

# innovations

Techniques – Markets – Trends

Volume 11 – 1/2017



*Vitamins  
for your  
molding  
process*



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# Editorial

# Content



**Michael Wittmann**

Dear Reader,

Even at the risk of maybe repeating myself, I would like to state: 2016 was a year that gave us the impression of having passed by much faster than most in recent times. This impression comes perhaps from the two big events that kept us on the go during this year: firstly our 40<sup>th</sup> anniversary event in June, and then the K show in October. Naturally, we also were occupied with smaller occasions and with the day-to-day business – our timetables being brimful with appointments.

The very pleasing course of business in recent years and the heavily increasing demand for our products have continued in the year 2016. And again, we had to face the necessity to carry out extensions on numerous of our production facilities. Just to name some examples, we had to extend three of our Austrian factories, and also the Hungarian plant. We now look forward to continuing our building activities unabatedly in the coming year. Over and over again, we find ourselves in the fortunate position to be allowed to adapt our production capacities to the risen demand of our customers.

As this year draws to a close we have the opportunity to review and also look ahead – and beyond the 2017 horizon. Generally, we expect similar growth in the coming years to that achieved during the past few years. Nevertheless, some recent worldwide existing developments – that we will not lose track of – are a bit thought-provoking. Especially some movements coming from the right as well as from the left that tend to raise trade barriers. As the name suggests: “barriers” would mean a striking disadvantage for us, because we are a globally active company. One of our declared principles, saying “thinking global, acting local”, becomes even more important in this context. In this spirit – as has happened before so often – we have underlined our preparedness for “globalization” by establishing new subsidiaries. In 2016 we have set up our sales and service subsidiaries in Slovakia and in South Korea.

Our expectations are not only based on our worldwide orientation, but naturally also on our innovative products. Geared to our slogan *be smart*, we will continue to further advance our initiatives and developments in the field of *Industry 4.0*. From a technological point of view, it is vital for us to be one of the leading forces; therefore we enter the year that lies ahead of us with much innovative drive. This innovative impulse is driven by creativity and the respective work enthusiasm. Being aware that this things happen every day anew, at this point I would like to thank all our employees and business partners: for their strong commitment and this excellent year 2016.

Yours cordially, Michael Wittmann

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# Jaeger Poway realizes efficient automatic production in China

*Turning to an automation solution from the WITTMANN Group, the Jaeger Poway company in Shenzhen was able to significantly improve its production process and its productivity. – A success story starring the WITTMANN W843 robot.*

**Terry Liu**

**F**ounded in 1999, Jaeger Poway is a joint venture of Erich Jaeger GmbH + Co. KG Elektrotechnische Spezialfabrik, a leading producer of electronic connectors for trucks and trailers in Germany, and the Hong Kong based company Poway Industry Ltd. The company's production base is located in Shenzhen, China. Currently, Jaeger Poway mainly supplies connectors to widely known domestic and foreign manufacturers of heavy trucks as well as semi-trailer vehicles and towing vehicles. The product range includes 7-pin 24V electric connectors, 15-pin 24V electric connectors, ABS connectors, and more. Among Jaeger Poway's most prominent customers are: VOLVO, MAN, SCANIA, WABCO, SINOTRUK, DONGFENG, FAW, SHAANXI AUTOMOBILE, and many others. Today, the company has become a high-quality supply partner of the heavy truck industry.

*Application model of some typical Jaeger Poway automotive products.*



*A spiral cable, one of Jaeger Poway's representative products.*



## **Decision in favor of WITTMANN**

Following the rapid development of the Chinese economy in recent years, the wage level of domestic production workers rose quickly, and accordingly, labor costs also increased very quickly. Likewise, Jaeger Poway

faces the pressure of rapidly growing production costs. In order to maintain the advantage of a good price-performance ratio in the global truck connectors industry, Jaeger Poway decided to partially replace manual



production with an automation system. For this reason, they carefully studied the automation equipment of a few renowned companies that are active in this market.

In the beginning, Jaeger Poway intended to adopt some six-axis servo robots for their automation needs in Shenzhen. But after the Jaeger Poway management had comprehensively considered – amongst other factors – such very important factors like the different footprints of different automation systems, of course the operator friendliness, and also the specific achievable cycle time, Jaeger Poway eventually selected the W843 servo robot model from the WITTMANN Group as their automation equipment.



pers a longer time could become an exhausting activity for the operators. Most of the production employees only reluctantly accepted this job.

