

## Classifications

|                |                |          |          |
|----------------|----------------|----------|----------|
| EN ISO 14343-A | EN ISO 14343-B | AWS A5.9 | Mat. No. |
| W 19 9 L Si    | SS308LSi       | ER308LSi | 1.4316   |

## Characteristics and typical fields of application

Stainless; resistant to inter-crystalline corrosion. Corrosion-resistant up to 350 °C. High toughness down to -196 °C

For joining and surfacing applications with matching and similar – stabilized and non-stabilized – austenitic CrNi(N) and CrNiMo(N) steels / cast steel grades. For joining and surfacing work on cryogenic matching / similar austenitic CrNi(N) steels / cast steel grades.

## Base materials

TÜV-certified parent metal

1.4301 - X5CrNi18-10; 1.4306 - X2CrNi19-11; 1.4311 - X2CrNi18-10; 1.4312 - GX10CrNi18-8; 1.4541 - X6CrNiTi18-10; 1.4546 - X5CrNiNb18-10; 1.4550 - X6CrNiNb18-10;

AISI 304, 304L, 304LN, 302, 321, 347; ASTM A157 Gr. C9, A320 Gr. B8C or D

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

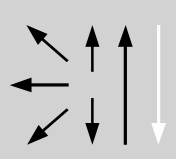
|      | C    | Si  | Mn  | Cr   | Ni   |
|------|------|-----|-----|------|------|
| wt-% | 0.02 | 0.8 | 1.7 | 20.0 | 10.0 |

**Structure:** Austenite with part ferrite

## Mechanical properties of all-weld metal

| Heat-treatment | Yield strength<br>R <sub>p0.2</sub> | Tensile strength<br>R <sub>m</sub> | Elongation<br>A (L <sub>0</sub> =5d <sub>0</sub> ) | Impact work<br>ISO-V CVN J |         |
|----------------|-------------------------------------|------------------------------------|----------------------------------------------------|----------------------------|---------|
|                | MPa                                 | MPa                                | %                                                  | +20 °C                     | -196 °C |
| aw             | 400                                 | 570                                | 35                                                 | 100                        | 35      |

## Operating data

|  | <b>Polarity:</b><br>DC (-) | <b>Shielding gas:</b><br>(EN ISO 14175)<br>I1, I3 | <b>Marks:</b><br>† W 19 9LSi /<br>ER308LSi | ø mm | L mm |
|-------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------|--------------------------------------------|------|------|
|                                                                                     |                            |                                                   |                                            | 1,6  | 1000 |
|                                                                                     |                            |                                                   |                                            | 2,0  | 1000 |
|                                                                                     |                            |                                                   |                                            | 2,4  | 1000 |
| 3,2                                                                                 | 1000                       |                                                   |                                            |      |      |

## Approvals