

34. Edition | 17th Year



First LED luminaire ready for marketing

KURTZ know-how for perfect aluminium housing

“Pro Original”:

KURTZ in-house fair with specialized lectures and industry trends

Gratulation I:

SMT Global Award for ERSA VERSAFLOW 3

Gratulation II:

More than 100 trainees in the Kurtz Group

www.kurtz.info

www.kurtz.de

www.ersa.de

Editorial

Hope

In the second half of the fading year 2008 we experienced how quickly the mood of the world markets can change.

In its 230-year history, the Kurtz Group has weathered numerous ups and downs. We have managed to do so because we cooperate long-term and in a spirit of trust with our business partners; because our staff is able and willing to fight and because our decision-making processes are fast and flexible.

But every crisis brings a new set of challenges and in addition to all the professional measures required to adapt to changing circumstances, a sense of hope and assurance must also be brought to bear.

The effects of the financial crisis and its overall economic implications are being experienced very differently among our business sectors. In some areas, our customers report very significant drops in orders while others are quite confident

with regard to the trend for the coming years. In this respect, we cherish the hope that the effects of the current situation on us will not all be negative and that together with our customers, suppliers and staff we will be able to overcome the looming slump unscathed.

A hopeful sign in this context was, for example, the KURTZ GmbH in-house fair in our engineering works in Wiebelbach. Around 500 specialist visitors from all over the world availed of this event, which has long become established as a meeting point for gaining information on technological trends and product innovations. In addition to highly-promising discussions, specific projects were also considered. Therefore – like our business partners – we face the suspenseful year 2009 with hope and confidence.

We would like to express our thanks for the cooperation we enjoyed in 2008 and wish our customers and staff success, luck and stamina for the coming year.

→ **New Managing Director Technology**

On 1 January 2009 Mr. Uwe Rothaug will take over responsibility as a Managing Director in the Kurtz Holding GmbH & Co. for the business division Kurtz PLASTICS (Particle Foam Machines). Additionally Mr. Rothaug will take over the Kurtz Group's central department Technology.

Mr. Rothaug is 47 years old and married with two children. He was born in Marktheidenfeld and studied information technologies. From 1989 until the end of 2008 he worked for Messrs. atg in Reicholzheim, first as a designer and in the past years as Managing Director.

In the KURTZ GmbH Mr. Rothaug will be responsible for the machine building factory. Together with Mr. Sammati he will constitute the Managing Board.

B. Kurtz R. Kurtz U. Rothaug W. Kurtz

The Managing Board of Kurtz Holding GmbH & Co.:
 Dipl.-Kfm. Bernhard Kurtz,
 Dipl.-Ing. Rainer Kurtz, CEO,
 Dipl.-Inf. Uwe Rothaug and
 Dipl.-Ing. Walter Kurtz.



Art & Culture Vol. 7

Spain



Art & Culture Vol. VII:
 At present the Spanish artist Montse Gomis shows her pictures in the administrative building of Kurtz in Wiebelbach.

Photo right hand side: Montse Gomis

By Walter Kurtz

The opening of the seventh exhibition took place in the Kurtz Industrial Gallery in the administration building of the Kurtz Group in Wiebelbach in the course of the "Art & Culture at Kurtz" series. Kurtz has addressed itself to presenting art from those countries in which the company is particularly active. On this occasion, Kurtz provided a forum for Spain.

Most people are familiar with this country as a sunshine paradise and as the land of historical artists and master builders. But the country also has a very active contemporary art scene. With Montse Gomis, the company has succeeded in winning an artist for an exhibition in Spessart, who is well known beyond the borders of Spain.

Montse Gomis is a professor in the art school Escola Massana Art i Disseny de Barcelona. She lives amidst her works and a variety of studios in a lovingly-restored castello. In her subtle, understated presentation technique she reflects the image of modern Spain, one which should become increasingly familiar to us. Numerous exhibitions in Spain and throughout the rest of Europe testify to the reputation of the artist.

Around 200 art aficionados made their way to Wiebelbach for the opening of the exhibition and availed of the opportunity to engage in direct discussion with the artist and gain an understanding of her inspiration and, in consequence, of Spain, the land of master artists.

In-house fair 2008 „Pro Original“

Meeting place for original experts from niche markets

By Walter Kurtz

At the beginning of November, the traditional KURTZ in-house fair took place in the Wiebelbach machine building facility. Along with the K'plastics fair in Düsseldorf and PLAST in Milan, this event is the meeting place for the European particle foam processing industry. In addition to current product innovations, special-interest lectures presented the latest technologies and developments in the processing of EPS, EPP and copolymeres. The in-house fair at KURTZ was organised together with the business division for casting machinery, in order to exploit synergy effects. Particularly in the area of machinery for low-pressure aluminium casting, KURTZ enjoys an outstanding reputation, especially in the supply of automobile components. And so the low-pressure die-casting and sand-casting community has also found a home in Wiebelbach.

The fact that the in-house fairs at KURTZ have a long tradition is evidenced by their popularity. For the two days, around 500 visitors from all over the world registered. In years without major national or international fairs for the plastics processing industry, this event has become established as a platform for the particle foam processing family. This year it was possible to make the

event even more attractive by timing it to coincide with the EPS Particle Foam congress of SKZ (South German Plastics Centre) in Würzburg.

The main focus of the special-interest lectures at this year's fair was the topic "Pro Original". Beginning with the optimum planning of the plant to the determination of the actual energy originators, for example pre-expansion, transportation and storage and on to the consumption of steam, air and electricity, the latest research results in the area of shape moulding production were presented in detailed test series.

In addition to the lectures, interesting product innovations also awaited the visitors in the production hall. Of course, as well as the possibility for discussions on the exhibits and lectures, personal dialogue was the main focus of the event. And the highly-varied supporting programme offered sufficient opportunity for it.

"Pro Original" – the motto of the fair was tangible everywhere: in the topics of the specialized lectures, the machines on show and the in-depth knowledge of the participants in the discussions. Here, as ever, the original experts from the niche markets found their meeting place.



Originals meet: The KURTZ in-house fair is an important meeting place for the industry to exchange know-how.



Ryan Brown, Björn Dewes and John Floryance presented Kurtz PLASTICS innovations.

Information was both available in specialized lectures and directly at the machines in the production hall.



KURTZ as contract manufacturer

The highest quality for prototypes and series production runs

Also large components of up to 10 m in length can be mechanically processed in one single clamp.

By Stefan Dressler

In addition to the development and production of machinery for the processing of particle foam materials and casting machines, the Kurtz Group offers its customers a wide range of services in mechanical processing and contract manufacturing. Capacities have now been expanded in these areas, enabling us, for example, to produce prototypes and small and medium series, in the shortest possible time. The KURTZ team sets great store by unbureaucratic order processing systems. A major advantage is that unmachined parts of grey cast iron, nodular

graphite iron or cast aluminium are made in our own foundries, saving time and money. A further benefit offered by KURTZ as contract manufacturer is the facility for the mechanical processing of large components up to 10 m in length in a single clamp. The extremely high quality of the parts is ensured by 5-side processing of the workpieces on nearly all machines. The high quality standards are permanently monitored in a fully climate-controlled measuring room, using a 5-axis measuring machine.

