

# Handbook on Pulp and Paper Processing

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## About the Book

The pulp and paper industry comprises companies that use wood as raw material and produce pulp, paper, board and other cellulose based products. The pulp and paper sector presents one of the energy intensive and highly polluting sectors within the Indian economy and is therefore of particular interest in the context of both local and global environmental discussions. Increases in productivity through the adoption of more efficient and cleaner technologies in the manufacturing sector will be most effective in merging economic, environmental, and social development objectives. Papers are mostly used product starting from writing to packaging. It plays an important role in commercial field as well as in academic field also. Without paper nothing is expressible and reliable, so paper is part and parcel of our life. Adequate amount of raw materials for processing paper and pulp is available. Bamboo is the main raw material for Indian paper industry. New bamboo areas even at high cost are being trapped. Some of the examples of high yield pulping process are mechanical process, semi chemical process, alkaline chemical process, sulfite process, etc. Physical strength properties of paper depend on the quality of raw material, its pulping, bleaching and subsequent paper making processes. Technology has made it easy to process these raw materials in an economic and lucrative way to meet the global demand. Raw materials like, straw, bagasse, wood, bamboo is almost available in most of the places. So it is great opportunity for the entrepreneurs to start up such kind of industry. Paper Industry has tremendously increased in India in the last 20 to 30 yrs. The Paper industry is a priority sector for foreign collaboration and foreign equity participation up to 100% receives automatic approval by Reserve Bank of India. Several fiscal incentives have also been provided to the paper industry, particularly to those mills which are based on non conventional raw material.

Some of the fundamentals of the book are bleaching of bamboo cold, high yield semi chemical pulping of mixture of bamboo and mixed hardwoods, sulphate semi chemical process, kraft green liquor semi chemical process, neutral sulphite semi chemical process, thermo mechanical pulps for newsprint, zeta potential concept in paper sizing, sodium carbonate in alkali extraction during bleaching bamboo, maintenance engineering in pulp and paper industry, design and application of refiners in stock preparation, paper machine effluent etc.

This book explains about the various raw material, their processing and utilizations and also the possible waste treatment of such paper and pulp making industry. To draw attention for manufacturing quality product with all possible latest technologies is the main purpose of this book. The book is very resourceful for new entrepreneurs, technocrats, existing units and research scholars.

