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عنوان مقاله:

Numerical Investigation of Auxetic Materials Due to the Elastic Properties and Negative Poisson's Ratio

محل انتشار:

دومین کنفرانس ملی توسعه علوم مهندسی (سال: 1394)

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نویسنده:

.Emran Khoshrouye Ghiasi - *Faculty of Engineering, Ferdowsi University of Mashhad, Mashhad, Iran*

خلاصه مقاله:

Auxetic materials are obtaining practicalinterest in technical segments for their fantastic andrarely extreme mechanical response. Hence, unlikemost materials, the Poisson's ratio is negative. Thismeans that such solids expand transversely whenstretched longitudinally. Due to their uniqueproperties, a number of various auxetic systems thathave been extended generally with respect todesigning specific geometry of the material structures.This paper exhibits the effects of Poisson's ratio onthe elastic constants such as tensile modulud (E),shear modulus (G), and bulk modulus (K). Inaddition, it is concluded that auxetic materials aretechnologically and theoretically significant .fordifferent applications

کلمات کلیدی:

Auxetic Material, Poisson's Ratio, Elastic Constants, Deformation, Strain

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