innovations
Technics – Markets – Trends
Volume 5 – 3/2011

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Issue 4/2011 of “WITTMANN innovations” will appear at the beginning of the fourth quarter 2011.
Dear reader,

“Island of the blessed” – since the seventies, the self-image of many Austrians is displaying a picture of their country as a place where people in principle can live together without conflicts, harmonically and safe.

However – and we know it quite well – there is the opposite situation in the world, where countries have not developed for the better in regard to the personal security of the individual.

For example Mexico, where the war of the drug cartels that is covered in the media is influencing everyday life, and even has given a boost to petty crime. In such surroundings many people are preferring anonymity, and are avoiding reports, for not to become the potential target of extortion. So much more pleasing, that we may publish in this innovations issue an article from Mexico dealing with the current Mexican investments of Dräxlmaier. An innovative company that wants to demonstrate global competitiveness, against all odds. At this point I would like to affectionately thank the officials for it.

Energy efficiency is a complex topic that is not only linked to immediate energy consumption, but in general to the idea of economical and considerate exploitation of resources.

The issue at hand is featuring the refeeding and accordingly the blending of problematic material. On the one hand, regrind is offering a high cost-saving potential and can avoid scrap, but on the other hand, conveying of regrind – and especially blending of regrind – can assign processors tough jobs. In the course of developing our gravimetric blender GRAVIMAX, we have thought of this problem very intensely, and now we are presenting the outcome in detail for the first time.

Consumer electronics and white goods with perfect high-gloss surfaces are currently quite in fashion and are challenging plastics processors like never before. Using the example of an application at the SANIT company in Eisenberg, Germany we are describing the optimal solution: variothermal tempering combined with the new BFMOLD™ mold technology.

The whole team of innovations wishes you a real reading pleasure with these and the other themes.

Sincerely,

Michael Wittmann
WAVIN profiting from long lasting partnership with WITTMANN BATTENFELD

WITTMANN BATTENFELD has supplied injection molding machines to WAVIN Ekoplastik in the Czech Republic ever since that company’s foundation. Today, 20 injection molding machines from WITTMANN BATTENFELD are installed at the Kostelec facility. WITTMANN has also contributed to WAVIN Ekoplastik’s manufacturing equipment by supplying robots and automation.

Gabriele Hopf

WAVIN Ekoplastik, a specialist in pipes and fittings, based in Kostelec, has been active on the market with plastic pipe and fittings systems since 1990. In 2003, the company was taken over by the Dutch WAVIN group, which is now present in 29 countries and operates its own production plants in 16 of these.

The WAVIN group ranks among the leading manufacturers of plastic pipe systems for water transport. Its products are used in buildings and infrastructure, such as sewerage systems, in high-pressure systems or in agriculture as rain water drainage pipes.

All types of plastics are processed, such as PVC, technical thermoplastics or polyolefins. The company’s pipes and fittings are shipped to customers around the world. WAVIN Ekoplastik’s Czech plant, which employs about 350 people, also exports its pipes and fittings worldwide, with the company’s main markets lying in the countries of the former Soviet Union. Primarily PPR materials, of which some 13,000 tons are processed annually, are used in the Czech Republic. The pipes and fittings with inner diameters ranging from 16 to 110 mm are produced in millions of units. The bestsellers, for example, are fittings with an inner diameter of 20 mm and a 90° bend, which are manufactured in quantities of 1 to 1.5 million units per month.

20 years of partnership

WAVIN Ekoplastik and WITTMANN BATTENFELD are closely linked to one another by many years of cooperation. A major part of WAVIN Ekoplastik’s equipment consists of WITTMANN BATTENFELD machinery, mostly machines from the HM and TM series with clamping forces ranging from 100 to 650 t.

WAVIN Ekoplastik’s requirements for injection molding machines are different from those of many other plastics processors in that clamping force is not the decisive factor,
but rather, due to high shot weights, the supply of large injection units. Consequently, the challenge to injection molding machine manufacturers is to deliver the largest possible injection unit compatible with each clamping unit.

Due to the large production quantities with high cycle times (the latter ranging from 1 minute to a maximum of 16 minutes), molds with a large number of cavities are used. On one machine from the HM series, for instance, WAVIN Ekoplastik uses a stack mold with 48 cavities.

