

Fixed-points theory for global vibration control using vibration neutralizer

Abstract

The vibration neutralizer has been used in many applications since invented. In many cases, an ingenious design law called fixed-points theory was utilized in determining the optimum tuning and damping ratios of the device. However, those applications are limited to point response control of a relatively simple structure. There are some applications related to continuous structures but the purpose is for point response control, collocated or non-collocated. In this paper, the fixed-points theory is examined for global vibration control namely the control of the kinetic energy of a continuous structure. It is proven in this paper that the same design law is applicable for a more complicated purpose. The results presented in this paper may offer new ways of using the device. (c) 2005 Published by Elsevier Ltd.