

Wageningen Paper and Board

Newsletter for the paper and board industry and its suppliers
September 2004, Year 1, 2nd issue

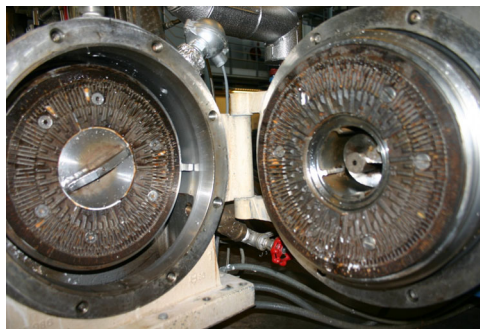
Cost reduction by optimisation refining

The right combination of raw materials and refining parameters can result in a significant energy reduction and increase of production capacity. Improved refining control will reduce off-spec production and establish a more stable process. Refining efficiency is being improved at a large number of Dutch paper mills in the project Optimisation Refining.

In this project, initiated by the Centre of Competence Paper and Board, the Dutch mills and suppliers of refining equipment co-operate to realise these goals. Companies exchange knowledge and experience and with relatively low efforts for each company possibilities for optimisation are defined.

Inventory

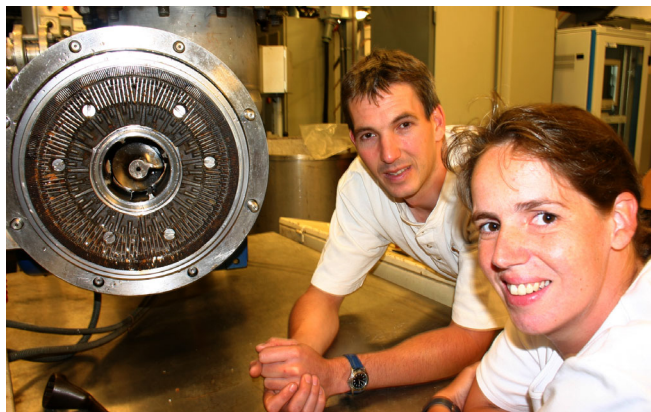
The project started with an inventory on the objectives of refining, energy, equipment, processing conditions, processing control and optimisation possibilities at the participating mills. Jocco Dekker (refiner specialist) and Paulien Harmsen (project manager) from Wageningen UR reviewed the information and examined the current refining equipment.



Disc refiner at Wageningen UR

Benchmark

From the mills pulp samples before and after refining were processed and analysed on the most important paper properties. Most of the analyses were performed by the paper mills. Paulien Harmsen: "People from the mills were very co-operative and enthusiastic. The inventory and the visits made them often more aware of their own refining process."



Jocco Dekker and Paulien Harmsen

The mill data and inventory information enables us to analyse and benchmark the refining process at each mill and define optimisation routes. Jocco Dekker: "With this project we obtained a unique data set and relations between refining and changes in fibre and paper properties. This gives more insight in the refining process and enables refining improvement at the paper mills."

Technology platform

The project created a technology platform, as during meetings and workshops many different refining topics were discussed. An excursion is organised by Voith and Andritz in the autumn of 2004 to visit state-of-the-art paper mills and suppliers of refining equipment in Europe. Currently implementation projects are being defined, to realise the expected energy savings.

More information: Jocco Dekker, +31 317 475382

October 8: Open Day for customers

Agrotechnology & Food Innovations, part of Wageningen UR opens her doors on Friday October 8 for all customers. You will be informed on the developments of our institute, the research programmes, our products and facilities.

More information: www.agrotechnologyandfood.wur.nl

News

Enzymes improve papermaking

Enzyme seminar

'Enzymes are seen as the most viable option for the process industry to achieve the requirements of sustainability. Future will give a huge amount of new possibilities', according to prof. Warmoeskerken at the Seminar 'Enzymes in the Paper Industry' on September 1 at the University of Twente.

Kappa, Buckman, Nalco, Novozymes and Ceresstar showed present applications of enzymes in the paper industry. Henry van der Valk (Wageningen UR) summarised these applications and presented possible future applications.

