

Title (en)

A BALANCING DRUM ASSEMBLY IN A CENTRIFUGAL PUMP AND METHOD OF OPERATING A BALANCING DRUM ASSEMBLY

Title (de)

AUSGLEICHSTROMMELANORDNUNG IN EINER KREISELPUMPE UND VERFAHREN ZUM BETRIEB EINER  
AUSGLEICHSTROMMELANORDNUNG

Title (fr)

ENSEMBLE TAMBOUR D'ÉQUILIBRAGE DANS UNE POMPE CENTRIFUGE ET PROCÉDÉ DE FONCTIONNEMENT D'UN ENSEMBLE  
TAMBOUR D'ÉQUILIBRAGE

Publication

**EP 4098879 A1 20221207 (EN)**

Application

**EP 21177051 A 20210601**

Priority

EP 21177051 A 20210601

Abstract (en)

Invention relates to a balancing drum assembly (10) in a centrifugal pump (100), wherein a shaft (14) adapted rotatably supported to a housing (12,12'), a balancing drum (16) having a first axial end (16.1) which is in fluid communication with a pressure channel (104) of the centrifugal pump (100), and the balancing drum (16) having a second axial end (16.2) which opposite to the first axial end (16.1), the housing (12,12') forming a space (18) for balancing fluid which space (18) is at least partly bordered by the second axial end (16.2) of the balancing drum (16), an outlet (20) arranged to the housing (12,12') for the balancing fluid, a flow control system (23) arranged between the outlet (20) and the space (18), comprising a first fluid flow control element (24) attached with the housing (12,12') in the space (18) at a side of the second axial end (16.2) of the balancing drum (16), the first fluid flow control element (24) comprising a first flow control surface (24'), which is co-axial with the shaft (14) and the balancing drum (16), and a second fluid flow control element (26) comprising a second flow control surface (26') arranged co-axial with the shaft (14) and the balancing drum (16), attached to a rotatable part of the balancing drum assembly (10), wherein the first flow control surface (24') and the second flow control surface (26') form an adaptive fluid constriction for the balancing fluid discharged to the outlet (20).

IPC 8 full level

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CPC (source: EP)

**F04D 1/06** (2013.01); **F04D 29/0416** (2013.01)

Citation (applicant)

- DE 2043450 A1 19720309 - KLEIN SCHANZLIN & BECKER AG
- EP 2163767 B1 20120620 - POMPE GARBARINO S P A [IT]

Citation (search report)

- [XY] US 6309174 B1 20011030 - OKLEJAS JR ELI [US], et al
- [Y] US 5215448 A 19930601 - COOPER PAUL [US]
- [X] US 6617731 B1 20030909 - GOODNICK DOUGLAS J [US], et al

Designated contracting state (EPC)

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