

Title (en)
Air and steam-cooled gas turbine vane

Title (de)
Luft- und dampfgekühlte Gasturbinenschaufel

Title (fr)
Aube de turbine à refroidissement à air et à vapeur

Publication
EP 1126134 A1 20010822 (DE)

Application
EP 00103261 A 20000217

Priority
EP 00103261 A 20000217

Abstract (en)
The turbine blade (1) has a blade wall (3) with a blade part (4). The blade wall defines a first hollow chamber (21), and a second chamber (23), which is completely separate from the first one. The first chamber is closed relative to the blade part surface, and the second chamber is open toward that surface. The blade wall has a front flow edge (9), defining the first chamber, and cooled by steam, and an outlet flow edge (11) defining the second chamber, cooled by air. At least 3/4 of the blade wall are cooled by steam (17).

Abstract (de)
Die Erfindung betrifft eine Gasturbinenschaufel (1), die in getrennten Hohlräumen (21, 23) sowohl mit Luft (25) als auch mit Dampf (17) gekühlt wird. Insbesondere die Abströmkante 11 wird mit Luft (25) gekühlt, wodurch die Abströmkante (11) aerodynamisch günstig dünn ausführbar ist. Der größte Teil der Gasturbinenschaufel (1) wird Verdichterluft sparend dampfgekühlt. <IMAGE>

IPC 1-7
F01D 5/18

IPC 8 full level
F01D 5/18 (2006.01)

CPC (source: EP)
F01D 5/187 (2013.01)

Citation (applicant)
US 5320483 A 19940614 - CUNHA FRANCISCO J [US], et al

Citation (search report)
• [X] EP 0894946 A1 19990203 - MITSUBISHI HEAVY IND LTD [JP]
• [X] US 6019579 A 20000201 - FUKUNO HIROKI [JP], et al
• [X] EP 0955449 A1 19991110 - MITSUBISHI HEAVY IND LTD [JP]
• [DX] US 5320483 A 19940614 - CUNHA FRANCISCO J [US], et al

Cited by
EP1655452A3; EP1355040A3; EP1321627A1; FR3021697A1; CN102953767A; FR3021699A1; CN106470782A; US7819169B2; US10689985B2; WO2015181497A1; WO03054357A3; US10662789B2; US10570751B2; US11359498B2; WO2015181488A1

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