ABSTRACT

ROTARY PRESSURE TRANSFER DEVICE

A pressure transfer device for the transfer of pressure energy from a high pressure fluid stream to a lower pressure fluid stream wherein a generally cylindrical housing (61) contains a rotor (63) having a plurality of channels (65) extending axially therethrough that revolves about a central stator (67) or within a surrounding sleeve (73) and a pair of end covers (69, 71) which slidingly and sealingly interface with respective planar end faces (68) of the rotor. The end covers (69, 71) and the accompanying components of the device are constructed so as to allow the channels to be at least twice filled with a high pressure first liquid during each revolution of the rotor and thus discharge twice the volume of a pressurized second liquid than if they were filled only one with high pressure liquid.

FIG. 3