

عنوان مقاله:

Optimal Placement of Piezoelectric S/A for Active Vibration Control of Engineering Structures by Using Controller Design

محل انتشار:

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خلاصه مقاله:

Reducing energy consumption is the main purpose of design. Naturally, energy loss in each system can compromise the future of a system. This has drawn attention of researchers all around the world. Contentious structures the same as an engineering structure such as beam, plate, and shell are widely used in various industries. Much of industrial systems include these structures. However, the most important point in designing such structures is to avoid failure, reduce maintenance cost, and increase life of the structure. These points directly and indirectly can describe energy consumption and necessarily cannot meet the objectives of the design and not reach an optimal output and product. Vibration of any continuous system can have poor consequences on performance and can weaken the design of a system. Therefore, the effort to reduce vibration and control the mechanical phenomenon has a significant impact on reduced energy waste of a continuous structure (kinematic energy- potential energy). This paper sought to report scientific and research activities from 1980 to 2013 on vibration suppression of continuous systems focusing on optimal placement approach on the structure and installing piezoelectric S/A and smart model built by control approaches in order to attenuate and control unwanted vibrations of the system against external stimulations and disturbance

کلمات کلیدی:

optimal placement, active vibration control, piezoelectric sensor and actuator, continuous structure

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