

Kölner Entsorgungslogistik-Studenten besuchen Papierfabrik in Hürth

Dass Papier für den Zeitungsdruck auch unverpackt verschickt werden kann, ist logistisches Neuland. Auf jeden Fall für die Studentengruppe vom Fachgebiet Entsorgungslogistik der Technischen Hochschule Köln, die von Guido Clemens, Manager Technology, Quality, Environment bei UPM Hürth, durch die Fabrik geführt werden. Die INGEDE hatte den Besuch mit der Leiterin des Studiengangs, Frau Prof. Dr. Kathrin Hesse, vorbereitet. Frau Hesse berät auch die Deutsche Post in Zusammenhang mit der recyclingfreundlichen Folienverpackung für das Werbeprodukt „Einkauf Aktuell“.

Die unverpackten Rollen gehen in eine 80 Kilometer entfernte Druckerei, erklärt Clemens. Die Logistik des Transports ist so effizient optimiert, dass kein unvorsichtiger Gabelstaplerfahrer mehr versehentlich das empfindliche Papier beschädigen kann. Dass dabei die Entfernung eine untergeordnete Rolle spielt, verdeutlicht ein Experiment mit einer Lokalzeitung in der unmittelbaren Nachbarschaft: Die dort beschäftigten Zeitungsarbeiter zeigten eher weniger Sensibilität für das empfindliche Produkt. Nach etlichen Dellen, die die Qualität der zu bedruckenden Rolle beeinträchtigten, kehrte man hier bei der Auslieferung zur konventionellen schützenden Verpackung zurück.



Den interessierten Kölner Studenten imponiert vor allem die Größe der Anlage: „So kann man sich das überhaupt nicht vorstellen, das kann man nur nachvollziehen, wenn man einmal hier war“, sagt einer der Teilnehmer. Nicht nur die rund 1.000 Tonnen Altpapier, die pro Tag in Hürth

verarbeitet werden, auch die wiederholten Geschwindigkeitsrekorde der Papiermaschine, die während des Besuchs mit knapp 2.000 Metern pro Minute produzierte, hinterlassen Eindruck. Aber auch die Herausforderungen, die Verunreinigungen im Altpapier für die Aufbereitung bedeuten, werden bis zum Schluss intensiv diskutiert.



Waste Logistics Students from Cologne visit Paper Mill in Hürth

Paper being delivered to a customer without any protective wrapping – that is a new type of logistics, at least for a group of students coming from Technische Hochschule Köln (TH Köln). Guido Clemens, Manager Technology, Quality, Environment with UPM Hürth, guided the group through the plant. INGEDE had arranged the visit in cooperation with Prof. Dr. Kathrin Hesse, who is also a consultant for Deutsche Post in the context of the recycling-friendly plastic wrapping of the Post's weekly advertisement package “Einkauf Aktuell”.

The unwrapped reels are delivered to a printer 80 kilometres away, Clemens explains. The transport logistics is so efficient that no careless forklift operator can accidentally damage the sensitive paper any more. The underpart of the distance was shown by an experiment with a local newspaper nearby: The temporary workers there were less attentive to the sensible product. After several dents impairing the quality of the reel, the delivery was changed back to the protective wrapping.

The students were especially impressed by the size of the plant: “It is hard to imagine that, you only get an

idea if you have been here”, one of the participants stated. Impressive for the students was not only the volume of 1,000 tons of paper for recycling used in Hürth every day, also the repetitive speed records of the paper machine, producing at almost 2,000 meters per second during the visit. But also the challenges that impurities within the paper for recycling mean for the processing are interestingly discussed until the end of the visit.

Axel Fischer

CALENDAR OF EVENTS

01 Dec 2015
Forschungsforum Altpapier
Heidenau, Germany

08-09 Dec 2015
Digital Print for Packaging
Berlin, Germany

23 Feb 2016
PTS-CTP Deinking Symposium
Munich, Germany

24 Feb 2016
INGEDE Symposium
Munich, Germany

25 Feb 2016
INGEDE Member Symposium
Munich, Germany

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NIP31 Conference in Portland: Print Market Changing Rapidly UV Inkjet by Konica Minolta, Multi-Layered Gel Ink by Ricoh



Already at drupa 2012, Konica Minolta had presented a prototype of an inkjet printer using UV-curable inks. At that time, concerns about problems with the poor deinkability of UV inks were answered with the printer targeting just the market for packaging. At the NIP31 Conference, Toshiyuki Takabayashi of Konica Minolta's R&D Division, Inkjet Business Unit, presented the "Newly developed UV-curable inkjet technology for Digital Inkjet Press 'KM-1'", now addressing the Commercial Printing Market. The single pass inkjet printer shall deliver 1.500 duplex pages per minute, printing both on coated and uncoated paper. In the discussion, Konica Minolta researchers were well aware of the deinkability problems with UV inks and assured to look into this issue.

A multilayer ink concept was presented by Shinta Moriya of Ricoh Corporation, titled "Inkjet Printing System for High Print Quality on Offset coated Paper". Ricoh here aims at the difficulties to use its Geljet Printer on offset paper as merging of adjacent drops or intercolor bleeding can occur, causing a deterioration of the image quality. High speed

and high image quality printing on off-set coated paper by aqueous ink jet technology, Moriya stated, "will pose a challenge because ink is harder to penetrate into this kind of paper and it is more difficult to fix it firmly on the surface on the paper due to its surface treatment". The concept here is 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.

After many years of investigating and discussing the poor deinkability of most aqueous inkjet inks, INGEDE recently saw the first commercial inkjet-printed newspaper fulfilling the ERPC deinkability scores after the INGEDE Method 11 test. Axel Fischer of INGEDE presented the results at the NIP31 Conference. Still the brightness does not compare to results achieved with offset or dry toner prints. The removal of the ink is slower than with offset newspapers, also the remaining amount of very small dispersed pigments ("filtrate darkening") is still visibly high.

Axel Fischer



Toshiyuki Takabayashi of Konica Minolta presenting "Newly developed UV-curable inkjet technology for Digital Inkjet Press 'KM-1'"

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