

عنوان مقاله:

Study of Auxetic Materials Behavior by Experimental Methods

محل انتشار:

هفتمین کنفرانس بین المللی مواد کامپوزیتی: ساخت، خواص و کاربرد (سال: 1399)

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خلاصه مقاله:

The auxetic structure has a negative Poisson coefficient and treats in tension and pressure, unlike ordinary objects. Auxetic structures are advanced structures such as composites and biomaterials that have different properties and applications in a variety of fields, such as military, medical, textile, and aerospace industries. In this research, experimental tests of the model produced by 3D printing technology and calculating transverse displacement by introducing some methods were evaluated. Four simple methods were proposed for experimental testing on the model. These four methods used to measure sample dimensions are caliper measurement, Dial indicator, line counter measurement, and image processing technique. All methods can be easily achievable and the accuracy of measurement using image processing is higher than in other ways.

کلمات کلیدی:

Auxetic material- Poisson ratio - 3D printing – Image processing

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