# UTP A 80 Ni

solid wire

| Classifications | | |
|---|---|---|
| EN ISO 18274 | AWS A5.14 | Material-No. |
| S Ni 2061 (NiTi3) | ER Ni-1 | 2.4155 |

## Characteristics and field of use

UTP A 80 Ni is suited for joining and surfacing on commercial pure nickel grades, including LC nickel, nickel alloys and nickel-clad steels.

Such materials are employed primarily in the construction of pressure vessels and apparatus in the chemical industry, in the food industry and for power generation, where good behaviour under corrosion and temperature is demanded.

The weld metal has an excellent resistance in a lot of corrosive medias, from acid to alkali solutions.

## Typical analysis in %

| C | Si | Mn | Ni | Ti | Fe |
|---|---|---|---|---|---|
| < 0.02 | < 0.3 | 0.3 | balance | 3.3 | < 0.1 |

## Mechanical properties of the weld metal according to EN ISO 15792-1 (min. values at RT)

| Yield strength $R_{P0.2}$ | Tensile strength $R_m$ | Elongation A | Impact strength $K_V$ |
|---|---|---|---|
| MPa | MPa | % | J (RT) |
| > 300 | > 450 | > 30 | > 160 |

## Welding instruction

Clean the weld area thoroughly to avoid porosity. Groove angle about 70 °.
To be welded by stringer bead technique.

## Approvals

TÜV (No. 00950), ABS

| Wire diameter [mm] | Current type | Shielding gas (EN ISO 14175) | | |
|---|---|---|---|---|
| 0.8 | DC (+) | I 1 | I 3 | Z-ArHeHC-30/2/0.05 |
| 1.0 | DC (+) | I 1 | I 3 | Z-ArHeHC-30/2/0.05 |
| 1.2 | DC (+) | I 1 | I 3 | Z-ArHeHC-30/2/0.05 |