

ABSTRACT OF THE DISCLOSURE

**LIP SEAL HAVING INCREASED CONTACT FORCE AT INTERFACE
AND
APPARATUS INCORPORATING THE SAME**

5

A seal having a body portion, at least one lip portion extending from the body portion, and a protrusion formed on the at least one lip portion. The lip portion and protrusion formed thereon may each include an arcuate segment wherein the arcuate segment of the protrusion exhibits a smaller radius than the arcuate segment of the lip portion. The protrusion further includes a surface or a segment adjoining its arcuate segment on the intended fluid or upstream side of the seal. The segment of the protrusion on the intended fluid side may be configured to be substantially perpendicular with the surface of a machine element with which it comes in contact.

10

15 The configuration and orientation of the protrusion enables the seal to apply an increased contact force over a reduced area, improving penetration of any fluidic film formed on the surface of the machine element and thereby reducing leakage.

[FIG. 2B]