

TWE-81W2

AWS A5.29 E81T1-W2C

Characteristics and Applications:

TWE-81W2 is a titania type flux-cored wire and suitable for butt or fillet MAG welding of 590N/mm² weather-proof grade steel and A588、A234、A242、A333 or COR-TEN 60 (used normally without painting) at low temperatures. It can be applicable for all-position welding and show smooth bead appearance and shape, spattering.

Notes on usage:

1. Must pre-heat ;inter-pass temperature should be controlled around 50°C~150°C.
2. To keep the toughness, the plates should not be welded with excessive heat input.
3. Use DC(+) polarity and CO₂ gas.
4. Keep the product dry, while it is stored or delivered.

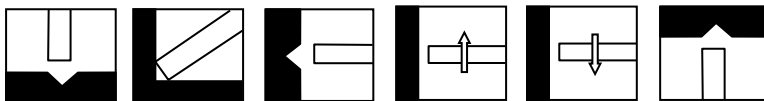
Typical chemical composition of weld metal (wt%):

| | C | Mn | Si | P | S | Cr | Ni | Cu |
|---------------|-------|-----------|-----------|--------|--------|-----------|-----------|-----------|
| AWS | ≤0.12 | 0.50-1.30 | 0.35-0.80 | ≤0.030 | ≤0.030 | 0.45-0.70 | 0.40-0.80 | 0.30-0.75 |
| Typical value | 0.03 | 0.85 | 0.42 | 0.015 | 0.007 | 0.53 | 0.60 | 0.40 |

Typical mechanical properties of weld metal:

| | Yield strength MPa(ksi) | Tensile strength MPa(ksi) | Elongation % | Charpy V-Notch J (ft-lbf) -30°C (-20°F) |
|---------------|----------------------------|------------------------------|-----------------|---|
| AWS | ≥470(68) | 550-690(80-100) | ≥19 | ≥27(20) |
| Typical value | 603(87) | 646(94) | 26 | 60(44) |

Welding position:



Sizes and recommended parameter range (DC <+>):

Stick out:15-25(mm), gas flow rate:20-25(l/min):

| Position | Diameter (mm) | 1.2 | 1.6 |
|----------|---------------------|---------------------|---------------------|
| | F、HF、H | 180A-300A / 26V-36V | 200A-350A / 21V-34V |
| VU、OH | 150A-220A / 24V-28V | 180A-230A / 20V-24V | |
| VD | 220A-320A / 24V-32V | 250A-350A / 25V-32V | |

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