


A Study on the Exposure of Vertical Vibration Towards the Brain on Seated Human Driver Model

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Abstract

Human experiences low-frequency excitation through driving which affect the human's health. Research had been conducted over the years by using biodynamic model of seated human body to analyze and observe the effect of vehicle vertical vibration towards the subject. However, previous study only focuses on the effect of vertical vibration up to head segment without taking the brain effect into account. In this study, biodynamic model is modelled including the brain to study the impact of vibration on the brain. Spring-mass-damper system are used in this model to represent the biodynamic model of seated human body and compared with previous study. From the model, it shows that the proposed model able to show the significant impact that happen on the skull and brain when vibration is exerted to the human body.

Keywords

Vibration Vehicle Biodynamic model