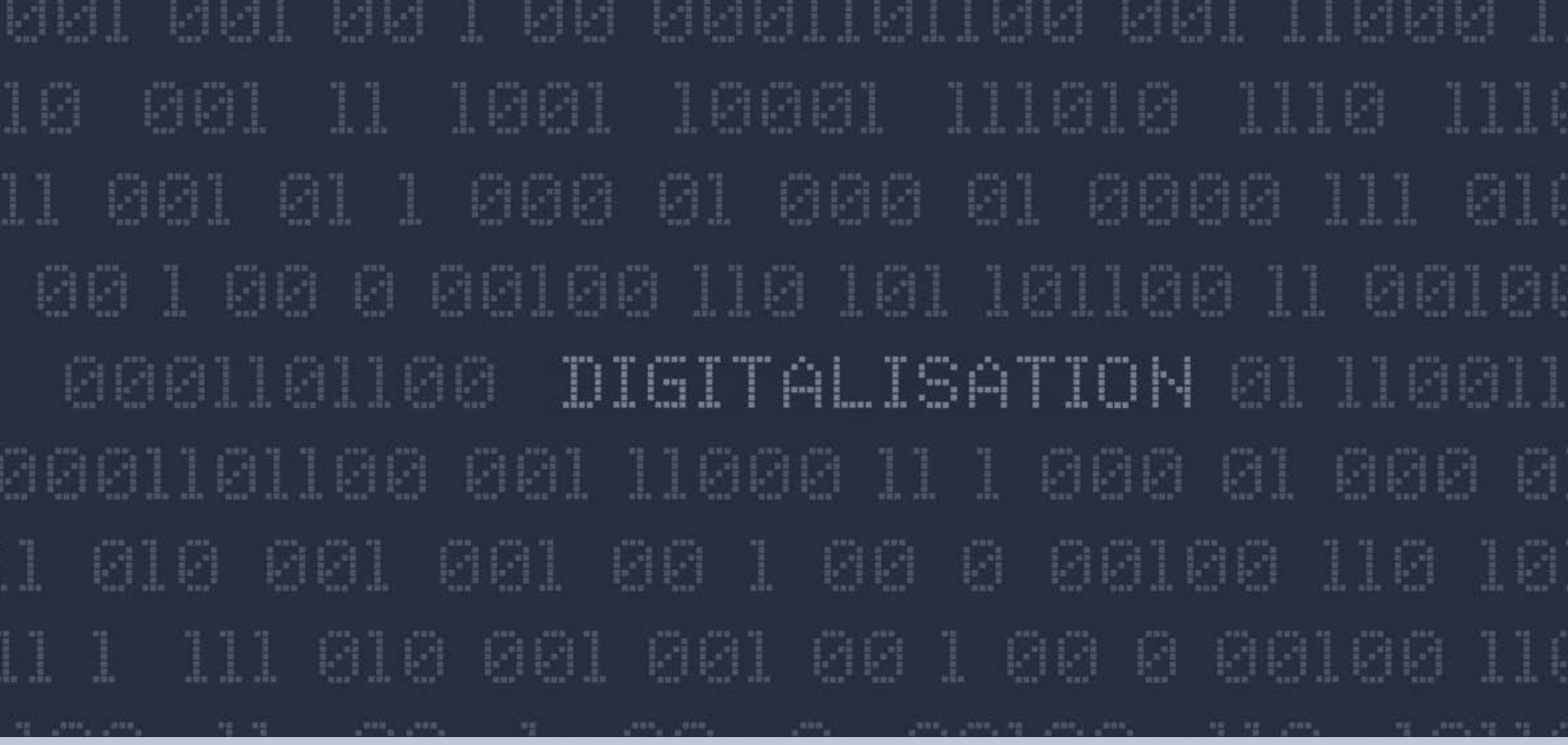
46

July
2018

Kurtz Ersa Magazine

For Customers and Business Partners of Kurtz Ersa Corporation

kurtz ersa



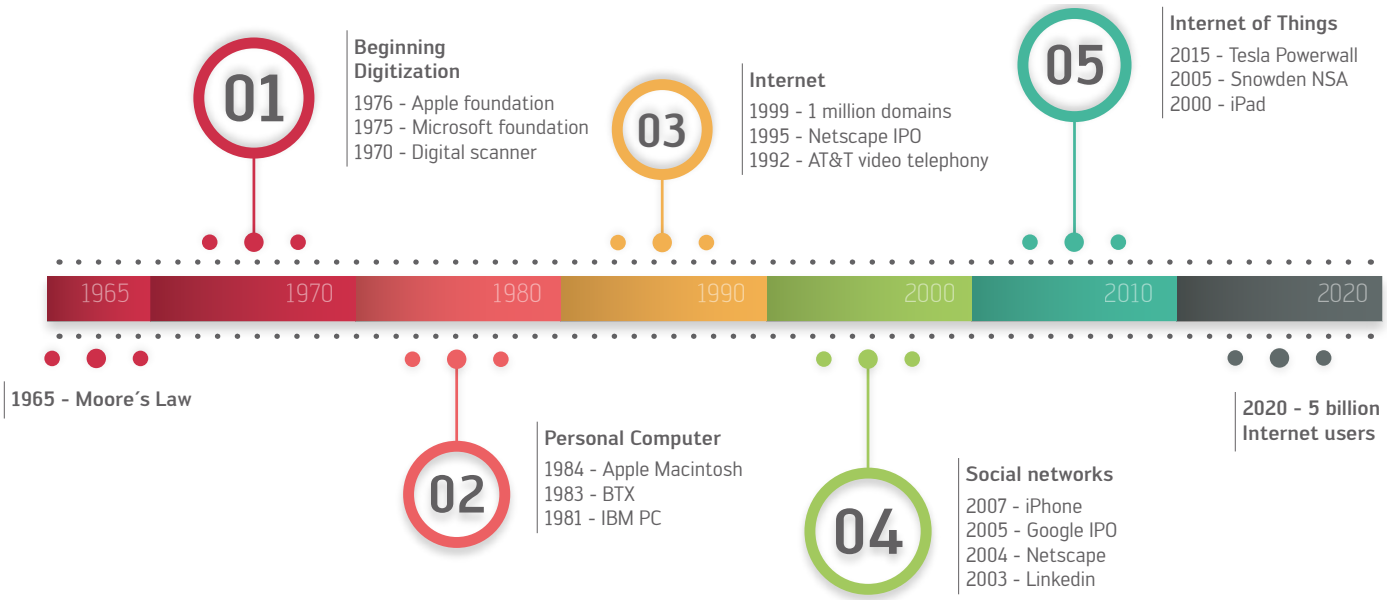
0101010101010

Rainer Kurtz,
Chief Executive Officer
of the Kurtz Ersa Corporation

Digitalisation has been keeping us busy at Kurtz Ersa for many years now. It offers great opportunities to increase efficiency for both our customers and ourselves. Digitalisation permits us to think in completely new ways, to tackle assignments which previously appeared unsolvable and also to redefine our working world. Many of these were already being discussed prior to the creation of the Industry 4.0 brand name, many others are currently in the works. But the process of digitalisation leading to the fourth industrial revolution is currently in full swing and therefore relevant for Kurtz Ersa.

