

TL-98B3

JIS Z 3223 DT2418
AWS A5.5 E9018-B3
EN1599 E CrMo2 B 3 2

Characteristics and Applications:

TL-98B₃ is an iron powder low hydrogen type electrode for low alloy heat resistance steel. The weld metal contains 2.25%Cr-1%Mo that makes the electrodes more suitable for the welding of piping steels (STPA24, A335-P22), boilers (STBA24, A199T22, A213T22, A200T22), heat exchanger pipes (A182-F22, A336-F22) which the service temperature is at 550°C. Good creep rupture strength also can be obtained at high temperature.

Notes on Usage:

1. Clean up the contaminations on the base metal and welding seam so as not to derogate the weld metal quality from particles.
2. Dry the electrodes at 350-400°C for 60 minutes before use.
3. Use back-step method and hold for 3-5 seconds at every end-up to prevent arc starting from blowholes.
4. Maintaining short arc length as possible is highly recommended. While welding with weave method, moving range should be controlled within 3 times of the wire's dia.
5. When the heat input is excessive, the impact value tends to be reduced. Therefore, select proper heat input depending on the required impact value.
6. Pre-heat the workpiece at 200~350°C and PWHT at 680~730°C.

Typical chemical composition of weld metal (wt%)

| C | Mn | Si | P | S | Cr | Mo |
|------|------|------|-------|------|------|------|
| 0.08 | 0.65 | 0.55 | 0.015 | 0.01 | 2.30 | 1.00 |

Typical mechanical properties of weld metal

| YS (MPa) | TS (MPa) | EL % | PWHT |
|----------|----------|------|-----------|
| 620 | 730 | 23 | 690°Cx1hr |

Welding position



Sizes and recommended current range (AC or DC <+>)

| Diameter (mm) | | 3.2 | 4.0 | 5.0 |
|---------------|------|--------|---------|---------|
| Length (mm) | | 350 | 450 | 450 |
| Amps | F | 90-140 | 140-190 | 190-240 |
| | V&OH | 80-120 | 120-160 | - |

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