



Cromarod 312

SMAW - (Stick) - MMA
Stainless Steel

Date: 2009-02-27
Revision: 19

Description:

Cromarod 312 is a rutile flux coated electrode which deposits a 29%Cr / 9%Ni austenitic/ferritic stainless steel weld metal with a ferrite content of approximately FN 50. The weld metal exhibits excellent tolerance to dilution from dissimilar and difficult-to-weld materials without hot cracking.

Applications:

- Difficult-to-weld steels e.g. high carbon hardenable tool, die and spring steels, 13% Mn steels, free-cutting steels, high temperature steels (non-structural).
- Dissimilar joints between stainless and high carbon steels.
- Surfacing of metal-to-metal wear areas, hot working tools, furnace components.

Welding positions:



Coating type:

Rutile

Welding current:

DC +, AC 0CV > 39V

Ferrite content:

FN 50 (WRC-92)

Corrosion resistance

Good resistance to sulphurous gases at high temperature. Good resistance to wet corrosion up to approximately 300 °C.

Scaling temperature:

Approx. 1100 °C in air.

Redrying temperature:

350 °C, 2h

Chemical composition, wt.%

| | C | Si | Mn | P | S | Cr | Ni |
|---------|------|-----|-----|-------|-------|------|------|
| Min | | | 0,5 | | | 28,0 | 8,0 |
| Typical | 0,10 | 1,2 | 0,8 | 0,02 | 0,02 | 29,0 | 9,0 |
| Max | 0,15 | 1,3 | 2,0 | 0,035 | 0,025 | 31,0 | 10,5 |

| | Mo | Cu | V | Nb |
|---------|-----|-----|-----|-----|
| Min | | | | |
| Typical | 0,2 | | | |
| Max | 0,5 | 0,5 | 0,1 | 0,1 |

Mechanical properties

| | <u>Specified</u> | <u>Typical</u> |
|-------------------------|------------------|----------------|
| Yield strength, Rp0.2%: | ≥ 450 MPa | 590 MPa |
| Tensile Strength, Rm: | ≥ 660 MPa | 760 MPa |
| Elongation, A5 | ≥ 22% | 25% |

Classification:

| | |
|------------|-------------|
| EN 1600 | E 29 9 R 32 |
| AWS A5.4 | ~E 312-17 |
| ISO 3581-A | E 29 9 R 32 |

Approvals:

CE

Note

All classifications: slight deviation in Si.

Core wire:

P ≤ 0.030%

S ≤ 0.030%

N ≤ 0.080%

Produkt data:

| Diam.mm | Length mm | Product code | Current A | Voltage V | Kg weld metal/ kg electrodes | No. of electrodes/ kg weld metal | Kg weld metal/ hour arc time | Burn-off time/ electrode (sec.) |
|---------|-----------|--------------|-----------|-----------|---------------------------------|-------------------------------------|---------------------------------|------------------------------------|
| 2,5 | 300 | 74382500 | 40-80 | 25 | 0,64 | 90 | 1,1 | 34 |
| 3,2 | 350 | 74383200 | 80-120 | 26 | 0,64 | 47 | 1,5 | 44 |
| 4,0 | 350 | 74384000 | 100-160 | 27 | 0,65 | 31 | 2,1 | 55 |