STRESS-STRAIN DISTRIBUTION AND ELASTIC MODULI: MULTIPHASE COMPOSITE BODIES

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Abstract

In this paper some bounds are given for the difference and ratio of the extreme values of the moduli of the constituents in terms of the longitudinal and transverse moduli of the composite material. In addition, the lower bound for the ratio of maximum and minimum values of stress on the phases of the composite is obtained in terms of physical and elastic properties of the constituents.

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Key Words: Transverse modulus, Multiphase composite, Longitudinal stress, Normal strain.