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Successful PhD defence

Following the seminar Mónica López-Lorenzo defended her thesis on the subject of Enzymatic fibre modification.

Recycled paper upgrading

This successful day was concluded with the official start of the Eureka-project 'Enzymatic upgrading of Recycled Paper'. This project aims to enhance the papermaking process by enzymatic fibre upgrading and removal of disturbing components. Results will elucidate how enzymes should be applied in industry.

This 3-year project is co-ordinated by the Centre of Competence Paper and Board. Participants are Wageningen UR Paper and Board, Kappa Roermond Papier, Mayr-Melnhof Eerbeek, Novozymes and Buckman Laboratories.

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Innovation and Sustainable Development in the Fibre Based Packaging Value Chain

Breakthrough in Packaging in 'Sustainpack'

A new set of breakthrough packaging options, based on renewable fibre based resources will lead to new customer packaging, improved barrier properties, low weight - high properties board packaging material and intelligent packaging. This will be achieved in a 4-year research project for the benefit of the European paper and packaging industry which started on July 1st.

The project aims at material reduction and enlarged application of fibre based products in packaging. This will be achieved through improved fibre-fibre bonding and increased use of fibre composite materials. Therefore research is performed in the area of cellulose and nano-particle processing and fibre surface engineering.



International cooperation

Ingrid Wienk, one of the sub-project coordinators: "Wageningen UR focuses on the development of improved paper and board properties, fibre based nanocomposite material and communicative packaging. We cooperate with a large number of European universities, research institutes and industries".

Company participation

Ed de Jong, head of department and member of the project general assembly: "Involvement from middle and small companies is particularly being stimulated. Companies can also participate as sponsors in order to gain access to the project and results." The project is partly sponsored by the European Commission.

For the official Sustainpack website, visit www.sustainpack.com. For related websites from Wageningen UR, see www.ec-pack.nl and www.agrofibrecomposites.com.

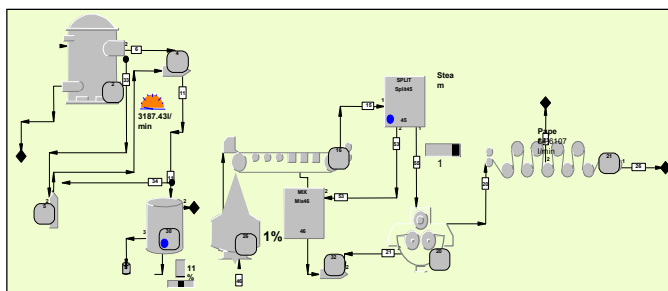
More information: Robin Sinke, +31 317 475310.

Faster and more accurate planning and decision-making

Software: Process modelling with WinGems™

Process modelling enables troubleshooting and optimisation of process control, without having to invest in large scale mill trials. In order to extend our mill support, Wageningen UR acquired a license for the process simulation tool WinGems™. This program is especially designed for the pulp and paper industry by Pacific Simulation.

Edwin Keijsers, Wageningen UR: "With the software, we are able to assist industry with (re)designing their production processes, with respect to e.g. new equipment, addition of chemicals or enzymes and end product quality."



More information: Edwin Keijsers, +31 317 477523.

Events

Presentations from Wageningen UR
Zwick Roell Symposium 'Determination of Mechanical Characteristics', Ulm, August 31 - R.J. Sinke: 'Improved Level and Control of Stiffness'.

Start of COST E-41 on analysis techniques for cellulose, lignin and extractives, October 21, 22.
Wageningen UR participating persons: E. de Jong and R.J.A. Gosselink

PIRA 'Nanotechnology for Papermakers' Conference, Stockholm, November 29, - R.J. Sinke: 'Enhancing Paper Properties through Use of New Chemicals and Composites'.

Publications

'Kappa Roermond Papier plukt vruchten van Eureka', Buitenlandse markten -July 2004

'Verbeterde stijfheid maakt karton sterker' - Verpakkingsmanagement 6 - 2004

Workshops

Study trip refining, Autumn 2004
(in co-operation with the Centre of Competence Paper & Board)
see article on front page

Wageningen UR Paper and Board

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