

Preface

*“Paper is out”... and “paper flood increases”...
Is paper now dead or alive?*

Paper is reality in our life. This book informs on the technical, economic and social importance of paper and board. The authors give a concise description of the fascinating art and technology of paper making, providing laymen, students, politicians and others with most recent information and on the state-of-the-art technology. It shows the relevance of paper and board today as well as the historical background and economic aspects. The chapter on raw materials for paper and board manufacture contains an overview and summary of what is described in Volume 1 on fibrous material, followed by more detailed description of pigments as fillers and for coating. Paper chemistry has found an adequate scope covering this important area by basics and practical application. The process of stock preparation first describes the unit processes which are then combined to systems for primary and secondary fiber preparation. Water circuits with loop designs and circuit closure follow. The chapter on paper and board manufacture covers the different sections in the paper machine as well as fabrics, rolls and roll covers, and describes the different types of machines producing the various paper and board grades. The high technical standard of the control, information and analysing systems in the paper industry is described in the chapter of control systems. Coating is dealt with in a separate chapter covering color formulation and preparation as well as the actual coating application. Paper finishing gives an insight in what happens at roll slitting and handling. The chapter on environmental aspects includes waste water treatment as well as handling, utilization and disposal of solid waste. The following chapters describe the main paper and board grades and their properties, followed by testing of paper and board. The paper and book preservation chapter points at an area of burning interest of mankind. The appendix includes latest papers on state-of-the-art as well as earlier ones giving basics in certain areas.

This wide knowledge field of paper and board – the big elephant – could only be eaten by cutting it into smaller pieces. This was successfully done by the readiness of more than 20 authors, all professionals with detailed knowledge in their areas, to contribute to this project. The variety of their points of view are certainly one of

the advantages of this book. My thanks go to my colleagues for their cooperation, to the individual companies for providing the pictures, to BASF, OMYA and Voith for enabling the handbook to be printed in colors and to Ullmann for the support during the preparation of this book.