WITTMANN installed a W843 robot for the automation of two 100-ton injection molding machines. This automation system has been elaborately optimized by the automation professionals of WITTMANN. As a result, the production cycle has become significantly shorter than it was before: now it is only 84 seconds. Now, two injection molding machines need only four workers a day. The robots take over the heavy physical labor, which was undertaken manually before, and they guarantee smooth production runs around-the-clock.



*The pictures show the general layout of the WITTMANN automation equipment at the Chinese Jaeger Poway plant in Shenzhen, with operators and Mr. Lin, Jaeger Poway's Shenzhen Mold Department Manager.*

### *An efficient solution*

Before this was installed, the cycle time summed up to 108 seconds. The operation of one injection molding machine running at Jaeger Poway required two workers every shift. One of the workers had to put a wire into a gripper that fixed the insert, check the finished products, cut off sprues, and take the gripper with the finished part out of the machine. The other worker put the insert filled part gripper into the injection molding machine and took out the finished products from the gripper. Jaeger Poway ran two shifts a day. As a consequence, two injection molding machines used to need eight workers a day. As the weight of the gripper – including the inserted wire – was about 15 kg, handling the grip-



Normally, a robot at Jaeger Poway is operating at two injection molding machines, and both are producing parts. While one of the machines is prepared for the production of other parts, or while it is maintained, the robot can be set very easily to service exclusively the still running machine by applying only a few simple switchovers. Therefore, the overall production capacity can be raised significantly.

All in all, WITTMANN automation raises productivity, reduces the scrap rate, and lowers energy consumption. Its high-quality advanced equipment and the considerate and comprehensive technical support are the fundamental reasons why customers, including Jaeger Poway, turn to the WITTMANN Group. ♦

*Only some of the many important customers of Jaeger Poway.*

**Terry Liu**  
is Deputy General Manager of WITTMANN BATTENFELD (Shanghai) Co., Ltd. in China.

# Temperature control: more safety in production with new features

*From 2017, the WITTMANN TEMPRO basic C120 temperature controllers with direct cooling will be available with brand new software features. With their familiar easy operating comfort, these appliances will make an even more effective contribution to improving safety in production.*

**Walter Lichtenberger**

**T**emperature controllers with direct cooling from WITTMANN can operate at temperatures of up to 120 °C and are used wherever a high cooling performance is required. To achieve a high cooling performance, the cooling water is not used indirectly, flowing through a cooling coil, as is the normal practice, but the water inlet is connected directly to the heat exchanger.

Consequently, the operating temperature of the appliance depends indirectly on the water inlet pressure.

Previously, the minimum inlet pressure – 2 bar on the vapor pressure curve shown below – and the highest permissible temperature of 120 °C were linked in temperature controllers with direct cooling laid out for 120 °C. The consequence was that these appliances could not be operated at a water inlet pressure below that minimum. In such cases, the pressure setting had to be adjusted to the actual conditions manually via the appliance's display.

## **New software features offer added safety**

New (or overworked) software for the WITTMANN TEMPRO basic C120 appliances means

that the system pressure (water inlet pressure) is measured continuously, and a maximum temperature limit is set automatically. If the operator should attempt to set the maximum temperature higher than the calculated maximum temperature setting, the LED set value display flashes and issues a warning. This clearly indicates that an increase of the set maximum temperature is not pos-

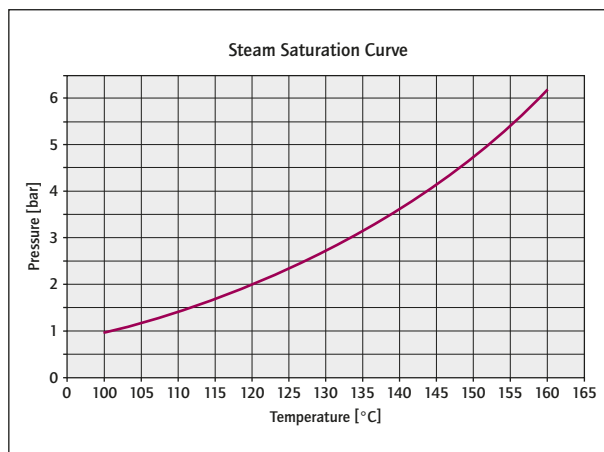
sible for safety reasons, as the water inlet pressure is too low. At the bottom of the scale, a minimum pressure of 1 bar is fixed in order to prevent cavitations inside the pump case.

