

Title (en)

MULTISTAGE PUMP FOR SUBMERSIBLE ELECTRIC PUMPS

Publication

**EP 0267445 A3 19900207 (EN)**

Application

**EP 87114884 A 19871013**

Priority

IT 2229786 A 19861111

Abstract (en)

[origin: EP0267445A2] A multistage pump for submersible electric pumps is described in which the axial anchoring and the centering of the stage body assembly are achieved by means of anchoring and centering elements consisting of projections (12a, 12c) provided in the outer casing (1) of the pump. This allows a more solid and economical construction and a simplification of the assembly and disassembly of the pump, with a reduction of the number of inner structural locking elements. The floating-ring (24) sealing construction of the stage bodies (2) allows an improvement of the sealing effect and of the hydraulic performance.

IPC 1-7

**F04D 29/62**; F04D 13/10; F04D 1/06

IPC 8 full level

**F04D 13/10** (2006.01); **F04D 29/62** (2006.01)

CPC (source: EP)

**F04D 13/10** (2013.01); **F04D 29/628** (2013.01); **F05D 2260/36** (2013.01)

Citation (search report)

- [A] US 4293288 A 19811006 - WEBER WALTER L
- [A] GB 211848 A 19240529 - SULZER AG
- [A] US 2667128 A 19540126 - BERGH CHARLES J
- [A] PATENT ABSTRACTS OF JAPAN, vol. 7, no. 163 (M-229)[1308], 16th July 1983; & JP-A-58 070 091 (SHINDOU PONPU K.K.) 26-04-1983

Cited by

EP3242031A1; EP1729013A1; CN102678627A; CN100366914C; EP0554803A1; US5271725A; CN102937099A; EP0566087A1; US5401146A; GB2250544A; US5154588A; US10995748B2; WO2007140549A1; WO2018114660A1

Designated contracting state (EPC)

DE ES FR

DOCDB simple family (publication)

**EP 0267445 A2 19880518**; **EP 0267445 A3 19900207**; IT 1213377 B 19891220; IT 8622297 A0 19861111

DOCDB simple family (application)

**EP 87114884 A 19871013**; IT 2229786 A 19861111