Here, the central platen of the mold is supported by the machine's linear guides. The advantage is precise guiding with low friction, with the weight of the mold being transmitted directly into the machine frame. On machines without linear guides, the mold platen would have to be supported by the tie-bars, with the consequence of an increase in friction and wear.

**Focus on energy efficiency**

Apart from quality, the aspect of energy efficiency also plays an increasingly important role in the machinery operated by WAVIN Ekoplastik, and it will be a determining factor in the planned step-by-step modernization of the equipment. In this context, Milan Nachtigal, WAVIN Ekoplastik's Technical Manager, can see some potential primarily in the machines with ServoPower drive technology available from WITTMANN BATTENFELD.

The ServoPower servo-hydraulic drive concept yields significant energy savings of more than 30% in this application with long holding pressure and cooling times. Milan Nachtigal comments that, “WITT-MANN BATTENFELD delivers high quality and excellent service and will certainly always be a potential partner for the modernization of our machinery”.

For this year, the introduction of the BATTENFELD K4 PDA system from WILLE has been planned for all injection molding machines installed at WAVIN Ekoplastik. This project will be supervised by WITTMANN BATTENFELD’s local sales company.

**The HM and TM series**

The machines of the HM series stand out above all by their modular diversity, ultimate precision and extensive range of options for virtually any application. The machines also feature an extremely small footprint, thanks to their highly compact, extremely rigid 3-platen design.

Further characteristics are low noise levels in operation and a service-friendly structure. A generously dimensioned mold space – an important aspect for WAVIN Ekoplastik – and low-maintenance linear guides are additional highlights of the HM series.

The machines of the WITTMANN BATTENFELD TM series come with a clamping unit offering highest precision and an ideal dynamic concept. One special feature is the free-standing tie-bars of the sturdy clamping unit. The moving platen moves along high-precision linear guides. This structure ensures exact parallelism during opening and closing as well as ultimate repeatability.

The dynamism of the 5-point toggle movements has been optimized so that minimal dry cycle times are achieved for cost-efficient manufacturing.

Gabriele Hopf is Head of the Marketing Department at WITTMANN BATTENFELD in Kottingbrunn, Austria.
Joint project of SANIT and WITTMANN BATTENFELD a complete success

At the ISH trade fair in Frankfurt, SANIT presented for the first time the so-called designer frame with a high-quality surface. This is a WC flush panel component offered to customers as an alternative to expensive glass panels. The frame is produced using a new injection molding and tempering technology from WITTMANN BATTENFELD.

Dieter Kremer

SANIT, based in Eisenberg, Germany belongs to the Aliaxis group, which has 90 companies in 39 countries. SANIT develops and manufactures technically advanced sanitary products from plastics and has advanced to one of the most renowned producers of the international sanitary industry.

When looking for a suitable partner to replace glass elements for sanitary flush panels in up-market on-wall installations with lower-cost plastic solutions, the well-known sanitary installation specialist contacted WITTMANN BATTENFELD in spring 2010.

SANIT’s aim was actually to injection-mold a part of the on-wall installation for a flush panel – a flat component with openings, a high degree of parallelism and a high-gloss surface. The WITTMANN BATTENFELD engineers very quickly realized that such stringent demands regarding the surface quality of the part in question could only be met by using a highly efficient temperature control system. The alternatives under consideration were induction technology, the use of high-performance ceramic materials as heat transfer agents, or molds equipped with a liquid tempering system.

For the last alternative in particular, the choice fell on BFMOLD™ technology developed by the Lüdenscheid Plastics Institute (KIMW), Germany.

Thus, WITTMANN BATTENFELD suggested to SANIT the integration of this technology in the mold and supporting the variothermic process with the new WITTMANN TEMPRO plus C160 Vario temperature controller. This would enable the manufacturing of a repeatable part, avoiding surface defects (such as blushing) and eliminating joint lines on the surface. Injection molders were already familiar...
with variothermic processes through various successful applications. But this combination was a step towards breaking new ground. However, both SANIT and WITTMANN BATTENFELD were convinced that they could successfully implement the project.

In the planning phase, samples were produced with a test mold which confirmed the positive assessment of all parties involved. Convinced of the effectiveness of this process, WITTMANN BATTENFELD presented the BFMOLD™ technology to its visitors with the mold produced by the Lüdenscheid Plastics Institute (KIMW) at the Open House event 2010 that took place at the Kottingbrunn plant in Lower Austria and showed two more applications at the K show 2010 in Düsseldorf.

