

원형중공빔 접수진동특성의 실험적 고찰

A Study on the Modal Characteristics of Submerged Circular-tube-beam by Experiment

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ABSTRACT

This paper dealt with an experimental study on the free vibration of circular-tube-beam submerged in water. A circular-tube-beam is commonly founded on the nuclear fuel assembly system in nuclear reactor. The nuclear fuel assembly is susceptible to flow-induced vibration in nuclear reactor. So, the nuclear fuel assembly is designed to avoid any resonance due to the vibration during the reactor operation. In the experiment, the applied boundary condition is clamped-free and the effect of water height on natural frequency and damping is studied. The experiment in air and in water has been performed. The used experimental method is the impact exciting method. The natural frequencies and damping ratio according to water height are presented.