

Title (en)

HIGH-PRESSURE PLUNGER PUMP, AND USE OF A HIGH-PRESSURE PLUNGER PUMP

Title (de)

HOCHDRUCKPLUNGERPUMPE UND VERWENDUNG EINER HOCHDRUCKPLUNGERPUMPE

Title (fr)

POMPE À PISTON HAUTE PRESSION ET UTILISATION D'UNE POMPE À PISTON HAUTE PRESSION

Publication

**EP 4377571 A1 20240605 (DE)**

Application

**EP 22728358 A 20220505**

Priority

- DE 102021119690 A 20210729
- EP 2022062195 W 20220505

Abstract (en)

[origin: WO2023006270A1] The invention relates to a high-pressure plunger pump (2) which comprises: at least one plunger assembly (3) having a working chamber (31) and a plunger (32) that is positioned in the working chamber (31) so as to be movable back and forth in an axial direction; at least one first control valve (5) and at least one second control valve (6) which are connected to a valve housing (4) having at least one high-pressure line (41) and at least one low-pressure line (42), the high-pressure line (41) being connected to the working chamber (31) in a sealable manner by the first control valve (5) and the low-pressure line (42) being connected to the working chamber (31) in a sealable manner by the second control valve (6), the valve housing (4) having a high-pressure connection (43) that opens into the high-pressure line (41), the at least one first control valve (5) and the at least one second control valve (6) being actuatable by means of a control unit (7) in such a way that a fluid, which is fed via the high-pressure connection (43) of the valve housing (4) and is under high pressure, is fed to the working chamber (31) and can be discharged via a low-pressure connection (61) of the at least one suction valve (6) after driving the plunger (32), the at least one plunger (32) being coupled to a generator (11) via a driveshaft.

IPC 8 full level

**F04B 1/00** (2020.01); **F04B 7/02** (2006.01); **F04B 17/03** (2006.01); **F04B 53/00** (2006.01)

CPC (source: EP IL KR)

**F04B 1/00** (2013.01 - EP IL KR); **F04B 7/02** (2013.01 - EP IL); **F04B 7/0266** (2013.01 - EP IL KR); **F04B 17/03** (2013.01 - EP IL KR); **F04B 53/006** (2013.01 - EP IL KR); **F04B 2203/12** (2013.01 - EP IL KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**DE 102021119690 A1 20230202**; CN 117769623 A 20240326; EP 4377571 A1 20240605; IL 310146 A 20240301; JP 2024527050 A 20240719; KR 20240036597 A 20240320; WO 2023006270 A1 20230202

DOCDB simple family (application)

**DE 102021119690 A 20210729**; CN 202280052038 A 20220505; EP 2022062195 W 20220505; EP 22728358 A 20220505; IL 31014624 A 20240115; JP 2024504963 A 20220505; KR 20247004505 A 20220505