

Title (en)

ELECTROMAGNETICALLY SUSPENDED AND ROTATED CENTRIFUGAL PUMPING APPARATUS AND METHOD

Title (de)

ELEKTROMAGNETISCH GELAGERTE UND ANGETRIEBENE KREISELPUMPE SOWIE ENTSPRECHENDES VERFAHREN

Title (fr)

APPAREIL DE POMPAGE ROTATIF HYBRIDE COMBINANT SUSTENTATION MAGNETIQUE ET FORCE CENTRIFUGE, ET PROCEDE CORRESPONDANT

Publication

EP 0897477 A4 20010516 (EN)

Application

EP 97923548 A 19970505

Priority

- US 9707567 W 19970505
- US 1685796 P 19960503

Abstract (en)

[origin: WO9742414A1] An apparatus and method for a centrifugal pump (10) for pumping sensitive biological fluid which includes (i) an integral impeller and rotor (21) which is entirely supported and rotated magnetically by electromagnets (52, 54), (ii) a pump housing and arcuate passages (32, 34, 36) for fluid flow and containment, (iii) a brushless driving motor (40) embedded and integral with the pump housing, (iv) a power supply, and (v) specific electronic sensing and control algorithms -- all fitly jointed together to provide efficient, durable and low maintenance pump operation. A specially designed impeller and pump housing provide the mechanism for transport and delivery of fluid through the pump to a pump output port with reduced fluid turbulence.

IPC 1-7

F04B 49/06; **F04B 17/00**; **F04B 35/04**; **F03B 13/00**; **F04D 7/00**; **F04D 29/04**

IPC 8 full level

A61M 1/10 (2006.01); **A61M 60/122** (2021.01); **A61M 60/232** (2021.01); **A61M 60/422** (2021.01); **A61M 60/538** (2021.01); **A61M 60/562** (2021.01); **A61M 60/806** (2021.01); **A61M 60/822** (2021.01); **F04B 49/06** (2006.01); **F04D 13/06** (2006.01); **F04D 15/00** (2006.01); **F04D 29/04** (2006.01); **F04D 29/048** (2006.01)

CPC (source: EP KR US)

A61M 60/122 (2021.01 - EP KR US); **A61M 60/232** (2021.01 - EP KR US); **A61M 60/419** (2021.01 - EP US); **A61M 60/422** (2021.01 - EP KR US); **A61M 60/538** (2021.01 - EP KR US); **A61M 60/562** (2021.01 - EP KR US); **A61M 60/806** (2021.01 - EP KR US); **A61M 60/822** (2021.01 - EP KR US); **F04B 49/06** (2013.01 - KR); **F04D 13/0646** (2013.01 - EP); **F04D 29/048** (2013.01 - EP US); **F16C 32/0448** (2013.01 - EP); **A61M 60/148** (2021.01 - EP US); **A61M 60/824** (2021.01 - EP US); **A61M 2205/3334** (2013.01 - EP); **F05B 2240/515** (2013.01 - EP); **F16C 2316/18** (2013.01 - EP); **F16C 2360/44** (2013.01 - EP)

Citation (search report)

- No further relevant documents disclosed
- See references of WO 9742414A1

Designated contracting state (EPC)

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 9742414 A1 19971113; AU 2932497 A 19971126; AU 722998 B2 20000817; BR 9709305 A 19990810; CA 2253666 A1 19971113; CN 1228140 A 19990908; EP 0897477 A1 19990224; EP 0897477 A4 20010516; JP 2000510929 A 20000822; KR 20000010736 A 20000225

DOCDB simple family (application)

US 9707567 W 19970505; AU 2932497 A 19970505; BR 9709305 A 19970505; CA 2253666 A 19970505; CN 97195201 A 19970505; EP 97923548 A 19970505; JP 54011497 A 19970505; KR 19980708847 A 19981103