Title (en)

STEAM/GAS TURBINE PRESSURE STAGE WITH UNIVERSAL SHROUD

Title (de)

DAMPF-/GASTURBINENDRUCKSTUFE MIT UNIVERSALDECKBAND

Title (fr)

ETAGE DE PRESSION D'UNE TURBINE A VAPEUR/GAZ PRESENTANT UN ANNEAU DE RENFORCEMENT UNIVERSEL

Publication

EP 1623097 A4 20120627 (EN)

Application

EP 03726350 A 20030418

Priority

US 0312102 W 20030418

Abstract (en)

[origin: WO2004099572A1] Imperfect design of shroudS (8) or identical parts of the blades (7) of steam/gas turbines, including the adjoining seals, leads to a decrease in reliability and efficiency. These drawbacks are eliminated by the use of drilled radial holes (12) in the shroud of the blades (7). The transfer of steam through the shroud holes (12) results in the relief of the pressures gradient on the surface of the shroud (8) and prevents the formation of metal oxide, salt and other deposits on the inner surfaces of the shroud (8). The quantity and diameter of the holes (12), as well as their corresponding disposition and the values of radial clearances in shroud crowning seals (4, 5) regulate their efficiency.

IPC 8 full level

F01D 5/18 (2006.01); **F01D 5/14** (2006.01); **F01D 5/22** (2006.01); **F01D 11/08** (2006.01); **F01D 25/00** (2006.01)

CPC (source: EP)

F01D 5/143 (2013.01); **F01D 5/225** (2013.01); **F01D 11/08** (2013.01); **F01D 25/007** (2013.01); F05D 2220/31 (2013.01); F05D 2220/32 (2013.01); F05D 2260/602 (2013.01); F05D 2260/95 (2013.01); Y02T 50/60 (2013.01)

Citation (search report)

- [XI] US 4534701 A 19850813 - WISSER GERHARD [DE]
- [XI] SU 663861 A1 19790525 - LE POLT I IM M I KALININA [SU]
- [XI] JP S55146201 A 19801114 - HITACHI LTD
- [XI] DE 893649 C 19531019 - SIEMENS AG
- [XI] FR 2166494 A5 19730817 - ONERA (OFF NAT AEROSPATIALE)
- See references of WO 2004099572A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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