

Selectarc Inox 2209

Stainless Electrode For Duplex Steels

Classification

AWS A 5.4 : E2209-17 EN 1600 : E 22 9 3 N L R 3 2

ISO 3581-A : E 22 9 3 N L R 3 2

Description & Applications

Rutile-basic electrode with an austenitic-ferritic microstructure (duplex). The weld metal can be applied for operation temperatures up to 250°C and is resistant in chloride containing media, like sea water, against pitting corrosion as well as crevice and stress corrosion. Easy to weld in all positions, except vertical down. Stable arc, regular drop transfer, easy slag removal, finely rippled weld beads.

Main applications: For butt welding and cladding of steels and castings with an austenitic - ferritic structure, which are used for pumps, vessels, piping systems etc. attacked by chloride containing solutions. But also for impellers and other components which require high strength combined with corrosion attack.

Base materials

| UNS | Alloy | EN 10088 | Material N° | CLI |
|--------|-------|------------------|-------------|------------|
| S31803 | | X2CrNiMoN22-5-3 | 1.4462 | URANUS 45N |
| S32304 | 35N | X2CrNi23-4 | 1.4362 | |
| S32900 | 329 | X3CrNiMoN27-5-2 | 1.4460 | |
| | | G-X8CrNiN26-7 | 1.4347 | |
| | | G-X6CrNiMo24-8-2 | 1.4463 | |

Typical Weld Metal Composition (%)

| С | Si | Mn | Cr | Ni | Мо | N | Fe |
|---------|-----|-----|------|-----|-----|------|------|
| < 0.030 | 0.9 | 0.9 | 22.5 | 9.0 | 3.0 | 0.18 | Rem. |

All Weld Metal Mechanical Properties

| R _{p0,2} (MPa) | R _m (MPa) | A ₅ (%) | KV (J) |
|---------------------------|----------------------|--------------------|-----------|
| >550 | >700 | >22 | +20°C >50 |
| | | | -40°C >37 |

Welding Current & Instructions

| Electrode | ØxL (mm) | 2,5x300 | 3,2x350 | 4,0x350 |
|-----------|------------|---------|---------|---------|
| Current | (A) | 50-75 | 70-100 | 90-150 |

Redrying 2-3 hours at 250-300 $^{\circ}$ C. Guide electrodes with a slight declination and weld with a short arc. Interpass temperature : <150 $^{\circ}$ C.

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