Our experienced personnel have the best possible training, to ensure an excellent foundation for this manufacturing service from KURTZ. The KURTZ team have a very high level of quality awareness and are committed to completing orders to deadline.



First LED street luminaire ready for marketing

Aluminium housing by KURTZ

By Hans Blum

A delicate luminaire which reminds you of a cobra's head and weighs all of 30 kg: The first LED street luminaire comes from Siteco and we hope that it will soon become more popular - completely tame! With this product alone (86 high-power LED's), many a community could set an accent. Along the lines of: Our village is to become more beautiful.

KURTZ supplies the housing component with the dimensions 850 x 700 x 600 mm. The construction of this innovative product down to the prototypes was carried out within only five weeks. With the support of a cast consultant, the three aluminium cast parts (lamp housing, mast head and lid) were developed ready for casting at

Siteco within two days and modelled by means of 3D construction. Doing justice to the designers' requirements was a highly demanding task.

Thanks to professional co-operation leading to the required results, we finally succeeded in building the sand casting models within only five weeks and in casting good blanks for the prototypes at the first attempt. The processing facilities at KURTZ proved to be a benefit here.

The parts were then mechanically processed on a 5-axis processing machine. The components needed for lacquering were presented at Siteco in good time.

At the end of the year, the street luminaire of the future project will enter its second phase: The low-pressure dies will then be built. We must wait and see how this new LED luminaire DL10 with its cobra-like appearance will assert itself. But in any case, this product has plenty of bite!

siteco



Optimized production at the foundries

By Ulrich Munz

In September, a change took place in the management of the KURTZ aluminium and iron foundries with Graziano Sammati taking on responsibility for these areas. Since 2003, Mr. Sammati had been plant manager of the iron and grey iron foundry and has an intimate knowledge of the requirements of our branch. There have been changes at KURTZ – a re-organization with respect to more efficient structures leading to an optimized operation and an increase in customer satisfaction.

→ KURTZ mechanical processing of small components

Following the purchase in 2007 of the Barthelsmühle site adjacent to the iron foundry, with an area of over 100,000 m², and following extensive renovation work, the processing has moved to its new location. Within just two weeks, the move from Marktheidenfeld to Hasloch with over 20 CNC machining centres and turning machines was completed in August of this year. Since then, the close proximity of the processing to the iron foundry has resulted in effective organisational and logistic benefits, including benefits with regard to the increasing market demand for ready-to-build-in castings. At KURTZ, up to 1,000 mm traverse paths and five-axle technology can be processed, and specific contract manufacture can be offered. This segment is to be further expanded.

→ Aluminium cleaning shop

In order to achieve further short paths from the casting to processing, September saw our aluminium cleaning shop move to the Barthelsmühle site, next to the mechanical processing department. Large areas and brightly-lit rooms now guarantee that the work can be carried out in a clear-cut and structured manner.

→ Iron and grey iron foundry

From 4,000 to 18,000 tonnes annually within only five years – with this extraordinary growth rate, bottlenecks in the process chain constantly demanded attention, be it the new and higher-performance resin sand mixer, the expansion of the cooling station or the new large-scale silo, to allow the circulating sand to cool down faster. The last bottleneck was the lack of space in the department for large sand cores, which even in four-shift operation was stretched to the limit. Now that the area previously occupied by the aluminium cleaning shop has become available as a result of its move to the Barthelsmühle site, the potential of the large sand core manufacturing has doubled. Consequently, from 2009 onwards, the capacity of our iron foundry will rise to 22,000 tonnes of molten iron annually, following extension of the mixing belt and the further expansion of the cooling chamber for cast flasks.

Demand still exists in the market for high-quality castings with the option of finished processing, and in fact this demand is growing – of course, KURTZ is reacting to it.

Huth & Gaddum GmbH counts on KURTZ

Island solution can easily be integrated into production line



Since last year Huth & Gaddum belongs to Belte AG



By Lothar Hartmann

Founded in 1905 Huth & Gaddum metal foundry based in Velbert Rhineland is a renowned supplier to the rail, overhead line and machine building industries. The company was initially active in heavy metals, but since 1938 also in aluminium, where they achieved success in meeting customer requirements for quality castings.

Alongside the existing sand and gravity die casting currently in Huth & Gaddum, which since 2007 became part of Belte AG, they turned their attention to a technical upgrade of the low pressure foundry. The newly implemented KURTZ low pressure die casting machine type AL 13-13 FSC with integrated furnace exchange system has been delivered and temporarily installed as an „island solution“, which can

be easily integrated into the production line. The concept for a new casting machine in Huth & Gaddum was forward looking to cater for future requirements. For the best value from the equipment Huth & Gaddum emphasised the need not only to produce the current product portfolio, but to be well enough equipped for products planned in the future.

The main focus here was that the casting machine was jobbing foundry oriented and therefore very flexible with convenient controls, and specified with adequate cooling circuits. With the furnace exchange system achieving a high quality of melt will be ensured.

The expansion carried out is not just limited to the new investment in casting

technology, but much more the melting range and the complete environment is configured as future oriented.

With further steps, such as investing in modern X-ray and CT technology, the increased needs for customer satisfaction continue to be resolved. The future product portfolio of Huth & Gaddum metal foundry, as part of Belte AG, will be on the path towards a complete solution for the customer, and consequently a reality.

With this investment, another step towards “Full Service” in Belte AG as well as in its subsidiary foundry Huth & Gaddum, could be taken.

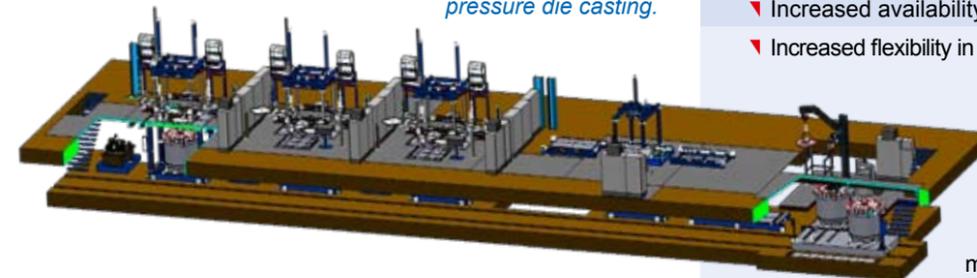
We wish Huth & Gaddum a lot of success for the future!

Stand out from the crowd

– The predominant motto today for LEIMEKO Berlin



LEIMEKO produces with a FSC casting line by KURTZ both in low pressure sand casting and in low pressure die casting.



LEIMEKO casting line – first installation stage – engineered by KURTZ.

