

ABSTRACT

Ni-Fe-Cr ALLOY

An objective of the present invention is to provide a Ni-Fe-Cr alloy having an excellent intergranular corrosion resistance. A Ni-Fe-Cr alloy of the present embodiment has a chemical composition consisting of, in mass percent, C: 0.005 to 0.015%, Si: 0.05 to 0.50%, Mn: 0.05 to 1.5%, P: 0.030% or less, S: 0.020% or less, Cu: 1.0 to 5.0%, Ni: 30.0 to 45.0%, Cr: 18.0 to 30.0%, Mo: 2.0 to 4.5%, Ti: 0.5 to 2.0%, N: 0.001 to 0.015%, and Al: 0 to 0.50%, with the balance being Fe and impurities. An average grain size d (μm) satisfies Formula (1):

$$d < 4.386 / (C_{\text{rel}} + 0.15) \quad (1)$$

where, C_{rel} in Formula (1) is defined by Formula (2):

$$C_{\text{rel}} = C - 0.125\text{Ti} + 0.8571\text{N} \quad (2)$$

where, symbols of elements in Formula (1) and Formula (2) are to be substituted by contents of corresponding elements (mass%).

FIG. 1