

## Classifications

|                |          |              |
|----------------|----------|--------------|
| EN ISO 14343-A | AWS A5.9 | Material-No. |
| W 29 9         | ER 312   | 1.4337       |

## Characteristics and field of use

UTP A 651 is suitable for joining and surfacing of steels of difficult weldability, repair of hot and cold working steels, cushioning layers.

The weld metal of UTP A 651 is scale resistant up to 1150° C. Crack and wear resistant, stainless and work hardening.

Hardness of the pure weld metal: approx. 240 HB

## Typical analysis in %

|     |     |     |      |     |         |
|-----|-----|-----|------|-----|---------|
| C   | Si  | Mn  | Cr   | Ni  | Fe      |
| 0,1 | 0,4 | 1,6 | 30,0 | 9,0 | balance |

## Mechanical properties of the weld metal

|                           |                        |                |                       |
|---------------------------|------------------------|----------------|-----------------------|
| Yield strength $R_{P0,2}$ | Tensile strength $R_m$ | Elongation $A$ | Impact strength $K_v$ |
| MPa                       | MPa                    | %              | J [RT]                |
| 650                       | 750                    | 25             | 27                    |

## Welding instruction

Clean weld area thoroughly. High carboned and solid work pieces depending on shape and size have to be preheated up to 150-250° C. Steady guidance during welding process.

| Rod diameter x length [mm] | Current type | Shielding gas (EN ISO 14175) |
|----------------------------|--------------|------------------------------|
| 1,2 x 1000                 | DC (-)       | I 1                          |
| 1,6 x 1000                 | DC (-)       | I 1                          |
| 2,0 x 1000                 | DC (-)       | I 1                          |
| 2,4 x 1000                 | DC (-)       | I 1                          |
| 3,2 x 1000                 | DC (-)       | I 1                          |