Every company would be well advised to define itself in this environment. Each one has to set its own focus. For us, Industry 4.0 means optimum exploitation of the opportunities offered by digitalisation. Here the numerals 0 and 1 form the basis for everything else. That's why we now have a "Project 01" at Kurtz Ersa. Under this title, we have set up a project organisation for the next five years to implement the projects relevant for Kurtz Ersa. The Kurtz Ersa Magazine will keep our readers up to date on what's new in "Project 01". Once again, the editorial team has compiled an interesting mix on this and other product-related and market-related themes from the world of Kurtz Ersa. We wish you a pleasant read! ■

GOOD LUCK!
Your Rainer Kurtz



KURTZ ERSA PROMOTES DIGITALISATION

Ready for the future with P01

Within the framework of the steering group in spring, Kurtz Ersa launched the "P01" project. A telling title for the project with which the management is addressing the major trend, digitalisation, and at the same time underscoring its importance.

Digitalisation has been around since 1970. In the intervening period, the capability of information technology has doubled every two years. New technologies permit new business models and are revolutionising industries. The increasingly digitalising customer expects digital technologies. The LP shrank, mutated into a CD – and headed off to the cloud as online music. Collections of books no longer fill the shelves but are archived in the slim e-book. Today's smart phones have more processing power than yesterday's bulky mainframe computers. One of the former market leaders in photography, Kodak, failed to spot the development of information technology and has disappeared from the market. The German Federal Government, in contrast, recognised the significance of digitalisation, initiated a future project for comprehensive digitalisation of industrial production with Industry 4.0 and launched a billion-figure development scheme for broadband expansion.

GREATEST POSSIBLE EXPLOITATION OF DIGITALISATION

With Project P01, Kurtz Ersa aims to ensure that the group gains the greatest possible benefits from digitalisation, and becomes even more competitive for its customers around the world. All business processes can be affected by digitalisation. Anything that can be digitalised, will be digitalised. Opportunities and risks will be assessed, ideas collected, initiatives launched. The ideas will be generated, discussed and developed further in sub-groups, and decided on in the monthly meetings of the management. The following sub-groups have been defined: Production, product, administration and communication. At present, around 40 smaller and larger initiatives are active – from the idea to the ongoing major project.

EXPANSION OF AVAILABLE NETWORKS

In its implementation as a business strategy, digitalisation requires a supporting IT strategy. The Kurtz Ersa IT Team is working feverishly on improving the capability and availability of the networks. "We are presently increasing the band widths of the internet connection, developing the internal Wi-Fi nets, working on replacing the old telephone arrangements and installing reliable video conference systems. The networks are being examined for weak spots, obsolete components have to be replaced, security system configurations upgraded. And of course we want to enhance the customer service provided by our IT hotline. We are challenging our current IT service provider to prove that they can supply the necessary capability," says Kurtz Ersa Chief Information Officer, Peter Stärk, summarising the ongoing measures. And that is just the beginning of P01! ■

Kurtz Ersa Logistics Director Matthias Hofmann.

Kurtz Ersa CEO Rainer Kurtz hands over the key to Logistics Manager Matthias Hofmann.

Representatives of Kurtz Ersa, business partner and Chief District Administrator Thomas Schiebel (2nd from left) put the central warehouse into operation.

The first container is stored in the automated warehouse.

HUGE DELIGHT WITH SCHEDULED COMMISSIONING

Kurtz Ersa Central Warehouse celebrates official opening

After a planning phase extending over almost two years, and a 14-month building and set-up phase, the new Kurtz Ersa Central Warehouse went into operation as scheduled. A happy occasion that was celebrated with two events at the beginning of July.

In a festive setting, Kurz Ersa CEO Rainer Kurtz, together with Kurtz Ersa Logistics Director Matthias Hofmann, opened the central warehouse – to the musical accompaniment of the Hammergebläse band. The symbolic first container was stored in the automated warehouse. Alongside representatives of the companies and official bodies involved in the construction, shareholders and management, those staff members were present whose future workplace will be at the new location, Frankenstrasse 14. "With the Kurtz Ersa Central Warehouse, we have created urgently needed manufacturing capacity at the operative sites of Kurtz GmbH and Ersa GmbH," said Kurtz Ersa CEO Rainer Kurtz. ■

Kurtz Ersa Hammergebläse: musical background at the opening of the Central Warehouse.

Commission picking places in front of the automatic small parts warehouse.

BIG RUSH AT PICTURE BOOK WEATHER

Open house at Kurtz Ersa Central Warehouse

In order to present the mode of operation of the central warehouse to all Kurtz Ersa employees and the interested general public, an Open Day was held on 7 July, 2018. In addition to an attractive supporting programme which included, among other things, entertainment for the children and a rich diversity of dining options, the focus was on the logistics itself. Three interactive stations allowed visitors to try their hand and find out for themselves how processes run in the central warehouse. Long queues soon formed at the stations that gave visitors an understanding of the processes involved in incoming goods handling, picking in the automated small parts warehouse and stacker operation in the wide-aisle facility.

Following the inauguration celebrations, the Kurtz Ersa logistics staff will be kept busy up to September 2018, ramping up operations in the new premises. Step by step, existing stocks will be disbanded and moved to the new facility. The first step was taken by the existing Ersa external warehouse, which was cleared out as far back as the end of July. This was soon followed by the logistics facility in Bestenheid and most of the warehouse of Kurtz Maschinenfabrik in Wiebelbach – and there is space enough for all this in the logistics staff's new home: Over 80,000 m³ of enclosed space is available for the high pallet rack. We wish them every success with the tasks ahead! ■

Busy operation at the open day.

BUILT 2018

Effective area approx. 8,000 m²

Automatic small parts warehouse with 4 STORAGE SYSTEMS

Electronic connection of Kurtz Ersa logistics service providers

Central spare parts delivery for customers worldwide and for German Kurtz Ersa sites

31,000 bin locations for boxes (600 x 400 mm)

18 m height
96 m depth
77 m width

10 loading ramps for incoming and outgoing goods

13 m high WIDE-AISLE WAREHOUSE for storing up to 3,300 EURO PALLETS

6 automatic vertical lift storage with total storage space of 1,200 m² on only 30 m² footprint

Plenty of room to move up: the 13 m high wide-aisle warehouse with plenty of storage capacity.

Attractive supporting programme with a variety of catering options and children's entertainment.

Believes in sustainable teaching methods: Kurtz Ersa is a Premium Partner of "Smart Lab 4.0".

Kurtz Ersa once again top employer

For the second time in succession, Kurtz Ersa was confirmed as one of the "Best Employers in Germany" in February 2018. This was the conclusion reached by a study published by the business magazine FOCUS BUSINESS in cooperation with the business network Xing and the employer rating portal kununu.

As in the previous year, the machine builder Kurtz Ersa is therefore among the country's most popular employers. The local Main-Spessart region enjoys almost full employment with an unemployment rate of 1.8 % (status April 2018) – and at Kurtz Ersa, in particular, employees find ideal conditions in which to promote their professional careers and specifically advance the fortunes of their company. The external jury for the FOCUS ranking assessed Kurtz Ersa as particularly good in the categories "Electronics & Electronic Engineering" (16th place), "Manufacturing and Processing of Raw Materials and Construction Materials" (16th place) and "Machine and System Engineering" (14th place). For the first time, in addition to the overall winners, and winners in the various branches, Statista also declared the Top 50 companies in the eight new categories "Internationality", "Digital Workplace", "Working Environment", "Careers"", "Initiative", "Advanced Training & Development", "Management Culture" and "Healthy & Fit". Here too, Kurtz Ersa achieved good ratings – with regard to further training and development, the company's internal Hammer Academy and the diverse further training options secured Kurtz Ersa 19th place. Employees at Kurtz Ersa also enjoy excellent career prospects – as reflected by 27th place in the category Career.

