Title (en)

FASTENING OF A TURBINE BLADE WITH TREE-SHAPED ROOT IN A TURBINE ROTOR BY MEANS OF DEFORMABLE FIXATION WEDGE AND A SECURING ELEMENT

Title (de)

FIXIERUNG EINER TURBINENSCHAUFEL MIT TANNENBAUMFÖRMIGEN FUSS IN TURBINENROTOR MITTELS EINES DEFORMIERBAREN FIXIERKEILS UND SICHERUNGSELEMENTS

Title (fr)

FIXATION D'AUBE DE TURBINE AVEC PIED EN FORME D'ARBRE AU ROTOR DE TURBINE AVEC CALE DÉFORMABLE ET ÉLÉMENT DE FIXATION

Publication

EP 3650652 A1 20200513 (EN)

Application

EP 18205174 A 20181108

Priority

EP 18205174 A 20181108

Abstract (en)

The invention relates to a fastening arrangement for a turbine blade (1) with tree-shaped root (10) in a rotor groove (20), wherein the root (10) at a radially inner side (11) comprises a recess (110). A deformable locking wedge (3) comprising a deformation groove (30) is inserted into the recess (110). The locking wedge (3) is in contact with a face (111) of the recess (110) and secured against axial displacement outwardly from the groove (20) by means of a securing element, namely a securing pin (4) detachably arranged in said rotor groove (20). Thus, the mechanical structure of the rotor groove (20) may be improved while preventing unwanted displacement of the blade (1) in the groove (20). The locking wedge (3) may comprise lamellas (31) for receiving the securing pin (4).

IPC 8 full level

F01D 5/32 (2006.01)

CPC (source: EP)

F01D 5/326 (2013.01); F05D 2260/36 (2013.01); F05D 2260/37 (2013.01)

Citation (applicant)

- US 4762775 A 19880809 - OGAWA TADASHI [JP], et al
- EP 1643082 A1 20060405 - SIEMENS AG [DE]

Citation (search report)

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- [X] US 2012177498 A1 20120712 - YARAVA PRADEEP KUMAR [IN], et al
- [XD] EP 1643082 A1 20060405 - SIEMENS AG [DE]
- [A] GB 2038959 A 19800730 - GEN ELECTRIC
- [A] US 2013216387 A1 20130822 - TORKAMAN ALEX [US], et al
- [A] EP 1860280 A1 20071128 - SIEMENS AG [DE]

Designated contracting state (EPC)

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DOCDB simple family (publication)

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