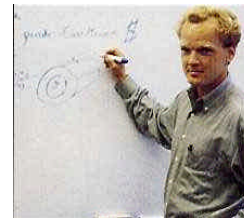


Stuart Loewen Paper and Papermaking Physics Consulting Services



Typical Services

Paper machine fibre orientation and stiffness profile benchmarking and optimization. This is usually done to eliminate a specific problem such as slack edges, wrinkling, non-uniform strength, low CD stiffness, colour misregister or other dimensional stability problems as curl.

Focus on Fibre Orientation

Most paper problems have many causes and thus many possible solutions. Until recent advances in fibre orientation instrumentation, fibre orientation properties were poorly understood and so are often an unrecognized fundamental source of running, printing and converting problems.

Fibre orientation is now following basis weight, caliper and moisture as a fundamental paper property to be controlled and optimized to suit specific end-use requirements. Stuart Loewen has the experience and expertise to analyze and optimize the influence of fibre orientation on your sheet's end-use performance. Using experience with a variety of paper grades in many printing and converting situations he is able to quickly identify opportunities for paper quality improvement. He also has the communication skills and background to work with your control and production staff and crews to implement the solutions.

The Approach

A typical fibre orientation optimization process starts with identification of the paper property to be optimized, assessing existing fibre orientation profiles and available wet-end controls, optimizing z-direction and cross machine uniformity of fibre orientation and finally optimizing the entire sheet for the identified paper property.

Experience, knowledge and expertise in areas of paper physics, forming dynamics, fibre orientation testing, analysis and the end-use requirements of different paper grades are combined to make best use of your existing furnish and papermaking equipment.

Benefits are more uniform product quality, most often in the form of edge-roll improvements, and optimization of sheet structure to meet new or existing customer needs.

Background of Stuart Loewen

Background in paper and papermaking research and optimization. Strong presentation, communication and technical analysis skills.

Clients include groundwood specialities, SCA, newsprint, coated free-sheet producers as well as paper machinery suppliers, instrumentation suppliers and R & D labs.

18 years in mill, printing, converting, and corporate R&D environments with an emphasis on using paper and papermaking physics to solve problems of significant commercial interest. Includes 5½ years as Research Scientist at Abitibi-Price Inc.

Published and presented papers and seminars on fibre orientation optimization, jet flow profiling, formation characterization, paper and papermaking physics.

PhD (Physics), Statistics and Dynamics of Coherent Structures on Turbulent Grid-Flow, University of British Columbia - 1987

Adjunct Associate Professor, Chemical Engineering Department, University of Toronto, affiliated with the U of T Pulp and Paper Centre. Guides graduate student research in paper physics

Associate, Advanced Papermaking Initiative, University of British Columbia's Pulp & Paper Centre

Work references are available on request. To discuss your requirements further, Stuart Loewen can be reached at Tel: 1 604 506-2854 or Email: sloewen@lszpaper.com