Title (en)

METHOD FOR DESIGNING A TURBINE OF AN AIRCRAFT ENGINE

Title (de)

VERFAHREN ZUR AUSLEGUNG EINER TURBINE EINES FLUGTRIEBWERKS

Title (fr)

PROCEDE DE CONCEPTION D'UNE TURBINE D'UN MOTEUR D'AERONEF

Publication

EP 1738061 B1 20120502 (DE)

Application

EP 05732126 A 20050311

Priority

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Abstract (en)

[origin: WO2005100750A1] The invention relates to a low-pressure turbine of a gas turbine. The turbine comprises a number of stages arranged one behind the other in an axial manner in the flow-through direction of the turbine. Each stage is formed from a fixed vane ring having a number of vanes and from a rotating blade ring having a number of blades. Each stage is characterized by a characteristic value vane-to-blade ratio that indicates the ratio of the number of vanes to the number of blades within a stage. One of the stages of the turbine is designed in such a manner that, in the event of noise-critical conditions of the turbine, the characteristic value vane-to-blade ratio of this stage is between a lower cut-off limit for mode k=-1 of the blade passing frequency (BPF) of said stage and an upper cut-off limit for the mode k=-2 of the blade passing frequency (BPF) of this stage.

IPC 8 full level

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CPC (source: EP US)

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Cited by

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