

Abstract

- A pump system comprises a pump assembly and a control assembly. The pump assembly comprises a casing, a helical vane for moving fluid, and a permanent magnet. The casing has a fluid inlet and a fluid outlet. The helical vane is housed inside the casing. The permanent magnet is securely attached to the bottom portion of the helical vane. The control assembly comprises a casing, a control circuitry, and a plurality of electromagnets. The electromagnets are securely attached to the top portion of the casing. The helical vane is capable of minimising turbulent flow and of maximising laminar flow inside the pump assembly. The control circuitry is capable of generating magnetic field by energising the electromagnets. Sequentially changing magnetic field of the electromagnets causes the helical vane to rotate. This invention relates to pump systems with an Archimedes spiral screw, and the principal use of the invention is for circulating fluid.

