

FOCUS

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BOBST Competence Center, Mex (Switzerland)

hunkeler
Hunkeler Systeme

Partnership for quality and reliability

The company BOBST and Hunkeler Systeme AG have worked together for more than 15 years now. Globally, over 300 customers operate with systems from BOBST and Hunkeler Systeme AG.

Packaging printer who invest in a die cutting or a foil embossing machine from BOBST, frequently choose disposal technology from Hunkeler Systeme AG. They want to optimally utilise the productivity of their BOBST machines and, at the end of the production process, want a disposal system with recognised reliability.

New processes to be developed

About 15 years ago, this partnership became more 'official' when BOBST and Hunkeler Systeme AG agreed to work together more closely. Since then, the two Swiss companies have installed systems and plants worldwide for over 300 customers active in the folded box, corrugated cardboard and hot foil embossing sectors. This collaboration has also meant that new processes could be developed. Hunkeler Systeme AG can offer the corrugated cardboard sector a de-dusting system, specially designed for the requirements of the flexographic printing and converting series from BOBST.

Hunkeler Systeme AG equips the BOBST Competence Center in Mex

A real milestone in the partnership was laid in 2012. At that time, BOBST opened their new Competence Center in Mex, the headquarters of the company. Here is where BOBST customers have the opportunity to test the die cutting and embossing technology on their own products. Hunkeler Systeme AG supplied the suction,

shredding and compaction equipment for the Competence Center. At the moment, four die cutting and three foil embossing machines are connected to the system, whereby the two systems run independently of one another.

Testament to close collaboration

An excellent testament to intensive development collaboration is the disposal equipment which BOBST utilises for the foil embossing machines of the series VISIONFOIL, EXPERTFOIL and MASTERFOIL. The core of the system is suction. This is integrated into the machines and connected to the shredding and compaction equipment via ducting. The challenge faced by Hunkeler Systeme AG's engineers was to efficiently remove the lightweight foil material, which can reach production speeds of up to 8,000 sheets an hour. As if this were not enough, the precise register accuracy in the foil embossing process could not be impaired. Additionally, the fine dust particles caused by the transport of foil waste and its shredding had to be entirely removed from the air. This requirement was fulfilled by the configuration of the suction system: Hunkeler Systeme AG placed the fan at the end of the system, thus creating negative pressure. Compared to a positive pressure system, the dust-laden air cannot escape through unsealed parts of the ducting system into the ambient air. Additionally, the great efficiency of the jet filter technology stays at a constant level, thanks to a self-cleaning function. An anti-static unit ensures the smooth transport of the foils.

We spoke to Serge Kalbfuss, the manager of the Competence Center, about the BOBST-Hunkeler Systeme AG partnership. The interview can be found on page 3 of this Focus magazine.



For the disposal of production waste from BOBST's foil embossing machines, Hunkeler Systeme AG developed a tailor-made suction technology.



Currently, at the BOBST Competence Center in Mex, four die cutting machines are connected to a disposal system.



Dear Partners and readers

We maintain long-standing and good working partnerships with nationally and internationally recognised machine manufacturers. They are long-lasting because we and our partners always work towards the same objective and we all, our partners and us, benefit from this collaboration. We pay just as much attention that we and our partner remain independent from one another.

Hunkeler Systeme AG is active world-wide as a medium-sized company in the development of disposal systems. Partnerships in diverse market segments – in recycling, in the printing and packaging industry, in securites and in banknote printing – have enormous importance for us. It is a matter of obtaining, and retaining, access to the above-mentioned market segments in all the regions of the world.

In our exchanges with our partners, in our common development endeavours and in our enduring search for the best possible solutions, there is added value for the customer. Because anywhere where production takes place, there will always be some sort of waste. In the interests of economic production, this waste must be automatically, efficiently and safely removed from the production process. This task can be satisfactorily carried out if we work closely with our partners.

Close collaboration is essential for economic success. Working closely with our partners, we develop new technical innovations. Our customers benefit from this progress, in that they increase the efficiency of their production and thus, thanks to economic and cost-effective operating processes, can advance themselves in the market.

We are pleased to present to you, in the current edition of our Focus Magazine, system installations that we have recently been able to realise for customers in the recycling sector, from the printing and packaging industry and bank note production.

With warm regards
Kurt Käser, Managing Director

Gobat Transport & Recyclage SA, Develier (Switzerland)

The Digitalised Disposal Centre

The disposal centre of the future is controlled digitally. Gobat Transport & Recyclage SA in Develier, Switzerland, demonstrated how it works. Last May the company opened its doors to interested parties in the professional community.

