

From Taiwan to Thuringia

With the installation of a semi-rotary letterpress machine from Smooth Machinery, label printing company Bohn Etiketten aims for further niche market expansion

KLEMENS EHRLITZER

A user report published in ETIKETTEN-LABELS (the German language sister publication of NARROWEBTECH) two years ago, drew the attention of JÖRG BOHN to the Taiwan-based press manufacturer Smooth Machinery Co Ltd. The machine characteristics therein described matched the expectations of the owner of label printing company Bohn Etiketten based in Kirchheilingen/D. Finally, the company installed the five-colour Smooth SPM-340LR, their first semi-rotary letterpress machine

Prior to installation the machine had to complete several test-runs, as JIM TIEN, Sales Manager for Smooth, recalls. There are certain reasons, why JÖRG BOHN put great emphasis on carrying out numerous trials, some using their own test charts, before making a purchase decision. On the one hand every investment for a new machine is a financial risk for a family-run company with only six employees on the other scrupulous technical approval is self-evident for a strongly technically related entrepreneur like JÖRG BOHN.

A whole lot of printing experience

BOHN started his professional education as an offset printer in 1978 followed by many years working on a *Planeta* sheet-fed offset press. Starting in 1986 he completed a three years study in Leipzig which earned him the grade of engineer for graphic technology. After the

political change in 1989 he took the advantage of working for a label printing company in the state of Baden-Württemberg in the former Western part of Germany. However, during these years he found it difficult to travel all the time between his place of employment and his home in Thuringia. Therefore he decided to found his own company. To distinguish it from other print shops located in the region, he decided to concentrate his activities on special products with short print runs for which he acquired a three-colour *Shiki* letterpress machine in 1995.

This niche strategy proved to be the right decision and the focus of production is still on special labels manufactured with high-quality materials and in short print runs. This includes marks for calibration and control issues supplied with security die-cutting. This often requires exceptional know-how, for example, in the processing of fancy substrates, the die-cutting of sub-

strates with thick adhesive layers or simultaneous printing on both sides.

From a one-man-show to family company

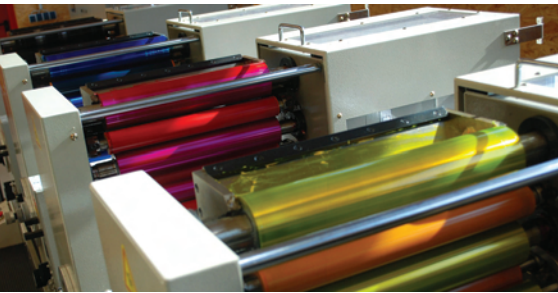
With the increasing number of incoming orders, in 2000 JÖRG BOHN installed a second letterpress machine, this time a two-colour *Etipol Combi 270*, which was extended four years later with two additional print units and a lamination unit. Although *Bohn Etiketten* developed from initially a one-man firm to currently a family-run company with six employees during the past 15 year, the focus is still on orders with smaller print runs with a maximum of one million labels.

Since 2006 the need for further expanding of production was evident. For a long time JÖRG BOHN was looking for a third press which not only would fit well into the existing production processes but also would not put too much strain on the financial capacities of the company. Inspired by an article published in *ETIKETTEN-LABELS* about the installation of a *SPM 340* press at *Hagmaier Etiketten*, he contacted the manufacturing company *Smooth Machinery Co Ltd* at their headquarters in Taiwan. After some intense information exchange concerning press reliability and service, he visited *Smooth Machinery* in 2008. Although he noticed some distinctive differences in view of production processes, he nevertheless found the product quality definitely comparable to European standards. This is also due to the fact, that since 1994 *Smooth* has been certified according to the ISO

Left:
Jörg Bohn (left) and Jim Tien in front of the new installed SPM 340.

Right:
The first machine at Bohn Etiketten: A Shiko letterpress machine installed in 1995.





9002 standard for quality management systems.

Highly automated letterpress

According to JÖRG BOHN, shipping and installation in October 2009 was accomplished in a highly professional way. After two days of test runs, the press was put into operation successfully by processing their first order. The SPM 340 has a considerably higher proportion of electronics compared to the more mechanical design of the other two presses. For example, the new machine is supplied with automatic web tension control, a single drive system for each print unit and an automatic register control system. For repeat jobs, the process data of up to 100 jobs can be stored and retrieved at any time. This high degree of automation is of huge benefit for the work of the press operators.

Using a reference mark printed on the web by the first print unit, the register system automatically controls the respective settings during the production run. Prior to the purchase decision, JÖRG BOHN had already tested the performance of the register control system at varying changes in speed e.g. stopping and starting. The very positive test results impressed him as well as the high print quality, especially the reproduction of very fine elements, and the low waste rate, which is of particularly importance when printing on expensive substrates for the manufacturing of special labels.

A really versatile machine

Bohn Etiketten also required the use of the existing range of die-cutting tools and printing plates with the new press. Therefore, many orders previously produced with the Etipol

Combi 270, are not easily passed on to the Smooth SPM, which will be used mainly for the production of four-colour jobs whereas the older presses will be running jobs with special colours. This splitting of jobs together with the wider web width of 340 mm (13.4") and the higher running speed has resulted in a considerable expansion of capacity which means that a higher number of jobs can be processed.

A feature of particular importance is the possibility of carrying out additional printing or converting processes during a second pass operation, which additionally expands the manufacturing possibilities for special products. The use of servo-drive technology and the photosensor-based determination of the printed reference mark ensures very high register accuracy between the first and the second pass. Another interesting feature with regard to special applications e.g. with sandwich substrates, is the ability, to die-cut from above as well as from below in one pass.

Asian price and European quality

As mentioned before, for JÖRG BOHN print quality was a very significant aspect. Therefore, he shows great interest in details like the design of the inking unit – and in this context, for example, whether they are supplied with oscillating rider rollers on top of the ink transfer rollers, as this considerably limits the risk of ghosting. According to JIM TIEN, such details are mostly of no interest for Asian customers, as they are mainly focussed on the purchase price. For this reason, Smooth highly appreciates the feedback of the more technically-oriented users in Europe as this contributes strongly to the practical relevance of further developments of the ma-

chine technology. Another example of the technical attitude of JÖRG BOHN is the selection of European equipment elements for the rewinding section. At the same time he commissioned Smooth to develop a possible additional machine control for the unwinding section.

Offset as a future offer

To meet market demands, Smooth increased their product range with a new semi-rotary narrow-web offset press, introduced for the first time at LABELXPO EUROPE 2009 in Brussels/B. This press offering a maximum printable surface of 430 x 410 mm (16.9 x 16.1") was presented with live demonstrations and according to JIM TIEN caught the attention of many show visitors. It is designed as an alternative for print shops with customers demanding offset quality but don't want to pay the high prices for European or Japanese presses. Other potential customers are sheet-fed offset print shops who want to combine offset print quality with inline converting. Therefore the new offset press will feature foil hot stamping and/or Stork units for rotary screen printing. For quite a time, pilot-users in Asia have been working with the new semi-rotary narrow-web press, which is said will be commercially available in the autumn of 2010.

→ www.bohnetiketten.de
 → www.smoothmac.com

Left:
 To avoid ghosting the inking units are supplied with oscillating rider rollers on top of the ink transfer rollers.

Centre:
 The use of sleeve type magnetic cylinders facilitates fast job changeover.

Right:
 All main functions of the Smooth 340 are controllable via the HMI touch screen unit.

Also the younger generation of the Bohn family is »infected« with the fascination for press engineering.

