



GB/T 13814 ——

AWS A5.11 ENiCrFe-4

EN ISO 14172 ——

AK ENiCrFe-4

Description: ENiCrFe-4 is a nickel-chromium-iron electrode intended for demanding cryogenic and nickel-alloy welding service. It offers higher strength than some earlier grades, good toughness at low temperature, stable arc behavior, and sound weld metal for critical joints where reliability is essential.

Application: It is mainly used for welding 9% nickel steel in low-temperature and LNG-related fabrication, and it can also be applied to similar nickel-base alloys. It fits cryogenic vessels, storage systems, and structural joints that must maintain strength and toughness under severe cold-service conditions.

Typical Chemical Composition(%):

	C	Mn	Fe	P	S	Si	Cu	Ni	Co
Requirement	0.20	1.0-3.5	12.0	0.030	0.020	1.0	0.50	≥60	---
Actual Result	0.10	1.05	9.37	0.015	0.015	0.40	0.10	65.89	---
	Al	Ti	Cr	Nb+Ta	Mo	V	W	La	B
Requirement	---	---	13.0-17.0	1.0-3.5	1.0-3.5	---	---	---	---
Actual Result	---	---	15.5	1.92	2.86	---	---	---	---

Typical Mechanical Properties:

	Tensile Strength (MPa)	Yield Stress (MPa)	Elongation (%)	Impact Values (J)
Requirement	≥650		20	
Actual Result	725		25	