

Classifications

| | |
|--------------------------------------|-----------------------|
| EN ISO 17633-A | AWS A5.22 |
| T 23 12 L P M21 1 / T 23 12 L P C1 1 | E309LT1-4 / E309LT1-1 |

Characteristics and field of use

Rutile, strip alloyed, flux cored wire with fast freezing slag for position welding of austenite-ferrite joints, and for the first layer of weld claddings of unalloyed and low-alloy base materials. The support provided by the fast-hardening slag allows out-of-position welding with high current magnitudes and high welding speeds. The fine droplet, lowspatter, very intense spray arc, the reliable fusion penetration, the self-releasing slag and the good wetting behaviour result in a high weld quality at the same time as short welding times. Additional advantages to its application are the ease of handling, the low heat input resulting from the high welding speed, and the small amounts of cleaning and pickling required. UTP AF 6824 LC PW should be used for flat and horizontal welding positions (PA, PB). The weld metal is suitable for operating temperatures between -60 °C and +300 °C.

Base materials

Joints: of and between high-strength, unalloyed and alloyed quenched and tempered steels, stainless, ferritic Cr and austenitic Cr-Ni steels, austenitic manganese steels and weld claddings: for the first layer of chemically resistant weld claddings on the ferritic-pearlitic steels used for boiler and pressure vessel construction up to finegrained structural steel S500N, and for the creep resistant fine-grained structural steels 22NiMoCr4-7, 20MnMoNi5-5 and GS-18NiMoCr 3 7

Typical analysis in %

| | | | | |
|------|-----|-----|------|------|
| C | Si | Mn | Cr | Ni |
| 0,03 | 0,7 | 1,4 | 23,0 | 12,5 |

Mechanical properties of the weld metal

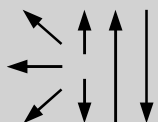
| Welded condition | Yield strength R _{PO,2} | Tensile strength R _m | Elongation A | Impact strength K _V | |
|------------------|-------------------------------------|------------------------------------|-----------------|-----------------------------------|---------|
| | MPa | MPa | % | J [RT] | - 60 °C |
| untreated | 400 | 540 | 35 | 65 | 50 |

shielding gas Ar + 18% CO₂

Welding instruction

The gas quantity should be 15-18 l/min. Slightly trailing torch position (angle of incidence about 80°), slight weaving of the torch is recommended in all positions. It is recommended that the voltage is increased by 2 V if the shielding gas is 100% CO₂. Preheating and interpass temperatures are to be adapted to the base material.

Welding positions



Current type DC (+)
Shielding gases: Argon + 15 - 25% CO₂, 100 % CO₂

Approvals

TÜV (09115.), DB (43.014.22), ABS (E309 LT 1-1(4)), LR (DXV and O, CMn/SS), GL (4332S{C1, M21}), CWB (E309LT0-1(4)), SEPROZ, CE, DNV, RINA

Recommended welding parameters

| Wire diameter [mm] | Amperage [A] | Voltage [V] |
|--------------------|--------------|-------------|
| 1,2 | 100-220 | 20-31 |
| 1,6 | 175-260 | 21-29 |