

4551 Ti

CATEGORY SMAW Stick Electrodes

TYPE Corrosion-resistant alloy for stabilized Cr-Ni steels

APPLICATIONS The electrode is suitable for welding austenitic corrosion-resistant stabilized Cr-Ni steels for working temperatures up to 400° C

PROPERTIES The weld deposit is scale-resistant up to approx. 800°C in normal atmosphere and oxidizing gases. The weld deposit is capable of taking a high polish

CLASSIFICATION

| | |
|------------|------------------------|
| AWS | A 5.4: E 347-17 |
| EN ISO | 3581-A: E 19 9 Nb R 12 |
| DIN: W.Nr. | 1.4551 |
| DIN | 8556: E 19 9 Nb R23 |

SUITABLE FOR

| | | |
|--------|------------------|------------|
| 1.4306 | X2CrNi 19 11 | (TP) 304L |
| 1.4301 | X4CrNi 18 10 | (TP) 304 |
| 1.4541 | X6CrNiTi 18 10 | (TP) 321 |
| 1.4550 | X6CrNiNb 18 10 | (TP) 347 |
| 1.4552 | G-X5CrNiNb 19 10 | CF-8C, 302 |
| 1.4312 | G-X10CrNi 18 8 | (TP) 302 |
| 1.4546 | X5CrNiNb 18 10 | - |
| 1.4311 | X2CrNiN 18 10 | - |

⇒1.4303, 1.4308, 1.4310, 1.4312, 1.4319

APPROVALS CE approved

WELDING POSITIONS:



WELD DEPOSIT WEIGHT %

| C | Mn | Si | Cr | Ni | Mo | Nb |
|-------|-----|-----|-------|----|----|---------|
| >0.03 | 0.8 | 0.8 | 18-20 | 10 | - | 10 x %C |

MECHANICAL PROPERTIES

| Heat Treatment | R _{P0,2} (N/mm ²) | R _m (N/mm ²) | A ₅ (%) | Impact Energy (J) ISO-V | | | Hardness HRC / HV |
|----------------|---|--|-----------------------|-------------------------|-------|--------|----------------------|
| | | | | 20°C | -40°C | -120°C | |
| AW | >380 | >540 | 33-37 | >50 | | >32 | |

AW: as welded

WELDING PARAMETERS / PACKING

| Welding Parameters | | | Packing | | |
|--------------------|-------------|--------------------|----------|------------|-----------|
| D (mm) | Length (mm) | Current (A) DC+/AC | kg / can | kg / 6pack | kg / 1000 |
| 2.5 | 300 | 50-90 | 2.4 | 14.4 | 18.8 |
| 3.2 | 350 | 80-110 | 2.8 | 16.8 | 35.6 |
| 4.0 | 350 | 100-150 | 2.7 | 16.2 | 54 |
| 5.0 | 450 | 150-200 | | | 107.1 |

REDRYING TEMPERATURE 300°C/2hr (not often required).