| 13 % Cr-steels / cast steel grades | According to parent metal | Tempering or quenching and tempering, according to parent metal |

## Approvals

TÜV (01582), CE