

Title (en)  
Submersible motor pump.

Title (de)  
Tauchpumpenaggregat.

Title (fr)  
Motopompe plongeante.

Publication  
**EP 0355781 A2 19900228 (DE)**

Application  
**EP 89115430 A 19890822**

Priority  
DE 3828512 A 19880823

Abstract (en)  
[origin: JPH0275794A] PURPOSE: To efficiently disperse heat from a waste heat source all the time by forming a hollow and closable shaft, partially filling liquid in the hollow shaft and forming a heat pipe system. CONSTITUTION: A shaft 7 is formed as a hollow and closable shaft by a closure member 18, and a liquid 17 is partially filled into the hollow shaft. Before a pump device is put into work, the closure member 18 is taken off and the liquid 17 is filled into the hollow shaft 7. After that, while removing the remainder air from the hollow shaft, the hollow part inside the shaft is air sealed and liquid sealed by the closure member 18. Therefore, the shaft thus produced, with the liquid 17 in the hollow part together, forms a heat pipe system for dispersal of loss heat from a rotor chamber 13 of the motor 2.

Abstract (de)  
Es ist ein Tauchpumpenaggregat beschrieben, das aus einer Pumpe (1,3) und einem die Pumpe (1, 3) antreibenden Naßläufer-Motor (2) besteht. Der Motor (2) und die Pumpe (1, 3) weisen eine gemeinsame Welle (7) auf. Zum Abtransport von Verlustwärme aus dem Rotorraum (13) des Motors (2) in die Wärmesenke der durch die Pumpe (1, 3) zu fördernden Flüssigkeit ist die gemeinsame Welle (7) als verschließbare Hohlwelle ausgebildet, die zum Teil mit einem Fluid (17) gefüllt ist. Die Welle (7) bildet mit dem Fluid (17) ein rotierendes Heat-Pipe-System.

IPC 1-7  
**F04D 13/10; F04D 29/04; F04D 29/58**

IPC 8 full level  
**F04D 13/08** (2006.01); **F04D 13/10** (2006.01); **F04D 29/04** (2006.01); **F04D 29/043** (2006.01); **F04D 29/58** (2006.01)

CPC (source: EP US)  
**F04D 13/10** (2013.01 - EP US); **F04D 29/043** (2013.01 - EP US); **F04D 29/5893** (2013.01 - EP US)

Cited by  
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**EP 89115430 A 19890822**; DE 3828512 A 19880823; JP 21427389 A 19890822; US 39570489 A 19890817