

Title (en)  
Axial flow turbine with low shroud leakage losses

Title (de)  
Axialturbine mit geringen Leckageverlusten

Title (fr)  
Turbine à flux axial avec des pertes de fuites réduites

Publication  
**EP 2096262 A1 20090902 (EN)**

Application  
**EP 08003488 A 20080226**

Priority  
EP 08003488 A 20080226

Abstract (en)  
An axial flow turbine (1) comprises a turbine casing (7) and a blade ring (2) having a shroud (5) being spaced apart from the casing thereby forming a radial tip clearance (8), through which a leakage flow is passing during operation of the turbine, wherein the casing (7) comprises a deflector (11) arranged outside the tip clearance and adapted to alter the cavity flow such that the leakage flow is turned from axial direction to radial direction and/or such that a downstream part of the cavity (8) is aerodynamically blocked by the deflector.

IPC 8 full level  
**F01D 5/20** (2006.01); **F01D 11/08** (2006.01)

CPC (source: EP)  
**F01D 5/20** (2013.01); **F01D 5/225** (2013.01); **F01D 11/08** (2013.01); **F05B 2240/33** (2013.01); **F05D 2220/31** (2013.01); **F05D 2240/126** (2013.01); **F05D 2250/314** (2013.01)

Citation (search report)

- [X] JP 2007321721 A 20071213 - TOSHIBA CORP
- [X] US 2004223844 A1 20041111 - FARRELL ALISON CAROL [US], et al
- [X] DE 1953710 A1 19700430 - ELIN UNION AG
- [X] JP 2004011553 A 20040115 - MITSUBISHI HEAVY IND LTD
- [X] EP 1767746 A1 20070328 - SIEMENS AG [DE]
- [X] GB 2417053 A 20060215 - ROLLS ROYCE PLC [GB]
- [A] FR 2439869 A1 19800523 - GERRY ULRICH [GB]

Cited by  
JP2012062863A; JP2014084816A; EP2725201A3; CN108119189A; JP2014234714A; EP2292897A1; JP2019203398A; US11339676B2; US9453417B2; US11519287B2; US9388701B2; JP2016194306A; WO2020158105A1; WO2011029420A1; WO2019131011A1; WO2011054341A3; WO2020158106A1; US9726027B2; US11655723B2; JP2019120140A; JP2020122445A; CN113383147A; US9476315B2; CN102822450A; CN103097666A; EP2578810A4; KR101491971B1; JP2020122444A; WO2012036068A1; WO2020158104A1; JP2012154201A; EP2554796A4; US2015132114A1; JP2020122446A; CN113631797A; CN114776389A

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**EP 2096262 A1 20090902**

DOCDB simple family (application)  
**EP 08003488 A 20080226**