The second new software feature of TEMPRO basic C120 also serves to improve occupational safety. To ensure the safe opening of the magnet valve, a fixed maximum differential pressure must not be exceeded. Therefore the temperature controller software is now programmed for pressure reduction at 6 bar in order to protect the functionality of the magnet valve.

Finally, another feature has been added in order to improve venting of the appliance during the heating phase. Due to long hoses and deflections inside the mold, air may be trapped in the temperature control circuit, and this may lead to substantial costs for repairs. Air bubbles inside the system may cause dry running inside the pump case, which may accelerate the wear and tear of the mechanical seal and thus cause exposure of the heating element. The new TEMPRO software ensures a cyclical opening of the cooling magnet valve during the appliance's heating

phase in order to release the trapped air from the system. This feature not only prevents potential costs for repairs, but also provides a more effective heat transfer to the mold.

All in all, and thanks to these new software features, the TEMPRO basic C120 temperature controller now offers considerable improvements in production safety. ♦



*The TEMPRO basic C120 single-circuit temperature controller with direct cooling from WITTMANN is also available with touch screen as an option – and from 2017 with revised software for even greater operating safety.*

*This steam pressure curve illustrates the correlation of water inlet pressure and maximum operating temperature.*

**Walter Lichtenberger** is Head of Temperature Control Technology at WITTMANN Kunststoffgeräte GmbH in Vienna.



# FC plus for the WITTMANN DRYMAX battery dryer

*With the FC plus module, plastics processors are offered an option for the DRYMAX battery dryer that considerably extends the possibilities of a frequency-controlled battery dryer. This solution has already received much praise in practice.*

**Markus Wolfram**



*One of many concrete examples: two WITTMANN DRYMAX battery dry air dryers supplying three material hopper lines. The amount of dry air is automatically adapted to the respective demand.*

**A**n FC-controlled dryer from WITTMANN adjusts the dry air volume to the throughput requirements of each drying battery. Ideally, these adjustments are made automatically without requiring the operator's intervention. This is the case with all DRYMAX FC battery dryers, which are equipped with this option as a standard feature. This automation feature prevents inefficient use of the FC function, which typically manifests itself in frequency-controlled dryers requiring manual adjustment.

## *FC turns to FC plus*

Moreover, FC plus enables even more efficient configuration and operation of drying systems. If the system consists of several dry air generators, some dryers can be shut off by automatic control in case of low demand. A dryer which is then no longer active switches over to the standby mode, which leads to a shut-down of all power consumers such as

fans and heater elements. As soon as the FC plus module registers an increase in material consumption – and consequently low system pressure – the frequency-controlled dryer increases its own performance first. If the demand continues to increase, one of the dryers on standby is activated. If the quantity of dry air generated is still insufficient, a total of up to three dryers can be additionally called in. The order in which the various appliances are activated can be adjusted.

The previous standard equipment package of DRYMAX dry air generators already included *SmartReg*, the efficient temperature-controlled regeneration system, as well as a function for material protection to prevent overdrying, and the SILMAX drying silos come with automatic *SmartFlow* air flow control to adjust the air flow to different materials and fluctuations in demand. The FC plus functionality is yet another contributor to the overall energy management system. ♦

**Markus Wolfram**  
is Sales Manager  
of the Bulk Material  
Department  
at WITTMANN  
Kunststoffgeräte  
GmbH in Vienna.

# Axjo Plastic is relying on the Swedish

*The Swedish Axjo Plastic company, with headquarters and the largest production facility in Gislaved, Sweden, has specialized in the production of polymer drums and reels for the cable industry. With support from BATTENFELD Sverige AB, based in Halmstad – and using the WITTMANN Group technology – the company changed the history of drums and reels.*  
**Christian Hiljemark**

**A**xjo Plastic AB started as a subcontractor with many different types of products. Over the past 12 years, the company has concentrated on the production of drums and reels. This now accounts for almost 100% of the entire production volume.

With production facilities in Hickory, NC, USA, Marinha Grande, Portugal, and Shenzhen, China, and logistics centers in 13 countries, Axjo has become a globally active company. The decision to concentrate on the production of drums and reels not only changed Axjo's turnover figures, but also established a generally brand new way of thinking when it comes to drums and reels.

