عنوان مقاله:

Comparison of Performance of Hydraulic Balanced Vane Pumps by Using Different Curves at the Inner Peripheral Cam Surface of Its Stator

محل انتشار:

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خلاصه مقاله:

When designing a hydraulic balanced vane pump, selecting of a suitable curve for using at the inner surface of its stator constitutes a key factor in improving a sufficient sealing action between pressure and suction sides of the pump, so decreasing the amount of leakage of working fluid from the clearance between the rotor and the stator and also between the vanes tip and the inner surface of the stator in the sliding contact between the two and, accordingly, increasing the volumetric efficiency and its output flow because of the good continuity between circular arc and selected curve at contact points in the end of sealing zone and smooth sliding motion of the vanes on the inner surface of the stator. The good selecting of curve results to suppress the jerk and hence, the lateral reactional force applied to the vanes and diminishes local wear of the vanes tip and the impact characteristics of the vane, high ۳۵ years stresses, oscillation and noise of the pump. So at this paper, application of some important curves, during ago, at the inner surface of the stator of balanced vane pump will be considered and the advantages of using of each .curve will be compared

کلمات کلیدی:

Hydraulic balanced vane pump, Stator, Inner peripheral cam surface, Suitable curve