

Title (en)

AXIAL THRUST COMPENSATION FOR CENTRIFUGAL PUMPS.

Title (de)

AXIALSCHUBAUSGLEICH FÜR KREISELPUMPEN.

Title (fr)

COMPENSATION DE LA POUSSEE AXIALE DANS DES POMPES CENTRIFUGES.

Publication

**EP 0544693 B1 19940921**

Application

**EP 91913014 A 19910719**

Priority

- DE 4026905 A 19900825
- EP 9101357 W 19910719

Abstract (en)

[origin: WO9203662A1] The invention concerns a device for fully compensating the axial thrust in centrifugal pumps with a first device which brings about a hydraulic compensation of the axial thrust with the aid of a pressure difference generated by the impeller of the centrifugal pump and a second device which takes up the remaining axial thrust when the pressure head is inadequate for the operation of the first device. In order also to overcome the overload region which can be a problem in axial thrust compensation without using an additional back-up bearing, the invention provides for a second compensating device, also hydraulic, which brings about an increase in pressure in the pressure side of the lateral impeller space when the pressure head falls below a predetermined value, by which this device assumes the compensation of the axial thrust at a time when axial thrust compensation dependent on the pressure differences between the impeller intake and discharge can no longer act satisfactory.

IPC 1-7

**F04D 29/22**

IPC 8 full level

**F04D 29/22** (2006.01)

CPC (source: EP)

**F04D 29/2266** (2013.01)

Cited by

DE102017211940A1; GB2567582B

Designated contracting state (EPC)

AT BE CH DE FR LI

DOCDB simple family (publication)

**WO 9203662 A1 19920305**; AT E112019 T1 19941015; DE 4026905 A1 19920227; DE 59103062 D1 19941027; EP 0544693 A1 19930609; EP 0544693 B1 19940921

DOCDB simple family (application)

**EP 9101357 W 19910719**; AT 91913014 T 19910719; DE 4026905 A 19900825; DE 59103062 T 19910719; EP 91913014 A 19910719