

Static Study of Piezoelectric Bimorph Beams with Delamination Zone

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Abstract : The FOSDT (First Order Shear Deformation Theory) is taking into consideration to study the static behavior of a bimorph beam, with a delamination zone between the upper and the lower layer. The effect of limit conditions and lengths of the delamination zone are presented in this paper, with a PVDF piezoelectric material application. A FEM "Finite Element Method" is used to discretize the beam. In the axial displacement, a displacement field appears in the debonded zone with inverse effect between the upper and the lower layer was observed.

Keywords : static, piezoelectricity, beam, delamination

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