

Title (en)
Nickel-based superalloy composition

Title (de)
Zusammensetzung einer Nickel-Basis-Superlegierung

Title (fr)
Composition d'un superalliage de nickel

Publication
EP 1801251 A1 20070627 (EN)

Application
EP 06126538 A 20061219

Priority
US 31449505 A 20051221

Abstract (en)
A nickel-based alloy composition and turbine vanes and blades including from about 8 % to about 18 % cobalt, from about 12 % to about 16 % chromium, from about 4 % to about 8 % aluminum, up to about 6 % tungsten, from about 0.5 % to about 3.5 % titanium, from about 2 % to about 6 % molybdenum, from about 0.05 % to about 0.25 % carbon, from about 0.005 % to about 0.025 % boron, from about 0.02 % to about 0.1 % zirconium, up to about 1.0% iron, up to about 2.0% rhenium, up to about 2.0% tantalum, up to about 1.0 % hafnium, balance essentially nickel and incidental impurities, wherein the sum weight percent of aluminum and titanium is from about 4.5 wt% to about 13 wt%. In addition, the ratio of the weight percentage of aluminum to titanium is greater than about 1:1, preferably greater than about 2:1.

IPC 8 full level
C22C 19/05 (2006.01)

CPC (source: EP)
C22C 19/056 (2013.01); **F05C 2201/0466** (2013.01)

Citation (search report)

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- [A] EP 1201778 A2 20020502 - UNITED TECHNOLOGIES CORP [US]
- [A] EP 0421229 A1 19910410 - GEN ELECTRIC [US]
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- [A] GB 1224804 A 19710310 - GEN ELECTRIC CO LTD [GB]
- [X] J.R. DAVIS: "Nickel, Cobalt, and their alloys", 2000, ASM INTERNATIONAL, MATERIALS PARK, OHIO, XP002421955

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EP 06126538 A 20061219; DE 602006017324 T 20061219; JP 2006342208 A 20061220