

O-RING SEAL FOR ROCK BIT BEARINGS

Abstract of the Disclosure

An improved O-ring seal for rock bit bearings is formed from a resilient elastomeric composition comprising a multiplicity of low friction wear resistant particles distributed uniformly throughout the composition. The low friction wear resistant particles can have a rounded or non-rounded configuration. The low friction wear resistant particles located near the surface of the O-ring are exposed through wear of the elastomeric component to form wear pads that contact adjacent rotating rock bit sealing surfaces. The wear pads serve to reduce the break-off friction between the adjacent sealing surfaces and minimize the occurrence of stick-slip, thereby enhancing the service life of the O-ring seal and rock bit.