



Vibration Analysis of Cantilever Smart Structure by using Piezoelectric Smart Material

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Submitted: June 21, 2011 Accepted: August 12, 2011 Published: September 1, 2011

Abstract- The field of smart structures and smart materials has been an emerging area of research for last few decades. A smart structure would be able to sense the vibration and generate a controlled actuation to it, so the vibration can be minimized. For this purpose, smart materials are used as actuators and sensors. In this paper, some literature review is given about smart structure and smart material. Piezoelectric material is used as smart material and cantilever beam is considered as a smart structure. Different positions are considered for the model analysis. In this case, the modal analysis are found out by using ANSYS and MATLAB.

Index terms: Smart structure, Smart materials, vibration analysis, vibration control, cantilever beam, cantilever plate.