عنوان مقاله:

Experimental and numerical study of heat flux distribution in laserforming of bi-layer sheets

محل انتشار:

دو فصلنامه تحقیقات کاربردی در مهندسی مکانیک, دوره 4, شماره 1 (سال: 1393)

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خلاصه مقاله:

Laser forming is a modern process which is mainly used for forming metals.Different Lasers are used in this regard that includes Nd: YAG and CO2. In thisstudy, forming bi-layer sheets of Aluminum/Ceramic by Laser was investigated.Furthermore, effect of Uniform and Gaussian heat flux distribution in differentpower, velocity, and beam diameters on bending angle was studied. FEMsimulation indicated that, in the same conditions of analysis, Uniform heat fluxdistribution caused higher bending angle than Gaussian heat flux distribution.Moreover, the results showed that there was an optimum point at different speedsand laser beam diameters, at which the bending angle was maximum. In order toevaluating the numerical results, a set of experiments was conducted, whichshowed good agreemen

کلمات کلیدی:

Laser Forming,Cermet,Gaussian distribution,Uniform distribution