When a recycling company opens a new disposal centre, it is not initially considered anything very spectacular. Not so for Gobat Transport & Recyclage SA in Develier in canton Jura: the new construction, opened in September 2018, is a trail-blazer for the recycling sector, as it is one of the first digitally controlled disposal centres in Switzerland.

Everything on one credit card-sized badge

In May, about forty representatives from private and public disposal centres in Switzerland were invited to discover how a digitalised disposal centre works. Gobat Transport & Recyclage SA and Hunkeler Systeme AG, the general contractor who had planned and realised the new disposal concept, organised an Open Day in Develier.

A tour through the centre showed how simple and streamlined the process is: the core of the system is a personal badge, no larger than a credit card. The badge gives visitors



On a tour through one of the first digitalised disposal centres in Switzerland.

access to the site and to the individual disposal stations. All re-useable materials, the disposal of which is fee-liable, are registered and recorded according to type and weight and the information is deposited in a databank. Thanks to these automatically controlled processes, the resultant fee is fairly calculated according to origin and consumer.

Art Type and quantity of the materials are precisely known

The digitally controlled disposal centre has brought a wealth of benefits to Gobat Transport & Recyclage SA – economically, logistically and administratively. The customer disposes of the material himself; personnel at the individual disposal stations are rarely necessary. A guidance system directs the visitors through ordered lanes. This ensures easily monitored and efficient disposal operations. And finally, the digitalised processes permit the type and quantity of fee-liable materials to be precisely calculated. The company knows, at any time, which quantity of any material has been disposed of and at what cost. This differentiation means a cost monitoring which would not have been possible in a previous entirely manually operated disposal centre.

Appropriate and economical suction technology

In their Competence Center in Mex BOBST has re-organised a large part of the machine programming for folded box production and corrugated cardboard processing. Die-cutting machines of differing series are now connected to modern suction equipment from Hunkeler Systeme AG.

The device removes the waste within the stripping station directly following the die-cutting process as well as the skeletons after depanelization. The die-cutting waste is separated from the transport air with a rotary separator and sent to a press container. The air itself is cleaned from the dust in a filter system and released into the production area.

A measuring system in the press container sends an SMS to the transport company as soon as a defined fill level has been reached.

Energy Saving System and Automatic Switch-off

The suction plant has been designed for the most economical operation. At maximum performance, the system transports 24,000 cubic metres of air an hour. Machine performance is automatically adapted to the current requirements. An Energy Saving System (ESS) regulates the energy consumption of the plant according to need and allows only as much electrical output as production requires. Compared to operation without ESS, the consumption of electrical energy sinks by up to 60 percent. If none of the machines are in operation, the automatic switch-off puts the fan in the idle state.



The suction plant in the BOBST Competence Center operates with an air volume flow of 24,000 cubic metres an hour.

Serge Kalbfuss is the manager of the BOBST company Competence Center in Mex. We spoke with him about the company's collaboration with Hunkeler Systeme AG.

Mr Kalbfuss, how did the collaboration between BOBST and Hunkeler Systeme AG come about?

Process-related production waste from the BOBST machines is something that we must efficiently dispose of. In the packaging industry, BOBST enjoys a high reputation due to quality and reliability, which is why we want to work in the disposal sector with partners who can meet the high expectations of our customers. We have found just such a partner with Hunkeler Systeme AG.

Which criteria are important when the BOBST company is looking for a partner?

The packaging industry is a very demanding and dynamic sector. The market expects that we react rapidly to new requirements and develop appropriate technology quickly. And it is exactly this that we expect from our partners. Flexibility, availability and the ability to be innovative are thus central criteria which have a great influence on our decision.

This collaboration has continued now for more than 15 years. What do you especially appreciate about Hunkeler Systeme AG?



Serge Kalbfuss, Competence Center Manager BOBST

Hunkeler Systeme AG stands out with their very agile, competent development team. The engineers are well able to adapt new components to the stamping and hot embossing film machines used by BOBST, even when our machine builders, at the time of original construction, could not conceive of such additional devices. This engineering competence was especially notable when it became necessary to develop suction devices for our hot embossing film machines. And enormously valuable is also the good team work between our development department and that of Hunkeler Systeme AG. The exchange of information has helped to find appropriate solutions whenever new tasks have appeared.

Cutting waste for 40,000 copies an hour reliably disposed off

Since the spring of this year, NZZ Media Services AG produces a partial run of the «Coopzeitung». The online processing on a trimming drum is carried out with suction and compaction technology from Hunkeler Systeme AG.