CONFIRMED: OUTSTANDING PERSONNEL WORK

For the Human Resources Team at Kurtz Ersa, the excellent result in the study, which was conducted for the sixth time, rep-

resents confirmation of the significant intensification of personnel development – particularly in view of the increased use of digitalised tools. Across the company, this extensive use of resources led to over 200 hirings in 2017 and, in terms of turnover, ended with the fourth year of growth in succession. "We are doubly delighted with the rating – on the one hand, with the fact that we were able to match the outstanding result of the last ranking and, on the other hand, that we are performing in the same league as such global players as Bosch and Siemens," said Verena Alina Bartschat, Head of Personal Development at Kurtz Ersa.

Kurtz Ersa has been a premium partner of Smart Lab 4.0 since March 2018.

PREMIUM PARTNER OF "SMART LAB 4.0"

For the determination of the best national employees, the Hamburg market research institute Statista drew on over 127,000 employee ratings from an independent online questionnaire, a survey among Xing members and current kununu data. The decisive question was the extent to which employees would be willing to recommend their own employer to others. With a rating of 4.44 points (maximum 5 points), Kurtz Ersa also received an above-average rating in kununu from the employee perspective. In order to maintain this high level, Kurtz Ersa also implements sustainable teaching methods. Since March 2018, Kurtz Ersa has been a Premium Partner of the "Smart Lab 4.0". The alliance with the Vocational School Centre in Wertheim encompasses the use of a Smart Factory in miniature format. The approximately five meter long conveyor belt makes all the aspects of control engineering, automation and robotics available for teaching purposes with a fully integrated production line at 4.0 level as well as the regulation and control of a comprehensive merchandise management system. The 3D printer, too, can be used to train apprentices, students and employees of Kurtz Ersa within the framework of the Hammer Academy. Kurtz Ersa therefore goes one step further down the road of innovative and future-oriented staff training. ■

Strong alliance for the future: the "Smart Lab 4.0" as a joint undertaking in the Main-Tauber Administrative District – among others, Kurtz Ersa CEO Rainer Kurtz.

For the fifth time in the manor house: the choice of HAMMERWEIN.

HAMMERWEIN 2018 from the Winegrower of the Year

Every year in spring the Kurtz Ersa HAMMERWEIN is awarded. In 2018 there was a small anniversary to celebrate – the event in the "Schwarzer Bock" took place for the fifth time. As a prelude, Museum Director Viktoria Rawinski reported "On the construction and expansion of the iron hammer – a brief excursion into the forge's beginnings in criminal history". Afterwards Kristin Langmann, Franconian Wine Queen 2016, told about her reign as wine ambassador. Few would have suspected that the office took her to Austria and France – and even to Japan, China and South Korea. At the wine tasting afterwards, the Uffenheim woman proved her extensive knowledge of Franconian wines: with expert opinions on the six nominated wines and the corresponding menu, she gave an entertaining tour of the event and, after evaluating the voting results, announced the winner and thus Kurtz Ersa HAMMERWEIN 2018: 2016 Escherndorfer Lump, Scheurebe, late harvest. That this choice proves good taste is also proven by the award of the Escherndorf winery (Horst and Sandra Sauer) by Gault & Millau as "Winemaker of the Year 2018". Cheers!

Dear readers, give us a moment of your precious time!

For more than 25 years you have been receiving current information and stories from the Kurtz Ersa Group through our Kurtz Ersa Magazine. Now we would like to know from you as loyal readers what you particularly like and where we can become even better.

Three cases of hammer wine will be raffled off among all participants – please send your answer by September 15th to info@kurtzersa.de ... thank you very much for your efforts!

Your team from Kurtz Ersa Magazine

How interesting do you find the topics?

- ☐ Very interesting
- ☐ Interesting
- ☐ Neutral
- ☐ Less interesting
- ☐ Not at all interesting

How do you perceive the length of the contributions?

- ☐ Much too long
- ☐ Too long
- ☐ Neutral
- ☐ Too short
- ☐ Much too short

What would you like to read more about? What topics do you miss?

_____

_____

_____

_____

Your suggestion for Kurtz Ersa Magazine?

_____

_____

_____

_____

Dear guests, welcome to the Schwarzer Bock!

You know the Eisenhammer, the origin of the Kurtz Ersa Group? Yes, but do you know the Schwarer Bock right across the street? If not, you should make up for it. Isabel Cortes and her team offer you a variety of lovingly prepared regional dishes. Whether a good cup of coffee, a glass of wine or à la carte – leave the kitchen cold and visit our restaurant in Hasloch. ■

Current information and opening hours:

www.zum-schwarzen-bock.de

Summer 2013: The production of the HOTFLOW 3 series begins in the Kurtz Ersa plant in Zhuhai.

ENERGY-EFFICIENT REFLOW SOLDERING WITH ERSA HOTFLOW

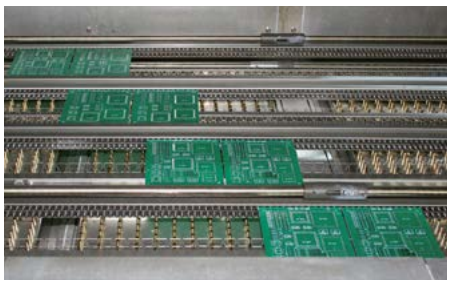
Let it REFLOW!

Since 1987, Ersa GmbH has been developing, producing and distributing SMD reflow soldering systems, making it one of the pioneers of this technology. In the early days, the first machines started at 2.5 m overall length, a 5-metre machine was considered a "monster". Since they were introduced more than 30 years ago, Ersa reflow soldering systems have been defining the industrial standard – the current HOTFLOW systems score with a perfectly balanced mix of process reliability, throughput and low operating costs.

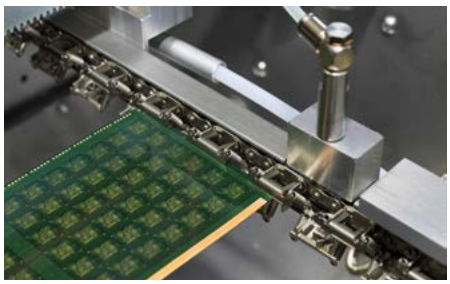
As long ago as 1993, the ERS 460 N2 was the first reflow soldering machine to be delivered under nitrogen atmosphere – thus preventing oxidation and achieving significantly improved soldering quality. Then the first big change in heating technology occurred. Although infrared emitters offered a high energy transmission rate, their disadvantage was that differently sized components particularly with dark-coloured housing absorbed more heat than the environment. This resulted in large differences in temperature on the printed circuit board. In other words, even more powerful systems were required for the dynamically expanding SMD technology. Thus in 1994 the Ersa HOTFLOW series was created, which relied on recirculating heating zones with changeable nozzles. Further generations followed the successful model: HOTFLOW 2 with faster wear part replacement and increased machine availability, HOTFLOW 3 (2008) with further enhanced energy efficiency and increased maintenance friendliness, HOTFLOW 4 in 2013 with energy consumption reduced even further, intelligent nitrogen control and flexible grip-transport system. The technology of the original machine lives on in the HOTFLOW reflow soldering systems version still used today, although this has been revised and had flow optimised multiple times. The HOTFLOW 4 uses directly controlled fan motors for the first time in a reflow system, leading to en-

High-end reflow soldering system: Ersa HOTFLOW 4/26.

