

유압식 자동차 동력조향장치 실내소음에 고압호스가 미치는 영향의 주파수 분석을 통한 연구

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A Study on Influence of High Pressure Hose on Automotive Power Steering Interior Noise Using Frequency Analysis

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Key Words : Power Steering System, Pressure Ripple, Vehicle Interior Noise

Abstract : A high pressure hose having tuning cables, called 'Resonator hose' is frequently used to attenuate pressure ripple generated by the pump for reducing the vehicle interior noise. A number of studies have been conducted on the resonator hose and its analytical models. However, there are few studies which deal with the influence of resonator hose on vehicle interior noise because the most of studies focused on transmission loss of the resonator hose. This paper presents NVH test results of power steering system and frequency analysis results. In the frequency analysis, both the relations between vibration, pressure ripple and vehicle interior noise and also the design parameters of high pressure hose influencing on vehicle interior noise were discussed. The test was done for various high pressure hose specimens in full turn condition.

이중질량플라이휠의 단품 구조해석

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Structural Analysis of Dual Mass Flywheel

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Key Words : DMFW(이중질량플라이휠), FEM, SAE, RICARDO, Power Train System(구동계), COSMOS/DesignSTAR

Abstract : 본 논문은 현대자동차에서 개발중인 이중질량플라이휠(DMFV)의 구조적, 열적 특성을 FEM code를 사용하여 평가하였다. DMFW의 몇몇 단품들은 SAE와 RICARDO에서 제시하는 평가기준을 만족시키기 위해서 일부 수정되었으며, 새로운 DMFW 시스템을 개발하는데 있어서 FEM을 사용한 방법은 매우 유용함을 알 수 있다.