## **Environmental commitment**

As a Swedish company, and being based in the Gislaved area, Axjo is rooted in the significance of environmental issues, and in the awareness of advantages that result from taking care of waste. Caring about the environment comes as a natural aspect of Axjo's production processes.

This means not only using smart machines and automation from the WITTMANN Group, but considering every aspect influencing Axjo's products. This includes using recycled polymers, energy-efficient production, efficient packaging, environmentally friendly transportation, and last but not least, the collection of already used drums and reels for reuse in the production of new parts. As Axjo puts it: "Reuse, reduce, recycle."



*Gislaved, Sweden: MacroPower 650 injection molding machine from WITTMANN BATTENFELD producing reels, one of Axjo's most important products.*

## **Axjo's principles were leading to the WITTMANN Group**

Axjo's products offer many advantages: robustness, low weight, and weather resistance. They are customized, innovative, timesaving, and environmentally optimized –



# agent of the WITTMANN Group

the same criteria that the WITTMANN Group adheres to. This seems to be one of the reasons why Axjo has worked with BATTENFELD Sverige AB for 12 years now.

One of Axjo's latest investments was a *MacroPower* 650 injection molding machine from WITTMANN BATTENFELD that is dedicated to the production of reels. This order also comprised a WITTMANN DRYMAX E300 battery dryer, two SILMAX E400 material hoppers, and

## *A common thread*

A very special challenge arose with the establishment of Axjo's additional production facilities in the United States, in Portugal, and in China. The respective circumstances on every continent had to be considered; from the different cultures and political conditions to circumstances such as time difference. That aside, it was necessary to keep the traditions, standards, and routines that had been developed and that had built up in Gislaved, Sweden.

BATTENFELD Sverige AB, as Axjo's injection molding machine supplier – and as a member of the WITTMANN Group family – was able to find the definite solution for Axjo's global molding production.

Three injection molding machines have now already been delivered to Hickory, North Carolina, USA. The installation of these machines, including the entire after sales service, was executed by the WITTMANN Group's United States subsidiary. As a result, the same standard as practiced in Sweden is at Axjo's disposal in the USA.

## *Axjo's conclusion*

The Axjo company says that “when choosing an equipment supplier, the key to success for us is service and spare parts. For example, we are running our factory in Hickory, NC, USA, 24 hours a day, all through the year. Losing production time for only a few days would cause a lot of problems. And we tend to organize all our factories in the same way, using the same types of machines,

the same mold designs, and so forth. For us, it is therefore important to have a partner that we can work with on a global basis, calling upon the same contact persons all the time. For the last 12 years, we have learned without any doubt that BATTENFELD Sverige AB is the right partner for us.” ♦

**Christian Hiljemark**  
is the Director  
of BATTENFELD  
Sverige AB in  
Halmstad, Sweden.



a DOSIMAX MC volumetric dosing system. In addition, a WITTMANN W843 linear robot for the automation of an already existing injection molding machine was purchased. This WITTMANNW843 robot was provided with a pallet charger, and a pallet conveyor, complete with safety housing.

# Two strokes of genius

*Based in New Hampshire in the United States, the Moto Tassinari company dominates the 2-stroke motorcycle engine aftermarket – with help from WITTMANN BATTENFELD.*

**Markus Klaus**



*In the background: Markus Klaus, the WITTMANN BATTENFELD IMM Division Manager (right), discussing molding with Scott and Steve Tassinari.*

**T**wenty-one years ago, two brothers in West Lebanon, New Hampshire with a love of motorcycles and racing came up with a better design for a reed valve – a part that controls the fuel-air mixture to the engine’s cylinders.

Today, brothers and business partners Scott and Steve Tassinari and their company, Moto Tassinari, are the leading global producers of reed valves and other parts such as intake manifolds for the 2-stroke engine aftermarket. Moto Tassinari recently moved into a gleaming new facility in West Lebanon and outfitted it with three brand new WITTMANN BATTENFELD *EcoPower* all-electric molding machines.

