

عنوان مقاله:

Experimental Investigation of the Cooling Rate Effect on Final Shape of Asymmetric Composite Laminates

محل انتشار:

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

تعداد صفحات اصل مقاله: 4

نویسندگان:

M Mobarakian, - School of Mechanical Engineering, College of Engineering, University of Tehran, Tehran, Iran

M Safarabadi - School of Mechanical Engineering, College of Engineering, University of Tehran, Tehran, Iran

M FARAHANI - School of Mechanical Engineering, College of Engineering, University of Tehran, Tehran, Iran

خلاصه مقاله:

Maintaining final shape of a composite laminate after curing is very important in most composite products. In Some applications, utilizing unsymmetrical composite laminates to achieve a certain shape after curing cycle is increasing. So, characterizing final shape of an unsymmetrical composite laminate is crucial. The purpose of this study is to investigate the effects of different cooling rates on the final shape of the thin unsymmetrical composite laminates with different lay-ups after the curing cycle. The samples were subjected to three different cooling stages with the same heating cycles. The samples used for this study were carbon/epoxy with three different stacking sequences, $[0/90/0]$, $[45/-45]$, $[0/45/-45/90]$. Results indicated that the distortion magnitude of the unsymmetrical composite laminate was significantly depending on the cooling rate. Also, results showed that the lay-up configurations can alter both the distortion magnitude and the final shape of the unsymmetrical composite laminate.

کلمات کلیدی:

Composite Laminate, Cooling Rate, Final Shape, Curing Cycle

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1226009>