NZZ Media Services AG operates their printing centre in St. Gallen Winkeln. In the spring of this year, the weekly workload there increased by 860,000 newspaper copies. The partial run of the «Coopzeitung» for the regions of Glarus, Graubünden, Winterthur and St. Gallen is produced, respectively, on Saturday and the following Monday is produced, 430,000 copies in total. Additionally, just as many copies are printed every Friday with a weekly promotions insert, as a supplement in the «Coopzeitung».

Online-Production of 40,000 an hour

The «Coopzeitung» is trimmed on all three sides, the promotion supplement is trimmed at the top and bottom. Depending on the number of pages, during one production run up to ten tons of paper waste must be removed during operations. This task is carried out by a suction and compaction plant which was designed by Hunkeler Systeme AG and installed in the autumn of 2018. The requirements for the disposal technology are high: for the three-sided trim, NZZ Media Services AG works on a trimming drum from the company Ferag AG. The system is directly connected to the newspaper printing machine and functions in online operation, respectively ten hours on two production days. Production speed reaches up to 40,000 copies an hour.

Double Container: In the Interest of Production security

With this background, the project team lead by production manager Daniel Küng, had to decide how the suction and compaction plant should be ordered. There were three possible solutions: compacting the cutting waste in a baling press, compacting in a single or double press container.

The double press container was selected – for a variety of reasons, as Daniel Küng relates. The most important point was production security; this was provided by the double container as a backup system. This variation was also interesting because of the minimal distance between the cutting drum and the double container on the outside during further processing. The ducting is correspond-



For economical, technical and logistical reasons, NZZ Media Services AG chose a double container compaction system.

ingly short, the energy required for the transport of the waste material is comparably low.

For Daniel Küng, there was a third important point; because the cutting waste is taken outside in closed containers, the production environment is free of paper dust. Clean working conditions are further encouraged in that the fan is placed at the end of the suction system, and the cutting waste is transported in negative pressure. This means that the dust-laden transport air, on its way through the ducting, cannot escape. It is completely cleaned in a jet-filter before it is exhausted into the ambient air.



Daniel Küng, production manager of the printing centre at St. Gallen Winkeln

„A competent partner we can rely on.“

Daniel Küng joined the printing centre at St. Gallen Winkeln in 2015 and has been managing production since then. The new suction and compaction plant is not new ground for him. He knows Hunkeler Systeme AG well, having already worked with their disposal technology in previous positions.

In that Daniel Küng engaged Hunkeler Systeme AG for the new plant in St. Gallen, he has expressed his trust in the company. At the same time, it was also very important that the paper waste from the printing machines should be disposed of by a system from the same supplier. „That we have one competent and reliable contact for the entire disposal process suits us very well indeed,“ says Daniel Küng.

Hunkeler Systeme AG develops and sets up roll splitting system

Landqart AG has been working with a new roll splitting system since the spring. It is part of an integrated shredding process which ensures an irreversible destruction of substrates for bank notes and identity documents.

By order of state authorities and central banks, Landqart AG produces substrate for identity documents and for the printing of bank notes. The products undergo a strict internal quality control. Substrate rolls which are faulty must not leave the production operation and must be destroyed in an absolutely secure internal process. For this purpose, Landqart AG installed a new roll splitting system in the spring. The system shreds the substrate rolls in an automatically controlled process in 20 to 60 centimeter stacks; this value can be set as required.

Secure Shredding in a Closed System

Landqart AG engaged Hunkeler Systeme AG for the engineering and the installation. The suggested concept has fulfilled in an optimal way the need for a secure and at the same time efficient shredding process, as Werner Vieli says. He is responsible for logistics, security and planning at Landqart AG. Werner Vieli is referring here to the closed system, which includes not only the splitting process, but also a shredder with two shred-



The splitting plant shreds substrate rolls in stacks whose width can vary between 20 and 80 centimeters.

ding grades and a granulator. The end products are particles, which correspond to security level P5. They are turned into compact briquettes in a press and are re-used as admixtures in the manufacture of various other products.

Internal Recycling of Valuable Materials

Previously, the splitting process and the following shredding were not two connected operations. To split the rolls, Landqart AG worked with a hydraulically driven gib head, which had to be manually operated. Shredding was laborious and slow; transporting the material to the shredder plant meant long distances had to be covered.

