

Induction-Lockin-Thermography and Induction-Burst-Phase Thermography for NDE

by G. Riegert, G. Busse

*Institute of Polymer Testing and Polymer Science,
Department of Non-Destructive Testing (IKP-ZFP), University of Stuttgart,
Pfaffenwaldring 32, D-70569 Stuttgart, Germany*

Abstract

Eddy current activated thermography uses resistive losses inside the sample for heating. This heating is done in a modulated way (Induction-Lockin-Thermography: ILT) or as a burst with a subsequent Fourier transformation of the temperature image sequence (Induction-Burst-Phase thermography: IBP). The phase evaluation of ILT and IBP has significant advantages as compared to inductive heating with visual inspection of the thermographic sequence: Phase angle images are independent of most artefacts like reflections, variation in emission coefficient, or inhomogeneous heating. Also the signal-to-noise ratio in the amplitude and phase images is significantly better than in single temperature images.

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