Title (en)

TANGENTIAL FLUID TURBINE

Title (de)

TANGENTIAL-FLUIDTURBINE

Title (fr)

TURBINE TANGENTIELLE À FLUIDE

Publication

EP 4368827 A1 20240515 (DE)

Application

EP 22207181 A 20221114

Priority

EP 22207181 A 20221114

Abstract (en)

[origin: WO2024104949A1] The present invention relates to a tangential fluid turbine which comprises: a shaft (12); a rotor (13) which is connected to and concentric with respect to the shaft (12); vanes (5, 5') which are attached to the rotor (13); a fluid inlet channel (1); a fluid outlet channel (2); and a circular-arc-shaped fluid circulation channel (11) which is concentric with respect to the shaft (12) and which connects the fluid inlet channel (1) and fluid outlet channel (2) and in which the vanes (5, 5') of the rotor (13) are moved by the fluid flowing through the fluid circulation channel, thus causing the rotational movement of the rotor (13). The tangential fluid turbine is characterized in that the fluid inlet channel (1) is designed such that the fluid enters the fluid circulation channel (11) in a tangential direction with respect to a circle that is concentric with respect to the shaft (12), and in that the fluid outlet channel (2) is designed such that the fluid exits the fluid circulation channel (11) in a tangential direction with respect to a circle that is concentric with respect to the shaft (12). The present invention also relates to: a method for operating such a tangential fluid turbine; the use of such a tangential fluid turbine in a motor vehicle, ship or power plant; and a motor vehicle, ship or power plant comprising such a tangential turbine.

Abstract (de)

Die vorliegende Erfindung betrifft eine Tangential-Fluidturbine, die eine Welle 12, einen mit der Welle 12 verbundenen, konzentrischen Rotor 13, am Rotor 13 angebrachte Schaufeln 5,5', einen Fluideintrittskanal 1, einen Fluidaustrittskanal 2, und einen mit der Welle 12 konzentrischen, kreisbogenförmigen Fluidumlaufkanal 11, der den Fluideintritts- 1 und Fluidaustrittskanal 2 verbindet und in dem die Schaufeln 5, 5' des Rotors 13 durch das durch den Fluidumlaufkanal strömende Fluid bewegt werden, wodurch die Rotationsbewegung des Rotors 13 bewirkt wird, umfasst,die dadurch gekennzeichnet ist, dassder Fluideintrittskanal 1 so beschaffen ist, dass das Fluid in tangentialer Richtung zu einem zur Welle 12 konzentrischen Kreis in den Fluidumlaufkanal 11 eintritt und der Fluidaustrittskanal 2 so beschaffen ist, dass das Fluid in tangentialer Richtung zu einem zur Welle 12 konzentrischen Kreis aus dem Fluidumlaufkanal 11 austritt, einem Verfahren zum Betrieb einer solchen Tangential-Fluidturbine, sowie die Verwendung einer solchen Tangential-Fluidturbine in einem Kraftfahrzeug, Schiff, oder Kraftwerk.

IPC 8 full level

F03B 17/06 (2006.01)

CPC (source: EP)

F03B 17/062 (2013.01); F05B 2220/20 (2013.01); F05B 2240/14 (2013.01); F05B 2250/141 (2013.01)

Citation (search report)

- [XI] DE 3911125 A1 19901011 - EGGS ELEKTROTECHNIK [DE]
- [A] US 2020347819 A1 20201105 - BONFIGLIO LUDOVICO [IT]
- [A] DE 1476913 A1 19691016 - TOTH DR FERENC
- [A] DE 102013010379 A1 20141224 - REAC ENERGY GMBH [DE]

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4368827 A1 20240515; WO 2024104949 A1 20240523

DOCDB simple family (application)

EP 22207181 A 20221114; EP 2023081593 W 20231113