Multi track conveyor for variable PCB width.



Multiple track ovens for multiple placer lines. Dual, triple and quad transport machines available.



The flexibility of the grip transport system makes it possible to transport PCB thicknesses from 0.1 to 6 mm in the mix without any spacing.

ergy savings of more than 50 percent despite the lengthened process zone. Whereas initially mesh belts were solely used for transporting the flat assemblies, more than 90 percent of all reflow systems had adjustable pin chain transport systems by the mid-1990s. A quadruple chain transportation system was developed for a well-known Nordic mobile phone manufacturer, with every individual track adjustable in terms of both width and speed. Maximum throughput despite small footprint and maximum energy efficiency were the requirements set at the time. Ersa promptly delivered – not just then, but umpteen times ever since.

The development of the personal computer led to a further leap in technology in the 1990s. Up to 1992 only a very few reflow soldering systems had a PC with user interface – the breakthrough in price and performance led to a positive explosion in the development of user-friendly software. Saving soldering profiles became the norm – the 1995 software was already able to calculate and adapt soldering profiles independently. This development has continued until today, and represents an important, if not the decisive, factor for an increasing number of potential customers.

REFLOW SOLDERING SYSTEMS IN ZHUHAI FROM 2013

As well as presenting the HOTFLOW 4, Ersa achieved a further milestone with its reflow soldering system division in summer 2013: production of the HOTFLOW 3 series begins in the Kurtz Ersa plant in Zhuhai. "As experienced mechanical engineers, we copied our final assembly line from Germany and set it up in Zhuhai. Frames and panels are produced locally, but all the important components such as drives, guides, chains or fans are provided on a weekly basis in accordance with the Zhuhai production schedule," explains Ersa General Sales Manager Rainer Krauss. Today, Ersa produces six different models of the HOTFLOW 3 series with between 14 and 26 heating zones there, all of which are designed to maximum production output per square metre of footprint and minimise error rates as well as the overall costs per printed circuit board produced.

Where does the leading technology stand today? Ersa has produced and delivered around 5,000 reflow soldering systems to date – with the Zhuhai plant having already contributed around 600 machines for the Asian market. In the meantime, the Ersa team produces more than 250 HOTFLOW 3 machines per year in Zhuhai as well as more than 100 machines of the HOTFLOW 4 series in Wertheim, all of which score with outstanding performance all down the line – high soldering quality, optimum process control, maximum machine availability – and a top energy balance, which means intelligently controlled energy and nitrogen consumption. Technology and electronics manufacturing remain an exciting field – to be continued with innovative solutions! ■

Quick and easy servicing through excellent accessibility and connections through quick couplings.

KNOW-HOW TRANSFER IN THE ERSA "DESIGN FOR MANUFACTURING" TECHNOLOGY SEMINAR

100 % quality in component manufacturing!

A densely packed programme awaited the 58 participants at Ersa's technology seminar "Design for Manufacturing from the Soldering Perspective". Jürgen Friedrich, Head of Application Engineering, introduced the topic. The European electronics industry must face up to numerous challenges if it is to remain competitive in a climate of global competition. The branch primarily produces components and appliances in mid-range lots for demanding industrial applications. This demands manufacturing-specific design and flexible production lines, so that even small lots can be produced efficiently and in top quality. "As a manufacturer of soldering systems, we often have to assess whether layouts are practicable – in cooperation with the customer and always complying with the generally accepted rules of technology," said Jürgen Friedrich.

The two-day seminar examined important aspects of component manufacturing for achieving highest quality in a cost-efficient framework. The span of topics extended from CAD design and PCB technology and components to production processes – with the focal points ranging from the complex interplay of the board layout and solder joint quality to quality assurance and the traceability of process parameters.

The aim was to show the influence of individual procedures on buildability and reliability. Above all, the interdependency of individual processes was to be highlighted, such as how PCB layout affects the capillary fill of THT components. "Those who invest here in developer's know-how really benefit – because optimum circuit board layout is a basic prerequisite for the manufacture of high-performance and reliable PCBs," stressed Jürgen Friedrich.

CONSISTENTLY HIGH-PRECISION PROCESSES REQUIRED

Arnold Wiemers, Technical Director of the LeiterplattenAkademie, spoke on CAD design and PCB technology. "Internet of things, big data, cloud computing, collaborating robots – all these tasks are only possible on the basis of functioning electronic components, implemented with far-sighted expertise," explained the PCB expert Wiemers. Helge Schimanski from the Fraunhofer Institute for Silicon Technology (ISIT) looked at component trends, the soldering of temperature-sensitive components and the challenges involved in processing new configurations. "No matter where they are in use – component sizes of 0402, 0201 or smaller demand high-precision processes in all the component manufacturing steps," emphasised the Head of the ISIT Application Centre for Innovative Component Manufacturing. The official programme for the first day of the seminar came to an end at 5 p.m. – participants then travelled by bus shuttle to Hasloch, where they had the chance to look around the Eisenhammer and dined together in the old manor house (Herrenhaus) in the evening. On the second day, the speakers took up the previous day's thread and presented further current topics from the areas of research, CAD design and PCB technology. At the end of the second day, the 58 participants headed home with lots of specific input for optimising their own production. "Design for Manufacturing" is sure to appear again in the Ersa seminar calendar … ■

Sudelec site in Usson-en-Forez near Saint-Étienne.

Sudelec Managing Director Serge Calmard.

The French EMS service provider Sudelec is located in the south of the Département Loire, in the heart of the Auvergne-Rhône-Alpes region, only about 50 km from Saint-Étienne. The company was founded in 1982 and last year generated turnover of 2.5 million euros with 25 employees on a production area of 1,200 m². As a supplier of equipped printed circuit boards, complete electronics modules and conceptional development, the Sudelec team is involved in branches such as aviation, industry, transport and logistics. Umpteen thousand complex high-tech printed circuit boards are equipped in Usson-en-Forez using a modern high-end machine park.

Sudelec Managing Director and Production Manager at Ersa VERSAFLOW 4/55.

BEST PRACTICE: SUDELEC + ERSA FRANCE

Professional, human, good!

Remy Lutz: Mr. Calmard, two years ago you bought a VERSAFLOW 4/55 selective soldering line with two pots from Ersa. What are you using the machine for?

Serge Calmard: The machine mainly processes double-sided printed circuit boards with several layers, which would be out of the question for a standard wave soldering machine – and manual soldering was not possible for this application either, since it would have taken too long and been too complicated.

Remy Lutz: What advantages does Sudelec have through the VERSAFLOW?

