

馈能型车辆主动悬架技术Technology of Regenerative Vehicle Active Suspensions

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摘要: 在车辆底盘悬架系统中, 馈能型车辆主动悬架的发展已受到关注, 其功能是在提高车辆行驶平顺性的同时尽可能地回收由不平路面激励引起的悬架系统振动能量, 以减少主动悬架的能耗。本文首先对近年来馈能型车辆主动悬架的发展和研究进行了全面回顾, 然后着重对电磁式馈能悬架进行了总结, 最后对电磁式馈能悬架的核心问题进行了分析。随着电磁技术的日趋成熟, 电磁式馈能悬架将会具有良好的发展前景。The regenerative vehicle active suspensions have become more and more attractive to many automotive researchers and engineers in recent years. The main benefits of a regenerative vehicle active suspension are the possible improvement of ride comfort and the regeneration of vibration energy with decreasing the energy consumption of active suspension. Above all, the state of the art on regenerative active suspension is reviewed. Then the electromagnetic suspension is summarized as the main type of regenerative suspension. In the end, the key problems in the development of the electromagnetic suspension are analyzed. With the improvement of electromagnetic technology, the electromagnetic regenerative suspension may become one of promising trends of vehicle active suspension.

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