

ABSTRACT

"INTERNAL COOLING SYSTEM FOR MECHANICAL SEALS AND USE THEREOF"

The present invention relates to a internal cooling system for a mechanical seal with the main objective to provide thereto conditions of greater reliability and longer service life periods, in particular, when applied to rotating pumping devices operating at temperatures lower than 420 °C, and pressures of less than 3,3 MPa, being the pressures susceptible to alteration depending on the dimension of the seal, product to be pumped and its rotating speed.

The system comprises the implementation of an internal circuit in the body of the mechanical seal, through which a cooling fluid will circulate, preferably an inert gas at a stable pressure which will cool the critical areas, thus preventing that the temperature exceeds 180 °C in these points. This system can also be applied to an already existing seal as long as the service conditions are known.

The cooling system is applied to seals in order to seal chemical or petrochemicals products, such as for example pumping of crude oil and derivatives thereof.