

Title (en)
TURBINE VANE PROVIDED WITH A RECESS FOR EMBRITTLEMENT OF A FRANGIBLE SECTION

Title (de)
TURBINENSCHAUFEL MIT EINER AUSNEHMUNG ZUR VERSPRÖDUNG EINES ZERBRECHLICHEN ABSCHNITTS

Title (fr)
AUBE DE TURBINE DOTÉE D'UNE CAVITÉ DE FRAGILISATION D'UNE SECTION FRANGIBLE

Publication
EP 3976931 A1 20220406 (FR)

Application
EP 20726420 A 20200518

Priority
• FR 1905588 A 20190527
• EP 2020063781 W 20200518

Abstract (en)
[origin: WO2020239490A1] The invention relates to a turbine vane of a turbine engine which comprises a blade (11) and a root (12), the root comprising a stilt (13) having lateral flanks with a curvilinear profile, said stilt comprising a frangible zone suitable for undergoing a breakage of the stilt if radial forces higher than a threshold are exerted on the vane, in particular centrifugal forces during an overspeed state of the turbine. The frangible zone comprises at least one oblong frangibility recess (17) formed on at least one of the lateral flanks of the stilt, said oblong recess extending in an axial direction of the stilt along a longitudinal axis (X-X') parallel to or included in a minimum cross-sectional plane (P) which contains a minimum cross-section of the stilt.

IPC 8 full level
F01D 5/30 (2006.01); **F01D 21/02** (2006.01); **F01D 21/04** (2006.01)

CPC (source: EP US)
F01D 5/3007 (2013.01 - EP US); **F01D 21/02** (2013.01 - EP US); **F01D 21/045** (2013.01 - EP); **F01D 5/147** (2013.01 - US); **F01D 21/045** (2013.01 - US); **F05D 2220/321** (2013.01 - EP); **F05D 2250/294** (2013.01 - EP US); **F05D 2250/712** (2013.01 - US); **F05D 2260/941** (2013.01 - EP US); **F05D 2270/021** (2013.01 - US)

Citation (search report)
See references of WO 2020239490A1

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2020239490 A1 20201203; CA 3139054 A1 20201203; CN 113891983 A 20220104; CN 113891983 B 20231222; EP 3976931 A1 20220406; EP 3976931 B1 20230809; FR 3096727 A1 20201204; FR 3096727 B1 20210625; PL 3976931 T3 20231204; US 11846206 B2 20231219; US 2022235665 A1 20220728

DOCDB simple family (application)
EP 2020063781 W 20200518; CA 3139054 A 20200518; CN 202080040046 A 20200518; EP 20726420 A 20200518; FR 1905588 A 20190527; PL 20726420 T 20200518; US 202017614039 A 20200518