

## Numerical Simulation of Thermoelastic Stress Analysis

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**This paper focuses on verification of experiment of thermoelastic stress analysis by using numerical solution. Thermoelastic stress analysis is noncontact technique to obtain thermograms, thermographic images of the stress fields, by using an infrared camera. In the elastic part experimental results can be used to determine the value of the first stress invariant under adiabatic conditions. The experimental part is dedicated to the postprocessing of the measured data. Numerical solution was performed by finite element method in two softwares: ANSYS and ABAQUS.**

**Keywords:** numerical simulation, thermal stress analysis, stress field, infrared camera

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