

عنوان مقاله:

Estimation of Thermal Contact Conductance using Conjugate Gradient Method

محل انتشار:

شانزدهمین کنفرانس سالانه بین المللی مهندسی مکانیک (سال: 1387)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Goudarzi - *Department of Mechanical Engineering, Iran University of Science and Technology, Tehran, Iran*

Shojaeefard - *Department of Mechanical Engineering, Iran University of Science and Technology, Tehran, Iran*

خلاصه مقاله:

For some manufacturing processes, the transfer of heat between the components, the tools and the environment has an effect on tool-life and the accuracy of the formed component. Consequently, the measurement of Thermal Contact Conductance (TCC) is of increasing interest to researchers and industrial engineers participating in the manufacture of high-precision components. A new method (Conjugate Gradient Method of Functional Estimation) and measurement equipments are proposed in which the measurements are conducted on thin cylindrical specimens, which are retained under pressure. A clear advantage of this method is the ability to estimate the TCC under specifically controlled conditions. The other advantage of the present method is that no a priori information is needed on the variation of the unknown quantities, since the solution automatically determines the functional form over the domain specified. In the present work the dependence of TCC on the pressure and the specimen texture are presented.

کلمات کلیدی:

Thermal Contact Conductance, Inverse Problem, Conjugate Gradient Method

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/41327>

