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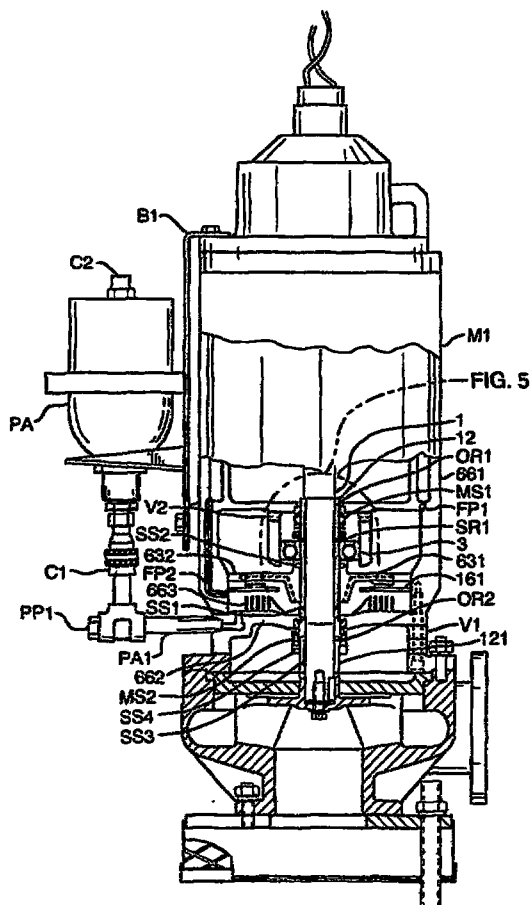
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(54) Title: SUBMERSIBLE MOTOR WITH SHAFT SEALS



(57) Abstract: A submersible electric motor driven pump has a motor chamber and a pump chamber separated by a seal chamber. Inboard and outboard shaft seals (MS1, MS2) immersed in an oil buffer fluid within the seal chamber restricts the flow of liquid from the seal chamber into the pump and motor chambers. An integral or externally mounted pre-pressurized buffer fluid reservoir (PA) maintains a positive fluid pressure in the seal chamber relative to the external pressure at working depth, and maintains a suitable buffer fluid level within the seal chamber, in order to prevent the ingress of the pumped media through the outboard seal (MS2). A unique impeller design (631) circulates fluid within the seal chamber in the region of the outboard shaft seal (MS2), allowing continuous dry run operation when used in conjunction with an integrally cooled motor design. A cartridge shaft sleeve subassembly, having a bearing (3) configured between the inboard and outboard seals (MS1, MS2), facilitates maintenance.

WO 01/25634 A1



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