

Title (en)

Submersible multistage pump with impellers having diverging shrouds

Title (de)

Mehrstufen-Tauchpumpe mit Pumpenrädern mit divergierenden Deckbändern

Title (fr)

Pompe submersible à phases multiples avec des turbines disposant des flasques divergentes

Publication

EP 2025942 A3 20100818 (EN)

Application

EP 08161663 A 20080801

Priority

US 95338607 P 20070801

Abstract (en)

[origin: EP2025942A2] A centrifugal pump may include plural pump stages (300), each comprising an impeller assembly (304), a stationary disc assembly (306) and a diffuser assembly (302), all disposed about an impeller shaft (102) that is driven by a motor. The impeller assembly (304) may include upper and lower impeller shrouds (338,334) having facing surfaces, and a plurality of impeller vanes (344) extending between the surfaces of the shrouds (338,334) to define a plurality of flow passages (346) for liquid to flow outwardly from a central hub (340) of the impeller assembly (304). To assist in pressure recovery of the pump, the distance between the surfaces of the impeller shrouds (338,334) may increase as the radial distance from the central hub (340) increases.

IPC 8 full level

F04D 1/06 (2006.01); **F04D 13/08** (2006.01); **F04D 29/22** (2006.01); **F04D 29/44** (2006.01)

CPC (source: EP US)

F04D 1/063 (2013.01 - EP US); **F04D 13/08** (2013.01 - EP US); **F04D 29/2255** (2013.01 - EP US); **F04D 29/448** (2013.01 - EP US)

Citation (search report)

- [I] US 2566795 A 19510904 - EMILE EGGER
- [I] US 1050698 A 19130114 - SCHEURMANN WALTER P [US]
- [I] US 2074650 A 19370323 - HOLDAWAY WILLIAM S
- [I] EP 0398377 A2 19901122 - VICKERS INC [US]
- [I] GB 191221965 A 19130410 - WOODROFFE FRANK KNIGHT, et al

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 08161663 A 20080801; US 18322208 A 20080731