**BFMOLD™**

The WITTMANN Group has acquired exclusive global utilization and marketing rights for the BFMOLD™ temperature control technology in injection molding tools developed by KIMW in Lüdenscheid and is continuing to develop this technology with new applications.

BFMOLD™ is a process for dynamic tempering and is not based on conventional tempering channels. Instead, a ball filling takes care of the mechanical support in a hollow structure placed extremely close to the cavity. Accordingly, the abbreviation BF stands for ‘ball-filled’.

In this way, tempering media can be brought very close to the mold cavity and be evenly distributed below its entire surface; the whole area below the cavity is available for heating or cooling. Here, the ball filling favors fast and efficient through-flow of the tempering medium.

Temperature control in this process is effected by the TEMPRO plus C 160 Vario multi-zone temperature controller specially developed for this purpose by WITTMANN.

In heating with BFMOLD™ technology, the downtimes are used for heating up, so that cycles are normally not lengthened. It also enables high cooling speeds. With large, flat tempering spaces, a homogeneous cavity wall temperature can be generated and thus a fine surface texture. Sink marks are prevented and joint lines and warpage minimized through an extended holding pressure phase. The process window of parameter settings is wider, and process optimization is feasible more quickly. In this way, the newly developed technology yields a significant improvement in surface quality with relatively low additional costs for tooling.

A high standard of surface technology

In the field of modern sanitary installations, flush panels are gaining in significance as design elements. The cisterns themselves are to an increasing extent concealed in the wall, as Raimund Au, Managing Director of SANIT, explains.

The on-wall installations remain visible, but they are becoming smaller and smaller, and their push-buttons become flatter. According to Raimund Au, solutions that are made of glass would be the best option here, but also the most expensive one.

With a sophisticated application in plastics, however, using the best surface technology currently available, SANIT has now succeeded in coming very close to the look and feel of glass components. Joint lines or sink marks are virtually invisible to the viewer’s eye.

The most recent products in the plastic version, even those with a chrome-plated surface, show unprecedented brilliance. Thus SANIT has created an attractively priced alternative to the expensive glass elements, one which can be produced in higher numbers at moderate cost per unit. Moreover, there is a great variety of design options, such as variants with marbled or water transfer printed surfaces.

Immediate success

The designer frame presented in March at the ISH in Frankfurt met with lively interest among visitors. The first orders were placed while the fair was still in progress. “Visitors to the fair have shown great interest in this new product, and here the decision to break new ground in process technology was right,” Mr. Au said. Many visitors were surprised about the application in black – a color which shows up any surface blemish on visible parts particularly clearly.

Mr. Au admitted that black had actually not been included in the SANIT range before. But the first samples had met with such an enthusiastic response that this difficult color could be included also into the product range. Fully satisfied with the result of the first project, SANIT is now planning to offer additional models produced with the variothermic process and integrated BFMOLD™ technology.

**Meeting at the ISH trade fair in Frankfurt: Raimund Au, Managing Director of SANIT (left) and Klaus Ehlig, Managing Director of WITTMANN BATTENFELD in Meinerzhagen, Germany. In the background: presentation of the designer frame in numerous variants.**

**Visualization of the ball filling in the mold, which is an integral part of BFMOLD™ technology (photo: courtesy of KIMW).**
The new WITTMANN GRAVIMAX blender and the art of blending regrind

The gravimetric blenders of the GRAVIMAX series were presented in the year 2007 for the first time. WITTMANN customers could get a general idea of the several models, and they were instructed about the functionality of the RTLS dosing technology. In the meantime the development work and additional fine tuning on the GRAVIMAX has continued.

Markus Wolfram

Resin that is easy-flowing and uniform in regard to its particle size and particle weight normally is not very difficult to handle when it comes to processing. But the situation is absolutely different from that when it is necessary to deal with resin of varying particle sizes and questionable quality that is tending toward material hang-up (also known as “bridging”).

Many materials also get electrostatically charged to a great extent during the blending process and are separating again. The WITTMANN GRAVIMAX is a material blender that is equipped to deal with these situations.

