9th International Conference on Quantitative InfraRed Thermography July 2-5, 2008, Krakow - Poland

Infrared thermography of electroconductive woven textiles

by J.Banaszczyk^a, A. Anca^b, G. De Mey^a

a Department of Electronics and Information Systems, Ghent University, Sint Pietersniewstraat 41, 9000 Gent, Belgium b Department of Electrotechnics, Technical University of Cluj-Napoca, C. Daicoviciu str. 15, 400020 Cluj-Napoca, Romania

Abstract

QIRT2008

Modelling of the current density in elelectroconductive textiles is a complicated problem as they cannot be considered homogenous structures with an isotropic current distribution. This anisotropy is mainly the result of the electrical contact resistance between interlacing yarns comprising the textile. It is difficult to measure the contact resistance directly as it is often nonlinear and depends on many factors, however it can by inferred by comparing computer simulations of the power distribution in the textiles with their corresponding IR images.

This paper was published in the QIRT Journal 6.2