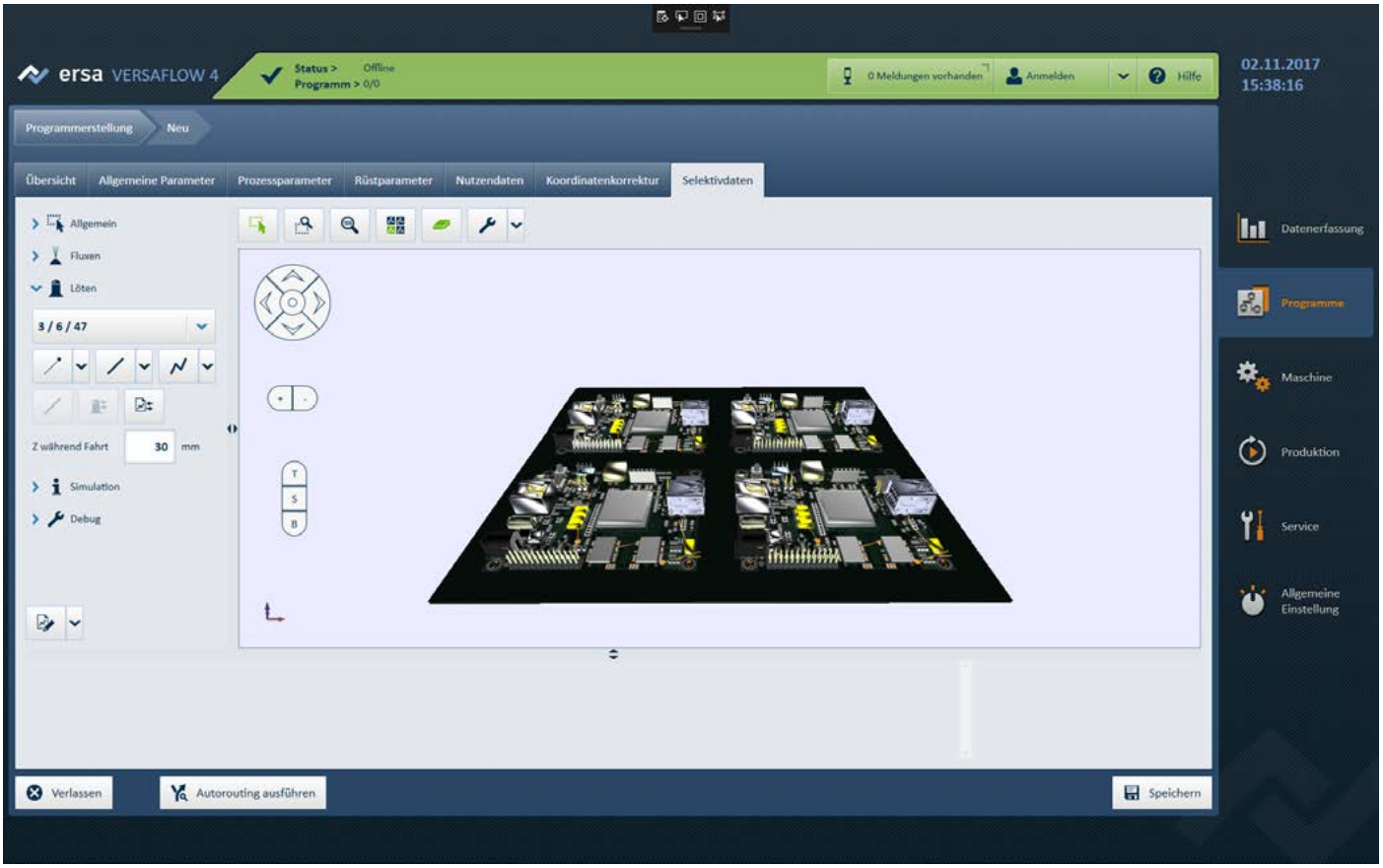
Serge Calmard: The advantages of this machine are quite clearly soldering quality, reproducibility, passage – not to mention its simple operation, of course. Another advantage is the dramatic gain in productivity compared with manual soldering tasks to significantly faster cycle times. Then of course there is the minimum rework after soldering and much shorter control times. For the future, we aim to stop the current standard wave soldering machine all together. Last but not least, the VERSAFLOW 4/55 impresses with its simple creation of soldering programs, fantastic flexibility through the two pots with y/z-variability and large capacity in line production. This machine is by far the best investment I have ever made for the company – both in terms of productivity and quality. The 4/55 is the high-performance basis we have for further developing Sudelec – which will primarily benefit our existing customers of course.

Remy Lutz: Why did you decide in favour of Ersa?

Serge Calmard: Quite simply because Ersa responded very quickly and was able to deliver immediately: Only one week passed between the first contact and the order. And then there was Ersa's reputation as market and technology leader for selective soldering systems and system supplier with the most comprehensive portfolio for electronics manufacturing in the world.

Remy Lutz: Were you only interested in selective soldering?

Serge Calmard: No, we took the opportunity to buy an Ersa rework system HR 600/2 for Sudelec, too, for complex repairs which cannot be done by hand. The system passed its trials with flying colours: Five times desoldering and soldering of a BGA which was still functional afterwards. Another Ersa system in Sudelec production is the wave soldering machine EWS 330 and we have had good experience with. ■



ODB++ data make photo-realistic representation of the assembly in 3D possible.

ERSA CAD ASSISTANT 4 USES THE POSSIBILITIES OF DIGITALISATION

Real added value in selective soldering!

Our world is becoming increasingly digitalised and networked. This development is also reaching production areas which are characterised by specialist know-how and the experience of individuals. To become more independent of these, new assistant systems are being used. One of these is the CAD Assistant 4 for preparing soldering programs.

Electronic assemblies are becoming more complex – with a wide range of different components, equipment densities and printed circuit board variants. Despite SMT mainstream, selective soldering technology is still growing strongly. The later soldering of THT components onto reflow-soldered assemblies is a natural part of many productions. Selective soldering with miniwave soldering systems which approach and solder the THT soldering spots CNC-controlled by x/y/z-axis have become firmly established. The CNC movement sequence contains all the position data, travel and process parameters for optimum formation of the THT soldering spots.

CAD ASSISTANT 4 – INTUITIVE CREATION OF SOLDERING PROGRAMS

The fast, reliable creation of selective soldering programs is one of the main features of efficient electronics production. For maximum machine availability, CAD Assistant 4 creates and varies soldering programs offline while the machine is running. Completely integrated in ERSASOFT 5, the programs created offline can be used directly at the soldering system. In addition, CAD Assistant 4 supports program creation for VERSAFLUX and VERSAFLEX. The data sets for the CNC axis systems are simply edited by drag & drop, predefined data sets can be adapted quickly, a plausibility check provides support with the integrity check. CAD Assistant 4 uses CAD data or images of scanned assemblies for programming – the program data created can be used immediately to simulate the overall process and check integrity. Moreover, CAD Assistant 4 offers an autorouting function: the software independently calculates the fastest soldering program for an assembly and suggests optimum travel paths for the flux and soldering program based on the travelling salesman principle.

DATA PROCESSING USING CAD DATA/IMAGE FILE

By importing 3D data of the assembly, CAD Assistant 4 offers the user additional supporting information for programming. This includes layer structure, drilling data, component parts lists, placement data and dimensional specifications. Thus the exact free space around the solder joints is known at every spot on the PCB. The data exchange format ODB++ creates almost all layout programs, popular 3D/CAD data such as GenCAD or IPC 2581 can also be processed. It is also possible to import the printed circuit board by scan – jpg, bmp, png, tif or gif formats can be used for example.

