산란 음향 홀로그래피의 기본 이론 및 오차 해석
Acoustic Scattering Holography and Analysis of Its Errors

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ABSTRACT

There are many difficulties to get the scattered field generated by obstacle which has arbitrary shape or irregular surface impedance by using analytic solution or numerical methods. In this study, we propose experimental method of acoustic scattering holography that can predict the far-field scattered field based on nearfield measurements. First of all, we express scattered field using K-H integral equation and compare the differences of which green's function we use. Also we consider analytic solution of scattered field by infinite cylinder to analysis for the errors due to apply cylinderical holography. So the errors which caused by holography due to frequency (ka) and microphone spacing are also analyzed by numerical simulation.

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