## *Humble beginnings*

The idea for a better valve came from Steve Tassinari, who at the time was working as a mechanic on the Suzuki racing team. “We were told to use existing parts, but I realized I could develop a better reed valve”, he says. He used his design on his own bikes, and saw better overall performance including better engine timing, higher horsepower, and better acceleration. “And that’s pretty much everything you need to get an edge in racing; that, combined with

rider skills are paramount to winning performance”, he says. Steve and his brother Scott took their new idea and in 1995 began making their own valves out of aluminum. They sold 1,100 aluminum-machined valves their first year in business, but it was not a profitable venture. “The process was very expensive, and we used an outside assembly house and had quality issues”, Scott says. “We stood behind every valve we sold, but we didn’t make any money.”

After working long hours trying to perfect their design, the brothers switched from aluminum to plastic for the valves the next year, but still had issues. Their rubber over-molded design had delaminating problems, and once again they had to switch vendors.

Scott Tassinari: “We sold a lot of these valves – over \$ 600,000 worth – and had to make good on all of them after they failed. The industry loved our designs and saw better performance, but the parts wouldn’t last. We decided to go back to the drawing board to really create a product that would work and survive the harsh environment of the 2-stroke motorcycle engine.”

The brothers came back with a newly-designed valve, the V-Force 2, and the performance was vastly improved. Then, in 2003, eight years after starting the company, the next-generation valve was introduced, the V-Force 3. This time,



they succeeded; their new, patented design worked great and sales took off. “We couldn’t make these fast enough”, says Scott Tassinari. The patented V-Force 3 reed valve has been selling since 2003. “The advantages of this valve: it requires no maintenance, and is ready to go to market right off the molding machine.” Produced of 45% glass-filled nylon, the V-Force 3 from Moto Tassinari provides a unique “double peak” performance advantage especially at high r.p.m. (10,000 r.p.m., 166 per second open/close). It is the

to control the production of their own parts. “It can take a lot of time to go outside to get samples made”, Scott points out. “We didn’t know a thing about molding, but decided to bring in our own machines and operators so we had complete control of our manufacturing under one roof.”

Moto Tassinari acquired the molding operations of a company that left Lebanon. The company had three older molding machines; since Moto Tassinari was already planning to move to a new, larger building and upgrade their facility, they decided to look to replace the older machines with new models. They looked at numerous brands but decided on WITTMANN BATTENFELD for several reasons, including familiarity (two of their older machines were BATTENFELDs, and the operators knew how to operate them and enjoyed their ease of use).

They also paid a visit to the WITTMANN BATTENFELD USA headquarters in Torrington, CT and came away impressed. “We liked the incentives that came with electric machines, and we really like having the support that WITTMANN BATTENFELD provides us”, Scott Tassinari continues. “We get great service from our rep, Emmett Reardon, who has bent over backwards to make us happy, and Markus Klaus and his team at WITTMANN BATTENFELD is always ready to come up to our plant to make sure our machines are working at optimal efficiency.”

“These electric machines are so quiet the only sound you hear when they’re running is the parts dropping into the bins”, says Steve. “Also, they’re clean – our operators loved the idea of moving away from the old hydraulic machines. Although, we should mention we kept one of the old BATTENFELD 110s – it still works great.”

*Moto Tassinari’s patented reed valve is used in 2-stroke engines worldwide.*



**Strong business**

The key customers of Moto Tassinari are snowmobile, motorcycle, and all-terrain vehicle (ATV) manufacturers including Polaris, Arctic Cat, Ski-Doo, KTM, Beta, Gasgas, Sherco, TM, and Husqvarna, among many others. Moto Tassinari’s valves are private-labeled for high-performance scooter companies in countries where 2-stroke engines are still widely used including Indonesia, Malaysia, Singapore, France, Germany, and Italy. With twenty-one years of business under their belt and a purpose-built new facility, the company

*Scott Tassinari (left) and Steve Tassinari have a long history in the motorcycle industry and their plant features numerous classic bikes, including this Sherco motorcycle.*

is prepared for the future. “Our sales and profits are strong and consistent”, says Scott. “We’re very happy with the state of our business. We’re specialists in a niche market, and we’re going to continue doing what we know best.”

