SCIENTIFIC BULLETIN

AUTOMOTIVE SERIES

DYNAMIC DESIGN OF THE STEERING COLUMN USING FINITE ELEMENT METHOD (FEM)

Authors

Ionel VIERU[1], Cătălin NEACŞU[2], Nicolae Viorel[3], Sebastian PÂRLAC[4], Marcel LUPAŞCU[5]

[1]University of Pitesti, Romania, e-mail: ionel.vieru@upit.ro, phone: +40-248-208804/291.
[2]Automobile Dacia Pitesti, Romania, e-mail: catalin.neacsu@daciagroup.com phone: +40-0740765570.
[3]University of Pitesti, Romania, e-mail: viorel.nicolae@upit.ro, phone: +40-248-208804/133.
[4]University of Pitesti, Romania, e-mail: seby_kwo@yahoo.fr, phone: +40-248-208804/247.
[5]TLG SRV, Romania, e-mail: lupascu_m@yahoo.com, phone: +40-0722381319.

Abstract

This paper presents the dynamic design of the steering column, represented by analyze of the natural modes. The CAD model was done using CATIA software, and the design was made using the Finite Element Method (FEM) by MSC/NASTRAN. Using this analyze we verified if the frequency of vibrations are outside the resonance area.

Keywords

Steering column, modal analyze, FEM.