Vibration Analysis of A 3-Dimensional Pipe Conveying Pulsating Fluid Flow

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Key Words: fluid pulsation, FEM, fluid-structure interaction, vibration

Abstract: A pulsation of fluid in a pipe sometimes cause severe vibration of pipe. The inertia, damping and stiffness characteristics of pipe will be changed by the effect of fluid-structure interaction. The velocity and pressure of fluid will impose the force to a bended shape pipe. In this paper, a pipe with fluid flow is modeled by finite element method and the fluid force from pulsation is also modeled by the fluid dynamics. The vibration of pipe conveying pulsating fluid flow can be estimated by taking into considering of fluid-structure interaction.

The establishing Korean Industrial Standard of the sound absorber for use in bildings

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Key Words: Korean industrial standard, rating of sound absorption, ISO 11654

Abstract: Recently Korean Industrial Standards has been revised and established newly accordance with the ISO system, especially ISO 140 series. This study aims to introduce and review ISO 11654 which contents rating of sound absorption, and then this study suggests to establish appropriate evaluating method and Korean Industrial Standard of the sound absorber for use in building.