

## عنوان مقاله:

A computational method to assess the impact of stacking sequence on the cured shape of laminated hybrid polymeric structures

## محل انتشار:

بیست و هشتمین کنفرانس سالانه بین المللی انجمن مهندسان مکانیک ایران (سال: 1399)

تعداد صفحات اصل مقاله: 4

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## خلاصه مقاله:

This paper represents a computational model regarding predicting the cured shape of different hybrid polymer laminates, particularly two stacking sequences are analyzed, namely [90/90/0/0] and [15/15/60]. Firstly, theoretical formulations are derived. The minimal potential energy principle is then employed and numerical results are obtained applying stability condition. Finally, the influences of mold radius as well as stacking sequence are analyzed using the novel represented model. The numerical results suggest that mold radius has a trivial effect on cured shape of laminated composites; while, this effect is more considerable for cross-ply arrangements. Moreover, the impact of mold radius is different over the different lengths. It is also showed that, overall, curvature a is bigger for cross-ply arrangement of [90/90/0/0]; while, curvature b is smaller for this ply configuration. The represented computational model can be used to predict the cured shape of various unsymmetrical hybrid composites in manufacturing stage at composite-based industries.

## کلمات کلیدی:

.Hybrid composites, Curvature, Stacking sequence, Mold radius, Interlaminar shear strain

## لینک ثابت مقاله در پایگاه سیویلیکا:

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