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Green printing – the Arnold printing plant shows how it works

The Arnold printing plant in Grossbeeren near Berlin presented impressive figures to its customers at two ecology days: use of the environmentally friendly PURe printing ink enables annual savings of 135,000 liters of water, 2,000 liters of chemicals and 4,500 kilowatt hours of energy thanks to the use of processless printing plates – as well as up to 175 tons less of CO_2 emissions a year thanks to a photovoltaic system on the roof of the company building. As a representative of Muller Martini, I had the great pleasure of experiencing this successful event live.

"Digital is no more sustainable than print – on the contrary: the myth that digital is per se more ecological than print is untenable!" This was the tenor of a widely acclaimed paper drafted by the renowned Austrian journalist Knud Wassermann Muller Martini-Blogs six weeks ago. What sustainability means in practice in the pressroom (but also in finishing) was demonstrated by the German Arnold printing plant in an impressive way at their ecology days. On the one hand, the innovative family-owned business in Grossbeeren near Berlin used its 30th anniversary, to celebrate the milestone birthday with its customers. At the same time, it also gave live print demonstrations and presentations to prove that green printing is reality and not just a show – in keeping with the motto: Do good and talk about it.

The linchpin of Arnold's "think green – print arnold" campaign is one of its two sheet-fed offset presses – a manroland R705 LV. Commissioned five years ago, Arnold has been using only the PURe printing ink developed by Epple since this summer in its six printing units. After PURe had its premiere more than a year ago at the Swiss printing plant Ast & Fischer un-

der the motto „astrein" (clean as a whistle), Arnold is the world's third graphic arts company that relies on this "ink system of the future", according to Chief Developer Dr. Carl Epple in an exciting presentation at the ecology days. ARNOLD is also the first company in the world to be certified with PURe as a Premium PSO and to operate in accordance with stricter tolerances than ISO standards.

While many supposedly ecological printing inks on closer inspection still contain ingredients, such as mineral oil, solvents that are harmful to health or heavy metals, according to Dr. Epple the odorless PURe, which dries quickly and without radiation, and can be recycled in an environmentally friendly way, does without any deceptive packaging: "PURe is free of mineral oil. The resins used are 100 percent based on natural substances that do not require any further chemical modification or synthesis steps. We do not use palm or soybean oil, which is primarily responsible for clearing rain forests. With PURe, we completely do without the use of photoinitiators, metal dryers such as cobalt, and other metal soaps. PURe is therefore the purest and most sustainable ink system currently available."

The Pantera perfect binder from Muller Martini, presented live at the ecology days, can also take a piece of Arnold's "eco cake."

PURe is, of course, the most sustainable printing ink in the world and somewhat more expensive than conventional printing inks. But as Managing Director Max Arnold assured me, his customers are to a certain extent willing to dig a little deeper into their wallets for green printing products. In turn, they are increasingly confronted with end customers who are specifically demanding more ecological production methods to thereby promote their printing products accordingly.

At the Arnold printing plant, where, of course, only recyclable tableware was used and organic wine served at the birthday party, climate neutral printing is not limited exclusively to the subject of printing inks. The use of processless printing plates, for example, enables Arnold to save 135,000 liters of water, 2,000 liters of chemicals and 4,500 kilowatt hours of energy every year. And – talking of energy – since a photovoltaic system on the roof of the company building produces green electricity, Arnold avoids between 155 and 175 tons of CO_2 emissions a year. Frankly, I find these numbers impressive.

"think green - print arnold" is also the name of a joint project between the ARNOLD group, consisting of the three companies Druckerei Arnold, drei m - media service and FORMAT

Druck und Medienservice GmbH, and the Berlin Student Research Center at the Lisa Meitner School. This project is exploring in depth why printed products have a bad reputation in society ("Don't print so much - you're destroying the environment!") and whether these assertions are actually true. The 2019/20 school year is not only looking at printing techniques and products, but also at what de-inking is and how printed products can be recycled. I am interested in to see what conclusions the Berlin Student Research Center will come to.

No greasing and no markings

As a representative of Muller Martini at the ecology days in Grossbeeren, I met Roger Bourquin, Head of Technology at Ast & Fischer, in addition to many other interesting visitors. During some small talk, he drew my attention to another major advantage of PURe printing ink: "There is no smearing and no marking in finishing. This means that the usual varnishing is not needed, which is used to avoid these negative effects. This leads to cost savings and shorter production times for the orders.

And here I'd like to say a few final words on the subject of "ecological processing" – as Muller Martini can also take a piece of Arnold's "eco-cake." The fact that the Arnold printing plant invested in a Pantera perfect binder for the first time in its 30-year company history almost a year ago and can now also produce softcover products in house provides two major benefits. On the one hand, hundreds of truck kilometers are eliminated every year, which results in a smaller CO^2 footprint. On the other hand, no additional tolerance editions need to be printed for production at external partners. In other words, there is less waste – and less waste also means lower raw material consumption.

Your
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