

Title (en)
Turbine blade cooling

Title (de)
Turbinenschaufelkühlung

Title (fr)
Refroidissement d'une aube de turbine

Publication
EP 0913556 A3 20000726 (EN)

Application
EP 98308829 A 19981028

Priority
US 96212897 A 19971031

Abstract (en)
[origin: EP0913556A2] A blade (10) for a gas turbine engine is disclosed having several improved cooling features. The blade has a plurality of internal cooling passages. The blade has a tip cap aperture (46) and film cooling holes (20), arranged such that the rearmost cooling passage in the blade receives sufficient cooling in all areas to control local heating of the blade. The blade also has angled turbulence promoters to improve internal cooling and a specially shaped platform (14) to avoid heating of the blade platform edges. <IMAGE>

IPC 1-7
F01D 5/18

IPC 8 full level
F01D 5/18 (2006.01); **F01D 5/20** (2006.01); **F01D 5/30** (2006.01)

CPC (source: EP)
F01D 5/186 (2013.01); **F01D 5/187** (2013.01); **F01D 5/20** (2013.01)

Citation (search report)

- [XY] EP 0527554 A1 19930217 - HITACHI LTD [JP]
- [Y] US 4135857 A 19790123 - PANNONE JOHN L, et al
- [X] US 4753575 A 19880628 - LEVENGOOD JAMES L [US], et al
- [X] GB 2250548 A 19920610 - ROLLS ROYCE PLC [GB]
- [X] US 4992026 A 19910212 - OHTOMO FUMIO [JP], et al
- [X] US 5387085 A 19950207 - THOMAS JR THEODORE T [US], et al
- [A] US 5243759 A 19930914 - BROWN WESLEY D [US], et al
- [A] US 4278400 A 19810714 - YAMARIK GEORGE J, et al

Cited by
EP1731710A1; EP1111190A1; EP1760267A3; EP1279796A3; CN104420893A; US6672832B2; US6579061B1; US7121802B2; EP1760267A2; US7249934B2; US7097429B2; US7377747B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 0913556 A2 19990506; EP 0913556 A3 20000726; JP H11193701 A 19990721

DOCDB simple family (application)
EP 98308829 A 19981028; JP 30466498 A 19981027