

Title (en)

Steam turbine with cooled hollow shaft and corresponding cooling method

Title (de)

Dampfturbine mit gekühlter Hohlwelle sowie entsprechendes Kühlverfahren

Title (fr)

Turbine à vapeur avec arbre creux refroidi et méthode de refroidissement correspondante

Publication

EP 1707739 A1 20061004 (DE)

Application

EP 05006651 A 20050324

Priority

EP 05006651 A 20050324

Abstract (en)

The turbine has a shaft (6) formed as a hollow shaft with an axial drill hole (8) flow throughable by a cooling medium (14). The cooling medium is pressed outwardly on a wall of the drill hole due to the centrifugal acceleration caused by the rotation of the shaft. A set of radial channels is inserted at ends of the drill hole in the shaft to supply or remove the medium and fluidic connectable with a storage for the cooling medium. An independent claim is also included for a method for cooling of a rotatably supported shaft of a steam turbine.

IPC 8 full level

F01D 5/08 (2006.01)

CPC (source: EP)

F01D 5/085 (2013.01); **F05D 2240/61** (2013.01)

Citation (search report)

- [X] US 6227799 B1 20010508 - KUHN RALF [DE], et al
- [X] US 5498131 A 19960312 - MINTO KARL D [US]
- [X] WO 2004113684 A1 20041229 - SIEMENS AG [DE], et al
- [X] DE 735505 C 19430517 - MASCHF AUGSBURG NUERNBERG AG
- [X] DE 1038839 B 19580911 - BASF AG
- [X] DE 915088 C 19540715 - KARL LEIST DR ING
- [X] DE 567576 C 19330105 - BBC BROWN BOVERI & CIE
- [A] GB 2136531 A 19840919 - ROLLS ROYCE
- [X] PATENT ABSTRACTS OF JAPAN vol. 008, no. 132 (M - 303) 20 June 1984 (1984-06-20)

Cited by

US2011308251A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1707739 A1 20061004

DOCDB simple family (application)

EP 05006651 A 20050324