

Title (en)
Rotor stage of a turbine

Title (de)
Rotorstufe einer Turbine

Title (fr)
Étage rotorique de turbine

Publication
EP 2746536 A1 20140625 (EN)

Application
EP 13196186 A 20131209

Priority
GB 201223193 A 20121221

Abstract (en)
A rotor stage of a turbine has a rotational axis (XX), a shroud (35) and radially inward thereof a turbine blade (32) defined partly by a pressure side wall (38), a suction side wall (37) and a tip portion (46). The tip portion (46) has a pressure side tip rib (70) and a tip cavity floor (74) defining a tip cavity (76). The pressure side tip rib has a width W ps , a height H ps above the tip cavity and defines a tip gap G ps with the shroud. The pressure side tip rib has a sloping side (78) joining the tip cavity floor and having an angle \pm ps to a radial line ZZ. The width W ps is in the range G ps to 5G ps , the height H ps is in the range 5G ps to 15G ps and the angle \pm ps is in the range 20° to 70°.

IPC 8 full level
F01D 5/20 (2006.01)

CPC (source: EP US)
F01D 5/187 (2013.01 - US); **F01D 5/20** (2013.01 - EP US); **F01D 11/08** (2013.01 - US); **F05D 2250/13** (2013.01 - EP US)

Citation (search report)

- [X] US 2010047057 A1 20100225 - KOPMELS MICHIEL [GB]
- [X] US 2009092500 A1 20090409 - BOURY JACQUES AUGUSTE AMEEDÉ [FR], et al
- [X] KR 20120048439 A 20120515 - UNIV SOGANG IND UNIV COOP FOUN [KR]
- [I] US 2004179940 A1 20040916 - LIANG GEORGE [US]
- [I] US 2005111979 A1 20050526 - LIANG GEORGE [US]
- [I] US 5660523 A 19970826 - LEE CHING-PANG [US]
- [I] US 5738491 A 19980414 - LEE CHING-PANG [US], et al

Cited by
CN104775854A; EP3428398A1; JP2020097930A; EP4056806A3; EP3623577A1; US11655717B2; US9850762B2; US10107108B2; WO2014186022A1; WO2019212478A1; US10801334B2; US11840940B2; EP3061914A1; CN105909315A; EP3575555A1

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2746536 A1 20140625; GB 201223193 D0 20130206; US 2014178207 A1 20140626

DOCDB simple family (application)
EP 13196186 A 20131209; GB 201223193 A 20121221; US 201314100784 A 20131209