Material hopper design

Optimum dosing and blending of components are already assuming the use of optimized material hoppers. Even the slightest disturbing factors like screws, screw nuts, and edged spots within the lead-out area can affect the material flow in a way that the bridging of the material is caused. The hopper geometry and the shape of the material outlet can also contribute to this effect. When it comes to processing problematic material, simply incorrect hopper geometry can prevent the material from flowing.

On any account, drawing great attention to the problem is necessary when processing soft and rubber-like materials. When the supply of a needed component is interrupted, the production is disrupted.

Therefore it has to be a priority objective to eliminate every disturbing outline in the material hopper, and to keep the surfaces as even as possible. Furthermore the hoppers have to be easily accessible for cleaning to minimize downtime. Gaps and clearances where resin particles could accumulate also have to be avoided.

Stuck material that would get loose after an insufficient cleaning could affect other production cycles in a negative way. The WITTMANN GRAVIMAX 14V is allowing for the disassembly of all its parts by using simple toggle latch locking mechanisms – without the need of any tools. When changing the production, the readjustment of the GRAVIMAX will take not more than five minutes.

A complete cleaning of the unit including the suction box can be executed within 30 minutes (in case of central configuration and when feeding several machines simultaneously).

Dosing valves and dosing process

The shape and types of the dosing valves and their principles of operation are also contributing to the outcome of the dosing process. The results that WITTMANN got from their dosing experiments have affected how the vertical valves of the GRAVIMAX have been designed.

The opening and closing device is placed outside of the material flow, thus preventing an accumulation of resin. Basically, the dosing process was designed to allow the highest possible material throughput without compromising the dosing accuracy.

The special WITTMANN RTLS (Real Time Live Scale) dosing technology means the real-time weighing of all components after an exact dosing (through pulsing the material). This technology is helping to keep the material constantly in motion, even when the material is not at all easy-flowing. The regular movement of the opening and closing of the
valve is translating itself into the movement of the material, thus avoiding the formation of resin bridges. The entire dosing process is monitored by the GRAVIMAX control and modified when indicated. The operations during the dosing sequence are attuned to the single components, because the particular flow behavior is analyzed and stored before starting the production.

Then, in the course of an auto-tuning phase, the correct material pulse rates are taken over and applied every time when dosing the different components.

Even for soft materials like TPE the dosing results were outstanding. It is clear that the absolutely necessary pre-condition for success is that hopper geometry and material pulsing are harmonized.

**Weighing of the material**

When weighing the material, its flow behavior is not very important. But it is also necessary to pay attention to the geometry of the bin and the possibility of trouble-free material conveying to the mixing chamber afterwards.

Accordingly, the GRAVIMAX got a broadly dimensioned opening into the mixing chamber and, again, even chamber surfaces. A large discharge opening contributes to reducing the cycle time. The peripheral area of this pneumatically operated discharge valve is executed as a slightly bent shape.

This construction is ensuring that even the finest ground material is kept within the mixing chamber over the total dosing period, and thus is weighed correctly.

Many other blender models from different manufacturers are not guaranteeing this, but they are falsifying the result of measurement by allowing the material to secretly ripple into the mixing chamber during the dosing process.

**Mixing chamber and mixer**

The construction of the GRAVIMAX mixing chamber and mixer is allowing for processing any resin. The mixer blades are executed as proper shovels to achieve a perfect mixing of all components. But also the shape of the mixing chamber is of special importance.

The GRAVIMAX 14V uses a hemispherically shaped bowl mixer. Thus the entire material volume in the bowl is accurately blended, and after having discharged the material, there are no residues left in the bowl mixer because there are no dead spots.

**Electrostatic charge**

Many processors are familiar with the difficulty of electrostatic charge. As far it is concerning conveyor pipes, this effect can be minimized through a proper grounding. But in the mixing chamber the phenomenon is built up continuously through the movement of the mixer. An efficient grounding is not possible. The extreme case would be that masterbatch (being predisposed to electrostatic charge) would separate again from the other components. The material is “climbing up” the walls of the mixing chamber, and then eventually collapsing uncontrollably. From this the repeatability is suffering, and of course an unwanted and maybe enormous variability in coloring could occur. Not even the use of ionized air can eliminate certain material’s tendencies to electrostatic charge.

Therefore the GRAVIMAX has three ribs incorporated into the vertically ascending steel wall of the bowl mixer.