The use of CAD data such as ODB++ is an enormous advantage during creation of the program – information about thermal capacity and drilling is important for optimum soldering results. Components plus process parameters, which can be transferred to new assemblies and individually adapted, are saved in a database. It is possible to "marry" components with flux and soldering parameters and save these permanently in the database. On the basis of ODB++ data, CAD Assistant 4 delivers further information on components used, bore holes and individual PCB layers.

Component geometry is stored in the ODB++ data set as a 3D model. If there are components on the soldering side of the component side as well, these must never come into contact with the soldering wave. To ensure the soldering pots avoid these areas, the user defines "exclusion areas". When the software generates the CNC movement sequence, it recognises these and fades them out from the available movement space.

REAL-TIME CHECK ON SUCCESS BY SIMULATION

Templates are the fast entry to programming – saved for various nozzle sizes and processing modes, they can be used for the creation of similar soldering applications. Pre-defined templates can be adapted individually by drag & drop, redefined if necessary and saved for later applications. Thanks to export and import functions they are easy to transfer from one machine to another.

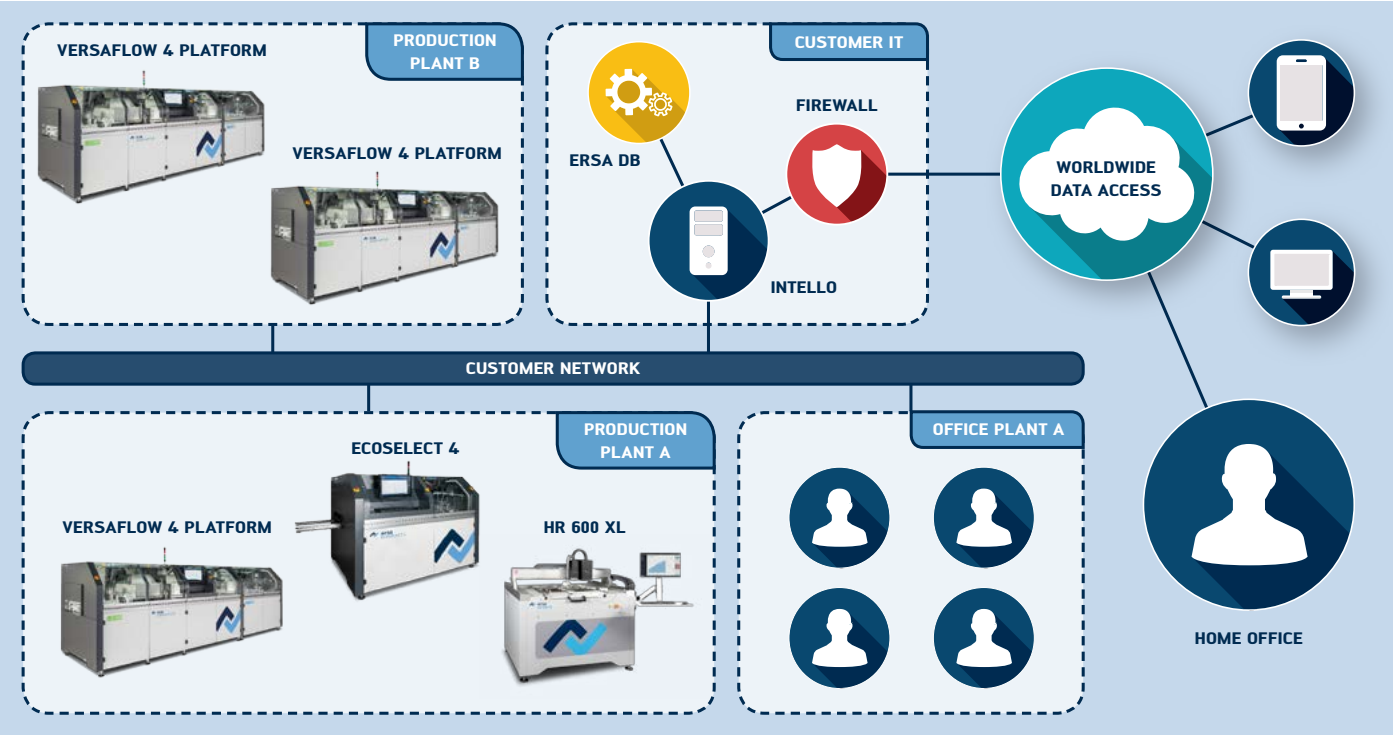
The programming defines which soldering spot is to be processed with which nozzle. Then an autorouting algorithm distributes the individual soldering tasks automatically to different soldering modules and pots. This algorithm calculates the fastest "route". Soldering process and routed sequence can be simulated in real time at the workstation.

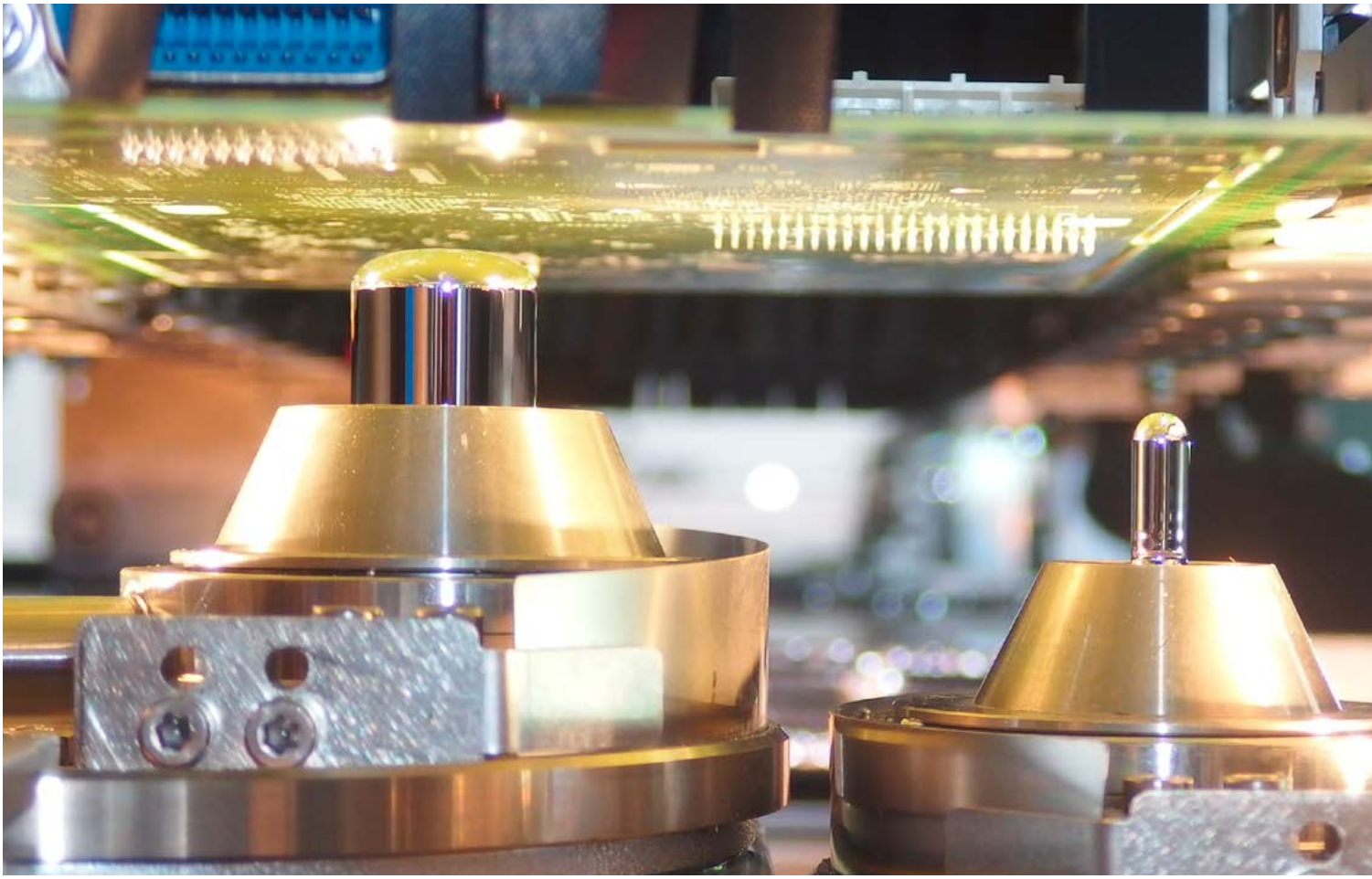
ERSASOFT 5: CENTRAL DATABASE-BASED SOFTWARE

