

Title (en)
VANE MADE OF COMPOSITE MATERIAL COMPRISING A METAL REINFORCEMENT, AND METHOD FOR MANUFACTURING SUCH A VANE

Title (de)
LEITSCHAUFEL AUS VERBUNDMATERIAL MIT EINER METALLVERSTÄRKUNG UND VERFAHREN ZUR HERSTELLUNG EINER SOLCHEN LEITSCHAUFEL

Title (fr)
AUBE EN MATÉRIAU COMPOSITE COMPORTANT UN RENFORT MÉTALLIQUE ET PROCÉDÉ DE FABRICATION D'UNE TELLE AUBE

Publication
EP 4401956 A1 20240724 (FR)

Application
EP 22785762 A 20220905

Priority
• FR 2109569 A 20210913
• FR 2022051674 W 20220905

Abstract (en)
[origin: WO2023037068A1] The invention relates to a method for manufacturing a vane (100) made of composite material for a turbine engine, comprising the steps of: - three-dimensionally weaving fibres and producing a fibrous preform (100'), - reinforcing an edge (108') of the preform (100') intended to form a leading edge of a blade of the vane, by integrating a metal reinforcement (130) onto this edge (108'), - mounting the preform (100') and the reinforcement (130) in a mould, - densifying the preform (100') with a matrix in order to form the vane (100), wherein, before integration of the reinforcement (130), the method comprises a step of introducing at least one reinforcement support (140) designed to be inserted between the reinforcement (130) and the edge (108') and wherein, in the densification step, the support (140) is surrounded by the matrix in order to adhesively bond the edge (108') and the reinforcement (130) with a predefined, minimal and homogeneous thickness.

IPC 8 full level
B29C 70/68 (2006.01); **B29C 37/00** (2006.01); **B29C 70/08** (2006.01); **B29C 70/20** (2006.01); **B29C 70/44** (2006.01); **B29C 70/48** (2006.01); **B29D 99/00** (2010.01); **B32B 7/12** (2006.01); **B64C 27/473** (2006.01); **F01D 5/14** (2006.01); **F01D 5/28** (2006.01); **B29K 705/00** (2006.01); **B29L 31/08** (2006.01)

CPC (source: EP US)
B29C 70/08 (2013.01 - EP); **B29C 70/205** (2013.01 - EP); **B29C 70/44** (2013.01 - EP); **B29C 70/443** (2013.01 - EP); **B29C 70/48** (2013.01 - EP); **B29C 70/68** (2013.01 - EP); **B29C 70/682** (2013.01 - US); **B29C 70/70** (2013.01 - US); **B29D 99/0025** (2013.01 - EP); **B32B 7/12** (2013.01 - EP); **F01D 5/282** (2013.01 - EP); **F01D 9/041** (2013.01 - EP); **F01D 25/162** (2013.01 - EP); **B29K 2705/00** (2013.01 - EP US); **B29K 2995/0077** (2013.01 - US); **B29K 2995/0097** (2013.01 - US); **B29L 2031/08** (2013.01 - EP US); **B32B 2603/00** (2013.01 - EP); **B64C 2027/4736** (2013.01 - EP); **F05D 2220/36** (2013.01 - EP); **F05D 2230/50** (2013.01 - EP); **F05D 2300/603** (2013.01 - EP); **F05D 2300/6034** (2013.01 - EP)

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
FR 3126914 A1 20230317; **FR 3126914 B1 20240308**; CN 117940273 A 20240426; EP 4401956 A1 20240724; MX 2024002955 A 20240326; US 2024239062 A1 20240718; WO 2023037068 A1 20230316

DOCDB simple family (application)
FR 2109569 A 20210913; CN 202280060926 A 20220905; EP 22785762 A 20220905; FR 2022051674 W 20220905; MX 2024002955 A 20220905; US 202218684142 A 20220905