

عنوان مقاله:

A study on residual stresses induced by waterjet peening

محل انتشار:

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

تعداد صفحات اصل مقاله: 2

نویسندگان:

A.H Mahmoudi - Associate Professor, Department of Mechanical Engineering, University of Bu-Ali Sina, Hamedan, Iran

F Salahi - MSc student, Department of Mechanical Engineering, University of Bu-Ali Sina, Hamedan, Iran

b Maleki - Directing Manager, Radox Group, Tehran, Iran

خلاصه مقاله:

One of the ways to enhance the fatigue life of the engineering components is to induce compressive residual stresses using peening processes. Among all the peening techniques, waterjet peening (WJP) is one of the youngest. WJP is similar to shot peening, with the difference that water droplets are used instead of pellets. WJP in comparison with shot peening has the advantage of creating a better surface. However, it produces a smaller region of compressive residual stresses. In the current study, WJP was examined on an aerospace class of aluminum alloy. Different parameters of WJP were examined both experimentally and numerically. For instance, the applications of WJP when the jet of water is constant or when it was moved were studied. Furthermore, the induced residual stresses were measured and compared with the numerical predictions

کلمات کلیدی:

Water jet peening, Residual stresses, Fatigue

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/510109>