ERSASOFT 5 relies on a popular database system for the reliable saving of all soldering system data. This enables them to be retrieved quickly, for long-term evaluation for example. For maximum data security, the database is installed in the customer's data processing centre – which means several machines can share a database and exchange data. If a product is manufactured at different plants, for example, identical processes are guaranteed – everywhere, no matter where the soldering system is located! ■

CAD ASSISTANT 4 IN BRIEF

With CAD Assistant 4, Ersa is supplying a further central module for the digital, networked factory of the future. The open database system and the use of standard 3D data formats from assembly development make two-way access to immense data quantities and information possible. Process parameters, printed circuit board and component specification are available centrally. Simultaneous feedback of the quality data into the same database opens up completely new possibilities. On the one hand for the convenient creation of soldering programs, since data and empirical values from other production locations can be accessed. On the other through more intelligent linking of the program and quality data as a basis for efficient process optimisation.





Ersa VERSAFLOW 4/55 at Rohde & Schwarz Czechia: Solder nozzles with different diameters; photo: Václav Wirth.

COOPERATION: ROHDE & SCHWARZ AND ERSA

Automated step to greater quality!

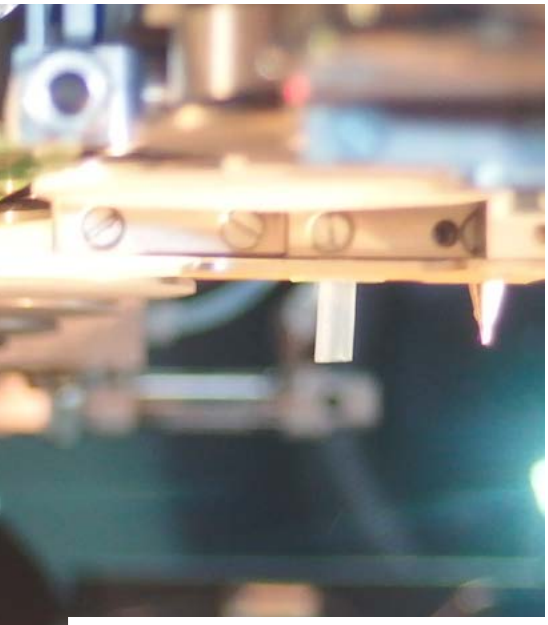
Since mid-2017, Rohde & Schwarz's Czech subsidiary has been relying on a technology for PCB assembly that no other plant of the communications technology expert yet has: automatic selective soldering of wired THT components. Rohde & Schwarz employee Václav Wirth presents the new technology.

Printed circuit boards contain two basic types of components: (non-wired) SMT and (wired) THT. The non-wired components are soldered on automated assembly lines, the wired components must be soldered manually or with the wave. There are several complications and restrictions associated with this: manual soldering is a slow and unstable process, the resulting quality depends entirely on operator experience. Only one-sided boards can be soldered automatically on the wave – a special tool is required to solder double-sided boards. Manufacturing such a tool is very time-consuming, however, and is not possible at all for some assemblies.

POSITIONING AND SOLDERING WITHOUT SPECIAL TOOL

This was how Rohde & Schwarz assembled printed circuit boards up to June 2017. The newly purchased selective soldering technology now permits the automatic positioning and soldering of wired components without a special tool having to be used. In practice, this means that we now have an automated process available which solders assemblies that previously could not be soldered with the wave and had to be soldered manually. The newly installed system runs through three basic manufacturing steps completely automatically. First step: flux is applied to the solder spot. Second step: assembly is preheated to the required temperature. Third step: soldering takes place.

Rohde & Schwarz had been considering purchasing selective soldering technology for quite some time. The deciding incentive was our visit to the Productronica in autumn 2015. There, it was confirmed that our investment ideas were on the right track. In January 2017 we started looking for potential suppliers and started first comparisons. Among five companies selected, we made the journey to test products personally on two nominated systems. This was the most difficult phase of the whole project.



Operator at the Ersa VERSAFLOW 4/55, photo: Václav Wirth

Václav Wirth, technologist at Rohde & Schwarz (Vimperk).

ERSA VERSAFLOW 4/55 CAME OUT THE WINNER

In the end, the performance and modular design of the Ersa selective soldering systems – not to mention the obliging impression made by the entire Ersa team – tipped the scales in favour of a VERSAFLOW 4/55. The technology was integrated extremely quickly in the production line and has been working without a hitch since June 2017.

