

Title (en)

Turbo machine with fluid re-injection to influence the boundary layer

Title (de)

Strömungsmaschine mit Fluidrückfuhr zur Grenzschichtbeeinflussung

Title (fr)

Turbomachine avec réinjection de fluide pour influencer la couche limite

Publication

EP 2110559 B1 20181212 (DE)

Application

EP 09003693 A 20090313

Priority

DE 102008019603 A 20080418

Abstract (en)

[origin: EP2110559A2] The machine has a main flow path confined by a wall, and a row of blades e.g. rotor blades or stator vanes, fixedly mounted on the wall. A fluid intake opening (9) and fluid supply opening (10) are located in the wall in an area of the blades, where the openings are connected by a fluid return path (11). A circumferential extension of the supply opening is less than distance between two adjacent blades. One blade has a blade section with a profile camber comprising an angular difference of 35 degrees of tangents drawn on a profile skeleton line at leading and trailing edges of the blade.

IPC 8 full level

F04D 29/52 (2006.01); **F04D 29/32** (2006.01); **F04D 29/68** (2006.01)

CPC (source: EP US)

F04D 29/321 (2013.01 - EP US); **F04D 29/542** (2013.01 - EP US); **F04D 29/563** (2013.01 - EP US); **F04D 29/681** (2013.01 - EP US); **F04D 29/682** (2013.01 - EP US); **F04D 29/684** (2013.01 - EP US); **F01D 17/162** (2013.01 - EP US)

Cited by

EP2871368A1; FR3107917A1; US11326619B2; US10066633B2; US10047619B2; WO2010015241A3; WO2019034740A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 2110559 A2 20091021; **EP 2110559 A3 20150325**; **EP 2110559 B1 20181212**; DE 102008019603 A1 20091022; US 2009263233 A1 20091022; US 8043046 B2 20111025

DOCDB simple family (application)

EP 09003693 A 20090313; DE 102008019603 A 20080418; US 38576709 A 20090417