By Lothar Hartmann

The light metal foundry Walter Koch & Sohn GmbH & Co. KG is in the middle of construction of its new production facility to increase capacity. LEIMEKO was founded in 1939 by Walter Koch, and in 1989 it was handed on to his son Peter Koch. In 2004, the company transformed into the light metal foundry Walter Koch & Sohn GmbH & Co. KG under the direction of Peter Koch and Peter Puhlmann.

The company is still today a family business, now with 150 employees, working in modern production conditions and producing around 400,000 finished castings per year. LEIMEKO stands for high quality, ready to assemble aluminium castings. The range includes individual preproduction or prototype parts to small and large series.

Manufacturing is certified according to ISO 9001:2000 offering the following benefits for ready to assemble castings.

- ▼ Sand casting from 0.1 to 200 kg
- ▼ Die casting, low pressure die casting to 80 kg
- ▼ Low pressure sand casting up to 100 kg
- ▼ Patternmaking – prototype manufacturing – 3D laser scanner reverse engineering
- ▼ CNC machining on 16 machining centres. 5 axis machining for parts up to a size of 1000 mm and weight of 1.5 to
- ▼ Water jet cutting – single or series production

To expand their flexibility and continue to meet their quality requirements LEIMEKO opted for an FSC casting line from KURTZ. In this line two processes are combined: Low pressure sand casting and low pressure die casting. Both systems are supplied from the same furnace.

As a long standing customer of KURTZ, LEIMEKO recognized the obvious benefits of this new technology:

- ▼ High quality melt
- ▼ No start up scrap after furnace exchange
- ▼ Increased availability of the line
- ▼ Increased flexibility in terms of alloy type and machine utilisation

All casting machines are equipped with a “Customer Specific” control system. For example saving of the casting process data and machine settings for each part cast. This reduces the programming effort when the product is changed. Various other details also contribute to an increase in productivity.

We wish our long time partner „Good Luck!“ and a good start with the new line.

MBW stakes on renewable energies

Large competitive edge in technology for customers

By Ewald Garrecht

The significance of renewable energies for the lasting development of the entire world community becomes particularly clear if one is conscious of how unevenly energy consumption and CO₂ emissions are currently distributed in the world. The industrial states of the North America-Japan-Europe triad with 20 per cent of the world's population consume more than 70 per cent of the commercial energy carriers. The change of the environment by man and the change in climate, in particular as a result of CO₂ emissions, make pushing the energy mix in the direction of renewable energies indispensable.

All of us, as consumers and manufacturers, must support the development in this sector in the medium and long term. MBW Metallbearbeitung Wertheim GmbH regards making a contribution here as a part of its corporate responsibility. Renewable energies are already an important future market with good growth rates. Alongside the environmental aspect, we also see an important point in securing a long-term corporate development. This is why we have decided to include this future market in our sales strategy and are already successfully supplying a number of renowned enterprises.

The share of turnover is currently about 20 per cent, and this strategy is to be continued - the objective is reaching a share of 30 – 40 per cent in the coming years. We offer our customers a technological lead in the various manufacturing processes. Under the motto „all inclusive“, we provide them with a flexible complete service from development via all the areas of manufacture of sheet-metal parts and components right down to complete assembly, not least also internationally at the customers' production locations.

Alongside components for the area of automation plant, as used for example in the photovoltaic industry, we also concern ourselves with products in the area of renewable raw materials.



Siplace Compare Convention 2008

ERSA as a partner of the Quad Lane production process



The visitors' focus: The Quad Lane Production Concept by SIEMENS which ideally supplements the reflow systems of the ERS HOTFLOW 3 generation with Quattro Track.

More than 450 decision-makers from electronics manufacturing companies and I&C companies from all over the world accepted the invitation to the Siplace Compare Convention in Munich this year. At the three-day congress, the Siplace Team showed that it was well prepared for the future independence of the present business unit Siemens Electronics Assembly Systems. Numerous innovative products and service offerings were

presented to the international public in workshops, presentations, forums and panel discussions, themed "Compare", and new production solutions were discussed. The focus of the visitors' interest was on the highly efficient new transport systems such as the Siplace Quad Lane, a quadruple conveyor which makes possible the implementation of completely new logistics and production concepts in electronics production. The 450 participants were able to

get acquainted with the future of SMT production technology together with ERS as the partner of the Quad Lane production concept. Apart from the Quad Lane automatic placement machines from Siplace, the new ERS HOTFLOW 3 generation with the Quattro Track concept was another attraction for the visitors.

The ERS heating technology has proven itself across several years in the double-track reflow applications in large series production operations. The successful further development of this concept has now become possible through a re-design of the multi-jet technology. The result was optimized heat transfer and a still greater thermal stability. ERS was thus able to integrate the Quattro Track transport into the process tunnel without negatively influencing the thermal characteristics of the systems. As a result, increases in productivity of up to 400 % as compared to commercially available machines are possible. Different products with different widths can be processed simultaneously at different speeds. This ensures not only the highest output, but also maximum flexibility per square meter floor space.

ALUMINIUM fair in Essen shows double-digit growth

By Ulrich Munz

With a plus of 27 per cent in exhibitor numbers, an extension of the exhibition area of over 15 per cent and an increase in visitor numbers of almost 10 per cent to approx. 17,000, the ALUMINIUM fair in Essen displayed a double-digit growth rate for the seventh time in succession.

KURTZ presented itself at the fair with a joint stand of the business divisions foundry machinery and aluminium foundry and the resulting consultancy competence led to impressive synergies. So, for example, one potential customer in need of a two-part casing which was

to be welded, pressure-tight, after processing was helped to create a one-piece casting using filigree salt cores. By the way: Such a spontaneous solution to customer problems is offered by KURTZ with the enormous know-how of its committed expert employees not just during fairs.

Customer satisfaction begins with consultation, and ALUMINIUM in Essen is an ideal platform for KURTZ to both convince potential customers of its innovative potency and efficiency and to take care of a fruitful exchange with suppliers.



Provided information to interested persons in Essen: Lena Seifert, Lothar Hartmann and Coleta Schmitt-Stückert.

Save money now!

i-Tip soldering tip prices permanently reduced

By Angelika Kattinger

With the i-CON soldering station, ERS supports the user's hand soldering process, as already repeatedly reported, with intelligent and high-performance technology. Now, ERS has reduced the price for the most commonly-used soldering tips in the i-Tip series by up to 28%.

Evaluations of economic efficiency prove that the use of the i-CON soldering station results in an enormous savings potential – even when existing soldering stations are replaced by the i-CON.



Technology Days at ERSA

Useful forum for know-how transfer in the SMT process technology

By Tilo Keller

Themed "Quality enhancement and cost reduction through secure SMT processes in electronics production", the ERSA Technology Days took place at the beginning of October in Wertheim. There were about 70 participants from Germany, Austria and Switzerland, and they benefited from the interesting programme and the know-how transfer for optimizing their production processes, enhancing their quality and reducing their costs.

The new ERSA applications centre proved to be the ideal platform for event organizers, speakers and visitors. In particular, the equipment in the demo centre, which is right next to the seminar rooms, underscored the image of ERSA as a technology leader. There were machines and systems available here for all the relevant technologies of SMT production for a hand-on experience. The participants were able to subject them to an intensive appraisal. They also included the new VERSAPRINT screen printer with integrated automatic full-surface inspection.

