

KF81-K2M

Flux Cored Wire for Low Temperature Steel

Classifications:

AWS A5.29 E81T1-K2M
A5.29M E551T1-K2M
EN T 46 6 1.5Ni P M

Characteristics and Applications:

KF81-K2M is rutile-based flux cored wire good notch toughness down to -60°C in all position with the use of Mixed gas. It containing 1.5% nickel in the weld metal, suitable for welding of 590MP high tensile steel for low temperature service, such as LNG and LPG carriers, storage tanks, offshore drilling ring, shipbuilding, construction machinery, etc., It can provide exceptional mechanical properties, less spatter, stable arc, easy slag removal and great efficiency.

Welding Position:

Typical Chemical Composition of All-Weld Metal:

| Alloy wt% | C | Mn | Si | Cr | Ni | Mo | P | S | Al |
|-----------|-------|-----------|------|------|-----------|------|------|-------|------|
| AWS | 0.15 | 0.50-1.75 | 0.80 | 0.15 | 1.00-2.00 | 0.35 | 0.03 | 0.03 | -- |
| Tested | 0.040 | 1.22 | 0.45 | 0.03 | 1.59 | 0.05 | 0.02 | 0.015 | 0.03 |

Mechanical Properties of All-Weld Metal:

| Mechanical properties | Yield Strength (Mpa) | Tensile Strength (Mpa) | Elongation (%) | Impact Value (J/°C) |
|-----------------------|----------------------|------------------------|----------------|---------------------|
| AWS | 470 | 550-690 | 19 | 27/-60 |
| Tested | 575 | 637 | 26 | 70/-60 |

Notes on Usage:

1. Electric current choice : DC+
2. Clean up water, rust, oil on the base metal sufficiently before welding.
3. Preheating the base metal at 150±15°C.
4. Use over Mixed gas(80% Argon + 20% CO₂).
5. Keeping the elongation is around 15-20mm.
6. Control small heat input quantity and keep lower interlayer temperature, or it is easy make low temperature impact ductility down.
7. It's necessary to cover the flux cored wire by canvas if it needs on wire feeder for one night.

Sizes Available and Recommended Parameter:

| Dia/mm | 1.2 |
|--------|---------------------------|
| Amp | F 120-300 V&OH 120-240 |