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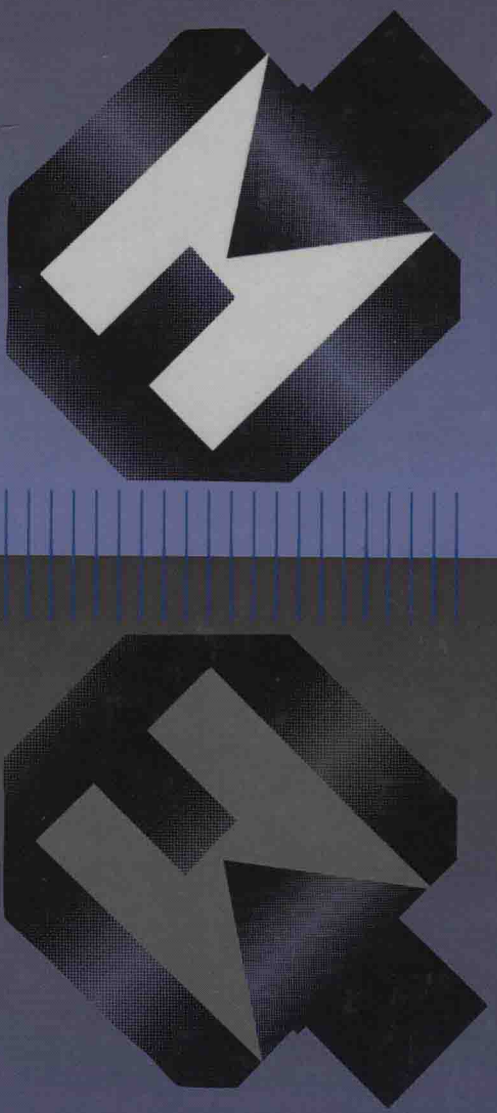
ELECTROMAGNETIC NONDESTRUCTIVE EVALUATION (XVI)



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Electromagnetic Nondestructive Evaluation (XVI)

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Preface

This volume contains selected papers from the 17th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE), which was held in Rio de Janeiro, Brazil from July 29 to August 1, 2012.

ENDE workshop is an important event for all scientists with interests in nondestructive testing. The first workshop took place in 1995 in London UK, and has been followed by workshops held in various parts of the world, but this is the first time this workshop series has come to Brazil and to a Latin American country.

The aim of the workshop is to bring together scientists from universities and research institutions conducting in-depth research into the basics of electromagnetic nondestructive evaluation on the one hand, and engineers presenting practical problems and industrial applications on the other hand. ENDE workshops also aim to provide a forum for discussing recent developments in the growing field of electromagnetic nondestructive evaluation methods. The workshop emphasizes both the basic science and early engineering developments in the field, so experts from theoreticians to research engineers in industry are encouraged to participate.

The workshop was jointly organized by Federal University of Rio de Janeiro, in cooperation with the Brazilian Society for Nondestructive Testing and Inspection (ABENDI), which is a NGO supported by Brazilian Companies, and whose focus is on the certification and training of people in NDT.

Eighty seven participants from Argentina, Brazil, Colombia, France, Germany, India, Italy, Japan, Korea, Poland, Slovak Republic, Spain, United Kingdom, United States, South Africa and Switzerland, were officially registered. There were eighty seven oral and poster presentations in all, one Keynote Conference and five Invited Lectures. From the papers submitted for publication, thirty six peer reviewed articles have been accepted and appear in these proceedings.

Keynote Conference

C.S. Camerini. Exploration of oil and gas on the Brazilian coast and the application of ENDs for integrity inspection.

Invited Lectures

1. F. Kojima, Reliability assessment of EMAT-NDE system for pipe wall thinning management.
2. N. Bonadeo, Electromagnetic NDT studies at Tenaris R&D: Mathematical modeling and experiments.
3. A. Tamburrino, Noniterative methods for real time imaging of conducting materials.
4. R. Sikora, Artificial intelligence systems in NDT.
5. T. Jayakumar, Advances in electromagnetic NDE techniques for materials evaluation.

I would like to express my sincere gratitude to all attendees, for their presentations and manuscripts, and the reviewers, for their time and energy which was necessary to produce a high quality volume of work, and the session chairs that help the ENDE 2012 organizers. Thanks are due to the members of the standing committee, and especially to the co-editors of this book, Professors Fumio Kojima and Tomasz Chady.

I am indebted to the students and researchers at the LNDC, Non Destructive Testing, Corrosion and Welding Laboratory – UFRJ, for their fantastic help and organizing efforts. Lastly, Dr Maria Cristina Lopez Areiza deserves my special recognition and acknowledgement for the hard work and invaluable assistance put forth during the preparation of the ENDE 2012 workshop.

Financial support coming from the Brazilian Agencies, CNPq (National Council for Scientific and Technological Development) and CAPES (Coordination for Education of Graduated Personnel) is acknowledged.

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abendi Associação Brasileira de Ensaios Não Destrutivos e Inspeção

Brazilian Society for Nondestructive
Testing and Inspection

ENDE 2012 – Rio de Janeiro, Brazil
Conference Organization

The 17th International Workshop on Electromagnetic Nondestructive Evaluation, Rio de Janeiro, Brazil, July 29th, August 1st, 2012.

Organized by
UFRJ, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

In Cooperation with
ABENDI, Brazilian Society for Nondestructive Testing and Inspection, Brazil

Co-Sponsors
CNPq, National Council for Scientific and Technological Development, Brazil
CAPES, Coordination for Education of Graduated Personnel, Brazil

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