ERSA thus presented itself not just as an event organizer for know-how transfer, but a technology partner in charge - a partner for all the key technologies of the SMT processes.

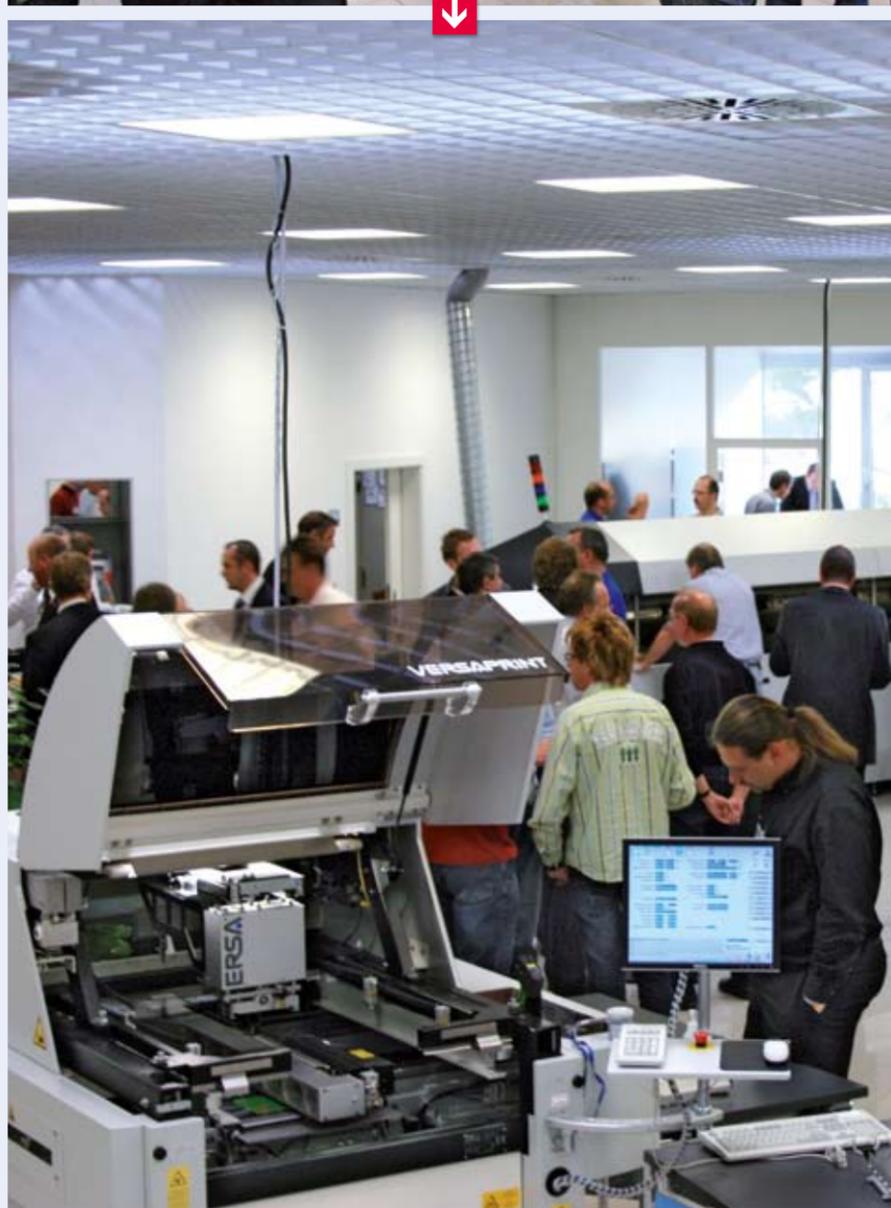
For the first time the customer is thus able to discuss his entire process integrally with one manufacturer. Apart from the

economic advantages, this also affords a number of technological and process engineering advantages and above all, it is ideal for the user when problems need to be resolved.

The focus of the seminars, which were held by selected speakers from renowned companies, was on the optimization of the complex electronics production processes. Many aspects of the various sub-processes were tackled and the latest developments were demonstrated.

After the participants had been welcomed by Dipl.-Ing. Rainer Kurtz, Managing Director of ERSA, Bernd Schenker, ERSA Sales Director started the ball rolling. The first speaker, Hendrik Müller of Airbus Deutschland presented an empirical field report about the challenges facing today's SMT production. Harald Grumm from Christian Koenen GmbH in Ottobrunn spoke on stencil printing as a key process in SMT production. Other interesting lectures treated the advantages of 100%-integrated inspection for the print quality of solder paste printers as well as new economical solutions in reflow soldering, in the area of flexible SMT repair and in visual inspection.

The presentations on the profitability calculations in the context of investment in high-value reflow soldering systems also drew a great deal of attention and



were very well received. Although they carry a higher procurement price tag than purportedly comparable, cheaper systems, they have quantifiable value addition, such as lower operating costs, the highest machine availability and up to 4 times the productivity.

These are all factors that make it possible for the users to increase the profitability of their companies in these days of global shifting of labour costs, increasing energy costs and high exchange rate risks. After all, only those companies that can maximize production output per m² of floor space and also keep the defect rates and the total costs per circuit board produced as low as possible will be able to achieve a competitive edge.

Especially the process managers among the participants were particularly interested in the seminars on „EPC - the permanently integrated process control“ in the latest ERSA reflow soldering machine generation and the „Integration of traceability solutions in production“, which was held by Rudolf Steinbauer from Zollner AG, Zandt.

But the contributions "Pin-In-Paste - an alternative to wet soldering" and the presentation of the "Global ERSA customer service concept" were also very well received by the audience.

In view of the success of this event and how well it was received, a repeat of the ERSA Technology Days in 2009 with new themes is already a done deal.

Wertheim and the ERSA showroom were the destination of more than 70 interested persons of the industry in October.

The ERSA technology days were used to exchange know-how – mainly to optimize production processes, to increase the quality and to reduce the costs.



Global Technology Award

International innovation prize for ERSA VERSAFLOW

By Tilo Keller

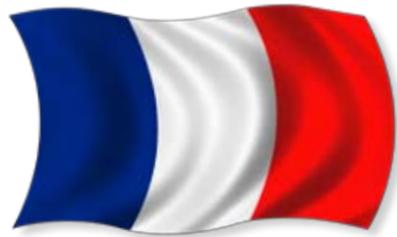
The winners of the American industrial prize, the "Global Technology Award", were announced during the SMTA trade fair in Orlando, Florida. This prize is conferred by the trade journal "Global SMT & Packaging". In the category of Selective Soldering Systems, a new category this year, the Global Technology Award 2008 went to ERSA VERSAFLOW 3/45 – a selective soldering machine with a dual track conveyor.

The Global Technology Award honours companies and persons who reach the highest standards and contribute to the development of our industry. It is intended to recognize the best processes in key areas, including production quality, customer service, turnover enhancement, innovation and employee motivation.