## Contents

### 1. BLEACHING OF BAMBOO COLD

#### SODA PULPS

#### Results and Discussions

#### Constant Conditions

Pretreatment with Acid

Pretreatment with Alkali

Bleaching Conditions in Different Stages

Effect of Peroxide in Alkali Pretreatment

Pretreatment with Dye

Bleaching Conditions in Different Stages

Conclusions

Experimental

Raw Materials

Bleaching

2. HIGH YIELD SEMI-CHEMICAL PULPING OF

MIXTURE OF BAMBOO AND

MIXED HARDWOODS

Raw Material

Experimental and Results

Sulphate Semi-Chemical Process

Kraft Green Liquor-Semi-Chemical Process

Neutral Sulphite Semi-Chemical Process

Discussion

Sulphate Semi-Chemical Process

Green Liquor Semi-Chemical Process

Neutral Sulphite Semi-Chemical Process

Conclusion

3. DEVELOPMENT IN HIGH YIELD PULPING PROCESS

Mechanical Process

Semichemical Process

Chemical Process

Alkaline Chemical Process

Sulfite process

Organic Catalyst to High Yield Pulping

AQ Pulping Technology

Polysulfide-AQ Process

Alkaline Sulfite-AQ Pulping

Experimental

4. THERMO-MECHANICAL PULPS FOR NEWSPRINT

MANUFACTURE FROM TROPICAL PINES

Raw Materials

Experimental

Preparation of Thermo-Mechanical Pulps

Results and Discussions

5. A STUDY ON REPLACEMENT OF SODIUM

SULPHATE BY AQ-LARGE SCALE TRIAL

Anthraquinone an Aid to Pulping

Laboratory Scale Investigations at Central Research Laboratory, Dalmianagar

Plant Trial with AQ

Evaluation of Mill Pulp

Discussion and Results

Conclusions

6. ZETA POTENTIAL CONCEPT IN PAPER SIZING

Electro Kinetic (Zeta) Potential-A Concept

The Theory of Electrical Double Layer

Sternâ€™s Modified Double Layer  
The Meaning and Limitations in the Application of  
Electro Kinetic Theory  
to the Paper Sizing  
Behaviour of Alum in Water  
Electro Kinetic Properties of Alum-rosin  
Size Precipitate and the Sized Fibre  
Conclusion  
Nomenclature  
Greeks

7. ECONOMICS OF BAMBOO AND HARDWOOD PULPING  
BY ANTHRAQUINONE CATALYSED-KRAFT-PROCESS  
Experimental Design & Observations  
Results & Discussions  
Conclusion

8. EFFECT OF BLEACHED PULP VISCOSITY ON STRENGTH  
PROPERTIES OF BAMBOO SULFATE PULP  
Experimental  
Pulping  
Bleaching  
Physical Strength Properties  
Chemical Analysis  
Observations and Discussions  
Conclusion

9. ALKALI/OXYGEN DELIGNIFICATION AND  
BLEACHING OF SODA BAMBOO PULP  
Experimental  
Discussions  
Conclusions

10. ALKALI/OXYGEN DELIGNIFICATION AND BLEACHING  
OF SODA BAMBOO PULP, BAMBOO + MIXED HARD  
WOOD PULP (70 : 30) AND MIXED HARDWOOD PULP  
Experimental and Results  
Discussions  
Conclusion

11. SODIUM CARBONATE IN ALKALI EXTRACTION DURING  
BLEACHING BAMBOO (D. STRICTUS) PULP  
Experimental  
Study on Sequentially Chlorinated (H/C) Pulp  
Study on Chlorinated Pulp  
Results and Discussion  
Conclusions

12. EFFECT OF HEMICELLULOSES ON  
UNBLEACHED SOFTWOOD KRAFT PULP  
Materials and Methods  
Enzyme Treatments  
Bleaching Experiments  
Chemical Composition and Kappa Number Analyses  
Microscopic Analysis  
Numerical Measurement of Colour  
Results and Discussion

Chemical Changes After Enzyme Treatment

Bleaching Experiments

Graff  $\text{Ca}^{\text{TM}}$  Stain

Numerical Measurement of Colour

Accessibility Changes and Simons  $\text{Ca}^{\text{TM}}$  Stain

Deuterium Oxide Exchange

Simons  $\text{Ca}^{\text{TM}}$  Stain

Conclusions

### 13. THERMODYNAMIC FUNCTIONS OF THE REACTION BETWEEN LIGNIN AND HYDROGEN PEROXIDE DURING BLEACHING

Experimental

Isolation of Thioglignin

Preparation of Hydrogen Peroxide Solution

Reaction of Thioglignin with Hydrogen Peroxide

Results and Discussion

Analysis of Kinetic Data

Order of the Reaction and Variation of Rate

Constant with Reaction Parameters

Validity of Arrhenius Equation (Reaction Rates and Temperature Changes)

Estimation of various Thermodynamic Functions

Conclusions

### 14. SEQUENTIAL BLEACHING

Experimental Procedure

Discussions of the Results

Bleach Consumption

Physical and Chemical Properties

Pollution Load of the Filtrate

Conclusion

### 15. MANUFACTURE OF CORRUGATING MEDIUM PAPER UTILIZING 100% BAGASSE FURNISH

Process Suggested for Making

Corrugating Medium from 100% Bagasse

Fibre Preparation

Depithing at Paper Mills

Digestion Cycle

Stock Preparation

### 16. EFFECTIVE UTILIZATION OF CHEMICALS IN PULP AND PAPER MILLS

Digester House

Chemical Recovery Section

Bleach Plant

Chemical and Stock Preparation

Effluents

### 17. EFFECTIVE USE AND RECOVERY OF CHEMICALS IN COLD SODA PULPING

Experimental

Chemical Treatment of E. Tereticornis

Eta Reed Sulphate Pulping

Evaporation and Burning Properties of Kraft and

Cold Soda Spent liquors  
Results and Discussions  
Chemical Consumption  
Pulp Properties  
Composition of Liquors  
Pollution Loads  
Properties of Spent Liquors  
Material Balances  
Conclusions