These contours make it impossible for the electrostatically charged resin to further mount up. It is always caught by the mixing blades and intermixed to the respective batch.

Markus Wolfram is Sales Manager of the Material Handling Department at WITT-MANN Kunststoffgeräte GmbH in Vienna, Austria.
Executing the superior automation of cups and lids

WITTMANN BATTENFELD Spain realized a demanding automation project for an important customer from the packaging industry. The company has 12 production plants in 9 countries and develops products for the pharmaceutical, personal care, chemical and food processing industry. The company has committed itself to manufacture all their products in an automatic way, with a 100% quality control of the outcome.

Martin Stammhammer

This manufacturer asked WITTMANN BATTENFELD to set up the automation of a new product: a special packaging for the food processing industry that was especially delicate to handle.

The product consisted not only of cups but also of loose lids that were to be molded together in a family mold. After having passed several feasibility studies, the work on the project was started.

The general philosophy of the project was to carry out the different operations by means of standard systems, and even these operations turned out to be rather complex. The aim was to simplify the system as much as possible and make it extremely versatile.

System advantages

- Completely automatic system. The machine operator only has to intervene to place empty boxes and take out full boxes.
- Continuous box loading: no transfer systems.
- Possibility to work with cancelled cavities.
- Simultaneous palletizing of lids and cups.
- Real-time production control.
- System easy to handle. Tailor-made development based on standard elements.
- The production is 100% checked in regard to deformations, burrs, marks and discoloration.

The robot's gripper is removing the parts from the mold and placing them on the conveyor belt.
The process

A food cup and its lid are molded together in a 16-cavity family mold from two materials. The mold is running on a machine of 400 t of clamping force. The cycle time is 4.5 seconds. A WITTMANN W737 linear robot is removing the parts that are undergoing a single check and that are palletized afterwards.

After having removed the parts, the robot is placing them on a translucent conveyor belt that is presenting the parts to the vision control. The vision control is executed by 8 cameras that are connected to an industrial PC via Ethernet. Four of the cameras are in charge of checking the parts in regard to deformations and burrs, the other 4 execute the color control. If the parts are identified as being free from defect, they are orderly deposited via a stacking device. Defective parts are removed from the system. As desired in each case, the stacked parts afterwards are sorted into the respective boxes using a 6-axis robot. The system is charging the boxes for the cups as well as the boxes for the lids fully automatically. Each new box is positioned, correctly aligned, and then is prepared for depositing the parts in the interior. After the 6-axis robot has filled the boxes, they are handed on, while a new empty box is supplied.

System control

As every single system device is working independently from the other units, a PLC control unit was installed and defined as Master. This PLC unit is controlling the communication between the single stations of the automation. Thus it is taking over the coordination of the entire operation.

Whereas the W737 robot is controlled by digital I/O-signals, the 6-axis robot via Profibus, and the cameras of the vision control system are integrated via Ethernet interface.
The family owned injection molding company CHOLEV located in Plovdiv (Bulgaria) specializes in the production of cosmetic pots and caps for the local market. These parts are also exported to other European countries, America and Asia. CHOLEV is substantially investing in a new production facility to meet the quality standards of the international markets. The company focuses on new product development to expand its range of cosmetic pots, and to respond to specific customer requirements regarding individual product design.

Jassen Sterev

The company’s owner and General Manager, George Cholev, is paying keen attention to new trends on the market that make it necessary to continuously adapt the product design. Manufacturing techniques and product design have to be developed together. CHOLEV, being creative and a deliberate follower of fashion, thus is strongly present in this demanding market.

In 2010, CHOLEV has retrofitted its plant with two HM injection molding machines from WITTMANN BATTENFELD, as well as WITTMANN dryers, hopper loaders and Minor 2 beside-the-press granulators. CHOLEV uses two Minor 2 screenless granulators that are connected to WITTMANN FEEDMAX S3/40 hopper loaders.

The cosmetic pots and caps that are developed by the in-house design department are made from SAN and PP. Most of the parts are thick-walled and clear. The crucial production problem is to achieve the highest quality surface and transparency. This is the reason why CHOLEV is working with a semi-automatic cycle.

Until now CHOLEV was manufacturing the parts using an external dryer, carrying the dried material to the injection molding machine in a container. This approach has caused some difficulties regarding the handling of the dried material because of being subject to a cooling-down effect, and being exposed to the danger of uptaking humidity from the surrounding air.

