Arun S. Mujumdar

DRYING '86

Volume 2

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Edited by

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McGill University, Canada

HEMISPHERE PUBLISHING CORPORATION

A subsidiary of Harper & Row, Publishers, Inc.

Washington New York London

DISTRIBUTION OUTSIDE NORTH AMERICA

SPRINGER-VERLAG

Berlin Heidelberg New York Tokyo

DRYING '86, Volume 2

1 2 3 4 5 6 7 8 9 0 BRBR 8 9 8 7 6

Library of Congress Cataloging-in-Publication Data

Drying '86.

Proceedings of the Fifth International Symposium on Drying held on the campus of the Massachusetts Institute of Technology, Cambridge, MA, Aug. 13–15, 1986.

Includes bibliographies and indexes.

1. Drying–Congresses. I. Mujumdar, A. S. II. International Symposium on Drying (5th : 1986 : Massachusetts Institute of Technology)

TP363.D7926 1986 660.2'8426 86-14232

ISBN 0-89116-566-5 (set) Hemisphere Publishing Corporation

ISBN 0-89116-638-6 (v. 1)

ISBN 0-89116-639-4 (v. 2)

DISTRIBUTION OUTSIDE NORTH AMERICA:

ISBN 3-540-16906-7 Springer-Verlag Berlin

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PREFACE

It is a great personal pleasure and privilege for me to present these two volumes which constitute the formal Proceedings of the Fifth International Symposium on Drying (IDS'86) held on the campus of the Massachusetts Institute of Technology, Cambridge, MA, USA, August 13-15, 1986. As the Founder and continuing Program Chairman of the biennial International Drying Symposia Series, I am simply delighted with the positive reception and even acclaim which this series has earned worldwide over the past eight years. This has been possible only through the incessant and untiring efforts devoted by numerous individuals, professional and industrial organizations. Indeed, the number of those who contributed in some way or the other to the success of IDS'86 is so large that we have had to devote a separate section to acknowledge them individually in these volumes. If I have missed any names I wish to offer my apologies and assurance that the omission is inadvertent.

The significant growth in R&D activity related to drying and dewatering in the past decade was no doubt triggered by the energy crunch and the rising cost of energy. I hope that the recent fall in the world price of oil will not soften the industrial as well as academic interest in drying and dewatering technologies. Any dampening of such interest at this stage will be counter-productive in the long run. Furthermore, developments in drying technology are not always motivated by energy considerations alone but also by needs related to increased productivity, better product quality, safer and environmentally superior operation, new products and processes etc.

A quick glance at the contents of these volumes will show that all aspects, fundamental as well as applied, of drying of solids are covered. Continuing the tradition of earlier symposia in this series, the authors represent most parts of the world. For the first time, IDS'86 also covers such industrially significant areas as dewatering and R&D connected with humidity measurement technology which is vital to better control of drying processes.

International conferences and symposia have long been an integral part of the infra-structure of science, engineering and technology. The origin of this tradition may be traced back to the scholarly wanderings of European and Asian scholars centuries ago. Diffusion of knowledge across geographical as well as geo-political boundaries has had a very positive influence on the development of sciences as well as the arts for centuries. The growth of the scientific community and the increasing ease of travel have made it possible for more scientists to meet more often, define common goals, collaborate on problems of mutual interest, exchange ideas and research results both formally and informally, and above all, to create mutual trust and goodwill.

Despite the massive volunteer effort which goes into successful organization of any meeting -especially one with such extensive multidisciplinary character as the IDS - the cost of organization and attendance is high and hence must be justified. While it is relatively easy to state arguments in support of such meetings it is an order-of-magnitude difficult task to assess objectively their immediate and long-term value. As the founder/Chairman of the IDS series I am constantly concerned with this problem. One indirect indicator pointing to the value of the IDS meetings is the ever increasing numbers of abstracts submitted and participants, regardless of the location of the meeting in the world. A statistical evaluation of the technical programs and attendee lists shows that all IDS meetings have consistently met their objective of providing a truly international forum (20-35 nations represented at each meeting to date) for multidisciplinary and inter-industry scientific and engineering presentations. It is hoped that "cross-talk" between disciplines and various industries facing important drying problems will lead to increased productivity. IDS is designed to encourage and facilitate such cross-talk.

A recent evaluation of a successful, well-established series of scientific meetings has shown that the series met their immediate objectives in that they were international and multidisciplinary and provided a forum for participants to actively contribute to discussion (Ref. 1). A long-term positive outcome was the subsequent exchange of research material (60 per cent) and to the establishment of collaborative research projects (30 per cent). While these figures seem rather high, I feel that they are a true indicator of the success of the series.

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1. Evered, D., Porter, Ruth and Nugent, Jonathan, International Scientific Meetings: Relation between Structure and Function, British Medical Journal, 291, 1028-1031 (1985).

I know that IDS has catalyzed several international collaborations in drying R&D - at least four such collaborations in my own case. I hope that participation in IDS series will lead to an overall increase in international, multidisciplinary collaborative projects.

The impact of international meetings can also be assessed by citation analysis. Unfortunately I do not have the necessary data. For the series mentioned earlier, citation analysis showed that the meeting proceedings were cited early, often and over a substantial period of time. It is my hope that the IDS proceedings have had and will continue to have a significant impact on the drying R&D community internationally. Perhaps a citation analysis in the years to come would be a worthwhile exercise.

It is my pleasure to note that IDS'88 and IDS'90 will be held in Versailles, France and Prague, Czechoslovakia respectively. IDS'88 will be held at Palais des Congres de Versailles, Versailles, September 6-8, 1988 with Dr. Michel A. Roques as the Symposium Chairperson. IDS'90 will be held in Prague in early September 1990 with Dr. Iva Filkova as the Symposium Chairperson.

Finally, I wish to record my sincere appreciation and gratitude to Professor Marcus Karel, IDS'86 Program Chairman, his efficient staff and colleagues at MIT for their enthusiastic effort to ensure success of this meeting. Aside from the members of the International advisory Panel, a large number of individuals have assisted us in the IDS'86 effort and, in particular, in the editing of these proceedings in a remarkably short time. They are (in random order): Mainul Hasan, Purnima Mujumdar, Anita Mujumdar, Suna Polat, Osman Polat, Laura Passos, Moses David and Victor Jariwala. The support of the professional societies and industrial organizations is acknowledged separately. My sincerest thanks go to all the Keynote Lecturers and all authors whose efforts have indeed resulted in this compendium which I hope will serve the drying community worldwide for years to come.

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ACKNOWLEDGEMENTS

The IDS'86 Program Chairmen gratefully acknowledge the active support and cooperation of the following professional societies, industrial organizations and members of the International Advisory Panel. Special thanks of course are due to distinguished Keynote Lecturers, authors of papers and session co-chairmen as well as the M.I.T. Conference Office without whose whole-hearted cooperation IDS'86 could not have been successful. We wish to record with appreciation the assistance of Sarah Boyer and Gayle Fitzgerald, both of M.I.T. Special Events Office, in the organization of IDS'86.

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