

ABSTRACT

ELECTRICAL MACHINE – FLUID MACHINE

STANCHEV AGGREGATION SET comprising a Stator/Body Unit, Rotor/Piston Units and a Power Supply and Control Module. The stator/body unit (1) shapes a volume of rotation in which there are two segment-type rotor/piston units (11) the profile of which matches that of the volume of rotation. There are two channels (30) in the walls shaping the volume of rotation, in contact with two external areas from and to which fluid is fed and let out. The permanent magnets (12) are fixed in the rotor/piston units (11) the lines of magnetization of which are collinear with the axis of the volume of rotation. Electromagnets, mounted along the whole length of the volume of rotation, frame the permanent magnets with their magnetic yokes (3) and (7) and coils (5). The poles of the electromagnets (7) face the trajectory of the poles of the magnetic yokes (7) of the permanent magnets (12). The terminal ends of the coils (5) of the electromagnets are connected to the electronic control module (24). There are position sensors (10) in the stator/body unit (1) near the permanent magnets (12). A distant control and reading interface of the control module (24) secures control of the electromagnets, so that their magnetic fields, interacting with the magnetic fields of the permanent magnets (12), set up synchronized rotation of the rotor/piston units (11) which pushes out and at the same time lets in (in a cycle of operation π rad (180°)) an equal amount of fluid.