

Title (en)
Nickel-base alloy

Title (de)
Legierungen auf Nickelbasis

Title (fr)
Alliages à base de nickel

Publication
EP 2520678 A2 20121107 (EN)

Application
EP 12166469 A 20120502

Priority
US 201113100441 A 20110504

Abstract (en)
The invention is a class of nickel-base alloys for gas turbine applications, comprising, by weight, about 13.7 to about 14.3 percent chromium, about 5.0 to about 10.0 percent cobalt, about 3.5 to about 5.2 percent tungsten, about 2.8 to about 5.2 percent titanium, about 2.8 to about 4.6 percent aluminum, about 0.0 to about 3.5 percent tantalum, about 1.0 to about 1.7 percent molybdenum, about 0.08 to about 0.13 percent carbon, about 0.005 to about 0.02 percent boron, about 0.0 to about 1.5 percent niobium, about 0.0 to about 2.5 percent hafnium, about 0.0 to about 0.04 percent zirconium, and the balance substantially nickel. The nickel-base alloys may be provided in the form of useful articles of manufacture, and which possess a unique combination of mechanical properties, microstructural stability, resistance to localized pitting and hot corrosion in high temperature corrosive environments, and high yields during the initial forming process as well as post-forming manufacturing and repair processes.

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Citation (applicant)
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