Phase angle Thermography for depth resolved defect characterization

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Abstract

Optically excited Lockin-Thermography is a non-contact NDE-method which found many applications. However, the depth information about thermal boundaries (i.e. defects) which is included in the resulting phase angle images has not been extracted rigorously till now. This paper shows one way to derive from phase angle values depth resolved information on thermal boundaries and perform single-sided thermal wave profilometry.

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