

Title (en)

Cooling water pump for use on the housing of an internal combustion engine.

Title (de)

Kühlwasserpumpe zur Verwendung an dem Pumpengehäuse einer Brennkraftmaschine.

Title (fr)

Pompe à eau pour circuit de refroidissement pour usage sur le carter d'un moteur à combustion interne.

Publication

EP 0491130 A1 19920624 (DE)

Application

EP 91117710 A 19911017

Priority

DE 4040200 A 19901215

Abstract (en)

[origin: US5224823A] A cooling water pump for a pump housing of an internal combustion engine includes a bearing cover that can be fixed within a bore of the pump housing. The pump also includes a pump shaft and a bearing. The pump shaft is rotatably mounted in the bearing. An impeller and a pulley are each coupled to the pump shaft, and the impeller has an inlet opening that is circular in shape and concentric with the impeller. The inlet opening is disposed at the end of the impeller that faces the pump housing in the axial direction. A first concentrically formed covering covers the impeller and is impermeable to liquids flowing in the axial direction. The first covering is disposed in first zones located radially beyond the inlet opening, and the impeller is open in second zones located on a side of the impeller axially opposite the first covering.

Abstract (de)

Eine Kühlwasserpumpe zur Verwendung an dem Pumpengehäuse (1) einer Brennkraftmaschine, bei der das Flügelrad (5) an dem dem Pumpengehäuse (1) zugewandten, axialen Ende mit einer kreisförmig begrenzten, konzentrischen Einlauföffnung (7) versehen ist, wobei das Flügelrad (5) in den radial außerhalb der Einlauföffnung (7) liegenden Zonen durch eine in axialer Richtung flüssigkeitsundurchlässige, konzentrisch ausgebildete, erste Abdeckung (8) überdeckt ist und wobei das Flügelrad (5) in den der ersten Abdeckung (8) axial gegenüberliegenden Zonen (9) des anderen Endes in axialer Richtung offen ist. <IMAGE>

IPC 1-7

F04D 1/00; **F04D 29/08**; **F04D 29/22**; **F04D 29/42**

IPC 8 full level

F04D 1/00 (2006.01); **F04D 29/08** (2006.01); **F04D 29/22** (2006.01); **F04D 29/42** (2006.01)

CPC (source: EP US)

F04D 1/00 (2013.01 - EP US); **F04D 29/086** (2013.01 - EP US); **F04D 29/2216** (2013.01 - EP US); **F04D 29/426** (2013.01 - EP US)

Citation (search report)

- [X] US 2922374 A 19600126 - PERISH PETER W
- [A] US 4655684 A 19870407 - HAENTJENS WALTER D [US]
- [A] FR 1411148 A 19650917
- [A] US 3079866 A 19630305 - WALKER GEORGE D
- [A] DESIGN ENGINEERING. Januar 1989, LONDON GB Seiten 14 - 17; 'INNOVATIVE PROCESS PUMP COMBINES HIGH PERFORMANCE WITH EASY MAINTENANCE'

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0491130 A1 19920624; **EP 0491130 B1 19940406**; AT E104022 T1 19940415; DE 4040200 A1 19920617; DE 4040200 C2 19941117; DE 59101330 D1 19940511; DK 0491130 T3 19940502; ES 2051063 T3 19940601; US 5224823 A 19930706

DOCDB simple family (application)

EP 91117710 A 19911017; AT 91117710 T 19911017; DE 4040200 A 19901215; DE 59101330 T 19911017; DK 91117710 T 19911017; ES 91117710 T 19911017; US 80727291 A 19911213