

Title (en)
Radial pump

Title (de)
Radialpumpe

Title (fr)
Pompe radiale

Publication
EP 1310678 A1 20030514 (DE)

Application
EP 02450257 A 20021107

Priority
AT 17612001 A 20011108

Abstract (en)
Radial pump (1), especially a cooling pump for an internal combustion engine, comprises an impeller (2) with impeller blades (5), and a guiding device (4) with at least one temperature- and/or rotational speed-sensitive element for temperature-dependent flow control. At least one blade and/or the guiding device is designed as a rotational speed-sensitive element. The blades can be elastically deformed by Coriolis forces of the coolant flow. The angles of emersion defined by the blades and the tangential planes of the blades decrease with increasing rotational speed. <??>Preferred Features: The blades are made of a flexible elastic material. The blades are also designed as a temperature-sensitive element and consist at least partly of bimetal. The blades can be deformed by a change in temperature of the coolant and the angles of emersion defined by the blades and the tangential planes of the blades increase with increasing temperature.

Abstract (de)
Die Erfindung betrifft eine Radialpumpe (1), insbesondere Kühlmittelpumpe für eine Brennkraftmaschine, mit einem Laufradschaufeln (5) aufweisenden Laufrad (2) und einer Leiteinrichtung (4) mit zumindest einem temperatur- und/oder drehzahlsensitiven Element zur temperaturabhängigen Steuerung des Förderstromes, wobei zumindest eine Laufradschaufel (5) und/oder die Leiteinrichtung (4) als drehzahlsensitives Element ausgebildet ist. Um den Wirkungsgrad zu erhöhen ist vorgesehen, dass die Laufradschaufeln (5) durch Corioliskräfte der Kühlmittelströmung elastisch verformbar sind, wobei vorzugsweise zwischen Laufradschaufeln (5) und Laufradtangentialebenen (ϵ) definierte Austrittswinkel (α) mit zunehmender Drehzahl abnehmen. <IMAGE>

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F04D 15/00; **F04D 29/24**

IPC 8 full level
F04D 15/00 (2006.01)

CPC (source: EP US)
F04D 15/0027 (2013.01 - EP US); **F04D 15/0038** (2013.01 - EP US); **F04D 29/247** (2013.01 - EP US); **Y10S 416/50** (2013.01 - EP US)

Citation (search report)

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