George Cholev reports: “The cooling-down and uptake of humidity have created many production problems. We asked WITTMANN BATTENFELD Bulgaria how to solve this problem, and how to improve our production process. Their proposal was to install a closed system using a drying unit, hopper loaders, and a mixing valve toward a Minor 2 beside-the-press granulator. We followed their advice and achieved a much better result than we had expected initially: a rise of 17% in production volume, less defective parts of only 1%, and a 100% recycling rate of sprues.”

The CHOLEV recycling process

The result for CHOLEV was immediately a very good one. 100% recycling of sprues beside the press is a real advantage, compared to using a central granulator. CHOLEV not only eliminated the risk of unintended material or color mixing, but the installation of the Minor 2 beside-the-press granulator has also led to reducing the amount of dust generated, and to significant labor cost savings. Because the regrind material only contains a very low percentage of dust,
CHOLEV can keep the highest inline recycling quality level. The WITTMANN Minor 2 beside-the-press granulator is compact, energy efficient, and it is operating at a low noise level, using the screenless/low speed technology.

And because of its low noise level and heat development, the plant installation was welcomed by the operators. Again, in comparison to a central granulator, inline recycling was the right choice, since there is no risk of contaminating the reground material with metallic particles. George Cholev adds: “The WITTMANN BATTENFELD solution was the most cost-effective one proposed to us, so we decided to pursue the complete installation in collaboration with them.

A WITTMANN W702 sprue picker is taking the sprues from the mold area and dropping them directly into the Minor 2 granulator. Furthermore we chose a W711S robot with servo subarm to take the finished parts and stack them onto the output conveyor belt. This double arm robot is also dropping sprues into the Minor 2. This system is a perfectly automated production cell. Our combination of the WITTMANN dryer and WITTMANN hopper loader with mixing valve and screenless granulator has become a real success, and therefore we have ordered three more installations from WITTMANN.”

The Austrian Open House 2011 event took place at WITTMANN Group headquarters in Vienna.

WITTMANN Group headquarters celebrates Open House event

On June 30th, 2011 WITTMANN celebrated this year’s Open House at its Vienna headquarters. The event was dedicated to the company’s Austrian customers and friends; a large number of guests were welcomed.

WITTMANN took the opportunity to present their intelligent auxiliaries, ranging from material conveying and drying equipment, units for the recycling of plastics and mold tempering equipment, to superior robotics and automation for the injection molding industry.

Lectures and presentations

Representatives from the several WITTMANN plants with expert knowledge held the lectures that addressed the different trends and developments in the field of peripheral devices.

The lecturers were available at any time during the event to field and answer any questions from the audience. In addition, numerous exhibits provided the visitors with a detailed overview of the latest WITTMANN innovations, including:

- The latest generation of robots with R8.2 robot control was presented. The visitors were shown the technical capability of these robots and the functionality of their new software modules.
- A 4-cavity IML application with a round label for the production of 300ml-cups was demonstrated, running on a TM Xpress 270-1330 injection molding machine.
- Particularly energy efficient drying of resin was shown using the example of the DRYMAX Aton wheel dryer.
- Based on the variothermal tempering process, a WITTMANN TEMPRO plus C temperature controller introduced the highly innovative mold tempering technology BFMOLD™.
- The MAS and SUMO granulators that provide molders with a material flow with absolute process security were presented to the public for the first time, as well as the latest developments in the field of material feeding.
- And, last but not least, some aspects of gas assisted injection molding (AIRMOULD®) and water assisted injection molding (AQUAMOULD®) were presented.

WITTMANN customers and representatives of the press showed tremendous interest in the technical lectures and were consistently impressed by the solutions presented.
Austria: The Sales and Distribution Department

The internationally operating WITTMANN Sales and Distribution Department is located in the company’s Vienna group headquarters. Every day the members of this department are facing the demands that are occurring from doing business over long distances. As such, dimensions from simple postal packages up to huge shipments that are posing a real logistic challenge have to be carried out.

The Viennese Distribution Department is the worldwide contact point for any orders incoming from the branches and agents of the WITTMANN Group.

On the one hand, the members of the department are ensuring a seamless procedure of shipping, including the arrangement of the transport, all charging documents and clearance papers.

