

基于联合仿真的汽车动力总成悬置系统隔振特性研究 Study on Vibration Isolation Characteristics of Automobile Powertrain Mount System Based on Co-simulation

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摘要: 基于联合仿真技术,运用Matlab软件对不同悬置元件的试验数据进行拟合,建立非线性悬置仿真模型;通过信息交换接口进行数据传递,在ADAMS软件环境中对汽车动力总成悬置系统隔振特性进行研究,对比分析不同悬置系统的隔振性能,为悬置系统的优化分析、匹配选型提供参考。研究表明,基于非线性悬置模型的动力总成悬置系统振动特性更接近于实际情况。The two non-linear mount simulation models were created by using Matlab software to fit various mount experiment data based on co-simulation. The vibration isolation characteristics of automobile powertrain system was studied under ADAMS software environment along with transmitting data through information exchange interface, and different mounts- vibration isolation performance was analyzed, which could provide research foundation for optimizing analysis and matching of mount system. The results show that the vibration characteristic of powertrain system is closer to actual situation founding on non-linear mount model than on the linear.

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