

PREFACE

The MECASENS IV conference on stress evaluation on materials by neutron or synchrotron radiation in Vienna, Austria, September 24th -26th, 2007 was the fourth in a series of conferences starting with MECASENS I in Reims, France 2000, organised by Prof. Alain Lodini, University of Reims, France, continuing with MECASENS II in Manchester, UK, 2003 and MECASENS III in Santa Fe, New Mexico, USA in 2005. MECASENS IV was jointly organised by the Institute of Material Science and Technology, Vienna University of Technology, Vienna, Austria (TUWien), and the Department Material Diagnostics and Steel Technology, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany (MPI).

The conference MECASENS IV brought together more than 140 scientists from all over the world, both academia and industry, to address specific topics within the field of measurement of stresses in solids using neutrons, X-rays and synchrotron radiation. Special emphasis was placed on multi-disciplinary approaches involving an understanding of the measured stress field and the consequences of the stress field for the behaviour of materials and components. The advances in instrumentation, experimental techniques, data evaluation, modelling and simulation have been presented by scientists from all over the world. The scientific community in this challenging field of research is increasing significantly. The discussion of the achievements and of the planned research demonstrated the evolution and the scientific as well as the technological potential of stress measurements in solids.

We thank all the authors and in particular all the referees assigned to the manuscripts for their efforts contributing to these proceedings.

We would like to express our gratitude to all those at TUWien and MPI who supported us in organizing the MECASENS IV conference, particular thanks are to Ms. S. Windisch, Mrs. D. Fischer, TUWien and Mr. D. Souza, Mrs. A. Adrian, MPI.

Financial support of travelling expenses for five PhD students by the NMI3 program of the EU is gratefully acknowledged.

Wien, January 17th 2008

Düsseldorf, January 17th 2008

H.Peter Degischer

Anke Rita Pyzalla , Andras Borbély

Institute of Materials Science and Technology, Vienna University of Technology, A-1040 Vienna, Austria	Department Material Diagnostics and Steel Technology, Max-Planck-Institut für Eisenforschung GmbH, D-40237 Düsseldorf, Germany
---	---