عنوان مقاله:

OFF LINE MONITORING OF TRACK INDUCED EXCITATION OF CAR BODY USING OPERATIONAL RESPONSES

محل انتشار:

پانزدهمین کنفرانس سالانه مهندسی مکانیک (سال: 1386)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Teimouri-Sichani - *M.Sc.Student Iran University of Science and Technology Tehran, Iran*

Ahmadian - *Associate Professor Iran University of Science and Technology Tehran, Iran*

خلاصه مقاله:

There are methods for determination of track induced excitation of a car body and almost in all of them direct responses of the structure on the location of the excitation have to be measured which is not always possible. From another point of view there are some indirect force determination techniques with ability to determine excitation force of a system without measuring direct responses of the excitation point. These methods are called Indirect Force Determination methods. In this study some of the indirect force determination methods are introduced and possibility of applying them on a car body is discussed. Different aspects of problem such as noise contamination of measurements and stability of the problem with their treatments are explained and a suitable method for determination of excitation forces of a car body is proposed. For case study responses of a real car body during operation are recorded using 20 accelerometers mounted on the side panels of the structure. Finite Element model of the car body is used together with its measured responses and track induced excitations between car body and its boogies are reconstructed in three principal x,y and z axes using Transfer Path Analysis.

کلمات کلیدی:

Indirect Force Determination، Car Body، Operational Measurement، Transfer Path Analysis

لینک ثابت مقاله در پایگاه سیویلیکا: