Title (en)

MULTISTAGE RADIAL TURBINE

Title (de)

MEHRSTUFIGE RADIALTURBINE

Title (fr)

TURBINE RADIALE MULTIÉTAGÉE

Publication

EP 2518280 A1 20121031 (EN)

Application

EP 10839038 A 20100930

Priority

- JP 2009292600 A 20091224
- JP 2010067065 W 20100930

Abstract (en)

A multi-stage radial turbine that is capable of reducing the number of bearings and of improving the conversion efficiency is provided. Provided are a plurality of radial turbine rotor blades (5) that are attached at intervals to a single rotating shaft (3); a plurality of nozzles (19) that are individually installed on an upstream side of each of the radial turbine rotor blades and that accelerate a flow of fluid; a connecting channel portion (9) that connects gas an outlet portion (23) of the radial turbine rotor blade (5) on the front stage side and an upstream side of the nozzle (19) on the rear stage side, the connecting channel portion (9) being provided with a U-shaped bent portion (25) that deflects outward in the radial direction the flow of fluid that is made to flow out from the radial turbine rotor blade (5) in the shaft direction; a vane portion having a plurality of deflecting vanes (27) that deflect the flow of fluid inward in a rotation direction (R) while guiding the flow of fluid from the U-shaped bent portion (25) outward in the radial direction; and a return bent portion (31) that deflects inward in the radial direction the flow that is made to flow out from the vane portion (29) while swirling outward in the radial direction.

IPC 8 full level

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CPC (source: EP US)

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