

NiFeCr-1

Description and Application: It is used for welding of its own Cr-Ni-Mo-Cu alloy UNS N08825, and can also be used for surfacing cladding and interlayer cladding on steel surfaces. The product is widely used in the mechanical industry such as marine oil, natural gas, pressure vessels, chemical industry, military industry, transportation, mining, and water conservancy.

Conform to: GB/T 15620 S Ni8065, ISO 18274 S Ni 8065, AWS A5.14 ERNiFeCr-1

Chemical composition of the welding wire (Wt.%)

	C	Si	Mn	S	P	Mo
GB	≤0.05	≤0.5	≤1.0	≤0.015	≤0.020	2.5~3.5
AWS	≤0.05	≤0.5	≤1.0	≤0.03	≤0.03	2.5~3.5
Example value	0.012	0.10	0.49	0.005	0.005	3.32

	Ni	Cr	Fe	Ti	Al	Cu
GB	38.0~46.0	19.5~23.5	≥22.0	0.6~1.2	≤0.20	1.5~3.0
AWS	38.0~46.0	19.5~23.5	≥22.0	0.6~1.2	≤0.20	1.5~3.0
Example value	43.89	22.78	25.70	0.85	0.10	2.68

Mechanical properties of the deposited metal

	Temperature (°C)	Tensile strength Rm (MPa)	Yield strength ReL (MPa)	Elongation A (%)	Impact -196°C (J)	ASTM G28-A (boiling · 120h)	ASTM G48-A (26.5°C,72h)
AWS	Room Tem	≥550	—	—	—	—	—
Example value	Room Tem	589	415	38.5	202/213/197	0.15mm/Y	0.06g/m ²

*Example value: TIG welding with a solid wire of diameter 1.2mm.

GTAW Reference specification (DCEN)

Diameter (mm)	Type	Shielding gas	Welding current(A)	Gas flow(L/min)	Welding speed (mm/min)
Φ1.0	Automatic	Ar	150~180	16~20	80~120
Φ1.2	Automatic	Ar	160~200	16~22	80~120
Φ2.0	Manual	Ar	140~180	12~17	80~150
Φ2.4	Manual	Ar	150~200	12~17	80~150

⚠ Notes:

1. Rust, oil, moisture and other impurities must be removed from the weldment before welding.
2. The interpass temperature shall be kept below 150 degrees celsius during welding.