GMAW Wire for Nickel and Nickel-Based Alloy

KMS-72

Classification

AWS A5.14/A5.14M ERNiCr-4 JIS Z3334 SNi6072

EN ISO 18274 S Ni 6072 GB T15620 S Ni 6072

Shielding Gas:75% Ar+25%He

Applications and Features

- (1) KMS-72 is 55%Ni-44%Cr alloy.
- (2) The excellent corrosion resistance at high temperature due to high Cr content in atmospheres containing sulfur and vanadium.
- (3) Suitable for welding Inconel 671 and 690 alloy.
- (4) Ideal for cladding the water cooled wall of boiler with sulfur fuel.

Welding Position



Welding Instruction

- (1) Clean surface of base metal before welding.
- (2) Heat input should be controlled as low as possible.
- (3) For other instructions, please refer to Appendix B.

Typical Chemical Composition of Wire (wt%)

| С | Si | Mn | Р | S | Cr | Ti | Fe | Ni |
|------|------|------|-------|-------|-------|------|------|-------|
| 0.02 | 0.02 | 0.09 | 0.003 | 0.001 | 42.42 | 0.54 | 0.08 | 56.50 |

Typical Mechanical Properties of Weld Metal

| | Tensile Strength | Yield Strength | Elongation | Charpy V-Notch | | |
|-------|------------------|----------------|------------|----------------|---|--|
| N/mm² | | N/mm² | % | °C | J | |
| | 735 | 558 | 40 | - | - | |

Size and Suggested Operating Range (DC+)

| Diameter (mm) | 0.8 | 0.9 | 1.2 | 1.6 |
|---------------|---------|---------|---------|---------|
| Current (A) | 140~180 | 160~200 | 190~230 | 200~250 |
| Voltage (V) | 24~27 | 25~28 | 26~30 | 29~33 |