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(54) Title: MECHANICAL SHAFT SEAL

(57) Abstract

The invention is a mechanical seal assembly for use between a stationary body and a rotating shaft. The seal assembly includes a stationary element, a rotating biasing element and a rotating tensioning element. The rotating biasing element is sealed to the rotating shaft utilizing an o-ring seal. The tensioning member is rigidly mounted to said shaft using an interference fit backed up by set screws or the equivalent. The stationary assembly is centered about the shaft and rigidly fastened to the stationary body. Either the stationary element or the rotating follower element may hold packing in a radial packing groove, as a sealing medium. An axial biasing force provided by coil springs (or other compressive means) on the periphery of the rotating follower plate and secured by the rotating tensioning element insures intimate contact of the packing medium to the stationary element and rotating biasing element sealing face, thus providing a fluid tight seal. In the preferred embodiment, the elements are provided as a fully split design, enabling this seal to be assembled on a rotating shaft without the necessity of access to the end of the shaft.

