

Classifications

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|--------------------------|-------------|----------|
| EN ISO 18274 | AWS A5.9 | Mat. No. |
| S Ni 8025 (NiFe30Cr29Mo) | ER383(mod.) | 2.4656 |

Characteristics and typical fields of application

Nickel based alloy; resistant to intercrystalline corrosion and wet corrosion up to 450 °C (842 °F). Good corrosion resistance, especially in reducing environment. For joining and surfacing work with matching and similar – non-stabilized and stabilized – fully austenitic steels/cast steel grades containing Mo (and Cu).

For joining mentioned steels with unalloyed/low-alloy steels.

Base materials

TÜV-certified parent metal

1.4465 – X1CrNiMoN25-25-2; 1.4577 – X3CrNiMoTi25-25;

2.4858 – Alloy 825 – UNS N08825 – NiCr21Mo;

and combinations of aforementioned materials with ferritic steels P265GH and

1.4583 – X10CrNiMoNb18-12; Sanicro 28

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

| | C | Si | Mn | Cr | Mo | Ni | Cu |
|------|------|-----|-----|------|-----|------|-----|
| wt-% | 0.02 | 0.2 | 2.6 | 29.0 | 4.3 | Bal. | 1.8 |

Structure: Austenite

Mechanical properties of all-weld metal

| Heat-treatment | Yield strength R _{p0.2} | Yield strength R _{p1.0} | Tensile strength R _m | Elongation A (L ₀ =5d ₀) | Impact work ISO-V KV J |
|----------------|-------------------------------------|-------------------------------------|------------------------------------|--|---------------------------|
| | MPa | MPa | MPa | % | +20 °C |
| aw | 350 | 380 | 550 | 30 | 120 |

Creep rupture properties: In the range of matching cast steel grades

Operating data

| Polarity: | Shielding gas: | Marks: | ∅ (mm) | L mm |
|-----------|----------------------|-----------|--------|------|
| DC (–) | (EN ISO 14175) I1 | ✦ Ni 8025 | 2.0 | 1000 |
| | | | 2.4 | 1000 |
| | | | 3.2 | 1000 |

Welding instruction

| Materials | Preheating | Postweld heat treatment |
|---|--|---|
| Matching metals | None (weld as cold as possible) cooling in air | Mostly none; if necessary solution annealing at 1120 °C (2048 °F) |
| Joining of matching austenitic steels to unalloyed / low-alloy steels / cast steel grades | According to parent metal | None |