

316/316H AC/DC

| For welding steels such as Outokumpu | EN | ASTM | BS | NF | SS |
|--------------------------------------|--------|-------|--------|-----------------|------|
| 4401 | 1.4401 | 316 | 316S16 | Z7 CND 17-11-02 | 2347 |
| 4571 | 1.4571 | 316Ti | 320S17 | Z6 CNDT 17-12 | 2350 |
| – | 1.4919 | 316H | 316S51 | Z6 CND 17-13 | 2347 |

Standard designations

EN 1600 E 19 12 2 R

AWS A5.4 E316H-17

Characteristics

AVESTA 316/316H AC/DC is a high carbon Cr-Ni-Mo electrode primarily intended for welding ASTM 316 and 316H type stainless steels exposed to temperatures above 400°C.

Welding data

| DC+ or AC | Diam. mm | Current, A |
|-----------|----------|------------|
| | 2.5 | 50 – 80 |
| | 3.25 | 80 – 120 |
| | 4.0 | 100 – 160 |

Weld deposit data at maximum welding current

| Electrode diam. mm | length mm | | | | | Metal recov. ~ % |
|--------------------|-----------|------|----|------|----|------------------|
| | | N | B | H | T | |
| 2.5 | 300 | 0.55 | 91 | 0.99 | 40 | 110 |
| 3.25 | 350 | 0.59 | 45 | 1.66 | 50 | 108 |
| 4.0 | 350 | 0.62 | 30 | 2.21 | 58 | 107 |

Typical analysis % (All weld metal)

| C | Si | Mn | Cr | Ni | Mo |
|------|-----|-----|------|------|-----|
| 0.06 | 0.8 | 1.0 | 19.0 | 12.0 | 2.8 |

Ferrite 5 FN DeLong

Mechanical properties

| | Typical values (IIW) | Min. values EN 1600 |
|---------------------------|-----------------------|-----------------------|
| Yield strength $R_{p0.2}$ | 470 N/mm ² | 320 N/mm ² |
| Tensile strength R_m | 615 N/mm ² | 550 N/mm ² |
| Elongation A_5 | 35 % | 25 % |
| Impact strength KV +20°C | 50 J | |
| Hardness approx. | 210 Brinell | |

Interpass temperature: Max. 150°C.

Heat input: Max. 2.0 kJ/mm.

Heat treatment: Generally none (in special cases quench annealing at 1050°C).

Structure: Approx. 95% austenite and 5% ferrite.

Scaling temperature: Approx. 850°C (air).

Corrosion resistance: Excellent resistance to general, pitting and intercrystalline corrosion in chloride containing environments.

Intended for severe conditions, e.g. in dilute hot acids.

Approvals

- CE
- CWB
- TÜV

Welding positions

