WAGENINGEN UR
For quality of life

Wageningen Paper and Board

Newsletter for the paper and board industry and its suppliers
April 2004, Year 1, 1st edition

First Issue!

First issue

This is the first issue of our newsletter 'Wageningen Paper and Board'. Through this newsletter you will be informed about developments in paper and board research. Developments that can be to your benefit.

Besides the latest developments in paper and board research and running and upcoming projects, attention is paid to new equipment, international activities and relevant events.

Our mission

Wageningen UR Paper and Board is the leading paper and board research group in The Netherlands. Fundamental and applied research is conducted to develop new sustainable processes and products. Programme co-ordinator Annita Westenbroek: "Our expertise enables us to contribute towards improved process efficiency. This is achieved by more effective use of fibre raw materials, introduction of new chemicals, control of stock preparation and product quality and by reduction of energy and waste formation." More information on the research themes you will find at the back of this newsletter.

Annita Westenbroek and Robin Sinke

Introduction to Wageningen UR

Wageningen Paper and Board is part of the larger Wageningen University and Research Centre, a holding organisation which consists of the Wageningen University and several research institutes, mostly located in Wageningen. Within Wageningen UR, the Paper and Board group belongs to the Institute for Agrotechnology and Food Innovations (A&F).

Website

In the autumn of 2003, the website www.paperandboard.nl was launched. Westenbroek: "On this site we inform you about current projects and on our research expertise and testing facilities. So visit the website and find out what other information could be of relevance to you!"

Research building Wageningen UR

More information?

If you are interested in additional information, please do not hesitate to contact us: Annita Westenbroek (annita.westenbroek@wur.nl) or Robin Sinke (robin.sinke@wur.nl) or visit the website www.paperandboard.nl
Please inform us about your relations for whom this newsletter could be relevant or if you want to be unsubscribed.

Suggestions or comments for this newsletter are also welcome!

Enjoy this newsletter!
Robin Sinke, editor

News

A number of new research projects have started in 2004.

Unnecessary damage during refining can be prevented and dewatering can be improved by means of a new compression refining technology.

Refining efficiency is being improved at a large number of Dutch paper mills co-operating in a benchmark and determination of 'best practice' in industry.

Improved recycled pulp quality and paper machine runnability will be achieved through application of a newly developed enzyme technology for fibre treatment.

Last but not least, two large European sponsored research programmes will start this year, named: 'Sustainpack' and 'EcoTarget'. For more information on these and other projects, see www.paperandboard.nl

International Activities

Examples of international activities are co-operations within European Cost-actions. Research institutes and industries from different EU-countries co-operate and communicate on specific important pulp and paper research topics.

One of these actions is E-23: **'Biotechnology in the pulp and paper industry'**. The objectives are to enhance the development and application of new biotechnological methods in pulping, bleaching and paper and board manufacturing processes.

The participants now focus on applying results and are presently testing e.g. enzymes for improved drainability, de-inking and slime control.

'Fibre Raw Material Technology for Sustainable Paper and Board Production'

Promising results in fibre upgrading

The demand for paper is continuously increasing and therefore the fibre raw material demand will also rise. This will lead to increased fibre prices along with decreasing fibre quality. What would be the best response? As we all want to maintain a sustainable supply of this raw material, we should respond with new innovative developments in fibre processing to prevent future fibre shortages.

Industrial co-ordinator Loud van Kessel, Kappa Roermond Papier: "We have set up the project 'Fibre raw material technology' to make a significant step forwards to the future availability. This has been achieved by identifying the fibre properties to focus on as well as by the development of new fibre (re)processing technologies."

In this project the paper industry has been co-operating with suppliers, research institutes and universities.

Papermachine at Kappa Roermond Papier

New upgrading technologies

Wageningen UR Paper and Board has contributed to this project with the development of new upgrading techniques in order to minimise the degradation effects as well as to improve recycled fibre characteristics. Scientific co-ordinator Annita Westenbroek: "Chemical, enzymatic and mechanical technologies have been investigated for prevention of unnecessary fibre damage and for upgrading of damaged fibres. The most promising techniques, compression refining and enzymatic upgrading are being further developed at pilot scale in follow-up projects."

Sustainable use of recycled fibres

The proposed technologies will result in a more sustainable use of recycled fibres, due to both enhanced fibre potential and increased availability of recycled fibres. Moreover, the proposed techniques contribute to decreased energy consumption and reduction of required additives.

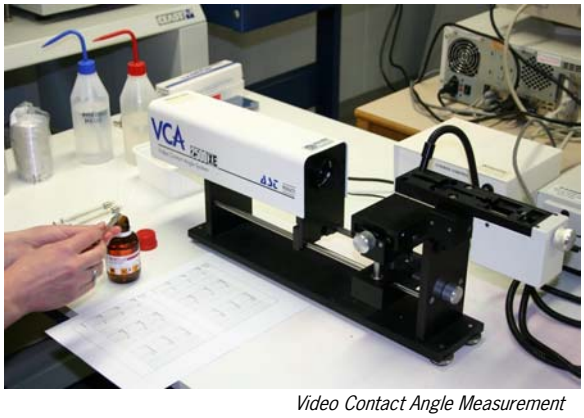
A public summary of the project 'Fibre Raw Material Technology for Sustainable Paper and Board Production' (ISBN 90-6754-786-7) will be available in May 2004.

Apparatus: Video Contact Angle Measurement System

Contact angle measurement is a simplified method of characterising the interfacial tension between a solid, a liquid and a vapour.

Analysis of:
- Contact angle (time intervals)
- Surface tension / energy of a solid

Examples of applications:
- Wettability investigation
- Coating analysis
- Adhesion studies



Video Contact Angle Measurement

Events

Presentations from Wageningen UR

8th PIRA Recycling Technology Conference, Prague, February 17,18 – R.J. Sinke: *'How to deal with the effects of recycling?'*

3rd CTP/PTS Packaging, Paper and Board Recycling Symposium, Grenoble, March 16,17,18 – A.P.H. Westenbroek: *'Fibre Raw Material Technology for Sustainable Paper and Board Production'*

KCPK International Paper and Board Conference, Beekbergen, April 6,7 – A.P.H. Westenbroek, R.J. Sinke: *Improved level and control of Stiffness'* E.R.P. Keijsers: *'MiTA, a flashlight in your Black Box'*

Workshops

(in co-operation with the Centre of Competence Paper and Board)

Workshop Refining, April 21
How to optimise refining in your mill? What can be learnt from other mills?

Workshop Deposits, May 13
How to deal with deposits in the papermaking process? New developments and practical solutions.

Workshop Enzymes, June 16
What can enzymes do in the papermaking process? What is proven technology and what are new developments?

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Major Research Themes

Fibre Raw Materials
Fibre quality and choice related to processing and end product requirements

Fibre Processing
Reduced energy consumption during fibre processing and in the total paper production line

Papermaking Chemistry
Synthesis of new or more effective chemicals based on natural raw materials

End Product Quality
Insight in product requirements based on converting and consumer demands, enhancing end product performance and development of packaging

By-stream Upgrading / Processing
Creating commercial value for solid by-streams from pulp and paper production processes

Colophon

Wageningen Paper and Board is meant to inform all contacts of Wageningen UR Paper and Board about research activities, new developments and projects etc. The newsletter will be issued 3 times a year and will also be available on the website, www.paperandboard.nl *Editor: R.J. Sinke, tel. +31 317 475310, P.O.Box 17, 6700AA Wageningen, robin.sinke@wur.nl*

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