

NON-SLIDING CARRIER BEARING IN SUBMERSIBLE PUMP MOTOR AND METHOD OF INSTALLATION

Abstract of the Disclosure:

A submersible well pump motor has features to prevent the carrier bearing from sliding axially along the stator due to thermal growth of the rotor. The rotor has a shaft and rotor sections spaced apart from each other. Carrier bearings are located between the rotor sections, each having an anti-rotation member that frictionally engages the inner diameter of the stator to prevent spinning of the carrier bearing. A deflectable thrust washer may be located between ends of the carrier bearing and the rotor sections. The thrust washer reduces in thickness in response to an axial thermal growth force due to axial thermal growth movement of the rotor sections and shaft. The thermal growth force is less than an amount of dislodging force required to cause the anti-rotation member to axially move relative to the stator. Rather than deflectable thrust washers, sacrificial thrust washers that dissolve prior to normal operation may be used.

FIG. 1