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STUDY OF THE VIBRATIONS OF AN AUTOMOBILE EQUIPED WITH INDEPENDENT SUSPENSIONS AND NEW SELF-ADJUSTABLE SHOCK ABSORBER (VZN)

Authors

Sebastian PÂRLAC[1], Ionel VIERU[1], Nicolae PANDREA[1],
Nicolae-Doru STĂNESCU[1], Dinel POPA[1],
[1]University of Piteşti, ROMANIA

Abstract

Models often utilized for the study of the automotive's vibrations are models with a finite numbers of degrees of freedom. Keeping into account that fequencies when the level of the produced vibrations influences the comfort and the traffic safety is 0 – 25Hz, and due to the eigenfrequencies of the body in white and of the system motor-gear box are superior to the frequency of 25Hz, result that the effect of the automotive's vibrations on the comfort and traffic safety can be studied with discrete models. For the present study, we choose a mathematical model which permits the study of the automobiles equipped with independent suspensions, having 11 degrees of freedom. In the paper were comparatively analyzed the vertical vibrations for an automobile equipped with dampers with adaptive characteristic, and the standard solution.

Keywords

Vibrations, modeling, suspension, damping