

Title (en)

Turbomachine with reduced tip leakage flow

Title (de)

Turbomaschine mit reduzierter Schaufelspitzenleckströmung

Title (fr)

Turbomachine avec débit de fuite d'extrémité réduit

Publication

EP 2826961 A1 20150121 (EN)

Application

EP 13177237 A 20130719

Priority

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Abstract (en)

The invention refers to a turbomachine, such as a turbine or a compressor, with a reduced tip leakage flow. It is an object of the invention to provide a constructionally simple and effective solution for reducing the amount of over-tip leakage flow between the stationary and the rotating components in the turbomachine, by applying measures for increasing the flow losses within the clearance gap between said components, e.g. the shroud of a rotating blade and the opposite flow duct delimiting segment, which will ultimately lead to an increased efficiency of the turbomachine. The invention is based on the idea to provide a number of dimples (10), impressed at least in part into the surfaces (7) of the flow-delimiting contours within the clearance gap (4) between the stationary and rotating components.

IPC 8 full level

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CPC (source: EP)

F01D 11/02 (2013.01); **F01D 11/08** (2013.01); **F01D 11/10** (2013.01)

Citation (applicant)

WO 2004083651 A1 20040930 - VIDA NIKOLAUS [DE]

Citation (search report)

- [XII] DE 102007046252 A1 20080403 - GEN ELECTRIC [US]
- [XII] US 6155778 A 20001205 - LEE CHING-PANG [US], et al
- [X] EP 1024251 A2 20000802 - GEN ELECTRIC [US]
- [AD] WO 2004083651 A1 20040930 - VIDA NIKOLAUS [DE]

Cited by

CN112437832A

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

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