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WITTMANN BATTENFELD is very proud that Moto Tassinari chose this equipment for their new facility. They are producing challenging to mold parts for a challenging application, which makes the WITTMANN BATTENFELD machinery a perfect fit! ♦

**Becoming a plastics molding business**

After realizing that they could produce a better reed valve out of plastic, and do it much more cost-effectively than using aluminum, the Tassinaris realized they preferred

**Markus Klaus is Injection Molding Machines Division Manager for WITTMANN BATTENFELD, INC. in Torrington, Connecticut, USA.**

# Linear Plastics' focus delivers an exceptional growth

*In the plastics manufacturing world Linear Plastics will be familiar to practitioners since 1974. The past three years, however, have seen the company attaining exceptional growth since moving to its present premises. A visit at the company's site in South Wales yielded some of the secrets of success.*

**Adrian Lunney**

*Linear Plastics plant in South Wales, UK. Building work was completed in spring 2016.*

*Eight complete WITTMANN BATTENFELD molding cells were sourced through 2015/16, WITTMANN beside-the-press granulators are key to in-house reprocessing and cost-efficient use of materials, sprues and rejects.*

*Linear has been cutting mold tools since 1974. This expertise and capability is key to the company's business.*

Linear Plastic's recent expansion has been achieved by the 90 strong workforce under the leadership of Gareth Bassett, owner and MD, and Andrew Harrison, General Manager. The company is located on the Treforest Industrial Estate, South Wales. The company's employment structure is made up of approximately 25% indirect staff (admin, technical and management) and 75% direct staff (production personnel).

Linear has a very broad skills base, including on-site trained machine operatives, time-served toolmakers/tool designers and professionals. Harrison himself, although MBA qualified came up through manufacturing industry via a tool-making apprenticeship and is therefore able to view the business from both technical and commercial angles.

As with most Small to Medium Enterprises (SMEs), Linear makes every effort to make the best and rounded use of all the skills its employees already have – and then develops and up-skills these further via a variety of strategies. Linear expects to further invest in the company's total quantum of skill levels, due to the requirement for additional "added value" business together with the planned further introduction of automation and cell manufacturing into the production processes.

The company's business fields and molding markets are very diverse, spanning a range of industries such as office furniture, construction, aerospace, medical, and electronics.



## *An expanding company*

The fourth quarter of 2013 saw the company move into new premises, a structure providing some 35,000 square feet of floor space. Early 2016 saw this building extended to 52,000 square feet. "This," says Harrison, "allows for further growth through the support and development of our current customer base and gives us the capacity to attract and support additional, new customers." The further expansion assists in realizing the Linear target of driving turnover over the £ 10 million mark.

Harrison says: "A close focus on every aspect of our manufacturing life has been the principal factor responsible for the upswing in productivity over the past three years. Every facet has come under the microscope and no aspect of the company's tooling and plastics processing has been untouched in a campaign to optimize manufacturing efficiency."

The process took off some three years ago when moving into the new space and reviewing the benefits of an automated shop floor. "And automated production is now another principle that the Linear business lives and breathes.

The proof of the pudding is simply in the eating," says Harrison. "Quality consistency and waste reduction efficacy have been two key outcomes, together with a consequent up-skilling of the human contribution."



**WITTMANN BATTENFELD as a partner**

Harrison notes: “Humans are, by default, prone to error and loss of concentration from time to time. Unfortunately a single lapse – especially on long cycle times and large products – can prove very costly and take time to correct.” An automated process can be relied upon to produce no such error.

In this up-skilling process Harrison notes the contribution of equipment supplier WITTMANN BATTENFELD. “We have been delighted to partner up with WITTMANN BATTENFELD for all our plastics technology needs. They are an extremely forward-thinking business and their one-



stop-shop approach to processing equipment means that we can wring optimal value out of all the equipment supplied; molding machine, robot, granulator, UNILOG B6 control. These can all be tuned together for us in one production cell; reducing recycling plastics waste, reducing cycle time, and energy inputs. That approach definitely works for us.” A total of nine

injection molding machines were sourced from WITTMANN BATTENFELD UK through 2015; each with its own pick-and-place robot, beside-the-press granulator and other peripheral items with several forming part of dedicated production cells.

**Meeting all demands**

“Linear”, says Harrison, “has the benefit of being organized with one-stop-manufacturing capability, right the way through from product design support, prototyping and tool-making through molding right the way through to final assembly, packaging and shipping. Service really is a key differentiator in our market, and we can provide our customers with technical support and service throughout a project. Some customers require you to carry inventory, and then to supply on a just-in-time basis. We are capable and happy to do that and it also allows us to use the new space to gradually add in extra

manufacturing, take on further machines. In terms of clients, the long pedigree of Linear Plastics in the area – since 1974 – has made the company a strong player and preferred supplier to the domestic market.”