On the other hand, the department is serving Austrian and certain key accounts. Especially taking care of the key accounts is getting more and more important, because internationally operating customers are increasingly covering their demands directly from their headquarters.

A prominent Danish plastics processor, for example, ordered the new equipment for its Mexican subsidiary from the Viennese WITTMANN headquarters. In this case, the order was shipped to Mexico directly from the Chinese production plant of the WITTMANN Group.

Furthermore, and as a matter of routine, a “team within the team” is taking over the detailed commercial examination of projects in the fields of robotics and material handling. After having fully examined the terms of payment and the conditions of transport, ideally the overall confirmation of order then is given from the Distribution Department.

A well-positioned team

The economic downturn in the year 2009 had led to a reduction of the department’s team members, but already in 2011, two new staff members have been employed. This is ensuring the department’s ability to fully meet the requirements that have risen significantly in the meantime. The team now consists of the Head of the Sales and Distribution Department, Barbara Weber, and her 8 contributors.

The exchange of information that is happening with the worldwide distribution network is bringing about especially diversified duties that often have to be accomplished in different foreign languages (such as English, Italian, and Spanish). For to handle the wide field of activity in an efficient way, the team members are sharing the responsibilities for the diverse markets. Everyone is specialized in very special territories. Depending on the sizes of these regions, the employees are responsible for a certain number of regions varying from 2 to 20.

New markets are always creating new challenges that are requiring special competencies. Not least this applies to the team of the Distribution Department that even is conferring with the Austrian Federal Ministry of Economy in some difficult cases.

In the end, this team is distinguished because of the fact that its members are amongst the WITTMANN employees with the longest lasting membership in the company. •
Dräxlmaier in Mexico is using the EcoPower series from WITTMANN BATTENFELD

The fully electric WITTMANN BATTENFELD EcoPower series of injection molding machines that were introduced at the FAKUMA 2009 trade fair have developed into a tremendous success. With this first installment of “My EcoPower” we are opening our series of field reports. These interview-based articles from EcoPower users will appear regularly in “innovations”.

- **What size and specification is your EcoPower machine?**
  We have bought an EcoPower 180/750 H with UNILOG B6 control.

- **Who is Dräxlmaier? And what do they produce?**
  Dräxlmaier is a widely known German-based company, a distinguished manufacturer of electric components, electronic components and of premium interiors.

- **Which brands of injection molding machines do you currently have?**
  Nissei, Husky, Krauss Maffei – and WITTMANN BATTENFELD.

- **Why did you decide to purchase – of all things – an EcoPower machine?**
  Because of the technology, power consumption and the short cycle times these machines offer.

- **Which were your special expectations with your new EcoPower 180?**
  Reduction cycle time 10%, reduction power consumption 35% versus a hydraulic machine from Nissei, and a reduction of water cooling.

- **Which are the actual results you have achieved using the EcoPower?**
  In cycle time we have a reduction between 15% to 20%, and in power consumption we reduce more than 90%, which is absolutely amazing.

  In the beginning we didn't believe it, but it is a reality. One of our injection molding machines in the factory consumes 95 kWh. The EcoPower only consumes 5.7 kWh.

- **How many molds are you typically using on your EcoPower 180?**
  Normally we are using eleven molds.

- **What are your favorite design features on the EcoPower 180 molding machine?**

  Power consumption, speed, safety systems, and protection from sudden electricity black-outs.

- **Have you had other benefits?**
  Of course, we had. The fully integrated interface is amazing, with the robot, we improved staff resourcing and made a positive impact in the ISO 14001 standard, because of reduction in power consumption. And because of the machine's footprint, floor space use was substantially improved – as was noise reduction. Together with improved stability of the entire manufacturing process and improved dosing time.

  In a few words: silence, small footprint, reliable molding machine.

- **What sort of payback period are you expecting? Have you renewed your payback calculations since buying the WITTMANN BATTENFELD molding machine?**
  In the beginning we expected 3.2 years, now we trust it will happen in around 2.4 years, which is possible with the considerable savings in electricity.

- **Have any of your customers seen your new EcoPower?**
  No, not yet.

- **Which changes do you suggest for the EcoPower series from WITTMANN BATTENFELD?**
  Automatic height adjustment, like hydraulics machines.