INGEDE News

Focus: Events in fall 2009

INGEDE Seminar near Madrid 7/8 October 2009

This year, the INGEDE seminar will take place in San Lorenzo de El Escorial which is one hour's drive from Madrid.

In the framework of the seminar Holmen Paper Madrid offers a mill visit at their Fuenlabrada mill taking place in the afternoon of October 7.

Afterwards the seminar "Paper Recycling — a necessity for today's paper loop" will begin with an introduction and a common dinner. On 8 Oct. a number of interesting papers will be given, providing complete and up to date knowledge on paper recycling to the participants. The environmental department of the Spanish government confirmed to send a referee as one of the speakers.

We are looking forward to welcome stakeholders of the paper value chain in Spain and Portugal and have a fruitful discussion in order to meet the challenges of tomorrow.
For more information see INGEDE's website.

Marion Klabunde

15—17 Sept 2009
NEC Birmingham

The Recycling & Waste Management Exhibition (RWM) is the undisputed leading exhibition for the recycling and waste management sector. It has more exhibitors and more visitors than any other event in the sector; it is also the fastest growing event with growth in visitors and metres of more than 10% each year for the past five years.

An industry-wide exhibitor base, free seminar programmes, live demonstrations of machinery and vehicles, a chance to see the latest services and technologies available and numerous networking opportunities.

For more information see:
www.rwmexhibition.com

source: RWM

COST E48 Action's book

The Future of Paper Recycling in Europe
Opportunities and limitations

printed in autumn 2009

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FEICA 2009
European Adhesives & Sealants Conference

FEICA, the Association of European Adhesives and Sealants Manufacturers, is organizing the FEICA Annual Conference on 17—18 Sept 2009 in Budapest, Hungary. The venue will be the Hotel Inter-Continental.

This year FEICA meets Central & Eastern Europe and one of the main topics will be: Sustainable Business Development. As the FEICA Conference is the only conference in Europe organised by the Industry for the Industry it is a unique business opportunity to present your company to 250 leaders.

For more information see
www.feica-conferences.com

source: FEICA

In this issue:

CALENDAR OF EVENTS

15—17 Sep 2009
RWM Exhibition
(Recycling and Waste Management)
Birmingham/UK

17—18 Sep 2009
FEICA European Adhesives and Sealants Conference
Budapest/Hungary

6 Oct 2009
INGEDE project meeting
125 08 CTP "VALOBA"
Grenoble/France

7—8 Oct 2009
INGEDE Seminar
"Paper Recycling — a necessity for today's paper loop"
San Lorenzo de El Escorial
Spain

12—15 Oct 2009
Ifra Expo
Vienna/Austria

14—15 Oct 2009
Radtech Europe 2009 Conference & Exhibition
Nice/France

20—21 Oct 2009
PTS Sticky Seminar
Dresden/Germany

27— 30 Oct 2009
Entsorga Enteco
Cologne/Germany

16—17 Nov 2009
Paper Recycling Europe
Brussels/Belgium

IFRA Expo 2009

On 12—15 Oct 2009, the Ifra Expo will take place in Vienna. The annual Mercer quality of living survey has put Vienna at No. 1 position worldwide – due to its stability, safety, accessibility and the attraction of the Austrian capital as a tourist destination!

The motto of this year's IFRA Expo is "Your Roads to Success". Its aim is to provide an overview of the current state of the industry as well as support in determining the course of the future.

For more information see
www.ifraexpo.com

source: Ifra

RadTech Europe 2009

Conference & Exhibition

October 14—15, 2009, Nice/France

At the exhibition, visitors will be able to meet all main players in this growing industry. The exhibitors from international leading companies will provide competent answers and contribute to making the visit most effective. The conference as Europe's key event for the UV/EB industry will host internationally renowned speakers from Europe and abroad, presenting 75 top-level papers in 12 sessions to an international plenum.

Further information on the conference and exhibition can be found at http://www.european-coatings.com/radtech

source: RadTech

PTS Sticky Seminar 2009

From 20 to 21 Oct 2009, PTS will hold a Sticky Seminar in Dresden.

The Seminar "Bekämpfung und Vermeidung von Stickys für einen wirtschaftlichen Altpapiereinsatz" will be mostly in German language.

The aim of the traditional seminar (since 1997) is to provide the participants with science-based information on e.g. current technologies and their potential to the prevention of stickies. Also new findings on the sticky analysis will be presented.

On the first day of the seminar background information and an overview will be given. On the following day several speakers will give a paper about their practical experiences with stickies.