An independent technical jury evaluated the competitors according to the following criteria: The VERSAFLOW 3/45 is the first in-line selective soldering machine with dual track conveyor and the proven ERSA single wave solder nozzle technology. It allows the highest flexibility and throughputs for processing two boards whose dimensions can be up to 508 x 204 mm (20" x 8") each. With up to four solder pots and eight flux spray heads in simultaneous operation, the VERSAFLOW 3/45 currently delivers the fastest throughput: 22 boards can be processed simultaneously in the machine.

→ **Vive la France**

ERSA opens its own representative office in France



The highly motivated team of ERSA France, the new branch of KURTZ France, to be reached at: rue des Moulissards, F-21240 Talant, Tel: +33 (0) 3 80 56 66 10 Fax: +33 (0) 3 80 56 66 16, e-mail: ersa.france@orange.fr

By Rudolf Seiffer

When the association between ERSA and our agents Jahnichen, which had existed since the late 50's, ended in the summer owing to the bankruptcy of the agent, our company decided to significantly enhance its market share and its presence in France. Four of the erstwhile sales employees were inducted for this purpose. From now on, the company will operate under the name ERSA France une Division de KURTZ France S.A.R.L.

Since September, therefore, M/s Amiard, Agogué, Delaize and Descombaz have been officially employed by KURTZ France and operate exclusively on behalf of ERSA so that the interests of ERSA in the fields of soldering, stencil printers and inspection are looked after in the best possible manner by ERSA France une Division de KURTZ France S.A.R.L.



→ **ERSA Korea started operation**

Expansion in the Far East region

By Gerd Hänel

The founding of ERSA Korea on 1 July 2008 represents yet another positive development in the ERSA tools business division. The necessity for the company's own organization evolved from the opportunities of a potential market and the strong presence of the competition with their own organizations. Our operations with sales agencies and distributors in Korea showed that our business sector could not develop any further.

Key accounts like Samsung, LG etc. wish to be served and supported directly

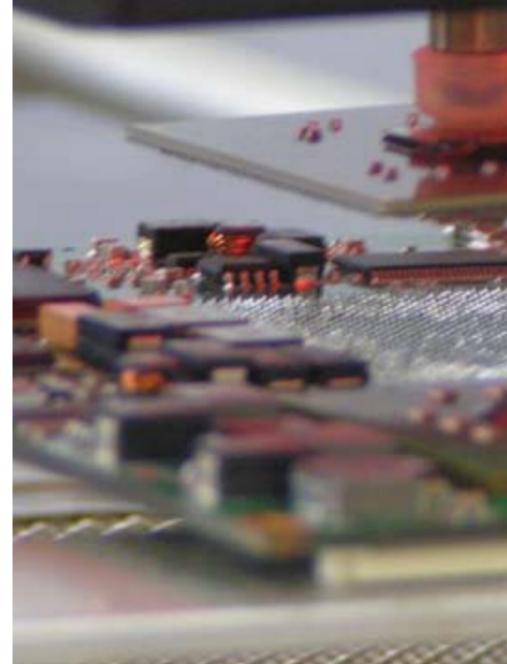
by the manufacturer (B to B). Added to this were the language barriers and the concomitant communication problems. ERSA Korea is placed under the roof and in the custody of KMC, in which David Park will be in charge of the business and develop it further.

Meanwhile, we have printed our own product catalogues of our various product lines in Korean. Moreover, since October, the first business negotiations under way with three national catalogue distributors are about to be completed, so that we shall have another sales channel open.

ERSA Korea has already been introduced within Korea through the publication of an editorial in one of the most important magazines for electronics production, "SMT Packaging" and a technical contribution on the subject of "ERSA Dynamic IR Rework Technology", and through other advertisements of our three product lines.

Also, demonstration machines and systems have been installed at ERSA Korea, and the personnel have been given technical training on their equipment at ERSA as well as in Korea.

Simple handling has convinced rework specialists for years



By Jochen Schreck

Since the last 10 years, ERSA GmbH has been supporting customers all over the world in the repairs of surface-mounted components using its infrared rework systems. Then as now, it is the close contact with the customers that makes the systems so important for the value-addition process of its users.

Thomas Aumer, Managing Director of ITRAC GmbH, Regenstauf confirms this. As a service provider in the area of repairs of notebook motherboards, embedded PCB systems and populated printed circuit boards of all kinds, ITRAC is a young, upcoming company that is developing its core business in the area of component repairs.

process were probably good reasons for ITRAC to deploy the machine in their company. Thanks to its compact structure, the IR 550 A can be used very efficiently and moreover, according to Aumer, offers an extremely important function for a repair service provider: The precise documentation of the soldering process. The operation and documentation software IRSofT logs all the profile settings, monitors and plots the complete soldering process including the actions of the plant operator. Thus, with the IR 550 A, as well as its elder brother, the IR 650 A and the youngest scion of the ERSA rework family, the Hybridtool – HR 100, the repair process can be completely documented.

The ERSA IR/PL 550, one of the top-selling rework systems in the world, has an outstanding price-performance ratio. It was developed for small to medium-sized boards and gives ITRAC the highest degree of flexibility. Even complex SMT and THT rework applications can be carried out without any problems.



ERSA IR550A

ITRAC now has 30 employees ensuring orderly acceptance, analysis, repair and processing of damaged electronics. ITRAC, too, looks back on many years of using ERSA rework products. Starting with the IR 500 A, which has been available since 1998, ITRAC has now progressed to deploying the modern IR 550 rework systems. Since the introduction of the Ball Grid Array (BGA) modules, Mr. Aumer, the founder of the company, has observed that faulty solder joints and electrical defects at these elements are the most frequent cause of the required repairs. And this is so with the number of repair cases showing an upward trend.

It is precisely in the case of BGA and its derivatives that the strengths of the IR 550A come to the fore. Simple handling coupled with a high processing accuracy at an acceptable price meant that the grade from Aumer's team was "very satisfied with the system". The homogeneous infrared heating technology established by ERSA has won over more and more fans since the cut-over to unleaded solder. The flexible heating technology and the temperature measurement at the component in every

The repair soldering must satisfy the IPC standards to be accepted by the customers. If this can be done successfully, which is the case to a great extent with the IR 500 A, the investment in such a repairing system pays for itself very quickly - as happened with ITRAC. For the component placement, which has to be done quickly and effortlessly despite structures becoming ever smaller, there is a retrospective extension available in the form of the precision placement system PL 550 A. In the meanwhile, ERSA has long since passed the 5000 mark for the number of rework systems installed. The accessory range has been tailored to the needs of the customer, and ERSA discusses issues and suggestions submitted by customers with application engineers and developers on a daily basis in order to continually improve the efficiency of the systems.

ERSA will continue to take note of the requirements of users like ITRAC and use them directly as inputs to the further development of the products. Hence, even in future, customers can look forward to convincing rework solutions from Europe's leading soldering technology manufacturer.



