

A visit to Felix Schoeller's Imaging Paper Mill



Since photokina 2012, specialty paper manufacturer Felix Schoeller has been marketing itself and its products with the promise: “Best Performing Papers. Worldwide.” “This statement makes an unequivocal promise of quality to all our customers,” explained Guido Hofmeyer, Executive Vice-President and COO of the Felix Schoeller Division, talking to INTERNATIONAL CONTACT. “In the imaging segment, we work directly with customers and users to develop tailor-made solutions for all printing processes in common use today.” The family-owned company, headquartered in Osnabrück, Germany, has created a unique set-up, combining over 115 years of experience in developing specialty papers with the world’s largest integrated production facility for imaging papers in the idyllic setting of Weissenborn, a small town in the state of Saxony in eastern Germany.

The paper mill in Weissenborn itself has an even longer tradition than the headquarters of the Felix Schoeller Group in Osnabrück: paper has been produced in Weissenborn since 1871. The mill was nationalized by the East German government in 1946. The production of photo base papers began in 1972. Up to 30,000 tonnes a year were manufactured in Weissenborn for the Eastern European market.

Felix Schoeller acquired the mill in 1990 and, with an investment of around 330 million euros, has expanded it into a globally unique manufacturing facility for imaging papers. With the exception of pulp production, the company masters the entire value chain under one roof. The fully integrated production system covers all steps from electricity generation in its own power plant, water treatment, paper production, polyethylene coating and

coating with the ink-receiving layers to customized slitting and distribution logistics. “A major factor on which our success hinges is our unique technology and production concept,” explained Hofmeyer. “It is the basis for key aspects of our brand promise Best Performing Papers. Worldwide.: uncompromising quality, unique flexibility and true partnership with our customers and partners.”

Uncompromising quality

The philosophy of uncompromising quality is evident in Weissenborn – firstly in its adherence to the tightest of manufacturing tolerances and secondly in the constant quality control of every production step. Like all Felix Schoeller’s production sites, the mill in Saxony is certified to ISO 9001 (quality management) and 14001 (environmental management). In addition, the site also complies with the ISO 50001 standard for sustainable energy management and ISO 18001 for occupational health and safety. The management



At the Weissenborn plant, Felix Schoeller produces media for all photo and imaging technologies – from (from left) paper making, PE and ink receiving layer coating



team at Felix Schoeller knows very well that any production plant is only as good as its employees. For this reason, the company takes its responsibility for its human assets just as seriously as its investments in plant and equipment. Over 800 of the 2,270 employees worldwide in the Felix Schoeller Group now work in Weissenborn. Through regular training and extensive internal communications, the company ensures not only that the workforce has perfect command of the production processes but is also fully au fait with the applications of the manufactured papers. "For Felix Schoeller, paper is more than just a raw material," said Guido Hofmeyer. "It is our passion and a passion that is shared by our employees." It may be pure coincidence, but the name of the manager of the R&D department responsible for new developments at Felix Schoeller is Dr. Papier, which translates into English as Dr. Paper.

"Even if the basis for our success is the paper itself, the subsequent manufacturing steps nowadays account for a much larger share of the added value than the actual production of the paper," continued Hofmeyer. "Furthermore, in the last few years, we have extended our product portfolio by a number of non-paper-based products. For example, we now offer film, canvas and specialty substrates for a wide variety of applications."

Unique flexibility

As a manufacturer of specialty papers, Felix Schoeller has geared the mill in Weissenborn to maximum flexibility to produce a wide range of different imaging papers. In fact, it produces media for all photo and imaging technologies in virtually all common formats – from AgX photobase paper, inkjet media, media for digital presses to



to slitting, cutting and shipping.

media for dye sub printing systems. There are certainly many paper mills around the world with greater capacity, but there are very few that are able to manufacture so many different specialty products. It is all made possible by the company's specialized machines, most of which are custom made using the experience and know-how of the Felix Schoeller experts. Felix Schoeller's paper machine no. 4 (PM4), for example, has a capacity of more than 105,000 tonnes a year and, running at a maximum speed of 800 meters per minute, can convert selected pulp using ultra-pure water and a great deal of technology into paper webs with a width of up to 3.5 metres. For most imaging papers, the next step is the PE coating process. Two high-performance extrusion lines apply the polyethylene with maximum precision onto the paper. Material with a width of up to 2 metres can be coated on one or both sides.