For more information see:

www.ptspaper.de/34.html?status=details&event_id=343

source: PTS

ENTSORGA—ENTECO

27—30 Oct 2009
Cologne

In autumn, the complete refuse management and environmental technology industry will again be meeting in Cologne at ENTSORGA-ENTECO, which this year will be the largest and most significant international environment fair in Europe.

In addition to the exhibits, environment-related lectures, podium discussions and conferences await you. In the outer area, there will again be interesting live demonstrations of state-of-the-art technologies, such as the VDMA technology days on materials preparation.

With foreign participation among exhibitors of about 25 per cent (873 exhibitors and 37 additionally represented companies), Entsorga-Enteco 2006 was a reflection of the global markets. Including estimates for the last day of the trade fair, around 43,000 visitors (2003: 48,366) from 106 countries (2003: 77) familiarized themselves with the industry's trends and innovations.

For more information see:

www.entsorga-enteco.com

source: ENTSORGA-ENTECO

European Paper Recycling Conference

The European Paper Recycling Conference will take place on 16—17 November 2009 in Brussels, Belgium.

Conference Highlights

- Informative program featuring plenary sessions and three program tracks.
- Three Tracks: Trading; Recycling Plant Operations; Mill Technical Sessions
- Extensive networking opportunities.
- An exhibit area featuring the latest product and service offerings.

The conference should be attended by Recovered Paper Merchants, Recovered Paper Brokers, Paper and Paperboard Mills. Recovered Paper Consumers, Equipment & Service Providers and Government Officials. INGEDE will be represented by Andreas Faul, who will give a paper.

More information:

http://
www.paperrecyclingeurope.com

source: Paper Recycling Europe

INGEDE News

Toner, inkjet, bonding agent and ColorLok: Digital prints and deinking

The future will be digital – but will it be just inkjet? One has to check the sources carefully when reading projections. Depending on who publishes a study, the numbers are heading upwards more ore less straight for one or the other technology. What they have in common: Digital printing has entered production scale, and traditional offset has become under pressure for several reasons. One is that our kids tend to read less. They retrieve their news from the internet and think saving paper saves the planet. But they tend to forget the hidden costs of the web – all the servers and equipment running 24/7 to provide instant access, wireless, lossless. And forget about the sustainability of the paper cycle.

Paper is a sustainable product, and sharing the morning paper is not only more communicative but most likely more environmentally friendly than operating four laptops in a home at the same time. The other challenge for offset is price: Short print runs have become cheaper if you do them digitally, and the quality of digital prints is improving. Comparing costs, you hear about the break even going up in favour of digital. But offset does not stand still. The new Heidelberg Anicolor is faster than many digital production printers, the quality of offset is usually better and Heidelberg claims to be competitive already at short runs like 200 copies of a report.

A third argument for digital prints is personalisation: In the near future you will receive phone and electricity bills, credit card and loyalty-program statements with more personalized advertisement. The currently blank spots in your mail are the most valuable advertising space of tomorrow. Your shopping habits will be recorded and evaluated, customer cards and plastic money deliver the data for targeted marketing. Direct mail promotion, transpromo, response rates are the keywords of future advertising.

Dry toner, dyes and pigments

Basically digital production printing is available with all the different technologies you know from your office. The first samples of books printed by inkjet printers are on the market. In the U.S., a major publisher started printing periodical handbooks with several kilograms of financial statistics and curves with a production size inkjet printer, at 122 meters per minute, almost 80 centimeters wide. Print-on-demand was a manufacturing process to reduce storage costs and allow authors to be published even with small editions. Now it has become a publication strategy. This might change the field of publishing in the next years: Printing will not necessarily be connected to the generation of content, to authors, editors and publishers any more. It might be an on-demand process, performed by distribution agents who do not care what they print as long as it sells. This has already become true for newspapers away from home: Distributors receive the content data via satellite and print the Washington Post in Portugal with UV cured inkjet, the Daily Mail next to New York on an inkjet printer, they print Australian news to go on airplanes to Sydney leaving from Los Angeles, or a variety of papers including the Daily Mail in Dubai. Dry toner printers have once pioneered this field, now inkjet production size printers from Kodak Versamark, Screen, Océ and HP claim lower operational costs and try to win more market share.

