

설계파라미터 변경에 의한 고속버스용 엔진 냉각 팬의 저소음화 연구

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A Study on the Noise Reduction of the Engine Cooling Fan of an Express Bus by Change of Design Parameters

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Key Words : Broadband Noise(광대역 소음), Blade Passage Frequency(BPF, 날개 통과 주파수),
Sound intensity(음향 인텐시티), Taguchi method(다구찌 기법), SN ratio(SN비).

Abstract : This paper suggests the noise reduction method of the engine cooling fan. It was estimated the fan noise contribution at the engine room and identified the noise source at the rotating fan by sound intensity method, first. And it has been developed the program for predicting the noise spectrum of axial flow fan. The radiated acoustic pressure is expressed the discrete frequency noise peaks at BPF and its harmonics and the line spectrum at the broad band by the noise generation mechanisms. In this paper it is shown that the comparison of the measured and calculated noise spectra of fan for the validation of the noise predicting program. And this paper presents the characteristics of a fan noise due to modify the design parameters. Accordingly, it was obtained the design parameter values for noise reduction of fan.

ISO TC 108/SC 2 (기계·차량·구조물의 기계적 진동·충격의 측정 및 평가) 규격 제정 동향

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Standardization Activity of ISO TC 108/ SC2 (Measurement and evaluation of mechanical vibration and shock as applied machines, vehicles and structures)

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Key Words : ISO TC 108/ SC 2, vibration standards

Abstract : In this paper, standardization activities and trends of ISO TC 108/SC 2(Measurement and evaluation of mechanical vibration and shock as applied to machines, vehicles and structures) are reviewed.