

Title (en)

Method and apparatus for the operation of liquid flow machines.

Title (de)

Verfahren und Einrichtung zum Betrieb von Flüssigkeitsströmungsmaschinen.

Title (fr)

Procédé et appareil pour le fonctionnement de machines à écoulement de liquides.

Publication

**EP 0229970 A1 19870729 (DE)**

Application

**EP 86117072 A 19861208**

Priority

DE 3545101 A 19851219

Abstract (en)

[origin: US4842486A] An apparatus for improving the operating efficiency of a liquid-flow machine comprises a sensor for measuring the liquid throughput of the liquid-flow machine and a dosing device for controlling, in response to the measured throughput, the amount of a friction-reducing agent added to inflowing working fluid. The friction reducing agent preferably consists of macromolecular bodies such as polyacrylamides or tensides. Inorganic fiber is also possible as an additive for reducing friction in the liquid-flow machine.

Abstract (de)

Zur verbesserten Betriebsweise (Ansaugdruckerhöhung bei verminderter Antriebsleistung, geringere Schallemission) wird der einströmenden Flüssigkeit ständig ein Anteil an makromolekularen Körpern als Reibungsminderer zugesetzt.

IPC 1-7

**F17D 1/17**; **F04C 19/00**

IPC 8 full level

**F04B 11/00** (2006.01); **F04C 7/00** (2006.01); **F04C 19/00** (2006.01); **F04D 29/68** (2006.01); **F17D 1/17** (2006.01)

CPC (source: EP US)

**F04C 19/004** (2013.01 - EP US); **Y10T 137/0391** (2015.04 - EP US)

Citation (search report)

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Designated contracting state (EPC)

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DOCDB simple family (publication)

**US 4842486 A 19890627**; AT E43698 T1 19890615; CA 1275573 C 19901030; DE 3545101 A1 19870625; DE 3663731 D1 19890706; EP 0229970 A1 19870729; EP 0229970 B1 19890531; IN 164866 B 19890624; JP H06105077 B2 19941221; JP S62157298 A 19870713

DOCDB simple family (application)

**US 92467886 A 19861029**; AT 86117072 T 19861208; CA 525528 A 19861217; DE 3545101 A 19851219; DE 3663731 T 19861208; EP 86117072 A 19861208; IN 772CA1986 A 19861022; JP 30111586 A 19861217