

SEAL SECTION FOR ELECTRICAL SUBMERSIBLE PUMP

Abstract

A seal section for a submersible well pump assembly has a housing for connection between a pump and a motor. A central radial bearing support rotatably supports a drive shaft and defines upper and lower chambers in the housing. A well fluid passageway leads from an exterior portion of the housing to the upper chamber. Upper and lower isolation tubes extend around the shaft within the upper and lower chambers, defining an annular passage for fluid communication with lubricant contained in the motor. A bladder surrounds the upper isolation tube for separating lubricant from well fluid in the upper chamber. A labyrinth tube within the bladder has an upper end in fluid communication with a labyrinth port leading through the upper isolation tube and a lower end in fluid communication with the lower chamber.

FIGURE 1A