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ADMISSION PROCESS MODELING AN IMPORTANT STAGE BY IC ENGINE INTAKE SYSTEMS DESIGNING

In this paper is presented a method for calculating optimization of the intake-exhaust system wich is based on the unsteady gas flow modeling. This method make possible to determine the optimal configuration of the intake-exhaust system by criterion of the best output engine parameters. The estimation of the influential parameters: dimensions of the intake-exhaust system, valve timing and valve lift diagram, on the charging efficiency and engine power is possible by all operating regimes.

On the base of such analysis is possible to choose the optimal dimensions and concept as an input data for intake-exhaust system prototype realisation.

Key words: *intake-exhaust system, unsteady, modeling, designing*

MODELIRANJE PROCESA USISAVANJA – ZNAČAJNA FAZA U PROJEKTOVANJU USISNIH SISTEMA MOTORA SUS

U radu je prikazan metod za računsko optimiranje usisno-izduvnog sistema koji je zasnovan na modeliranju nestacionarnog protoka gasa. Ovaj metod omogućava određivanje optimalne konfiguracije usisno-izduvnog sistema po kriterijumu najboljih izlaznih parametara motora. Određivanje uticajnih parametara: dimenzija usisno-izduvnog sistema, šeme razvoda i zakona otvaranja ventila na stepen punjenja i snagu motora moguće je u čitavom polju režima rada.

Na osnovu takvih analiza, moguće je izabrati optimalne dimenzije i koncept kao polazne podatke za izradu prototipa usisno-izduvnog sistema motora.

Ključne reči: *usisno-izduvni sistem, nestacionarni, modeliranje, projektovanje*