18. EFFECTIVE USE AND RECOVERY OF CHEMICALS IN  
COLD SODA PULPING WITH PARTIALLY CLOSED SYSTEM  
Chemical Treatment of E. Tereticornis  
Results and Discussions  
Conclusions

19. MAINTENANCE ENGINEERING IN PULP  
AND PAPER INDUSTRY  
Inspection  
Lubrication  
Servicing  
Maintenance Problems

20. LIMITATION TO SATISFACTORY OPERATION OF  
WET END OF PAPER MACHINE  
Basis Weight Profile  
Head Box Pulsation  
Drainage Formation and Sheet Structure  
The Head Box  
Rectifier Roll Head Boxes  
Micro Turbulence Head Boxes  
Web Formers  
Twin Wire Forming  
Schmidt Classification  
Norman Classification  
High Consistency Forming  
Ancillary Equipments  
Wet Web Strength  
Limitations of Water Removal on Pressing  
Conclusion

21. DESIGN AND APPLICATION OF REFINERS  
IN STOCK PREPARATION  
Conical Refiners  
Shallow Angle Refiner  
Steep Angle Refiners  
Double Disc Refiners  
Safety Devices  
Influence of Machine Variables on Refining  
Batch Refining  
Machine Refiners

22. WET FELT DESIGNING TECHNIQUES  
Pressing  
Case Study  
Recommendations



### 23. MODERNIZATION AND OPTIMUM UTILIZATION OF EVAPORATORS FOR HARDWOOD BLACK LIQUORS-MILL EXPERIENCE

Hardwood Black Liquors  
 Recovery Boilers and Required Liquor Solids  
 Original Evaporator Units  
 Installation of a Pump in Between First Pass and Second Pass of Concentration Effects of Both Units  
 Conversion of Concentration Effect of First (OLD) Unit to a Finisher  
 Introduction of a New Finisher Effect  
 Utilization of Vent Vapour from Finisher  
 Changing the Liquor Entry from Tangential to Radial and Modification of Flash Chamber  
 Utilization of Vapour from Improved Finisher of Old Street  
 Conclusions

### 24. PAPER MACHINE EFFLUENT

Experimental  
 Discussions  
 Mode of Treatment for Paper Machine Effluent  
 Results  
 Conclusion

### 25. CONICAL REFINERS AND WIDE-ANGLE REFINERS IN CONTINUOUS AND BATCH REFINING SYSTEMS FOR BAMBOO AND HARDWOOD FURNISH

Introduction  
 Types of Refining Systems in the Mill  
 Conical and Wide Angle Refiners Strength, Development and Power Consumption

### 26. USE OF "NO PICK"™ ROLL IN PAPER MACHINE PRESS SECTION BASED ON SHORT-FIBRED TROPICAL HARDWOODS AND AGRICULTURAL RESIDUES

Theoretical Considerations  
 The Problem  
 Press Section Before Modification  
 Press Section After Modification  
 Discussion  
 Conclusions

### 27. CONSUMPTION OF FURNACE OIL IN RECOVERY BOILERS

Storage  
 Viscosity  
 Velocity  
 Turbidity & Causticity  
 Silica

Inverse Solubility  
 Organic Content and Calorific Value

### 28. NECESSITY TO RENOVATE AND MODERNIZE PAPER MACHINE

Fourdrinier Part

Press Part

Dryer Section

Calender Stacks

Pope Reel

Conclusion

## 29. WET END OPERATION OF A PAPER MACHINE

Approach Flow

Head Box

The Slice

Approach System, Head Box and Slice at W.C.P.M.

