

Nonuniformity of the Piston Motion in a Radial Aircraft Engine

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Abstract : One of the main disadvantages of radial engines is non-uniformity of operating cycles of each cylinder. This paper discusses the results of the kinematic analysis of pistons motion of the ASz-62IR radial engine. The ASz-62IR engine is produced in Poland and mounted in the M-18 Dromader and the An-2. The results are shown as the courses of the motion of the pistons. The discrepancies in the courses for individual pistons can result in different masses of the charge to fill the cylinders. Besides, pistons acceleration of individual cylinders is different, which triggers an additional vibration in the engine.

Keywords : nonuniformity, kinematic analysis, piston motion, radial engine

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