Deinking = release + removal

In 2001 already, INGEDE had started to look more intensely into the consequences digital prints might have for the recycling process. Together with Centre Technique du Papier (CTP) INGEDE organised a workshop, where CTP presented first results from deinkability tests of different samples. At that time already the basics of what we know today were disclosed: Dry toners are not an issue any more. The story of dirt specks from laser printers dates back to the very early days with slow printers. They were literally ironing the binder resin into the fibre network, not easily to be released by the deinking process. But that was yesterday. Modern fast printers save energy and toner, the thin hydrophobic layer being just slightly adhered to the surface, easily to be loosened in the pulper and removed in the flotation cell. Inkjet is different – dyes are designed to be lightfast, not to be bleached by a little peroxide, and the tiny pigments that are dispersed in a waterbased inkjet ink, small enough to pass nozzles of only several micrometers in diameter, make their way with the process water. It is obvious that these pigmented inks usually can be released from the fibre quite easily (part 1 of the deinking process), but difficult to be removed from the aqueous system (part 2). The basic principle of the process, removing hydrophobic inks from hydrophilic fibres, does not work here.

It took many conferences, publications and press releases until finally the inkjet printer industry realised that deinkability is also an issue for them. The feedback is twofold. One part is an increased cooperation and exchange of opinion. On the other hand, it is an increased effort in communication – in claiming positive environmental properties for products that according to current deinkability standards have not proven to be deinkable, and in questioning the validity of INGEDE's methods for their products.

A difficult discussion has begun: How relevant are INGEDE's deinkability test methods for different mar-

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kets? Is it different in the U.S.? A recent publication of an otherwise respected expert even claimed that the deinking of flexo printed newspapers has been solved in the U.S. and thus inkjet should not become an issue at all. But the article did not present any proof for this claim nor did it reflect the existing efforts of every more advanced mill to carefully avoid flexo in their input. Instead, close connections of the author to the respective printer manufacturers were obvious. Closing the circle, the next step followed in an instant – the article being quoted by a printer manufacturer to confirm that the INGEDE method "does not adequately address the highly complex range of paper recycling". And as an excuse not to participate in the deinkability test with the IPA Digital Print Forum 2009 that had adopted this test as a relevant feature.

A single drop of water and the dye-based ink begins to bleed

Is this possible? What happened in the last decade when the INGEDE methods were discussed over and over and carefully updated? Can you imagine that "relatively small adjustments to lab-scale experimental conditions can greatly impact (positively or negatively) the deinkability assessment"? And that it takes a printer manufacturer to discover this? The most interesting aspect about this excuse to duck out of the testing is: The article referred to inkjet, the printer in question was one using liquid toner, a system which for completely different reasons (for exceeding the threshold for dirt specks) was expected to fail the test.

Market reality is different from single lab experiments

This is where we stand today: The inkjet printers currently on the market all fail to deliver deinkable prints. One or the other promising development is being discussed, and the inkjet printer industry puts future developments in the foreground. But: The only ever deinkable inkjet samples, presented at drupa, were called "experimental" after INGEDE welcomed the first step towards a promising direction. These samples where printed using a "bonding agent" which leads to a precipitation of the ink on top of the paper rather than penetrating it, resulting in a more brilliant image, less inter-colour bleeding and less show through.

A similar effect can be achieved by coating the paper beforehand – with a "more advanced standard for better printing": ColorLok is called a performance standard rather than a chemical formula, just in order not to reveal the proprietary background. Tests and exchange of information is going on between paper mills, inkjet manufacturers and INGEDE. Whether it is sustainable and cost efficient to impregnate tons of paper with tons of chemicals just to achieve a kind of performance that other print processes inherently have, time will tell. Currently coated specialty papers are used in office environments, but the complications in the deinking process will result from the high volumes where pennies count. Will ink-jetted direct mail be printed on ColorLok paper in the future? Maybe. Will newspapers be printed on high-grade paper? Currently they are not, and all available inkjet printed newspapers are not deinkable.

More innovations to come

As long as those solutions are not on the market, INGEDE has to keep pointing at the problems with water-based inks. Current inkjet inks add to the flexo problem which has increased significantly especially in the UK, though discussions with ink manufacturers and publishers go on for almost 20 years now. The European Recovered Paper Council (ERPC) has adopted the INGEDE test method as a basis for the "Deinkability Scores", this score system underlies the new "INGEDE Certificate for the Assessment of Deinkability". There are more and more printers which have been certified to produce "good deinkable" prints. And there are more authorities discovering deinkability as a must for environmentally friendly printed products, at least if labels are discussed such as the Austrian Eco-label or the EU flower. Inkjet has a young history, and it might mature to a more sustainable technology than it is now. Until these are available, it is only one alternative on a market where better deinkable options still exist. One should not forget – over all the noise being created by one part of the printer industry – that every printing technology still needs paper. Whether you hear more from them or less. The future is not necessarily all inkjet. New processes might come and others go, innovation has not come to a halt.

Axel Fischer

COST E48 Action's book

The Future of Paper Recycling in Europe
Opportunities and limitations

printed in autumn 2009

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