

## Deinking in Disneyland

HP organizes recycling session at US chemistry conference



Anaheim Convention Center

For a week in March, the permanent home of Disneyland, world-famous theme parks, Los Angeles Angels baseball, and other attractions became the world capital of science as more than 13,000 scientists and others gathered in Anaheim for the 241<sup>st</sup> National Meeting & Exposition of the American Chemical Society (ACS).

One small portion within a schedule of nearly 9,500 presentations that span science's bounds, from astronomy to zoology, was deinking: Eric Hanson, director of the Printing and Content Delivery Lab in HP Labs, which conducts research on innovations in document lifecycle, and Hou T. Ng, senior deinking research scientist at HP Labs in Palo Alto, California had organized a morning session dedicated to "Advancement in Science and Technology of Recycling Printed Products", chaired by HP fellow Ken Lindblom.

Dr. Hans Putz from PMV in Darmstadt started the morning presenting "Experiences on the deinkability of print products with special consideration of digital prints". He gave an excel-

lent introduction into the challenges that digital prints like inkjet or liquid toner prints can mean to the deinking process. Manoj Bhattacharyya of HP talked about HP's ideas of applying a "Neutral deinking chemistry for digital and offset prints" and respective lab experiments, followed by Andreas Faul of INGEDE, who illustrated "Simulating a deinking plant in laboratory scale: Requirements and relevance".

Supported by INGEDE, a PhD student of Prof. John Cameron's group at Western Michigan University had worked on an "Assessment of INGEDE method in different laboratories and protocol modifications" which was presented in Anaheim by Dr Jan Pekarovic, while John Cameron was still in Germany for a sabbatical. The results were an encouraging

approach to adapt deinkability testing with other equipment than what has become standard in European labs.

Using various oxidizing and reducing agents, PhD student Alexander Jordan of Jeff Hsieh's group at Georgia Tech University had looked into "Selective chemical treatment for deinking inkjet printed paper". After another HP contribution presented by Minedys Macias, Prof. Samuel Schabel of PMV Darmstadt concluded the session with a general survey about the "Necessity of recycling benign paper products to ensure the most important European fibre resource for the paper industry: Recovered paper".

Due to the tough competition of dozens of parallel sessions, only a small audience found its way to the presentations. Still, the lively discussion proved the issue being worth to be introduced to a wider audience especially in the context of a meeting that had chosen the "Chemistry of Natural Resources" to be a leading theme for its contributions.

Axel Fischer

## CALENDAR OF EVENTS

3 – 4 May 2011

**PTS Fachseminar Sticky und Altpapier**

Dresden, Germany

10 – 12 May 2011

**IPEX Northprint 2011**

Harrogate, UK

16 May 2011

**Technical Committee Deinking**

bvdm Wiesbaden, Germany

23 May 2011

**INGEDE Project meeting 132 10**

"Deinkability of recovered paper depending on water circuit quality"

CTP Grenoble, France

23 – 24 May 2011

**Fogra Digitaldruck Symposium**

"Digitaldruck trifft Offset"

Munich, Germany

24 – 26 May 2011

**CTP advanced training course on "Deinking and Recycling"**

Grenoble, France

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## Visit of HP Labs in Palo Alto, USA



Hewlett Packard's deinking laboratory - from left: Nils Miller (HP), Amanda Yarnell (C&EN), Hans-Joachim Putz (PMV), Manoj K. Bhattacharyya (HP), Samuel Schabel (PMV), Laurie Mittelstadt (HP), Hou T. Ng (HP)

After speaking at the American Chemical Society National Meeting (overleaf) Samuel Schabel and Hans Putz of PMV Darmstadt together with Andreas Faul made a visit to Hewlett Packard's deinking laboratory by invitation of Hou T. Ng. Also people of other business units of HP attended as well as an editor of C&EN, the magazine of ACS. In the first part of the day, all three parties presented and discussed their organisa-

tions and their field of work.

After this theoretical part, the group could make a brief visit to the printing laboratory in which new features for HP Indigo presses are developed and tested. The afternoon was dedicated to demonstrations of three deinking tests. All three were with HP Indigo prints, two of them with HP's experimental deinking chemistry which was already presented at the Digital Round Table and

other opportunities.

The most interesting deinking test was the third one which utilised INGEDE Method 11 conditions. The prints used were HP Indigo photo book printings with a special treatment. The deinked pulp was very clean - 34 mm<sup>2</sup>/m<sup>2</sup> for all dirt specks, 23 mm<sup>2</sup>/m<sup>2</sup> in the size above 250 µm and none above 500 µm particle size.

Since this treatment is under development and not available commercially, it was not possible to receive printed samples for further testing.

If this kind of treatment will be feasible for wide application eventually, it can be a major step towards or even the complete solution to deinkability issues of HP Indigo prints.



Photo book pulp in Voith Delta flotation cell

Photo book print

Andreas Faul

## INGEDE Working Group "Recovered Paper Quality" – Spring meeting in Belgium

The working group Recovered Paper Quality held its spring meeting in Gent on April 5-6, 2011. As usual at the last meetings a RCP sorting plant was visited. The group got the possibility to see the brand-new installation at Stora Enso's Langerbrugge mill. Producing in a 24/7 scheme with a feeding up to 60 t/h the mill will be enabled to generate up to a third of its fibre demand in the future.

Main topics on the agenda of the meeting were quality control, unwanted

materials and availability of recovered paper. The latter item will be supported by the next version of the "European Declaration on Recovered Paper" by adding a paragraph about enabling conditions. To identify potential tasks for INGEDE as association in this field and to avoid double work an alignment with members' activities seems to be needed.

Mostly paper mills get the recovered paper delivered without a real quality check at suppliers' site. But there are

also some good examples the group want to highlight and to motivate further suppliers to do so. Accompanying to that the unwanted materials have to be described. Beyond that the members had good discussions and an experience exchange about all technical issues about our raw material.

The working group will meet again in Austria on October 12-13, 2011, hosted by SCA Ortmann.

Manfred Geistbeck