1. Record Nr. UNINA9910819851703321 Titolo Handbook of paper and board / / edited by Herbert Holik Weinheim,: Wiley-VCH, 2013 Pubbl/distr/stampa **ISBN** 3-527-65249-3 3-527-65252-3 3-527-65251-5 Edizione [2nd, rev. and enl. ed.] Descrizione fisica 1 online resource (1178 p.) Altri autori (Persone) HolikHerbert Disciplina 676.2 Papermaking Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Handbook of Paper and Board; Contents to Volume 1; Preface; List of Contributors to the Second Edition; 1 Introduction; 1.1 Paper and Board Today; 1.2 Paper and Board Manufacturing - an Overview; 1.3 Economic Aspects; 1.4 Historical Background and General Aspects; 1.4.1 Introduction; 1.4.2 Precursors of Paper; 1.4.2.1 Tapa (Bark cloth); 1.4.2.2 Felt; 1.4.2.3 Papyrus; 1.4.3 Paper; 1.4.3.1 Invention of Paper; 1.4.3.2 Chinese Paper: 1.4.3.3 The Eastern Spread of Papermaking: 1.4.3.4 The Spread of Papermaking into Central and Southern Asia; 1.4.3.5 Arab Paper; 1.4.3.6 Medieval European Paper 1.4.3.7 Mechanization and Industrialization1.4.3.8 Paper Machines; 1.4.3.9 Pulping and Sizing; 1.4.3.10 From Industrialization to Automation and Globalization: Technical and Economic Trends of the Nineteenth and Twentieth Centuries: 1.4.4 Historical Watermarking and Security; 1.5 A Philosophy of Papermaking: Life Lessons on the Formation of Paper and People; 1.5.1 Fibers as Individuals; 1.5.2 Paper as a Social Construct; 1.5.3 Fiber Preformation and Human Training; 1.5.4 Into the World of Turbulence; 1.5.5 Flocs and Vicissitudes; 1.5.6 Fibers Ready for the World, Part 1 1.5.7 Sheet Formation as the Basis of the Fiber's Society1.5.8 Fibers Ready for the World, Part 2; 1.5.9 In Summary - Toward the End; References; Further Reading for Section 1.3; Further Reading for Section 1.5; 2 Fibrous Materials for Paper and Board Manufacture; 2.1

Overview; 2.2 Chemical Pulp; 2.2.1 Introduction; 2.2.2 Wood

Cooking; 2.2.3.2 Regeneration of Spent Cooking Liquor; 2.2.4 Sulfite Pulp: 2.2.5 Bleaching of Chemical Pulp: 2.2.6 Semimechanical Pulp: 2.2.7 Properties of Chemical Pulps 2.2.8 Properties of SemiMechanical Pulps2.3 Mechanical Pulp; 2.3.1 Introduction; 2.3.2 The Grinding Process; 2.3.3 The Refiner Process; 2.3.3.1 Refining Principles; 2.3.3.2 Mechanical, Thermal, and Chemical Impacts in the Refiner Process; 2.3.3.3 Machines and Aggregates for the Refiner Process: 2.3.4 Mechanical Pulp Processing: 2.3.5 Mechanical

Preparation for Pulping Processes; 2.2.3 Sulfate Process; 2.2.3.1

Pulp Bleaching; 2.3.6 Properties of Mechanical Pulp; 2.4 Recovered Paper, Recycled Fibers; 2.4.1 Role of Recovered Paper in the Paper and Board Industry; 2.4.2 Main Definitions for Statistics; 2.4.3 Utilization Rates for Different Paper Grades

2.4.4 Resources of Recovered Paper 2.4.5 Lists for Recovered Paper Grades: 2.4.6 Use of Recovered Paper Grades: 2.4.7 Requirements of Paper Products with Respect to Recyclability; 2.4.7.1 Deinkability; 2.4.7.2 Removability of Adhesives Applications from Graphic Paper Products; 2.4.7.3 Removability of Adhesives Applications from Packaging Products; 2.4.8 Multiple Paper Recycling; 2.5 Wood Pulp Fiber Suspensions; 2.5.1 Introduction; 2.5.2 Flocculation; 2.5.3 The Flow of Wood Pulp Fiber Suspensions; 2.5.4 The Mechanisms of Flow; 2.5.4.1 Sub-Regime Zero-A; 2.5.4.2 Sub-Regime A-B

2.5.4.3 Sub-Regime B-C

Sommario/riassunto

Papermaking is a fascinating art and technology. The second edition of this successful handbook provides a comprehensive view on the technical, economic, ecologic and social background of paper and board. It has been updated, revised and largely extended in depth and width including the further use of paper and board in converting and printing. A wide knowledge basis is a prerequisite in evaluating and optimizing the whole process chain to ensure efficient paper and board production. The same is true in their application and end use. The 2 Volume Set covers a wide range of topics: