

Title (en)
Turbine motor pump and rotary pump.

Title (de)
Turbinenmotorpumpe und Drehpumpe.

Title (fr)
Motopompe à turbine et pompe rotative.

Publication
EP 0330640 A1 19890830 (FR)

Application
EP 89870011 A 19890118

Priority
BE 8800060 A 19880118

Abstract (en)
[origin: JPH029991A] PURPOSE: To reduce troubles and damages by increasing the pressure in a center circular area higher than sleeve inner pressure with a means that injects pressure liquid to a suction chamber of a turbine, and lubricating the interval between bearing and sleeve with the pressure difference. CONSTITUTION: A turbine driven rotary pump 1 for dredging a river injects pressurized motive fluid from an inlet 17 to a suction chamber 13, drains it out from an outlet 18 through a deviation blade 16, rotates a rotary sleeve 12 that is fixed with a blade 15, so the liquid from an inhalation flange 7 is exhausted to an outlet connection part 10 by rotation of a vane 24 in one body with the sleeve 12. The sea water being a working fluid is injected from the suction inlet 17 to the suction chamber 13 by a pressure higher than the inner pressure of the rotation sleeve 12 and the pressure of outlet chamber 14 goes higher also, so the working fluid flows into the interval between the bearing 19 and the sleeve 12 sealed by a gaskets 20 to 23 to lubricate it. Therefore, troubles and damages to the pump are reduced.

Abstract (fr)
L'invention concerne une motopompe destinée au pompage de liquides, entraînée par un fluide moteur sous pression. La motopompe (1) comporte un manchon rotatif (12) monté en ligne entre deux tubulures fixes (8, 10). Sur le pourtour de ce manchon (12) sont montées les aubes d'une turbine qui entoure le manchon (12). Des organes de pompage rotatifs (24) sont fixés à l'intérieur du manchon (12). La motopompe (1) selon l'invention est plus particulièrement destinée à un emploi comme pompe immergée, et notamment comme pompe de dragage à grande profondeur.

IPC 1-7
F01D 15/08; F04C 11/00; F04D 13/04; F04D 29/08; F04D 29/70

IPC 8 full level
F04C 2/107 (2006.01); **F04C 11/00** (2006.01); **F04C 15/00** (2006.01); **F04D 13/04** (2006.01)

CPC (source: EP US)
F04C 2/1073 (2013.01 - EP US); **F04C 11/006** (2013.01 - EP US); **F04D 13/043** (2013.01 - EP US)

Citation (search report)
• [YD] US 2113213 A 19380405 - LEONARD ROY E
• [YD] CH 465413 A 19681115 - SIEMENS AG [DE]
• [Y] FR 1528010 A 19680607
• [Y] GB 870262 A 19610614 - MARIO SCHOLL
• [A] DE 475711 C 19290502 - AEG
• [AD] DE 3008334 A1 19820204 - GULAIF JOSEF
• [A] US 2164975 A 19390704 - WHITCOMB WINFRED S
• [A] DE 309856 C 19181218
• [A] GB 1182606 A 19700225 - LUCAS INDUSTRIES LTD
• [A] DE 3621967 A1 19880114 - LETTMANN HEINRICH JOSEF [DE]
• [A] FR 2504404 A1 19821029 - HOWARD GEORGE [NZ], et al
• [Y] SOVIET INVENTIONS ILLUSTRATED, section B, septembre 1971, page 20, résumé no. 1334332/25-8, Derwent Publications, LTD, Londres, GB; & SU-A-2 80 232 (I.YU. CHAPLIGIN) Bul 27/26-08-1970

Cited by
US6120267A; EP0541883A1; US5316449A

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