

The 1st International Conference on Advanced Imaging (ICAI 2015) in Tokyo



Rainy day in Tokyo, Japan

With a recovery rate of 80,8% in 2014 and a utilization rate of 63,9%, Japan is one of the leading countries in paper recycling, collecting almost 10 million tons of used graphic paper every year. This includes 4,6 million tons of old newspapers that are collected separately from other paper and board.

With a variety of topics ranging from image processing, medical, bio and 3D imaging technologies to ink jet printing, electrophotography, and thermal printing, ICAI 2015 attracted almost 500 participants. Among the presentations in the "Digital Printing Technologies" sessions was one about "Technologies in high quality sheet-fed digital press 'JetPress'" by Yusuke Nakasawa of Fujifilm Corporation, explaining this inkjet printer concept that uses a primer to coagulate the jetted pigments. Nakasawa explicitly referred to the positive deinkability testing in cooperation with INGEDE.

Another multilayer-concept was presented by Yuuki Yokohama of Ricoh Corporation, titled "Development of Inkjet Supply for Offset Paper". Ricoh here aims at the difficulties to use its Geljet Printer on offset paper as merging of adjacent drops or inter-color bleeding can occur, causing a deterioration of the image quality. The use of paper specialized to absorb aqueous inks, Yokohama stated, "is not suitable because it diminishes customer values in terms of intended purposes and cost". The new concept here in a liquid undercoat applied with a roller that suppresses bleeding quick-drying ink on coated paper. A final "Protector Coat Liquid" is intended to reduce

friction and increase abrasion resistance. The protecting resin might also prevent the jetted pigment from dispersion during the deinking process; INGEDE has offered to look into the deinkability of this promising approach.

Axel Fischer of INGEDE on invitation of the ICAI Committee presented about "Paper Recycling and Testing the Deinkability of Printed Products". With more and more ecolabels requiring deinkability, this issue also for Japanese printer manufacturers has become of increasing importance – a very interested audience filled the lecture room to the last seat.

Axel Fischer



Collecting Paper for Recycling in front of a hotel.

CALENDAR OF EVENTS

30 Jun – 02 Jul 2015
Zellcheming Expo
Frankfurt a.M./Germany

15 – 17 Sep 2015
RWM
Resource Efficiency and Waste Management
Conference and exhibition
Birmingham, UK

5 – 7 Oct 2015
Printing Future Days
Chemnitz, Germany

13 Oct 2015
INGEDE-Project145 14
FT-IR spectroscopy
Darmstadt, Germany

14 Oct 2015
Seminar on Paper Recycling and European Paper Recycling Awards
Brussel, Belgium

14 – 16 Oct 2015
MIAC
Luca, Italy

25 – 28 Oct 2015
TAPPI PEERS
Atlanta, USA

Workshop on Quality of Paper for Recycling

The quality of paper for recycling attracted slightly over one hundred people to the 10th GesPaRec workshop "Quality Management of Paper for Recycling". The meeting facilities hardly could accommodate the audience which was mainly representing either the suppliers of paper for recycling or the paper industry. Two sessions covered the afternoon the first one with a general and commercial focus, the second one with a technical.

Martin Drews of GesPaRec and VDP opened the first session with a view to the paper industry in Germany and the focus on paper for recycling. The utilisation climbed overall by 0,8 % with 0,4 % in the dominant group of the lower grades, which represented about three quarters of the market. Within that group there was a shift to packaging grades while mixed paper and deinking paper decreased. In 2008/2009, Germany became net importer of paper for recycling, and over time the gap between imports and exports is increasing. After this statistical warm-up, Drews turned to the subject of quality management. GesPaRec is promoting it in three ways - with municipalities, with suppliers of paper for recycling and with paper mills. Municipalities and their waste management delegates are the target group of two events per year which are planned by GesPaRec. The subsequent discussion underlined the importance of these activities.

In his second presentation, Drews announced an update of the manual

for quality management of paper for recycling which is planned to be available as download from summer 2015.

The two following presentations provided the views of the paper industry and of the suppliers of paper for recycling on the revised EN 643. Stefan Hennigs, who spoke for the paper industry and for his company Mayr-Melnhof, stated a good acceptance of the standard. A better quality definition is essential for the paper industry which is increasingly confronted with quality, health and safety requirements from their customers. Andreas Uriel, speaking for bvse, expressed his dissatisfaction that the original objective of the revision creating a tool to get paper for recycling out of the waste regime was not achieved. In daily business, the revised standard hasn't arrived yet to a significant extent. There is further demand for test methods a subject at which the standardisation working group took up already. Uriel also gave tongue to bvse's concerns to match the defined quality levels economically. Not much was said by the two speakers about the grades newly defined in the revised EN 643. Many of them are obviously not very relevant for the German market.

Constanze Seidemann of PTS opened the second session with a prognosis of the future quality of paper for recycling. The trend in production towards packaging paper cannot be neglected anymore. In the graphic sector, the future ratio of newspapers, magazines, flyers and brochures as well as

woodfree papers will determine ash content and age of fibres. In the packaging sector, increasing ash contents lead to individual concepts of utilising raw materials containing kraft fibres. In general, non-paper product components as well as (barrier) coatings and varnishes will increase.

The next two papers dealt with measurement devices. Kurt Mitterböck of KMC presented the HPNA system for moisture measurement on trucks. The advantage of this micro-wave based inspector system is that it measures about 70 % of a load while the truck is passing slowly through the measuring gate. The system, however, has to be adjusted to the paper grade and is sensitive to the density of the load, to metal and to gaps between the bales.

"Balemat is the advancement of our PaperBaleSensor" explained Johannes Kappen of PTS. There are two Balemat installations one in Germany and one in Australia. A further improvement to the "Balemat 2" is made together with the Finnish company Haarla. Features are a fully automated measuring system for moisture, ash, plastic and mechanical pulp. The new device is also offered to drill into bales on trucks before unloading. Particularly the moisture triggered a lively discussion.

Hans-Joachim Stahl of Mayr-Melnhof Gernsbach, the host of next day's mill visit, concluded the session with an introduction to the mill and to the entry inspection concept. This is done in three steps. The first one is commercial and organisational. Due to the congested location of the mill between town and river a delivery exactly to the scheduled time is essential. The second step is visual check for prohibited and unwanted materials as well as for smell. The third step comprises moisture by hand-held device, content of carbonless papers and brightness. Three bales of every delivery are checked by a Balemat with two drillings per bale. The main motivation for these measurements is the process control in production.



Photo by GesPaRec

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