

Title (en)

LIQUID PRESSURE CONVERTER FOR USE IN PUMPING SYSTEMS WITHOUT ANY EXTERNAL ENERGY INPUT

Title (de)

FLÜSSIGKEITSDRUCKWANDLER ZUR VERWENDUNG IN PUMPSYSTEMEN OHNE IRGENDEINE EXTERNE ENERGIEEINGABE

Title (fr)

CONVERTISSEUR DE PRESSION DE LIQUIDES APPLICABLE À DES SYSTÈMES DE POMPAGE SANS APPORT D'ÉNERGIE EXTERNE

Publication

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Application

EP 07823040 A 20071108

Priority

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- ES 200602945 A 20061110

Abstract (en)

[origin: WO2008056014A1] The invention relates to a liquid pressure converter for use in pumping systems without any external energy input. The system is based on pressure accumulators consisting of devices having an inlet tube and an outlet tube, in which a pressure difference is created between the inlet and the outlet when a liquid is injected through the inlet tube, said difference being directly proportional to the volume of liquid injected. The pressure is converted using synchronised valves in order to alternate the connection of several accumulators between a parallel configuration (interconnected inlets and interconnected outlets) involving low pressure and high flow rate and a cascade configuration (the outlet of each being connected to the inlet of the next) involving high pressure and low flow rate. Pressure conversion systems based on said arrangement are claimed. The invention is suitable for use in hydraulics, enabling liquids to be pumped without using external energy.

IPC 8 full level

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CPC (source: EP ES)

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Citation (search report)

- [XA] US 2003056508 A1 20030327 - FAN QUN [CN]
- [XA] US 4170876 A 19791016 - BAUER EGON A J [DE], et al
- [X] US 5971027 A 19991026 - BEACHLEY NORMAN H [US], et al
- [XA] GB 191321875 A 19140929 - GRAHAM JESSE, et al
- See also references of WO 2008056014A1

Cited by

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