A commitment to long-term goals

108 Apprentices at Kurtz

Training ratio over 10%

By Sabine Haas

At the beginning of this year's commencement of training in the Kurtz Group, Dipl.-Kfm. Günther Bartschat greeted the largest intake to date with a total of 36 new apprentices. At present, 108 junior staff are undergoing apprenticeships in 18 different trades in the Kurtz Group.

In the past training year, the Kurtz Group was once again able to present a very successful result: In addition to the high number of former trainees – almost 100% – remaining with the company upon successful completion of training, the management was particularly pleased by the results of Elmar Hefter (design

draftsman) and Patrick Löber (metal cutting mechanic), who were awarded certificates of the Chamber of Commerce and Industry for second place in the Würzburg-Schweinfurt district in recognition of their outstanding examination results in their respective trades.

The cross-company training system of the Kurtz Group, and the proven concept of double training give trainees early insights into the different business fields and technologies and secure a know-how-transfer across the board. With



a constant training ratio of over 10%, a high value is placed on the qualification and promotion of junior staff within the company itself. For the Kurtz Group, the high quality of the apprenticeships and further training is a guarantee, not only in times of shortage of qualified workers, that the company will be equipped to respond to customer requirements and demands also in the future.

Of behavioural objectives and skills

Personnel development concept helps career-building

By Sabine Haas

The growing world-wide competitive pressure and the resulting increasing demands made on the companies of the Kurtz Group present new challenges every day. With its competent and flexible staff, the Group can face these challenges without fear. However, acquired knowledge needs to be constantly augmented and adapted to current requirements. The personnel development concept at Kurtz responds to this requirement and makes a major contribution towards qualifying staff for the forthcoming tasks and ensuring that they acquire the necessary skills. The main focus is on the selection and deployment of staff, management, further training and apprenticeships.

Measures of this kind are intended to directly support the strategic corporate objectives. In order to be able to effectively align personnel processes with corporate strategy, appropriate behavioural objectives need to be laid down to guide

the work of the staff in the company. As a means of defining capabilities and behavioural patterns necessary to achieve these objectives, competence models for various managerial positions in the Kurtz Group have been developed in workshops in the area of executive qualification. Competence consists of a combination of skills, knowledge, characteristics and behavioural patterns necessary to effectively occupy a specific managerial position in the Kurtz Group and to help achieve the strategic objectives.

The individual expert groups developed competence models for managerial positions in the areas Design, Production, Sales, Service, Logistics, Purchasing and Order Centre. Building on this, surveys and evaluation of the analysis process were carried out to achieve an alignment of the defined requirement profile with the qualification profiles of the specific executives. The resulting development reports provide information on the

potential and the existing competence. Individual strengths/weaknesses profiles offer a framework for establishing personnel development targets and serve as policy recommendations for deriving individual development plans with regard to the desired strategic implementation.

Using these results, specific staff development and qualification measures were developed and defined. The implementation of measures will follow as the next step.

Optimised staff development and thus the focussed and efficient promotion of staff is based on the comparison of currently-required competences and those required in the future in the specific position. Specific development targets and the integration into the overall strategic process permit Kurtz staff to contribute in a highly-motivated and active way to the implementation of the corporate objectives.

➔ A boys' day out

Off to the old Eisenhammer foundry

By Walter Kurtz

In glorious September tractor-outing weather, 25 cheerful aficionados of old tractors met at MBW to enjoy a day out with their "charges". After a tour of the plant, they proudly presented their elderly vehicles, all of course polished to a sheen. The historical farm machines of the Kurtz Group staff boasted between 12 and 82 hp. The oldest model went back to 1938, the "newest" of the tractors was registered in 1983. In rustic style, with a starting order and rally plates, the tour set off through the region around Wertheim:

From Schenkenwald, the route took them through the Mondfeld field area to the ferry landing stage where the retinue crossed the Main. With the Henneburg in the background, it presented a terrific photo motif, not only for the tractor fans themselves but also for by-passers. On the Stadtprozelten side of the Main they stopped for a lunchtime break. A busy Kurtz organisation team provided perfect catering.

The trip then continued through Stadt-

prozelten, past the Hofthiergarten, via Neuenbuch, Altenbuch, Sandacker and Kartause to the ultimate destination: the historical Eisenhammer site, origin of the Kurtz Group in Hasloch. The trainees were lined up there to receive the hungry tractor fans with music and barbecued specialities. Here was a chance to talk shop – on agricultural equipment from the days of the old diesel equipment for arable farming right up to today. The summary of this event: an unforgettable day that just calls for a repeat.



A long line of treasures:
In September Kurtz Group employees started for their first joint tour with their historical tractors.

New building materials

Russian building company produces ICF elements made of EPS

By Waldemar Scheller

The SU-155 group of companies is one of the leading building companies in Russia, employing around 60,000 people. They specialise in the construction of residential developments, high-rise blocks, temperature-controlled industrial buildings and warehouses. The range also includes markets, schools and hotels.

To date, these buildings have been constructed using the methods usual in Russia. But recently people have become aware of the great successes and benefits of construction methods using moulded insulating formwork units made of particle foam materials, and decided to use these for other building applications. In America this system is called ICF (Insulated Concrete Forms). ICF is the best method for building a low-energy house, in order to achieve an optimum energy balance.

The possibilities of ICF elements

- ▼ Solid construction with simultaneous interior and exterior insulation
- ▼ Several storeys are possible
- ▼ Faster construction times, giving good cost effectiveness
- ▼ Planning freedom with no limits
- ▼ Minimal technical building site installations
- ▼ Easy shaping of the ICF elements with blade or saw
- ▼ Easy, time-saving laying of supply cables, pipes and ducts
- ▼ Smooth, level surfaces; easy to apply interior and exterior finishes

Benefits of ICF walls

- ▼ Shortened construction times: The time spent on completing 1 m² house wall is approx. 0.43 hours
- ▼ Improved working conditions on the building site: The weight of a module is just 1.2 kg
- ▼ Precision placing of walls without professional preparation: Tongue & groove joint system, additional adjustment and fixing fittings
- ▼ Energy-saving: Elimination of cold bridges, 3 to 3.5 x reduction in heating oil consumption, reduction of the heat insulation coefficient to as much as 0.11 W/(m² x K)
- ▼ Excellent room climate: Dew point set for outside conditions, interior insulation (the temperature of the interior wall surfaces is just 1°C lower than the room temperature, giving low air movement – thus also ideal for allergy sufferers).

Features of the K14.512S :

- ▼ Easy access to the machine for mould change and maintenance
- ▼ Operation with and without shuttle means flexible production and optimisation of cycle times
- ▼ Numerous shaping possibilities



After lengthy discussions and negotiations, KURTZ was selected as the supplier of the EPS system. The system is designed for a capacity of approx. 400 m² structural elements per working day, i.e. more than 100,000 m² residential area per annum. The annual throughput of a system like this is 1,300 tonnes EPS.

