2013 Introduction to Kraft Pulping and Bleaching

August 5-6, 2013

TAPPI Training Facility, Peachtree Corners (Metro Atlanta), Georgia, USA

COURSE SCHEDULE

MONDAY, AUGUST 5

8:00 – 8:30
- Course Overview and Learning Objectives
- Introductions

8:30 – 9:30
Wood and Fiber Raw Materials
- Hardwoods and Softwoods
- Wood Properties
- Fiber Properties

9:30 – 10:30
Preparation of Wood & Chips for Pulping
- Debarking
- Chipping
- Screening
- Storage and Recovery
- Chip Quality

10:30 – 12:00
Preparation of White Liquor
- Chemical Terminology
- Chemical Tests
- Chemical Recovery Cycle

12:00 - 12:45 LUNCH

12:45 – 1:30
Overview of Kraft Pulping
- Terminology
- Pulp Properties and Tests

1:30 – 2:30
Kraft Digesters and Technology
- Batch
- Continuous

2:30 – 3:30
Kraft Pulping Chemical Reactions
- Delignification
- Cellulose
- Hemicelluloses
- Extractives

3:30 – 4:30
Kraft Pulping Variables and Effects on Properties
- AA, EA
- H Factor
- Pulp Quality for Different Grades

4:30 – 5:15
Trends in Kraft Pulping
- Displacement Cooking
- MCC Cooking
- Lo-Solids
- Isothermal
- AQ
- Polysulfide

5:15 Adjournment

Note: For participants who desire additional depth and/or introductory review, Professor Kocurek will be available until 6:00 PM.

Dr. Michael J. Kocurek is Professor Emeritus of Paper Science & Engineering at North Carolina State University and has taught Pulping and Bleaching to both undergraduate and graduate students, and groups of technical personnel and operators for more than 40 years. He is the editor of 11 books, including the recognized Pulp and Paper Manufacture series, and has authored/co-authored six video courses, including the Introduction to Pulp & Paper series. Dr. Kocurek received his B.S., M.S., and PhD degrees in Paper Science & Engineering from the SUNY College of Environmental Science & Forestry, and Syracuse University, and also founded the Paper Science Department at the University of Wisconsin-Stevens Point. His honors include TAPPI Fellow, TAPPI Distinguished Service Award, and induction into the Paper Industry International Hall of Fame - an honor bestowed to recognize people who have made preeminent contributions to the global paper industry.

2013 Introduction to Kraft Pulp Manufacture
Pulping, Pulp Processing and Bleaching

COURSE SCHEDULE, CONT.

TUESDAY, AUGUST 6

7:45 – 8:00
Q&A and Discussion of Day One Topics

8:00 – 8:30
Pulp Processing Overview
- Oxygen Delignification
- Fiberizing
- Washing
- Screening & Cleaning

8:30 – 9:30
Brown Stock Washing
- Displacement
- Diffusion
- Equipment
- Washing Variables

9:30 – 10:30
Screening & Cleaning

10:30 – 11:30
Overview of Bleaching
- Sequences
- History
- ECF and TCF

11:30 – 12:00
Chlorine Dioxide Bleaching
- Equipment
- Variables
- Reactions

12:00 - 12:45 LUNCH

12:45 – 1:30
Chlorine Dioxide Bleaching (cont.)
- Equipment
- Variables
- Reactions

1:30 – 2:00
Caustic Extraction
- E, EO, EP
- Variables

2:00 – 3:00
Oxygen Delignification
- Equipment
- Variables
- Reactions

3:00 – 3:15
Other Bleaching Sequences
and Trends in Bleaching
- Ozone
- Enzymatic
- Other

3:15 – 3:45
Pulp Mill Environmental Review

3:45 – 4:30
Pulp Mill Biorefinery

4:30 Adjournment

Note: For participants with later departures, Professor Kocurek will be available for further Q&A and discussion.

Workshop Location: TAPPI Training Facility
Peachtree Corners (Metro Atlanta), Georgia USA

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