Sheet Formation and Drainage on the Fourdrinier

Shake

Suction Boxes

Dandy Roll

The Couch

Conclusion

## 30. CLEANING SYSTEM-SHOWER FOR PAPER MACHINE

Mechanical Cleaning

Classification of Water Shower

Wire Cleaning Shower

Knock off Shower

Trim Knock-off Shower

Couch Roll Cleaning Shower

Return Roll Cleaning Shower

Dandy Cleaning Shower

Felt Shower

Special Features of Water Showers

Material of Construction

Insert Type Nozzle

Protective Shell

Programming

Filters

## 31. SUITABILITY OF KENAF CTMP FOR LINERBOARD

Experimental

Raw Material

Particle Size

Reduction and Washing

Injection Process

Fiberizing and Refining

Kraft Pulping

Pulp Testing and Handsheet Formation and Testing

Results and Discussion

Andritz Sprout-Bauer Pulping Trials

FPL Pulping Trials

Kenaf and Loblolly Pine Pulp Blends

Conclusions

## 32. NEWSPRINT FROM BLENDS OF KENAF CTMP AND DEINKED RECYCLED NEWSPRINT

Experimental

Results and Discussion

## Conclusion

### 33. FEASIBILITY OF USING KENAF CHEMITHERMOMECHANICAL PULP IN PRINTING AND WRITING PAPER

#### Results and Discussion

Andritz Sprout-Bauer and FPL Pulping Trials

Postbrightened Kenaf Thermomechanical Pulp

#### Conclusions

#### Experimental

Raw Material, Particle Size Reduction, and Material Wash

Injection Process

Fiberizing and Refining Process

Testing of Pulp and Forming and Testing of Handsheets

Postbrightening of Kenaf TMP

Brightness Reversion

### 34. MESTA/KENAF AS RAW MATERIAL FOR KRAFT PULPING

#### Raw Material

#### Experimental

Chemical Constituents of Mesta

Pulping and Sheet Making

#### Discussion

Physical Characteristics

Chemical Constituents

Pulping Bleaching and Black Liquor Characteristics

Morphological Studies

Properties of Pulp Sheets

Fibre Classification Results

#### Conclusions

### 35. RESPONSE OF KENAF VARIETY, HC-583 TO DIFFERENT LEVELS OF NITROGEN

#### Materials and Methods

#### Results and Discussion

Plant Height

Basal Diameter of Stalk

Dry Yield of Stalk

Increase in Dry Yield of Stalk per Kg. N Applied

#### Conclusion

### 36. PREHYDROLYSED KRAFT COOKING OF JUTE STICK (EFFECT OF PREHYDROLYSIS CONDITION)

#### Experiments

#### Raw Materials

Digestion

Bleaching

Chlorine Water Bleaching

Analysis of the Pulp

#### Results & Discussion

A. Effect of Prehydrolysis Treatment on the Chemical Composition of Jute Stick

B. Loss of  $\alpha$ -Cellulose and Lignin after Prehydrolysis and Kraft Cooking of Jute Stick

Results of Bleached Pulps

#### Conclusions

### 37. HIGH YIELD PULP FROM JUTE STICKS

### 38. GREASE PROOF PAPERS FROM SULPHITE JUTE STICK PULP

Raw Material

Pulping

Conclusion

### 39. CHEMICAL RECOVERY BOILERS FOR PULP MILLS

#### USING AGRICULTURAL RESIDUES AS RAW MATERIALS

Present and Future Prospects of Agricultural Residue Usage in India

Advantages of Use of Agricultural Residues

Special Shelter Type Design for Smaller Units

### 40. PROBLEMS IN BL EVAPORATION IN INDIAN RAW MATERIALS

Black Liquor Screening

Black Liquor Soap Problem

Carbonaceous Deposits

Scale Formation and its Removal

Results Achieved

Technical

Vapour Side Scale

Method of Feeding Black Liquor

Mixed Feed

Quintuple Effect & Forced Circulation Evaporator