The full project management for the system was undertaken by KURTZ and it was delivered as a complete system. It consists of a VN 1000 continuous pre-expansion unit with density monitoring system and three shape moulding machines of the size K14.512S. The design as a shuttle machine with a laterally moving steam chamber enables the automatic placing of inserts into the mould. This happens parallel to the automatic removal of the mouldings onto a stacking table, considerably reducing the cycle times.



Fill injector B-Jet for a more efficient production

KURTZ innovation sets the benchmark

By Walter Kurtz

Little importance is generally attached to fill injectors in the manufacture of shape mouldings. They all have a Venturi nozzle to produce the negative pressure necessary for the transport of the material from the charging silo to the mould cavity. Their use therefore appears close to insignificant, as it represents only around 10 per cent of the total cycle time.

But on closer examination significant differences are revealed between the different types of fill injector in terms of structure, filling efficiency and reproducibility, which can provide substantial benefits in the manufacture of shape mouldings. It is a positive advantage to a processor to be able to use a single filler type for mixed operations in the processing of EPS (expandable polystyrene) and EPP (expandable polypropylene), no longer reducing the associated working capital. The need to maintain a single filler type also reduces the operational maintenance costs.

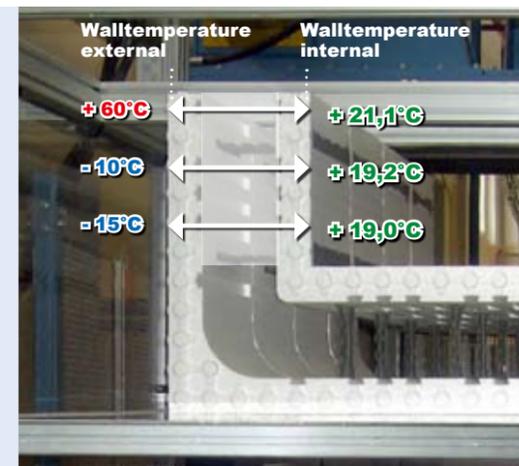
We support this benefit by means of a simple plug-in connector to connect the KURTZ B-Jet fill injector to the lower and upper sections of the filler. On release of the plug-in connector and the removal of the upper section, all of the injector seals are accessible and may be changed without the lower part having to be removed from the mould. As with injection moulding, the plug-in connector, with separation of the lower section that remains in the mould,

makes repositioning works unnecessary, which means a quicker mould change procedure.

The dual-walled design of the lower section of the filler prevents the material from overheating and reduces the likelihood of malfunctions. The Venturi system in the lower section is wear-free and with its position close to the filling activity ensures reproducible filling and prevents material blockages caused by the injector closing piston. On the one hand, this reduces material consumption, and on the other, the even filling and resultant steaming increases the quality of the shape moulding being produced.

An essential benefit of the mould structure is the rotatability of the upper section and therefore also the location of the material supply pipe with regard to the positioning of the fill injectors. Three connectors to the fill injector ensure optimum, trouble-free operation, as "Filler Open" and "Filler Closed" can be controlled independently of the filling air, and if necessary the filling air can be adjusted in line with the degree of nozzle equipment of the cavities to be filled. In endurance tests, new kinds of seals and sealing materials have been tested to ensure that the KURTZ injectors are pressure and vacuum tight. This also ensures low-maintenance operation.

The B-Jet is therefore more than just another alternative to the other injectors found in the market.



The comparison of the outer and inner wall temperatures proves the excellent insulation properties of ICF building elements. Here you can see the values with the example of 20 °C interior temperature.

Shape moulding with underestimated potential

Skin-moulding and glazing for improved technical properties and an increased level of perceived value.



Shape mouldings of particle foam materials are often not highly appreciated by the customers, although they can be quite aesthetically attractive and of high technical quality.

By Klaus Baumann

Final consumers are often disturbed by the porous surface of the mouldings, which shows the particle limits and nozzle imprints. But help is possible by partially skinning or glazing the mouldings. In this context, the surface of the mouldings is melted and compressed locally. With this method, mouldings with a very attractive appearance can be produced. Special moulds with nozzle-free, polished surfaces supplied with heating vapour by an additional installation are used for this purpose. For disturbance-free production, a series of mould technology details and specific process steps have to be complied with. The method is often used for manufacture of ceiling coverings with high-gloss or silk matt surfaces and aesthetically attractive, classical decoration with a high value impression.

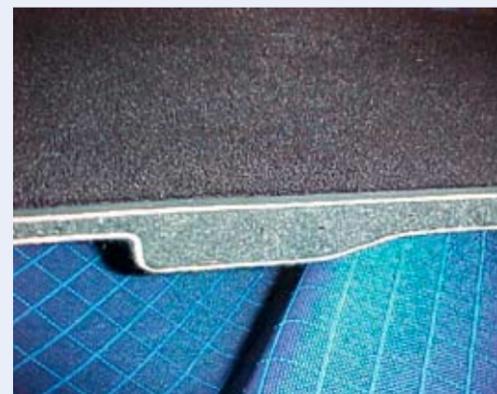
But sometimes, it is not the impression of a component, but the porosity of the surface and the abrasion resistance which need improving. This is why this method is also used in the manufacture of seedling pallets with skinned plant recesses. In this way, the fine roots of

the seedlings cannot find any pores into which they can grow. This results in a reduction of the failure rate of the seedlings because their roots remain undamaged when they are removed. Over and above this, the smooth surfaces can be cleaned more easily and more thoroughly before the next use.

The strength of mouldings from particle foam materials is also often underestimated. But a moulded foam part can considerably gain in mechanical strength if its surfaces are reinforced. This is achieved by two light, thin, yet tear-resistant layers of material being applied to the thickest low-strength core possible. This results in a sandwich element which is very rigid and strong despite its astonishingly low inherent weight. For this, a foil, a tissue or something similar has to be attached as a covering layer with high tensile strength.

A sandwich structure is given its load-bearing capacity, amongst other things, by a good combination of covering layer and substrate. This is most economically achieved if the contact surface of the

The KURTZ EPS pallet:
Only 3.5 kg in weight for a useful weight of up to 1,000 kg.



Sandwich-structured part for a car boot base, consisting of an EPP core, natural fibre mats and textile lamination.



Ceiling coverings with skinned visible side.



Seedling trays with skinned plant recesses.

covering layer and the substrate can enter into a positive bonding. Reusable pallets of EPS with very low inherent weight and a load-bearing capacity of up to 1000 kg are given the necessary strength, amongst other things, by the foil coating, in order to withstand the loads in fork-lift transport or even on high shelves. A comparison shows how light such constructions are compared with their load-bearing capacity: drink packages which are currently in use have a ratio of the weight of the packaging to the useful weight of 3:100. A lightweight pallet has a useful weight ratio of about 4:1000. This means that a packaging with a weight of only 3.5 kg can bear a load of 1000 kg!

How are such moulded parts produced economically? The necessary processing techniques are determined above all by the material and the thickness of the two covering layers. If

these covering layers are relatively thin and can be shaped well with the help of steam, they can be shaped and attached to the surface of the mouldings directly in the production of the shape mouldings.

