

Title (en)
Electromagnetic pump

Title (de)
Elektromagnetische Pumpe

Title (fr)
Pompe électromagnétique

Publication
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Application
EP 03020439 A 20030911

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JP 2002267663 A 20020913

Abstract (en)
The present invention provides an electromagnetic pump which discharge amount can be increased by increasing drive frequency, even when it is used for high viscosity fluid, such as oil at low temperature. The electromagnetic pump comprises an inner yoke 52 and a plunger 11 which form a magnetic circuit, wherein the plunger 11 reciprocates in a cylinder 53 in which a magnetic gap between the inner yoke 52 and the plunger 11 is narrowed by electromagnetic force, and enlarged by an elastic member 53a, and wherein a contact face area where a top end face 11d of the plunger 11 overlaps with a top end face 52b of the inner yoke 52 is set between 50 and 5% of the outer diameter circle area of the plunger 11. With this structure, the plunger 11 can be detached reliably from the inner yoke 52 and returned to an initial position by the elastic member 53a at the time of demagnetization. Hence, pumping by the plunger 11 is ensured, and the discharge amount can be increased by increasing the drive frequency.
The pump has an inner yoke (52) and a plunger (11) forming a magnetic circuit. The plunger reciprocates in a cylinder where a magnetic gap between inner yoke and plunger is narrowed by electromagnetic force, and enlarged by a coil spring (53a). A contact face area where top end face (11d) of plunger overlaps with top end face (52b) of inner yoke is set at or below 50 percent of outer diameter area of plunger.

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