For Harrison the arrangement is reciprocal. A sense of keeping it local pervades the day-to-day commercial activities. “Wherever possible”, says Harrison, “we will source locally, source

in Wales, and then source in the UK before looking abroad.” Like any successful contract molder Linear has taken care not to over-egg its customer portfolio in any one sector. A large variety of marketplaces make up the contributions to the current order book.

As manufacturers of high precision technical thermoplastic injection moldings, Linear Plastics has a number of special key competences. Harrison outlines three examples:

1. Linear’s ability to offer the customer technical support right from product design stage through to tooling development and prototyping, series tooling and manufacturing, then on to assembly with finished product dispatched as “ship to line” and “point of use” for the end customer.
2. Linear’s ability to produce both plastic and metal components and assemblies, specializing in the over-molding of metal inserts.
3. Linear’s ability to remain flexible in a demanding market sector allowing for the manufacturing of rapid tooling concepts with typical lead-times of 2–3 weeks and offering series products to the customer in batch sizes ranging from single figures to millions. ♦

*Picture left: This SmartPower production cell includes the very latest molding technology. Picture right: The UNILOG B6 control system plays a vital role in Linear Plastic’s production control systems.*

*Picture left: End-of-arm tooling and robotic gripper design makes for effective handling of parts. Picture right: A high quality finish and aesthetic is given as standard for many of Linear Plastic’s customers.*

*The distinctive red colored WITTMANN linear robots are unmissable in the cellular manufacturing approach taken at Linear Plastics.*

*Adrian Lunney is a press and public relations agent who specialises in media work for companies in plastics, medical and packaging sectors.*

# Working for the Spanish market for 25 years

*The Spanish subsidiary of the WITTMANN Group – WITTMANN BATTENFELD SPAIN S.L., – enters its 25<sup>th</sup> year.*

The Spanish WITTMANN BATTENFELD branch, based in La Pobla de Claramunt near Barcelona, was founded in 1992. Since that time Jordi Farrés has headed the company as the General Manager. In the beginning, the premises were very small, and the original staff was only four people. In 1997 – and after having grown significantly –, the company moved to a much larger site. The enterprise kept growing in subsequent years and in 2002 it relocated again; moving to the current facility of 1,250 square meters (including offices, warehouse, and a workshop area), still located in La Pobla de Claramunt.

*General Manager Jordi Farrés (seventh from the left, standing) and the bigger part of the collaborators of WITTMANN BATTENFELD SPAIN S.L. in La Pobla de Claramunt near Barcelona.*



experienced. In 2008, the market was not only merely dull, but suddenly stationary. After some difficult years passed, 2014 showed signals of recovery.

Today, WITTMANN BATTENFELD SPAIN has about 30% of the relevant market for robots, and also a big portion in regard to peripheral equipment.

of 30 people, and the company is growing once more. WITTMANN BATTENFELD SPAIN has two more facilities in addition to La Pobla de Claramunt: one is situated in the North of Spain, and the other is on the Spanish east coast, both of them are sales points including technical service.

## *The market situation*

As everybody knows, beginning in the late noughties, Spain suffered the worst economic crisis it has ever

The company is very well known especially for turnkey projects in the automotive industry. Now operating with a consolidated Sales Department and a very strong after sales team, WITTMANN BATTENFELD SPAIN is targeting a bigger portion of the injection molding machine market. The team of long-term General Manager Jordi Farrés consists

## *Future prospects*

The entire Spanish team sees a bright future with good prospects. The company's 25<sup>th</sup> anniversary will be celebrated in October 2017. At the same time, the EQUIPLAST trade fair will take place again in Barcelona – presenting a great opportunity to celebrate – with friends and customers. ♦

## WITTMANN Group agency in the Kosovo/Albania region

Since March of last year, the WITTMANN Group has been represented in the area of Kosovo and Albania by the Belgrade based company Eco Power Energy Efficiency d.o.o. Kosovo and Albania have great potential in the plastics sector and are showing more and more interest in new technologies. This trend prompted the WITTMANN Group to conclude an agency agreement in March 2015 with Eco Power Energy Efficiency d.o.o., a company founded in 2012.