Forced Circulation Evaporator

### 41. UTILIZATION OF UNCONVENTIONAL RAW MATERIALS

Advantages at a Glance for New Process

Cooking Liquor and Position of pH (Cold) during Pulping

Pulping Conditions and Delignification

Yield and General Properties of Pulp

Chemical Composition of Unbleached Pulp

Bleaching of Pulp

Paper Making Properties

Black Liquor and Recovery

Environmental Protection

Air Protection

Water Protection

Future Looks

Sulfite Shuttles into Space

### 42. UTILIZATION OF AGRICULTURAL RESIDUES USING

#### MECHANO-CHEMICAL PULPING PROCESS

Pilot Plant Trials at Cellulose and Paper Branch,

Forest Research institute and colleges, Dehradun

Production of Rice Straw Pulp

Production of Wheat Straw Pulp

Production of Bagasse Pulp

Production of Paper

Mechano Chemical Pulping on Industrial Scale

Chemical Preparation

Cooking

Search for Alternative Raw Material

Variables in the Process

Modification of Bagasse Pulping by Partial Replacement of

Sodium Hydroxide by Sodium Carbonate

Addition of Sodium Sulphide in Cooking Liquor in

Bagasse Pulping

Conclusion

#### 43. FEASIBILITY OF RECYCLED NEWSPAPERS HARDBOARDS

Experimental Design and Analysis

Materials

Processing

Acetylation

Adhesive Application

Board Manufacture

Testing

Results and Discussion

Static Bending Properties

Tensile Strength Properties

Water Absorption and Thickness Swell

Linear Expansion

Concluding Remarks

#### 44. RESTORING BONDING STRENGTH TO RECYCLED FIBERS

Dry-Fiberized Fiber Characteristics

Mechanical Treatment

Fractionation

Strength Additives

Chemical Treatments

Blending with Virgin Fiber

Papermaking Variables

Wet-Formed Papers

Pressing

Air-Formed Papers

Conclusions

Methods and Materials

#### 45. CHEMICAL MODIFICATION OF AGRO-FIBER FOR THERMOPLASTICIZATION

Experimental Procedures

Esterification Procedure

Thermal Analysis

Pressing of Esterified Fiber

Electron Microscopy of Pressed Fiber

Swelling of Pressed Fiber in Water

Results and Discussion

Esterification of Lignocellulosics

Thermal Analysis

Swelling of Pressed Fiber Pellets in Water

Conclusions

#### 46. POTENTIALS FOR COMPOSITES FROM JUTE AND

#### ALLIED FIBERS

Plant Utilization for Composites

Potential Composites for Agro-Resources

Geotextiles

Filters

Sorbents

Structural Composites

Non-structural Composites

Molded Products

Packaging

Combinations with Other Resources

Chemical Modification for Property Improvement

Conclusions

47. AN APPROACH TO "INPLANT COLOUR REDUCTION"™ OF BLEACH PLANT EFFLUENT USING CALCIUM

HYPOCHLORITE

Experimental

Discussion

48. DESILICATION OF SULPHATE WEAK BLACK LIQUOR BY THE ADDITION OF LIME

Experimental

Procedure of Desilication

Results & Discussion

49. TREATMENT OF PULP & PAPER MILL WASTES

Pulp and Paper Industry Water

Consumption

Nature and Effect of Impurities

Primary Treatment

Sedimentation Units

Sludge Handling & Disposal

Secondary Treatment

50. DECOLOURIZATION OF WASTE WATER

FROM BLEACHED-KRAFT PULP & PAPER

MILL USING ALUM AND CLAY

Materials and Methods

Results and Discussion

Sludge Blanket

Effluent Quality

Colour Removal

Removal of Suspended Solids

COD Reduction

Conclusion