The company took advantage of the investment in the new splitting plant and reconsidered the layout in favour of shorter transport routes and a more efficient shredding process. In contrast with the earlier gib head, the new splitting plant is set up at the



In a closed system, a conveyor belt transports the stack after the splitting process to a shredder with a downstream granulator.

cutting area, exactly where the rolls are cut. Additionally, the transport belt exits from the splitting plant in two directions. The forwards and backwards mode means that that scrap material resulting from when a new order run on one of the paper machines is not sent to the shredder but transported in the other direction to the waste container. This high-quality material is re-used by Landqart AG in stock preparation. And because the material is pre-shredded, it disintegrates in the pulper relatively quickly.

The system ensures economic production operations

Landqart AG has been working with the new plant for almost ten months. What is the verdict? Werner Vieli refers to greater speed. In that the rolls are split into small pieces, the shredder performance is increased by 20 per cent, compared to the previous system, he says. The rapid and logistically correctly arranged system for the splitting and shredding of the substrate rolls is an obvious benefit for the economic efficiency over the entire production operation for Landqart AG, Werner Vieli notes.



The end-product of the shredding process are small particles, which are compressed in a press (centre of picture) to briquettes.

Hunkeler Compact Buffer HCB 600

Secure destruction on little space

The Hunkeler Compact Buffer HCB 600 stores up to 600 kilos of banknotes an hour. It requires four times less space than other systems with a comparable performance.

Hunkeler Systeme AG presents the new HCB 600 (Hunkeler Compact Buffer) for the secure destruction of bank notes. The feed and shredding processes take place fully automatically with a shredder and a downstream granulator. Manual intervention is not necessary. The system is fully protected against unauthorised access. The HCB 600 is scalable, possible operating performances range from 200 up to 800 kilos of material an hour. The bank notes packets are stacked vertically and transferred via a Paternoster to a conveyor belt at the back, which transports the packet to the



It does a lot and requires little space: the Hunkeler Compact Buffer HCB 600.

shredder. Thanks to the Paternoster principle, the HCB 600 is a compact construction. It requires four times less space than a system with comparable performance.

Four HCB 600 for Latin America

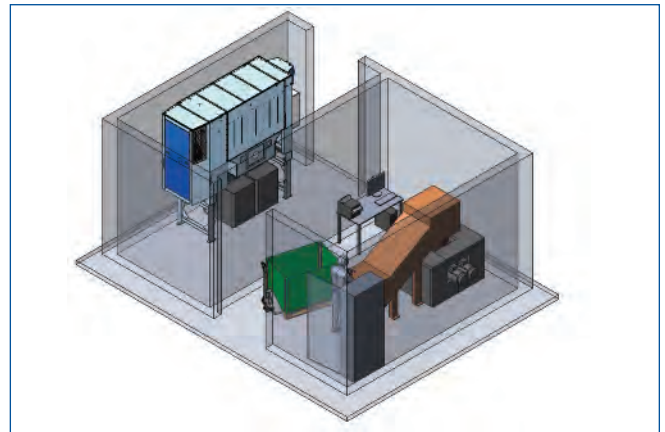
A well-known central bank in Latin America has ordered four HCB 600. The low space requirement was decisive when choosing Hunkeler Systeme AG.

Banky Foiben'I Madagasikara (Madagaskar)

The first choice in all aspects

The Banky Foiben'I Madagasikara equips their six branches with new sorting and shredding plants. Hunkeler Systeme AG presented a convincing concept and won the tender.

The Banky Foiben'I Madagasikara (BFM), the central bank of the island state of Madagascar, has ordered six plants for the destruction of bank notes from Hunkeler Systeme AG. The bank will install them next spring in six branches in various parts of the island. Thus the BFM changes from a centralised to a decentralised destruction of bank notes. Not only will the bank increase security but it will also save on costs, as transport from the six branches to the headquarters in the capital Antananarivo will no longer be necessary.



The system shreds bank notes to particles compatible to security level P4.

The system had to be suitable for installation in small rooms. An automatic process with single-step shredding and a particle size of according to security level P4 was required.

Interesting quality-price relationship

The concept, as developed by Hunkeler Systeme AG, met all the specifications. For BFM, not only the high level of automation and the compact construction, but also the very interesting quality-price relationship were decisive factors for choosing Hunkeler Systeme AG.

Event Calendar

25 to 27 November 2019	HSP Asia, Tokyo
26 to 28 November 2019	OH CPS Bank of Israel
16 January 2020	Suisse Recycling, Biel
10 to 12 March 2020	Logimat, Stuttgart
9 to 11 March 2020	HSP Europe, Lisbon
4 to 8 May 2020	IFAT, Munich
10 to 14 May 2020	Banknote Conference, Washington
9 to 12 June 2020	Suisse Public, Bern
16 to 26 June 2020	Drupa 2020, Düsseldorf

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