Particularly important for the production of imaging papers are the four coating machines, which are used to apply the ink-receiving layers that are key to image quality. Felix Schoeller's Weissenborn mill has full command of all the necessary coating technologies, which include roll coating and blade coating for matt inkjet papers and wallpapers as well as curtain or Meyer bar technology for microporous ink-receiving layers used for paper, film and canvas. "Virtually every second photo in the world is printed on a Felix Schoeller product," said Hofmeyer. "This is only possible because we master the manufacturing technologies for virtually all the main imaging processes and print systems." After the coating process comes the drying. "We do this, for example, with our latest coating machine, in a non-contact, high-speed drying system with, we believe, the lowest specific energy consumption in our industry," explained Hofmeyer.

Maximum flexibility is also the name of the game in the slitting process to ensure that the finished imaging papers from Weissenborn are delivered in precisely the quantities and formats specified by the customers. This means stocking a range of formats from semi-finished jumbo rolls for further processing in local markets, through smaller rolls in various widths and lengths, to ready-packed sheet goods that can be cut to the smallest format of 10 x 15 cm. In addition to accurately controlled cutting and slitting equipment, this requires a sophisticated logistics system. The high-bay warehouse with a capacity of 8,850 rolls stores the paper at a constant humidity and a temperature of 23°. A system for daily order processing allows Felix Schoeller to pack mixed pallets in order to meet customers' demands "just in time".

True partnership

In recent decades Felix Schoeller has developed a variety of new products in close cooperation with customers. In fact, the company only succeeded in becoming the world-market leader for photo base papers because it was able to call upon its outstanding expertise to fulfil the special requirements of the major photo paper manufacturers quickly and precisely. In the digital world, the company's customer portfolio has changed dramatically. Today, it also includes a vast number of print service providers around the globe. What has not changed, however, is the company's customer-focused approach. Not only has the Felix Schoeller range of products increased signifi-

cantly as a result, so, too, has the speed with which innovations are brought to market. At photokina 2012 alone, Felix Schoeller presented 40 new products, ranging from digital printing paper to canvas material. The company has already launched a number of new products again this year.

Many of Felix Schoeller's new products have been created through direct dialogue with the customer. "The global imaging market is developing at an enormous pace, and more and more new business models are being created for digital imaging products," explained Hofmeyer. "We watch this market very closely indeed and pick up on the new trends. We have learned to listen, and our integrated production in Weissenborn gives us the capability to respond flexibly and provide our partners with precisely the products they need."

A special success story

E-Photo papers by Felix Schoeller

One particular success story that is closely connected with the integrated paper mill in Weissenborn concerns Felix Schoeller's introduction in the last few years of E-Photo papers for digital printing. This product is specifically designed for photo printing on HP Indigo digital presses. With our papers, HP Indigo can produce an image quality that can stand the test of comparison with silver halide materials. This is particularly true when printed in HP Indigo's 6-color process using special photo inks. It is not surprising that Felix Schoeller's E-Photo papers, which were first introduced in 2008, are nowadays used by many digital printers around the world, particularly to produce premium photo books.

E-Photo papers and layflat photo books make perfect partners. For this application, Felix Schoeller has just launched its new E-Photo Lustre 135 D. Because of its thinner paper base, this material makes it possible to produce a layflat photo book with significantly more pages without increasing its thickness. Like all E-Photo papers, it has an outstanding permanence rating (over 200 years according to Wilhelm Imaging Research) and offers excellent folding and creasing properties. This is a major advantage with layflat photo books because in these products even genuine photo paper changes color in the fold with repeated turning of the pages. With conventional digital print papers, the coating usually tends to crack. By contrast, Felix Schoeller's E-Photo paper is unaffected by frequent page turning, as tests have proved. And incidentally, all the E-Photo papers are water resistant and dirt repellent.

Another innovation in Felix Schoeller's E-Photo range is E-Photo Metallic Silver 210 D. This double-sided printable paper creates a fascinating metallic effect, which can give photo books and calendars a particularly high-quality look.