

عنوان مقاله:

AUTOMOTIVE INTERIOR CABIN NOISE ANALYSIS AND OPTIMIZATION USING SEA AND RSM

محل انتشار:

مجله علم مهندسی خودرو, دوره 9, شماره 1 (سال: 1397)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Javad Marzbanrad - Assistant Professor, School of Automotive Engineeringt, Iran University of Science and Technology

Mohammad Hafezian - Iran University of Science and Technology

Mehdi Mozaffarikhah - Iran University of Science and Technology

خلاصه مقاله:

In this paper, the acoustic analysis of noise has been done in automotive cabin at high speed. High-frequency noise sources are applied separately to the roof and floor panels as well as to the windshield of the vehicle, which has been investigated at both the driver's and rear passenger's head. The most important panels that have the most noise emission are specified. In order to analyze high frequencies, the Statistical Energy Analysis (SEA) method has been used; also, the Response Surface Methodology (RSM) has been used to obtain optimized panel in terms of minimally weighing and maximum noise reduction. The results show that the proposed panels with unconstrained rubber layer .can reduce the cabin interior aerodynamically generated noise more than %۶

کلمات کلیدی:

Aerodynamic noise, Interior noise, unconstrained rubber layer, SEA, Noise reduction

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1865344

