

A THEORETICAL MODEL DEDICATED TO THE STUDY OF THE OCCUPANT'S HEAD IMPACT WITH THE AUTOMOBILE'S INSTRUMENT PANEL

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Abstract

There is presented a vibrating dynamic model with the help of which it is possible the modeling of the impact phenomenon between the occupant's head and the automobile's instrument panel. In the model frame there are taken into consideration the initial impact velocity of the head with the instrument panel, as well as the mechanical characteristics of the head and of the instrument panel. There are presented the dynamic responses of the system, as well as the interpretation of the results.

Keywords

Impact modeling, *Kelvin-Voigt* model, dynamic response, head impact, instrument panel