Under the management of Mirjana Saveski, Eco Power Energy Efficiency is at present actively developing the market for the products of the WITTMANN Group and the company is already engaged in several interesting customer projects, such as a project involving an in-mold labeling (IML) system for a customer in Kosovo.

Once this project reaches the implementation stage, an additional service engineer will be added to the organization.

## *Bright prospects*

Mirjana Saveski is confident that the new agency will contribute to the success of WITTMANN especially in relation to emerging production facilities in the Albania/Kosovo region.

Michael Wittmann, WITTMANN Managing Director: "With Eco Power Energy Efficiency, we have found a representative office for our product range which will help us to establish a strong presence also in this region." ♦



# New WITTMANN subsidiary in Slovakia

*Since September of this year, the WITTMANN Group has been operating its own subsidiary in Slovakia. Managing Director of the new subsidiary is Juraj Majerský.*

In response to the positive development of the WITTMANN Group's business activities in Slovakia, it was an obvious decision to intensify activities in that market – previously handled by WITTMANN BATTENFELD CZ, Pisek – by opening a separate subsidiary in Trenčín/Slovakia.

Juraj Majerský, a Sales Representative from WITTMANN BATTENFELD CZ with many years of experience is the Managing Director in charge of the new subsidiary and he will be supported by Michal Slaba of WITTMANN BATTENFELD CZ.

The new team will be responsible for technical customer support and spare parts supplies in addition to sales activities. For 2017, it is planned to recruit additional sales personnel as well as a service engineer to further strengthen the current team of four persons.

## *An interesting clientele*

About 250 injection molding companies are active in the Slovakian market place. Juraj Majerský expects further growth in that market, as the automotive supply industry is rapidly expanding in



*Picture left: Domicile of the new subsidiary in Trenčín in Slovakia. Picture right: Michael Wittmann (left) and Juraj Majerský, Managing Director of WITTMANN BATTENFELD SK in Trenčín.*

Slovakia. At present, three automobile manufacturers operate production plants in Slovakia: VW in Bratislava, PSA in Trnava, and KIA in Žilina.

Jaguar Land Rover is also beginning activity here with the construction of a plant in Nitra. On the basis of these developments the company anticipates 10% sales growth in the coming two years. Juraj Majerský says that “our aim is to strengthen the market position of the WITTMANN and WITTMANN BATTENFELD brands in Slovakia even further and to make the best possible use of the opportunities this market offers.”

Michael Wittmann, Managing Director of WITTMANN Kunststoffgeräte GmbH in Vienna, comments: “The posi-



*In the new selling agency premises: Juraj Majerský and Dagmar Miklušová, responsible for administration, Jaroslav Turek, customer support, and Michal Slaba, Managing Director of WITTMANN BATTENFELD CZ and Second Managing Director of the new Slovakian subsidiary (from left to right).*

itive economic development in Slovakia and the increasing demand for injection molding technology in this region call for a more targeted development of this market than was required in the past. With our new subsidiary in Trenčín, we can guarantee optimum support for our customers in this region – moving even closer to them.” ♦

## New WITTMANN agency in Morocco

From the end of June, the WITTMANN Group is now represented in Morocco by the SMARTINDUS company based in Tangier. Due to the positive market developments in Morocco over recent years, as well as the upbeat assessment by experts about the country's potential for further growth, the WITTMANN Group has decided to reposition its representation there. With SMARTINDUS, a Moroccan agency has been found which offers many years of market experience as well as an ideal organization for selling top-quality machines.

SMARTINDUS is based in Tangier in the northern part of Morocco, very close to the free trade area. For sales and distribution of WITTMANN and WITTMANN BATTENFELD equipment, three SMARTINDUS associates are engaged full-time, and two additional associates of SMARTINDUS are responsible for after-sales service on a pro rata basis.

In the Moroccan market, technical know-how and local support are the main requirements in relation to machines and other devices as well as spare parts. SMARTINDUS is able to

provide both the necessary workforce and storage capacity for this specialist type of support. The agency contract between SMARTINDUS and WITTMANN BATTENFELD France was signed on June 21<sup>st</sup>, 2016.

The management of the WITTMANN Group sees the new agency in Morocco as a good opportunity to gain a stronger foothold in this further developing market.

Michael Wittmann states: “I am confident that with SMARTINDUS we will establish our products in Morocco and make use of the opportunities this future growth market has to offer.” ♦



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