

عنوان مقاله:

Determination of Residual Stresses in Laser Spot Welding by Finite Element Method

محل انتشار:

سیزدهمین کنفرانس سالانه مهندسی مکانیک (سال: 1384)

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خلاصه مقاله:

An axisymmetric finite element model is developed to predict residual stresses- both in depth and on the surface- induced by laser spot welding of 304 stainless steel. A decoupled thermo-mechanical procedure is implemented with all material properties temperature-dependant. Distribution of residual stresses fairly agrees with empirical observations. Effect of preheating on the resultant residual stresses is investigated. One of the challenges in welding simulation is determination of absorption coefficient. In this work effect of absorptivity on the residual stresses induced by laser spot welding is also inspected.

کلمات کلیدی:

Finite Element – Laser Spot Welding – Residual Stress – Preheating – Absorptivity

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/27175>

