

*Dr Dragoljub Radonjić, prof. Faculty of Mechanical Engineering, University of Kragujevac,  
Božidar Tešić, BSME, R&D Institute "Zastava" Kragujevac,  
Miroslav Ravlić, MSE, R&D Institute "Zastava" Kragujevac,  
Andrija Savčić, BSME, R&D Institute "Zastava" Kragujevac,  
Nebojša Tasić, BSME Mechanics precise factory, Belgrade.*

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## RESEARCH OF PROFILED THROTTLE VALVES CHARACTERISTICS

*The classical throttle valves with large diameters have unfavourable flow section area change law. Therefore, engines with larger displacements use twin throttle valves with more favourable characteristics, but also with more complex construction. The throttle valves with spherical zones (profiled) practically represent compromise between single and twin throttle valves. In this paper the theoretical and experimental analyses of throttle valves characteristics with one and two spherical zones are presented. The design documentation, throttle valve prototypes and experimental research were made in R&D Institute of the car factory "ZASTAVA automobili".*

*Key words: throttle valve, flow section area, flow, spherical zone, throttle angle.*

## ISTRAŽIVANJE KARAKTERISTIKA PROFILISANIH PRIGUŠNIH LEPTIRA

*Klasični prigušni leptiri većih dimenzija imaju nepovoljnu karakteristiku zakona promene površine protočnog preseka. Otuda se kod motora većih zapremina koriste dvogrli leptiri koji imaju povoljniju karakteristiku, ali složeniju konstrukciju. Prigušni leptiri sa sfernim zonama (profilisani) praktično predstavljaju kompromis između jednogrlih i dvogrlih leptira. U ovom radu je prikazana teorijska i eksperimentalna analiza karakteristika prigušnih leptira sa jednom i dve sferne zone. Izrada konstruktivne dokumentacije, prototipova prigušnih leptira i eksperimentalna istraživanja obavljena su u Institutu "Zastave automobili".*

*Ključne reči: prigušni leptir, površina protočnog preseka, protok, sferna zona, ugao položaja leptira.*