

Title (en)

Sealing apparatus at the blade shaft of a rotor stage of an axial turbomachine and the use thereof

Title (de)

Abdichtvorrichtung an dem Schaufelschaft einer Rotorstufe einer axialen Strömungsmaschine und ihre Verwendung

Title (fr)

Dispositif d'étanchéité sur l'arbre à aubes d'un étage de rotor d'une turbomachine axiale et son utilisation

Publication

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Application

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Abstract (en)

[origin: WO2010088881A1] A sealing apparatus (1) at a blade shaft (4) of a rotor stage of an axial turbomachine, a plurality of blades being arranged in the circumferential direction next to each other on a rotor (5), and the sealing apparatus (1) comprising base plates that protrude at the blade shaft (4) in the axial direction and bulkhead (7, 7') that extend in the radial direction along the blade shaft (4), characterized in that from the base plate to the bulkhead (7, 7') preferably a rounded or parabolic transition cross-section is provided, wherein at least one of the bulkheads (7, 7') is offset with respect to the blade root edge (14, 14') in the direction of the radial longitudinal axis (13) of the blade shaft (4). As a result of the present invention, a reduction of the stresses introduced by torsion or centrifugal forces at the ends of the bulkheads at the blade root is achieved, which allows the blade root length to be reduced in the axial direction. In this way, a cost-effective production of the components, less material stress of the component, increased output of the turbomachine, and a reduced risk of breakage in the event of plate shear during operation of the turbomaschine are made possible.

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