

Title (en)
ELECTROMECHANICAL PUMP

Title (de)
ELEKTROMECHANISCHE PUMPE

Title (fr)
ELECTROMECHANICAL PUMP

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Abstract (en)
[origin: WO2014177442A1] According to the present invention there is provided an electromagnetic pump (1,50) comprising, an inlet (2); an outlet (3); an intermediate chamber (11) located between said inlet (2) and said outlet (3); a first valve (12) for controlling the flow of fluid into the intermediate chamber (11), and a second valve (13) for controlling the flow of fluid out of the intermediate chamber (11); a piston (4), at least a part of which comprises ferromagnetic material, located between the inlet (2) and outlet (3), and including a channel (19) through which fluid can flow, wherein the piston (4) is moveable between a first and second position to control the opening and closing of the first and second valves (11,12); a main spring (5) which is arranged to exert a force against said piston (4) to bias the piston (4) towards its first position; a coil (10) for generating an electromagnetic field for moving said piston (4) towards its second position, against the biasing force exerted by said main spring (5); a pressure increasing tube (15) with an inner diameter (d) which is smaller than an inner diameter (D) of the inlet (2), so fluid flowing from the inlet (2) into the pressure increasing tube (15) is pressurized; said at least a portion of the length (L) of the pressure increasing tube (15) is located within said main spring (5), characterized in that the piston comprises an inner part (16) and an outer part (17) wherein the inner part (16) of the piston is secured within the outer part (17) of the piston (4), and wherein the pressure increasing tube (15) is configured to extend from the inlet (2) to within the inner part of the piston (4). There is further provided a corresponding method of manufacturing an electromagnetic pump (1,50).

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