Free Vibration Characteristics of Stiffened Cylindrical Shell

by

Yoshiaki YASUI*1, Yasuhito NAKAKUKI*2 and Koji HOSOMI*3

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Abstract

This paper studies the vibration characteristics of a stiffened cylindrical shell subjected to internal pressure. The cylindrical shell under internal pressure is used in many structures as well as the stiffened cylindrical shell. It is problematic that the vibration characteristics are examined only at the natural frequency of the structure. Additionally, It is important to elucidate the vibration characteristics of the stiffened cylindrical shell under internal pressure. Then, the vibration characteristics of the stiffened cylinder shell under internal pressure were examined by finite element method and experiment. As a result, the increase in the natural frequency due to the internal pressure effect and coupled vibration due to the stiffening effect were confirmed.

Keywords : Stiffened Cylindrical Shell, Free Vibration Characteristics, Natural Frequency, Internal Pressure

* 1 Professor, Department of Prime Mover Engineering.
* 2 Unisia Jecs Co. Ltd.
* 3 Graduate Student, Course of Mechanical Engineering.