

ABSTRACT**DESIGN AND PERFORMANCE OF A NEW SUBSURFACE****SUCKER ROD PUMP****Alfred Olliviera**

The Conventional Ball and Seat pump has served the Oil Industry faithfully for many years and still continues to do so. The problems associated with it have become institutionalized and are dealt with routinely. Some of the more major problems such as gas-locking, gas pound and fluid pound hamper the efficient production of crude and cost the Oil Companies many thousands of dollars in downtime and repair work. There is one more problem that has not taken the limelight so much as the others but it is responsible for reduced production in very heavy crude wells, this is the high pressure drop associated with the flow of high viscosity crude in undersized pipelines.

The search for the ideal pump continues in many areas, and a variety of designs and pumping aids are available to boost the efficiency of the pumping system.

This thesis describes a pump, the valving and configuration of which tends to overcome many of the common problems encountered in the field, viz, Gas-

Locking, Fluid-pounding, Gas-pound and to a lesser extent, sanding problems and Rod-string buckling. The production data was gathered over a period of two years, in the Oilfields of Trinidad.

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