

Free Vibration Characteristics of Stiffened Cylindrical Shell

by

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Abstract

This paper describes about a free vibration characteristics of the stiffened cylinder shell. Though the cylindrical shell is used for much structure, it is reinforce in stringer and ring so that the most may supplement strength and rigidity. Therefore, the free vibration characteristics are grasped very important. It becomes a vibration characteristic unlike vibration characteristic of monocoque cylindrical shell. The natural frequency of various stiffened cylinder shells analyzed by finite element method because it grasps free vibration characteristics of the stiffened cylinder shell. In this study on the effect of the reinforcement on the free vibration characteristics in search of natural frequency of various stiffened cylinder shells in which cylindrical shell shape, type of the reinforcement, the number of the reinforcement differ it examines. And, by using cylindrical model in sweep experiment by point vibration, the examination was carried out. As the result, it was possible to clarify the stiffening effect in free vibration characteristics of cylindrical shell.

Keywords: *Stiffened cylindrical shell, Free vibration characteristics, Natural frequency*

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