

عنوان مقاله:

A study on residual stress measurement in hollow samples using contour method

محل انتشار:

کنفرانس دو سالانه بین المللی مکانیک جامدات تجربی (سال: 1394)

تعداد صفحات اصل مقاله: 2

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خلاصه مقاله:

Residual stresses have a great influence on the structural integrity of the engineering components. Contour Method is a destructive technique for measuring residual stresses that can measure two dimensional residual stresses. In this technique, the component is cut in half. The contours of the new surfaces created by the cut are then measured. Finally, the measurement data are used to calculate the residual stresses. However, application of the contour method for hollow samples is associated with some complications. In the current work, contour method was examined for hollow samples. Quenching procedure was employed to induce residual stresses within the samples to create a well-known stress field. The contour method was applied to the hollow samples when the hole was filled using a shaft. Furthermore, the measured experimental stresses were compared with those predicted using finite element analyses

کلمات کلیدی:

Contour method, residual stresses, Hollow samples

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/510111>