51. REMOVAL OF SOLUBLE SILICA FROM

SULPHATE GREEN LIQUOR

Experimental

Carbonation

Green Liquor Analysis

Results & Discussion

52. TRENDS IN ASH CONTENT OF STRAW

PULPS-AN EXPLANATION

Experimental

53. MINI LIME TREATMENT OF DISSOLVING

PULP MILL COLOURED EFFLUENT

Sources of Colour in the Pulp Mill

Effluent

Present Work

Chlorination of Lime Treated Effluent

Calcining of Effluent Sludge

Causticization Using Lime Obtained from Effluent Sludge

Conclusion

#### 54. COLOUR AND COD REDUCTION OF BLEACH EFFLUENTS

Experimental

Results and Discussions

Colour of the Effluents

Phenolic Compounds

Rate of Colour Reduction

Chemical Oxygen Demand

Conclusions

#### 55. EFFECT OF pH ON SULPHITE PULPING OF HOLOCELLULOSE OF E. TERETICORNIS

Experimental

Preparation of Cooking Liquor

Titration of Cooking Liquor

Sulphite Pulping

Neutral Sulphite Pulping

Preparation of Cooking Liquor

Chemical Analysis of Sulphite and

Neutral Sulphite Cooked Holocellulose

Results and Discussion Effect of pH and

Cooking Time on Yield

Effect of pH and Cooking Time on Klason Lignin

Effect of pH and Cooking Time on Alpha-Cellulose

Effect of pH and Cooking Time on

Pentosans

Effect of pH and Cooking Time on

Acidic Sugar

Effect of pH and Cooking Time

On Methoxyl and Acetyl Groups

#### 56. UTILIZATION OF AGRICULTURAL RESIDUES FOR PULP, PAPER AND BOARD

Rice Straw

Writing and Prints Paper

Grease Proof Paper

Wrapping Paper

Straw Board

Fibre Boards

Wheat Straw

Writing & Printing Paper

Greaseproof Paper

Straw Board

Jute Sticks

Writing and Printing Paper

Wrapping Paper Pulp Yield and Sheet Characteristics

Straw Board

Newsprint Grade Refiner Groundwood Pulp

Constitution of Hemicellulose

Greaseproof Paper, Strength Properties of Standard Sheet

Building Board

Bagasse

Writing and Printing Paper

Wrapping Papers  
Rayon Grade Pulps  
Greaseproof paper  
Straw Board  
Fiber Board  
Newsprint  
Cotton Stem  
Writing and Printing Paper  
Miscellaneous Raw Materials  
Arecanut Husk  
Ground Nut Shells  
Tea Stem  
Caster Stems (*Ricinus Communis*, linn)  
Sun Flower Stalk  
Arhar Sticks (*Cajanus SP*) and Jawar Stalk (*Sorghum SP*)  
Sugar Cane Leaves  
Paddy Husk

57. PROVISION OF CAPTIVE POWER GENERATION IN  
A 30 TPD AGRO-BASED PAPER PLANT AS A MEANS OF  
IMPROVING CAPACITY UTILIZATION

Capacity Utilization  
Power Availability  
Captive Power Plant  
Recommended Scheme  
Features of the Scheme  
Fixed Costs  
Variable Costs  
Average Cost of Power Generation  
Economics and Discussion  
Conclusion

58. ENERGY CONSERVATION IN PULP AND  
PAPER INDUSTRY—SOME THOUGHTS

Paper Industry  
Deliberations  
Total Energy Concept  
In-Plant Power Generation  
Energy Distribution and Utilization  
Overdesign and Capacity Utilization of the Equipment  
Energy Audit  
Short Term-Long Term Action Programme  
Short Term Schemes  
Long Term Schemes  
Generation  
Short Term  
Long Term  
Transmission  
Short Term  
Long Term  
Utilization  
Short Term  
Long Term

Waste Streams  
Energy Conservation Approaches  
Factor Affecting Energy Efficiency  
Research and Development  
National Energy Programme  
Summary and Conclusions

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