

Title (en)
NICKEL BASE SUPERALLOY COMPOSITIONS AND ARTICLES THEREOF

Title (de)
ZUSAMMENSETZUNGEN VON SUPERLEGIERUNGEN AUF BASIS VON NICKEL UND BAUTEILE DARAUS

Title (fr)
COMPOSITIONS DE SUPERALLIAGES À BASE DE NICKEL ET COMPOSANT EN CES COMPOSITIONS

Publication
EP 2449140 A1 20120509 (EN)

Application
EP 10727610 A 20100615

Priority
• US 2010038640 W 20100615
• US 79424410 A 20100604
• US 22194609 P 20090630

Abstract (en)
[origin: US2010329921A1] A superalloy composition comprising, in weight percent: about 6.2-6.6 Al, about 6.5-7.0 Ta, about 6.0-7.0 Cr, about 6.25-7.0 W, about 1.5-2.5 Mo, about 0.15-0.60 Hf, 0.0-1.0 Re, 6.5-9.0 Co, optionally, 0.03-0.06 C, optionally, up to about 0.004 B, optionally up to about 0.03 total of one or more rare earth elements selected from yttrium (Y), lanthanum (La), or cerium (Ce), balance nickel, such that the superalloy composition exhibits a stress rupture capability improvement of at least 15% over a base stress rupture capability of a base composition nominally comprising, in weight percent: 6.5 Al, 6.6 Ta, 6.0 Cr, 6.25 W, 1.5 Mo, 0.15 Hf, 0.0 Re, 7.5 Co. Articles incorporating the superalloy composition include a gas turbine engine component such as a high pressure turbine nozzle or nozzle segment.

IPC 8 full level
C22C 1/02 (2006.01); **C22C 19/05** (2006.01); **F01D 5/06** (2006.01); **F01D 9/02** (2006.01)

CPC (source: EP US)
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