

¹ MEASUREMENT OF DECELERATION ON THE ACCELERATOR PEDAL CONNECTION

Dorđe Antonijević, Milan Lončar, Aleksandra Janković, Faculty of Mechanical Engineering, Kragujevac, Serbia

Rade Đukić, High Tehnical school from Kragujevac, Kragujevac, Serbia

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Abstract

By using the recorded characteristic perceived through the shift - time in the area of the connection between the bulkhead of a passenger car's shell and the accelerator rod, and also, by using the numerical methods, the time characteristics of acceleration have been defined in this particular area. The time alteration of acceleration is known to represent the basis for making conclusions and precaution measures as regards the safety of a driver or passenger. This curve is modified in a number of ways throughout the paper itself, owing to which the following numerical values have been obtained: the values related to the shift concerning the connection between the bulkhead of the shell and the accelerator rod and all of this is placed within the connection between the lower left screw and the pedal adapter.

The shift optimization can be used by the constructor for a modification of the above mentioned connection with the purpose of obtaining the optimal acceleration, that is, the acceleration that would reduce the possible leg injuries of a driver to the minimum. The well-known formula defined in the AIS charts of biomechanical endurance has been used as an injury criterium.

Key words: the alteration of acceleration, shell, impact, injury.

MERENJE USPORENJA NA VEZI PEDALE GASA

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Rezime: Koristeći snimljenu karakteristiku pomeranje-vreme na mestu veze pregradnog zida školjke putničkog automobila i poluge pedale za gas, korišćenjem numeričkih metoda, došlo se do vremenske karakteristike ubrzanja na ovom mestu.

Poznato je da je vremenska promena ubrzanja baza za donošenje zaključaka i mera o bezbednosti vozača ili putnika. U radu je ova kriva modifikovana na više načina, tako da su dobijene numeričke vrednosti pomeranja veze pregradnog zida školjke i poluge pedale za gas i to na mestu veze donjeg levog zavrtnja za priključak pedale.

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Optimiranje ovih pomeranja može da posluži konstruktoru za modifikaciju pomenute veze u cilju dobijanja optimalnog ubrzanja, odnosno ubrzanja koje bi dovelo do najmanjih povreda noge vozača. Kao kriterijum povrede je korišćena opšta formula biomehaničke izdržljivosti.

Ključne reči: promena ubrzanja, udar, pedala, car body, impact, gas accelerator.