

Title (en)
HEAT RESISTING NICKEL-IRON ALLOYS FOR CASTINGS WITH A HIGHLY STABLE STRUCTURE

Publication
EP 0087609 B1 19850925 (DE)

Application
EP 83101057 A 19830204

Priority
DE 3207162 A 19820227

Abstract (en)
[origin: US4464335A] The invention relates to a nickel/iron casting alloy, containing no cobalt, exhibiting high strength at elevated temperatures accompanied by insensitivity to thermal fatigue, and possessing microstructural constituents which are thermodynamically highly stable. The alloy exhibits high hardness at elevated temperatures, outstanding resistance to oxidation, corrosion and wear, as well as good welding properties. The alloy is particularly suitable as a material for nuclear reactor components, and is composed of 1.1 to 1.6% of carbon 0.5 to 1.5% of silicon 0.01 to 0.2% of manganese 22 to 26% of chromium 12.5 to 14.5% of molybdenum 0.2 to 0.8% of niobium (columbium) 35 to 40% of nickel less than 0.01% of boron less than 0.002% of tantalum and 18 to 26% of iron, to make up 100%.

IPC 1-7
C22C 30/00; **C22C 19/05**

IPC 8 full level
C22C 19/05 (2006.01); **C22C 30/00** (2006.01)

CPC (source: EP US)
C22C 19/055 (2013.01 - EP US); **C22C 30/00** (2013.01 - EP US); **Y10S 376/90** (2013.01 - EP US)

Cited by
US8297046B2; US9057307B2

Designated contracting state (EPC)
BE FR GB IT

DOCDB simple family (publication)
EP 0087609 A1 19830907; **EP 0087609 B1 19850925**; CA 1208043 A 19860722; DE 3207162 C1 19831006; US 4464335 A 19840807

DOCDB simple family (application)
EP 83101057 A 19830204; CA 422363 A 19830225; DE 3207162 A 19820227; US 47045683 A 19830228