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Dotsenko V.N. Mathematical model of ICE piston stroke taking into consideration the hydrodynamic forces and moments that occur in the lubricating layer between piston and cylinder / V.N. Dotsenko, I.N. Moskalenko // Internal combustion engine. – 2009. – №2. – Р.57-59.

The approach to the examining, computing and profiling the ICE side surface taking into consideration the specificity of ICE operation has been described. This approach includes the theoretical studies, construction of mathematical model of a piston stroke and analysis of the research results. It is noted that the cylinder-piston friction pair represents an original sleeve bearing, and that the hydrodynamic forces and moments that occur in the lubricating layer between piston and cylinder are very similar to those that arise in the sleeve bearings and these were determined using the methods developed during their studies. It has been established that the error of the piston position determination increases at the design points that are close to the upper dead point or lower dead point; it can be explained by decrease in the absolute values of lateral force. Il.1. Bibliogr. 5 names.