

Title (en)

A PUMPING ARRANGEMENT FOR PUMPING A LIQUID PRODUCT FROM A TANK OR CONTAINER

Title (de)

PUMPENANORDNUNG ZUM PUMPEN EINER FLÜSSIGKEIT AUS EINEM TANK ODER BEHÄLTER

Title (fr)

DISPOSITIF DE POMPAGE PERMETTANT DE POMPER UN PRODUIT LIQUIDE HORS D'UN RESERVOIR OU D'UN CONTENEUR

Publication

**EP 1200738 B1 20030813 (EN)**

Application

**EP 00938577 A 20000606**

Priority

- DK 0000302 W 20000606
- DK PA199900800 A 19990607

Abstract (en)

[origin: WO0075518A1] A pumping arrangement for pumping a liquid product (10), such as oil products or liquefied gas, from a tank or container (11) comprises a rotary, high capacity main pump (12), such as a centrifugal pump, to be submerged in the liquid product. The main pump (12) is driven by an electric motor or another rotary driving motor (17) via a driving shaft (24). The driving motor (17) may be positioned above the upper liquid level. The pumping arrangement further comprises an auxiliary positive pump (29), such as a piston pump, for pumping a residual amount of said liquid product from the tank or container, and means (42, 43) for selectively drivingly interconnecting the auxiliary pump (29) to the driving shaft (24) of the main pump (12). Thus, the auxiliary pump may be driven by the same motor as the main pump. The means for selectively connecting the auxiliary pump to and disconnecting the auxiliary pump from the driving shaft of the main pump may comprise a ratchet device and may be activated by reversing the direction of rotation of the driving shaft.

IPC 1-7

**F04D 13/12**; **F04B 23/10**; **F04B 23/14**; **F04C 11/00**

IPC 8 full level

**F04B 9/02** (2006.01); **F04B 23/02** (2006.01); **F04B 23/10** (2006.01); **F04B 23/14** (2006.01); **F04C 11/00** (2006.01); **F04D 13/00** (2006.01); **F04D 13/04** (2006.01); **F04D 13/08** (2006.01); **F04D 13/12** (2006.01); **F04D 13/16** (2006.01); **F04D 31/00** (2006.01)

CPC (source: EP US)

**F04B 23/103** (2013.01 - EP US); **F04B 23/14** (2013.01 - EP US); **F04C 11/005** (2013.01 - EP US); **F04D 13/12** (2013.01 - EP); **F04D 31/00** (2013.01 - EP)

Cited by

AU2015230662B2; US10514047B2; WO2015135020A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

**WO 0075518 A1 20001214**; AT E247229 T1 20030815; DE 60004533 D1 20030918; DK 1200738 T3 20030908; EP 1200738 A1 20020502; EP 1200738 B1 20030813; JP 2003501589 A 20030114; JP 4237438 B2 20090311; NO 20015978 D0 20011206; NO 20015978 L 20011206; NO 332074 B1 20120618

DOCDB simple family (application)

**DK 0000302 W 20000606**; AT 00938577 T 20000606; DE 60004533 T 20000606; DK 00938577 T 20000606; EP 00938577 A 20000606; JP 2001501768 A 20000606; NO 20015978 A 20011206