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Shape control of composite plates with piezoelectric actuators (Article)

Mohamed Ali, J.S., Mahmood, M.M., Shaik Dawood, M.S.I. ✉

Mechanical Department, Faculty of Engineering, International Islamic University, Malaysia

Abstract

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In this paper, shape control of composite plates using piezoelectric actuators is being investigated. The goal of this study was to see how composite plates behave when they are integrated with piezoelectric actuators. Modelling and simulation were done using COMSOL Multiphysics software and results were validated using previously published studies. Parametric investigations were carried out to investigate the effect of patch locations and stacking sequences with respect to suppression of deflection. The obtained results showed that for uniformly distributed load considered in this work the patches worked effectively when they were placed at the center of the composite plate. © BEIESP.

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Dynamic analysis of laminated composite plates with piezoelectric sensor/actuator patches using the FSDT mesh-free method

Liew, K.M. , He, X.Q. , Tan, M.J. (2004) *International Journal of Mechanical Sciences*

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- 1 Gaudenzi, P.
Smart Structures: Physical Behaviour, Mathematical Modelling and Applications
(2009) *Smart Structures: Physical Behaviour, Mathematical Modelling and Applications*, pp. 1-177. Cited 51 times.
<http://onlinelibrary.wiley.com.ezproxy.um.edu.my/book/10.1002/9780470682401>
ISBN: 978-047005982-1
doi: 10.1002/9780470682401

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-
- 2 Agrawal, B.N., Treanor, K.E.
Shape control of a beam using piezoelectric actuators
(1999) *Smart Materials and Structures*, 8 (6), pp. 729-740. Cited 96 times.
doi: 10.1088/0964-1726/8/6/303

View at Publisher
-
- 3 Donthireddy, P., Chandrashekhara, K.
Modeling and shape control of composite beams with embedded piezoelectric actuators
(1996) *Composite Structures*, 35 (2), pp. 237-244. Cited 78 times.
www.elsevier.com/inca/publications/store/4/0/5/9/2/8
doi: 10.1016/0263-8223(96)00041-4

View at Publisher
-
- 4 Liew, K.M., Lim, H.K., Tan, M.J., He, X.Q.
Analysis of laminated composite beams and plates with piezoelectric patches using the element-free Galerkin method
(2002) *Computational Mechanics*, 29 (6), pp. 486-497. Cited 67 times.
doi: 10.1007/s00466-002-0358-3

View at Publisher
-
- 5 Koconis, D.B., Kollar, L.P., Springer, G.S.
Shape Control of Composite Plates and Shells with Embedded Actuators. II. Desired Shape Specified
(1994) *Journal of Composite Materials*, 28 (3), pp. 262-285. Cited 50 times.
doi: 10.1177/002199839402800305

View at Publisher
-
- 6 Her, S.-C., Lin, C.-S.
Deflection of cross-ply composite laminates induced by piezoelectric actuators
(Open Access)
(2010) *Sensors*, 10 (1), pp. 719-733. Cited 13 times.
<http://www.mdpi.com/1424-8220/10/1/719/pdf>
doi: 10.3390/s100100719

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