



Research News

Competence Centre Paper and Board

Within Wageningen UR , the research programme Paper and Board co-operates with the Dutch Competence Centre Paper and Board in order to improve the development and exchange of knowledge within the Dutch Paper and Board industry.

Fibre Raw Materials

Fibres are the most important raw material for paper and board in the Netherlands. However, fibre properties of raw materials are often unknown, show a big variation and its effect on product quality is unclear. Moreover they cannot be measured online. Therefore the control of the production process and product quality is not based on the quality of the fibre raw material.

Aim

De objectives are:

- closure of the fibre cycle
- more effective use of fibre raw materials
- improved control of stock preparation
- improved product quality
- reduction of energy consumption
- reduction of waste streams
- improved infrastructure of knowledge within the Dutch Paper and Board Industry'

Approach

In a group of paper engineers from all paper producing companies meetings are organised to discuss new ideas, current projects and experiences in fibre raw material quality, availability and processing.

R&D- and implementation projects are performed to optimise the use of fibre

raw materials in the paper and board industry.

In the project 'Recipe development' models have been made that relate easy to measure fibre properties to essential process and paper properties. This model leads to more efficient use of fibre raw materials and refiner energy, and an increase of filler content.

Research on the effects of fines and ash in recycled furnishes has lead to more insight in the possibilities of fractionation and refining for process and product optimisation.

In co-operation with suppliers of paper chemicals and analysis apparatus, research was performed in how to optimise product stiffness by adjustments in raw materials or process parameters.

A fundamental research program has been performed on elucidation of the degradation mechanism of structure and surface properties of fibres during processing, use and recycling in order to improve and develop technologies for upgrading of virgin and recycled fibres.

Follow-up projects have started in 2004 on the further development of a compression refining technology for virgin fibres and on enzymatic upgrading of recycled fibres.

Another project started in 2004 aims for improvement of the refining efficiency in the Dutch paper industry. Other paper and board manufacturers as well as suppliers, who would like to contribute to the objectives of the Fibre Raw Material Programme are invited to discuss possibilities for participation in these projects.

Information

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