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# DESIGN AND ANALYSIS OF KINEMATIC LINKAGE FOR VARIABLE DISPLACEMENT PUMP

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**ABSTRACT**
Axial piston pumps with constant pressure and variable flow/displacement have extraordinary possibilities for controlling the flow by change of pressure. These Variable displacement pumps deliver the required flow to the system without bearing the losses associated with a flow control valve. However, current variable displacement pumps have extremely high cost and exhibit poor efficiency at low displacement as their primary sources of energy losses are largely independent of displacement. Here adjustable linkage is proposed as a driving mechanism of a variable displacement pump. This linkage enables us to vary the stroke length of piston pump. As the stroke length of the piston changes, the quantity of fluid discharged also changes.

**KEY WORDS**- Variable displacement Pump, Kinematic linkage, CAD modeling and Analysis