PCF법을 이용한 왕복동압축기의 진동원 및 진동전달경로 규명

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The Identification of Vibration Source and Its Transmission Paths In Compressor Using PCF Method

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Key Words : Compressor(압축기), Vibration Source(진동원), PCF(부분 기여도 함수), *Transmission Path*(전달경로), *LDT*(*Line Discharge Tube*)

Abstract : It is necessary to determine the vibration source and its transmission paths in order to develop a low-noise compressor. Through the use of multiple-input/single-output(MISO) model, the transmission paths of vibration within a reciprocating compressor have been investigated. In order to identify the transmission path, we measure the accelerations of the block and transverse vibrations of the line discharge tube. As outputs, vibrations of compressor shell were measured at three positions; cylinder head, one near the suction line, and the top of upper shell. The partial coherence function and transfer function are obtained from the measured data, and the results are observed in order to determine vibration source and its influence on the

음향 챔버 내부의 1/3-옥타브밴드 스펙트럼 실시간 제어 시스템

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Real-Time 1/3-Octave Band Spectrum Control System of High Intensity Acoustic Chamber

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Key Words : 1/3-Octave band, Spectrum Control, Digital Signal Processing, Acoustic Chamber.

Abstract : This paper reports the performance and the Algorithm of an 1/3-octave band spectrum control system. The system is developed to provide various required spectrums in a high intensity acoustic chamber. The required spectrums, which usually comes from launch vehicle specification, starts from 25Hz band and ends 10,000Hz. Short settling time is required to guarantee the safety of test objects and reduce the amount of operating gas. The developed system adapted one data acquisition boards installed in a personal computer system to implement the whole control logic.