On the other hand, if the covering layer to be attached is thick and rigid, it is technically simpler and economically more sensible to insert it into the mould as a contoured dish which is thermoformed beforehand. A further possibility is laminating the finished moulding with the covering layers in subsequent processing. A good example of application for this is a lightweight boot base in a car comprising an EPP core, reinforced with natural fibre mats and laminated with textiles.

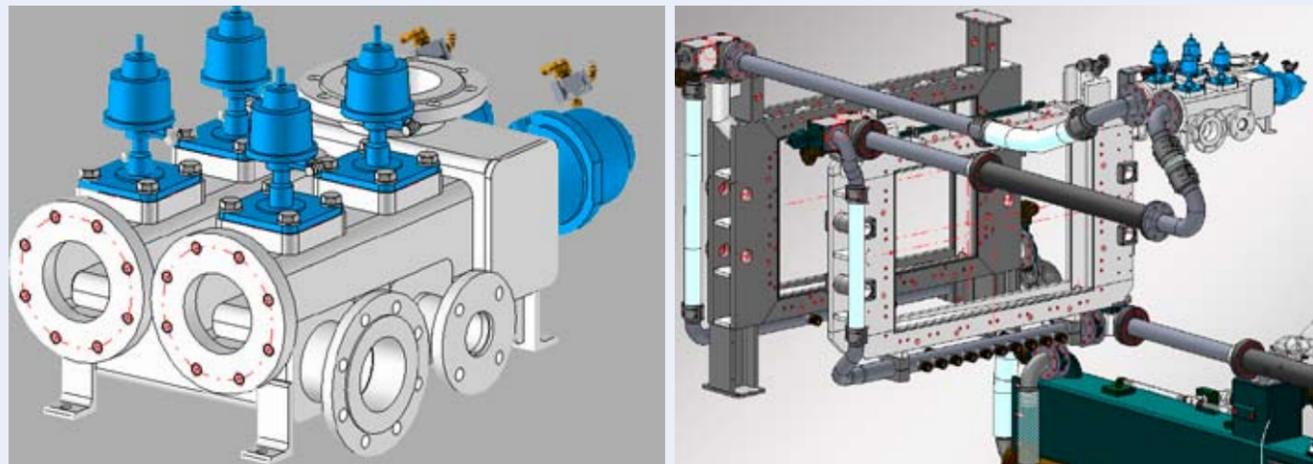
Even if many hopes for use of shape mouldings in the automotive area have not yet been fulfilled to the complete extent, particle foam materials are therefore still materials with potential.

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Efficient moulding production with KURTZ know-how

Measuring and visualising of energy consumption

The drastic increase in oil prices has also led to massive cost increases in the sector of expandable particle foam materials in recent years. While energy costs used to be low on the list of production costs, they now represent a primary cost factor.

This is caused by a twofold dependency of the whole of the particle foam materials' sector on the price of oil – on the one hand in the production of raw materials (styrene is based on oil), and on the other in the moulding production process with the use of steam as an energy source, which is mainly generated by burning oil or natural gas.

What can the individual producer do to survive against his competitors as well as other sectors overall? Specific starting points for energy savings in the particle foam industry include, for example: minimisation of radiation losses, reduction in steam losses, optimisation of the processing parameters and heat recovery.

However, the possibilities for energy savings in the particle foam materials' sector are only being introduced relatively

hesitantly. There is no lack of concrete ideas for saving energy and the potential certainly exists to do so, as, for example, in a shape moulding plant a substantial proportion of the steam energy is released unused and is thus not available to the actual production process (useful energy). But what has been lacking to date is a simple way of measuring and evaluating energy savings measures, especially when the potential savings are larger and therefore more lucrative, but require a certain level of investment. Good ideas can often run aground right at the start.

All that is left then is either to carry out certain measures „blind“ and hope for good results, or to try specifically to measure and determine the energy consumption transparently of each individual energy consumer (e.g. moulding machine, block moulding machine, cutting unit, pre-expansion unit), and apply the total values to the whole system.

Many good approaches have failed with the problem of the measurement results and possible measuring methods – mainly because useful measurement is a process that is difficult to control for

steam consumers with strongly dynamic operation, such as block moulds and shape moulding machines.

However, the use of steam consumption measurement as a standard solution using a vortex meter is expensive and complicated. Also, the measured values obtained by processes to date have been imprecise and sometimes difficult to understand.

This is where the new development from KURTZ comes into its own. For the above reasons, a measuring method has been developed with the aim of providing fast, mobile, cost-effective measurement of the steam consumption of shape moulding machines, with the best possible accuracy. The core aspect and advantage of this procedure is that the new measuring process works without a usual flow meter device (vortex meter) and the associated calming sections in the pipeline. Therefore they do not need to be installed in the existing stream pipe installations with the time and expense that would entail, also making mobile applications, for example for short-term measuring requirements, impossible.

With the new process, which will initially be used for mobile measuring applications in the service department for particle foam processing machinery, all that is needed are pressure and movement sensors, which are connected to the media block of a KURTZ shape moulding machine and a laptop to record the measurements. In ideal cases, the whole of the measuring equipment will be ready to use in less than an hour, for example for measuring steam consumption to enable the optimisation of the process parameters of a new mould.

This type of steam measurement – developed as part of a dissertation – is currently available for use with a type K813 TopLine shape moulding machine. The measuring process can, however, be extended to include any other KURTZ machine types as soon as the necessary data has been determined to use as a basis.

On the basis of these results, it is hoped to collect further results and information over the coming months regarding the possible applications. This will enable KURTZ to provide a service offering the fast, mobile measurement of steam and energy consumption of processing machines for particle foam materials.

Examples of expected future applications for this simple method of measuring steam consumption include the uncomplicated, fast optimisation of steam consumption during testing of moulds, the apportionment of energy costs for individual shape moulding cycles and the testing of optimisation measures for individual machines, at relatively low cost.



Measuring of steam quantity via laptop directly at the shape moulding machine.

Make your reservation now: KURTZ workshops



Tackle the casting

Workshops at KURTZ are no long-winded sessions using Power-Point presentations in dusty classrooms, but rather practical training sessions directly at the casting machines and on the cast parts.

“Workshop“ in practical implementation – the new product in the business division Service Foundry Machines at KURTZ. The aim is to make the customer more closely familiar with the machines and processes. With a deeper knowledge of the machines and the possibilities they open up, availability and production numbers can be increased.

The topics of the training units are agreed with the customer, so that each course is individually conceived. Have we stirred your interest? Then please don't hesitate to contact us at info@kurtz.de!

→ KURTZ reduces spare part prices for block moulding plants

KURTZ has some good news for customers with block moulding systems: To support our customers in value maintenance and the implementation of upkeep measures, we are reducing our spare part prices for block moulding systems. High system availability and productivity with lower energy requirements and minimum production costs are now more important than ever before. For us, good business begins and ends not only with the sale of a machine or system.

190 Mio € Turnover 1,200 Employees

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