

Title (en)  
Ni-Fe-Cr ALLOY

Title (de)  
NI-FE-CR-LEGIERUNG

Title (fr)  
ALLIAGE Ni-Fe-Cr

Publication  
**EP 3438306 A1 20190206 (EN)**

Application  
**EP 16897119 A 20161228**

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Abstract (en)  
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  $d$  ( $\mu\text{m}$ ) satisfies Formula (1):  $d < 4.386 / C_{\text{rel}} + 0.15$  where,  $C_{\text{rel}}$  in Formula (1) is defined by Formula (2):  $C_{\text{rel}} = C_{\text{Ni}} + 0.125 \frac{C_{\text{Ti}}}{C_{\text{N}}} + 0.8571 \frac{C_{\text{N}}}{C_{\text{Cr}}}$  where, symbols of elements in Formula (1) and Formula (2) are to be substituted by contents of corresponding elements (mass%).

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