Dra. Arantza MENDIOROZ
University of the Basque Country (UPV/EHU)
Bilbao School of Engineering
Department of Applied Physics
Plaza Ingeniero Torres Quevedo 1
48013 Bilbao
Spain
e-mail: arantza.mendioroz@ehu.eus

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ABSTRACT
PRESENTATION
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Dra. Arantza Mendioroz is a full professor of physics at the Department of Applied Physics of the Bilbao School of Engineering of the University of the Basque Country (UPV/EHU) in Bilbao, Spain.

Jon PÉREZ-ARBULU
University of the Basque Country (UPV/EHU), Vitoria-Gasteiz School of Engineering, Department of Applied Mathematics, Vitoria-Gasteiz, Spain
Dr. Agustín SALAZAR
University of the Basque Country (UPV/EHU), Bilbao School of Engineering, Department of Applied Physics, Bilbao, Spain

SIZING HORIZONTAL INNER HEAT SOURCES USING LOCK-IN INDUCTIVE INFRARED THERMOGRAPHY

We present a methodology to size the area and depth of horizontal inclusions of arbitrary shape, which generate heat by lock-in inductive thermography. The method is based on recording the amplitude and phase temperature profiles across the centre of the heated area and fitting them to the analytical model corresponding to a circular inclusion. In this way, we obtain the depth and the area of the heat source, avoiding complex regularized inversion algorithms. Experimental results on calibrated samples confirm the validity of the method.