

UK Magnetics Society

one day seminar

Soft Magnetic Composites and their Use in Electrical Machines

Tuesday, 16 November 2004

University of Newcastle-upon-Tyne

The properties of magnetic composites have improved dramatically in recent years. The materials open up a range of new possibilities in the manner in which electrical machines are designed and constructed. Powdered iron is essentially isotropic, so that three dimensional magnetic flux paths can be used leading to the emergence of large claw pole armature machines, novel axial and radial field machines and many other topologies which simply cannot be produced using laminations. Intense academic and industrial research has examined how machines using these materials can be manufactured in a cost-effective manner and machines using these materials are now being produced in large volumes.

This seminar will bring together composite producers, academic researchers and electrical machines manufacturers from across the world to discuss the latest material advances, machine designs and manufacturing possibilities of these materials.

PROGRAMME

from 0930 REGISTRATION/COFFEE

Chairman: Prof Alan Jack, School of Elec, Elec & Computer Engineering, University of Newcastle-upon-Tyne

1025 WELCOME/INTRODUCTION

1030 *Recent Developments in SMC Materials*, Dr Patricia Jansson, Hoganas AB, Sweden

1100 *Experience with ATOMET Soft Magnetic Composites: Properties, Pressing Conditions & Applications*, Prof Philippe Viarouge, Dr Jerome Cros, Dr Maxime Dubois, Laboratoire d'Electrotechnique, Electronique de Puissance et Commande Industrielle, University of Laval, Canada

1130 *Comparison between Four Topologies of Synchronous Machines using SMC*, David Martinez, Dept of Industrial Electrical Engineering & Automation, Lund Institute of Technology, Sweden

1200 *High Speed Motor Design Issues using Soft Magnetic Composites*, Miss Ulrike Hoefler, BOC Edwards

1230 LUNCH

Chairman: Prof Phil Mellor, Dept of Elec & Elec Engineering, University of Bristol

1400 *Development of Magnetic Composites through the Use of Hollow Reinforcing Fibres*, Dr Julie Etches, Dept of Aerospace Engineering, University of Bristol

1430 *Axial Gap Permanent Magnet DC Motor with Powdered Iron Armature*, Shu Hau Lai, School of Engineering Science, University of Southampton

1500 *Axial Flux Permanent Magnet Machines using Combined SMC and Laminations*, Prof Alan Jack, School of Elec, Elec & Computer Engineering, University of Newcastle-upon-Tyne

1530 TEA
END

The UK Magnetics Society accepts no responsibility or liability in any way whatsoever for any statements made or opinions expressed during this event

PLEASE COMPLETE AND RETURN TO:

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772295, email: mswadling@ukmagsoc.co.uk

I wish to attend The UK Magnetics Society one-day seminar *Soft Magnetic Composites and their Use in Electrical Machines*, Tuesday, 16 November 2004, at University of Newcastle-upon-Tyne, and enclose remittance to cover technical sessions, seminar documentation, refreshments and lunch (cheques made payable to 'The UK Magnetics Society' and drawn on a UK bank). Payment may also be made by bank transfer: The UK Magnetics Society, Barclays Bank plc 17 Market Place, Wantage, Oxon OX12 8AG, UK, Account No 50893293, Sort Code No: 20-90-91; please add on £10 to cover bank charges if paying by bank transfer from overseas.

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