# GMAW Wire for Nickel and Nickel-Based Alloy

## KMS-W

Shielding Gas:75% Ar+25%He

**Classification**

| | |
|---|---|
| AWS A5.14/A5.14M | ERNiMo-3 |
| JIS Z3334 | SNi1004 |
| EN ISO 18274 | S Ni 1004 |
| GB T15620 | S Ni 1004 |

### Applications and Features

( 1 ) KMS-W is 63%Ni-24%Mo-6%Fe-5%Cr alloy.

( 2 ) Good mechanical properties at 980℃, but poor oxidation resistance above 780℃.

( 3 ) Suitable for welding Hastelloy W.

( 4 ) Ideal for welding jet engine repair and maintenance, gas turbine parts and rotor hubs.

### 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%)

| C | Si | Mn | P | S | Cr | Mo | Fe | Ni |
|---|---|---|---|---|---|---|---|---|
| 0.01 | 0.08 | 0.40 | 0.001 | 0.001 | 4.79 | 23.37 | 5.46 | 65.60 |

### Typical Mechanical Properties of Weld Metal

| Tensile Strength | Yield Strength | Elongation | Charpy V-Notch | |
|---|---|---|---|---|
| N/mm$^2$ | N/mm$^2$ | % | ℃ | J |
| 700 | 544 | 25 | - | - |

### 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 |