

Title (en)
A NICKEL-BASED ALLOY

Title (de)
NICKELBASIERTE LEGIERUNG

Title (fr)
ALLIAGE À BASE DE NICKEL

Publication
EP 3697938 B1 20220525 (EN)

Application
EP 18788879 A 20181016

Priority
• GB 201716964 A 20171016
• GB 2018052973 W 20181016

Abstract (en)
[origin: GB2567492A] A nickel-based alloy comprising (by weight): 9.5-14.4 chromium, 3.8-9.6 cobalt, 0.6-5.1 % molybdenum, 0.7-6.2 % tungsten, 2.6-3.3 % aluminium, 2.3-5.6 % titanium, 0.01-0.1 % carbon, 0.001-0.1 % boron, 0.001-0.3 % zirconium, 0-4.0 % iron, 0-4.0 % niobium, 0-2.4 % tantalum, 0-0.5 % silicon, 0-0.1 % yttrium, 0-0.1 % lanthanum, 0-0.1 % cerium, 0-0.003 % sulphur, 0-0.25 % manganese, 0-0.5 % vanadium, 0-0.5 % copper and 0-0.5 % hafnium, with the balance being nickel and impurities and where $0.6\text{Ti} + 0.31\text{Nb} + 0.27\text{Ta} + 0.12\text{Al} \geq 3.7$. The alloy comprises 51-58 % by volume of gamma-prime phase at 850 °C and can be used to make turbine discs.

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

CPC (source: EP GB)
C22C 19/056 (2013.01 - EP GB); **F01D 5/06** (2013.01 - EP); **F05D 2300/17** (2013.01 - EP); **F05D 2300/177** (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
GB 201716964 D0 20171129; **GB 2567492 A 20190417**; **GB 2567492 B 20200923**; EP 3697938 A1 20200826; EP 3697938 B1 20220525; JP 2020537051 A 20201217; WO 2019077333 A1 20190425

DOCDB simple family (application)
GB 201716964 A 20171016; EP 18788879 A 20181016; GB 2018052973 W 20181016; JP 2020542211 A 20181016