

Study of Composite Beam under the Effect of Shear Deformation

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Abstract : The main goal of this research is to study the deflection of a composite beam CB taking into account the effect of shear deformation. The structure is made up of two beams of different sections, joined together by thin adhesive, subjected to end moments and a distributed load. The fundamental differential equation of CB can be obtained from the total energy equation while considering the shear deformation. The differential equation found will be compared with those found in CB, where the shear deformation is zero. The CB system is numerically modeled by the finite element method, where the numerical results of deflection will be compared with those found theoretically.

Keywords : composite beam, shear deformation, moments, finites elements

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