SUMMARIES
REZIMEA

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[1] COMPUTING OF THE CHASSIS FRAME DISPLACEMENTS CONDUCTED ON CARGO VEHICLES

UDC: 629.11.011.11:539.3:004.42CATIA

Abstract

What is presented at the beginning of this paper is the comparison between the results of the thin beam deflection, which are obtained by using: the engineering theory, by modeling due to the CATIA software, which is used at the Faculty of Mechanical Engineering, University of Kragujevac, for educational purposes, by the very own Al–SHELL software package intended for the structural analysis of the thin shell constructions and through the experiments.

The ultimate goal of this paper was to primarily compare the results obtained by the CATIA software packages, the Al–SHELL domestic research-development software and the experiments; and the goal itself entails a future affirmation of the software which is to be used in practical computing of the chassis frame of cargo vehicles.

Subsequently, the authors have presented the results of a calculation of the chassis frame deflection, i.e. a field of the chassis frame displacements of a single cargo vehicle.

These results are very significant as regards the situations marked by the change of the frame overloading, the causes of which can be ascribed to overloading, or to the constructive changes within the upgrading of vehicles.

Key words: displacements, thin–walled beam, thin shell, chassis frame.

PRORAČUN UGIBA RAMA ŠASIJE TERETNOG VOZILA

UDC: 629.11.011.11:539.3:004.42CATIA

Rezime: U radu je dat najpre ugib proste tankozidne grede dobijen prema: inženjerskoj teoriji, modeliranjem programskim paketom CATIA, koji se u edukacione svrhe koristi na Mašinskom fakultetu u Kragujevcu, sopstvenim programskim paketom AL-LJUSKE za strukturalnu analizu konstrukcija od tankih ljuski i eksperimentalno.

Cilj rada je bio da se proveri saglasnost rezultata dobijenih paketom CATIA, domaćim razvojno-istraživačkim softverom AL-LJUSKE i eksperimentom, da bi se, ubuduće, za proračun ugiba rama šasije teretnih vozila koristio softver.

Autori su potom dali rezultate proračuna ugiba rama, tj. polje deformacionih pomeranja rama šasije jednog teretnog vozila.

Ovi rezultati su veoma važni kod situacija promene opterećenja rama bilo zbog pretovara, bilo zbog konstruktivnih promena na nadgradnji vozila.

Ključne reči: deformaciona pomeranja, tankozidna greda, tanka ljuska, ram šasije.