

Title (en)  
CENTRIFUGAL PUMP UNIT

Publication  
**EP 0221300 B1 19900919 (DE)**

Application  
**EP 86112695 A 19860913**

Priority  
DE 3536140 A 19851010

Abstract (en)  
[origin: EP0221300A1] 1. A centrifugal pump unit consisting of a centrifugal pump and a prime mover, whose centrifugal pump possesses a radial impeller with balance holes and on whose two sides clearance gap seals are arranged which are in the form of subliquid bearings with an angular configuration and whose diameters are matched in order to balance axial thrust, the connection between the centrifugal pump and the prime mover being by way of a coupling which allows axial displacements of the pump impeller as needed for balancing the axial thrust, characterized in that clearance gaps (10 and 11), which have an angular configuration, are defined by angular gap rings (7 and 8) fixed in relation to the housing, which act both as an axial and as a radial bearing means, the parts, acting as axial bearing means, of the angular gap rings (7 and 8) being arranged on the low pressure side of the parts acting as radial bearing means.

IPC 1-7  
**F04D 13/02**; **F04D 29/04**; **F04D 29/16**

IPC 8 full level  
**F04D 13/02** (2006.01); **F04D 29/04** (2006.01); **F04D 29/16** (2006.01)

CPC (source: EP)  
**F04D 13/021** (2013.01); **F04D 29/0416** (2013.01); **F04D 29/167** (2013.01)

Citation (examination)  
DE 3305174 A1 19840906 - KRAEMER HERMANN

Cited by  
DE102009027645B4; EP0578285A1; GB2238831A; CN101953672A; US2022170474A1; EP2275017A2; DE102009027645A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**EP 0221300 A1 19870513**; **EP 0221300 B1 19900919**; DE 3536140 A1 19870416; DE 3674331 D1 19901025

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