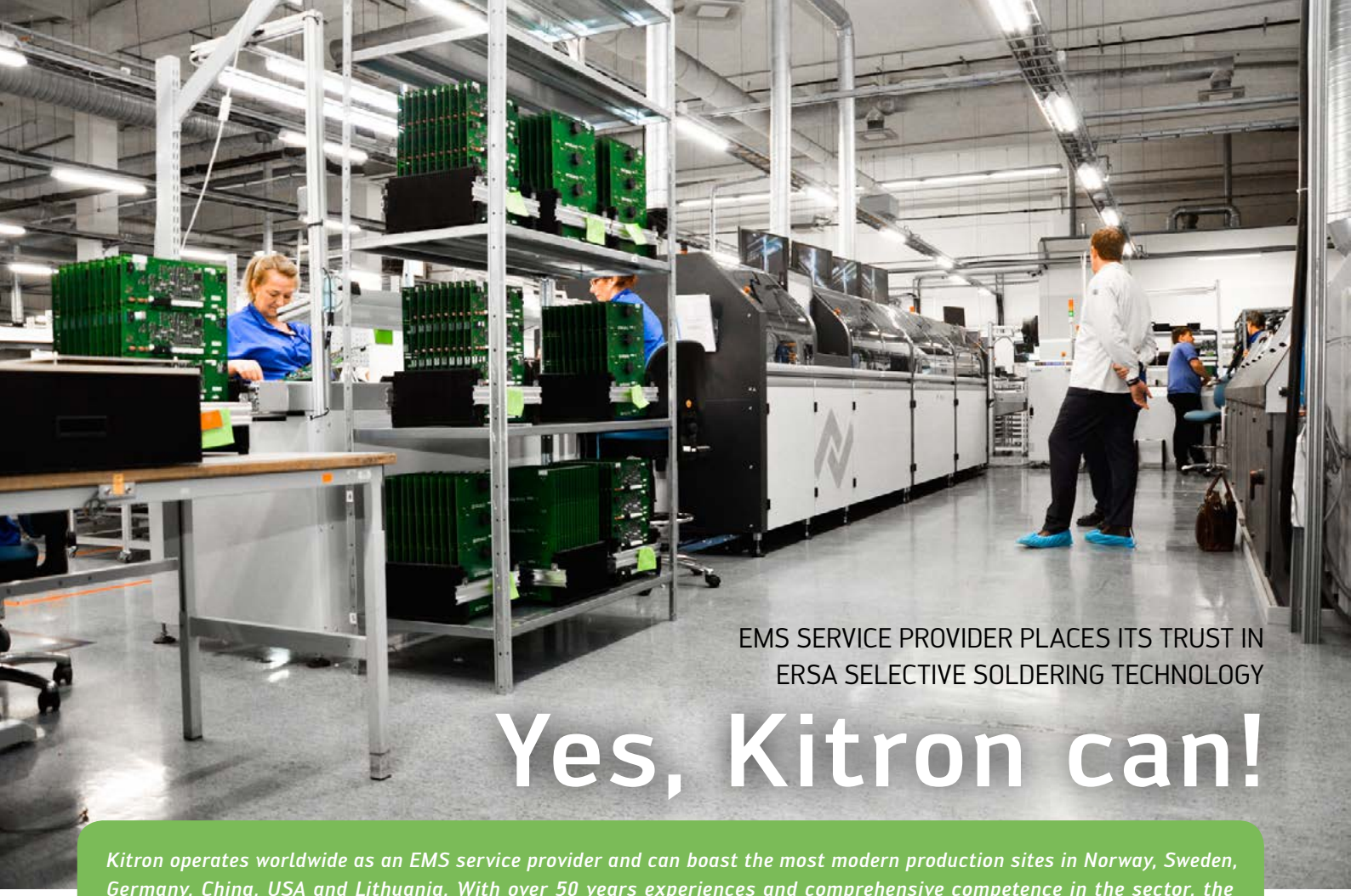
What were the goals associated with using selective soldering technology? We wanted to improve the quality of our products, reduce the number of faults and cut operating costs. All the requirements have been fulfilled completely, without compromise – the decision in favour of Ersa was dead right. ■

MOST IMPORTANT ADVANTAGES OF SELECTIVE SOLDERING:

- Automation of the soldering process
- Soldering under nitrogen atmosphere
- Higher quality compared with manual soldering
- Reproducibility and traceability of the process
- Machine soldering of components that cannot be wave soldered
- Possibility of processing new products without soldering mask
- Flexibility for smaller series and frequent product changeover
- Eco-friendly

KEY DATA ERSA VERSAFLOW 4/55:

- Inline machine
- Product changeover without loss of production time
- Printed circuit board format 508 × 508 mm (20 × 20 inch)
- Automatic adjustment of y/z-soldering module
- Processing of several PCBs in one machine



EMS SERVICE PROVIDER PLACES ITS TRUST IN ERSA SELECTIVE SOLDERING TECHNOLOGY

Yes, Kitron can!

Kitron operates worldwide as an EMS service provider and can boast the most modern production sites in Norway, Sweden, Germany, China, USA and Lithuania. With over 50 years experiences and comprehensive competence in the sector, the 1,450-strong team around the world contributes to quality and efficiency in all the product lifecycle stages. The Kitron subsidiary in the Lithuanian city of Kaunas, in particular, impresses with astonishing results in terms of output and quality – thanks, among other things, to Ersa selective soldering technology.

KITRON UAB AT A GLANCE

- Turnover 2017: EUR 87 million (Kitron total EUR 210 million)
- Production area: 11,000 m² (Kitron worldwide 40,000 m²)
- 750 employees (Kitron worldwide 1,450)
- Branches: Defence/aviation and aerospace, data/telecommunications, industry, medical technology and offshore/marine

It is just 17 years since Kitron UAB commenced production in Lithuania, with 30 employees, today this figure is 750! On a current production area of 11,000 m², the Lithuanian EMS production has grown by 30 % for the third year in succession. "We are proceeding on the assumption that our development will continue at this high level, and are therefore working hard at finding a suitable site for expansion," says Kaunas Production Manager Daumantas Barčas. "At the beginning of the year 2000, Kitron produced mainly cable harnesses and simple electronic components. Hardware and equipment came in from other Kitron sites in Sweden and Norway – an outstanding starter kit for our subsidiary here in Lithuania," reminisces Senior Soldering Technologist Kęstutis Žukauskas. Within the shortest space of time, Kitron set up clean processes in Kaunus, and achieved good results, so that Kitron was able to build up its own customer base. Today, the proportion of direct customers for Kitron UAB – predominately from the Baltic, Scandinavia, Europe and the US – is over 90 %!

POWER START IN LITHUANIA

Within just three years of the start-up on Kaunas, Kitron placed the management of the subsidiary completely into Lithuanian hands. In the following years, Kitron was one of the fastest-growing companies in the region, since 2008 the company is focussing increasingly on Lean Management. The best preparation for the dramatically-growing electronics manufacturing sector – be it automotive, electromobility or smart home. "At the forefront of our activities are top quality and development expertise – customers want to know: How can this be turned into a competitive product? Customers commission us with the provision of a fully manufactured product and require a partner on an equal footing," explains Kitron Production Manager Daumantas Barčas. In this context, Kitron UAB benefits from the connection with the Kitron headquarters in Norway and the comprehensive experience in the sector – this is discussed at global level and finds its way, for example, into site-spanning audits leading to standardised processes and standardised equipment.

QUALITY FIRST AS A MOTTO

Because, in addition to output and productivity, the Kitron team places enormous emphasis on quality – where possible as so-called "one piece flow" – the Lithuanian production management introduced selective soldering technology eight years ago. The Scandinavian Kitron colleagues had been availing of this for years, in the form of two Ersa VERSAFLOW B machines. Three years ago, the Kitron machine pool in Kaunas, was expanded with the addition of an Ersa ECOSELECT 1 – the greatest capacity on the smallest footprint. The enquiry about a high-volume product followed one year later – definitely a candidate for inline selective soldering. Kitron asked two companies for support and suggestions on how the product could best be manufactured – back then, the contract went to one of Ersa's competitors. The next high-volume product followed one year later; once again a selective soldering system was required. In the meantime, Ersa had launched the VERSAFLOW 4/55 with VERSAFLEX. "In addition to the performance of the VERSAFLOW 4/55, our decision was based on the extreme flexibility of the VERSAFLEX selective soldering module, which allows us to run the current high-volume production," says Senior Soldering Technologist Kęstutis Žukauskas. "For the current generation of our selective soldering systems, VERSAFLEX gave us the revolutionary vision of being able to position the pots completely flexibly. Because the life cycle of a product can deviate from the service life of the machine – and what then? No problem thanks to VERSAFLEX," says the responsible Ersa Area Sales Manager, Tobias van Rossem.

REQUIRED CYCLE TIMES IN OPTIMUM QUALITY

The VERSAFLOW 4/55 was calculated by Kitron UAB for a certain product – why the changeover to selective soldering for a comparatively simple, one-sided board with ten connectors? With wave soldering, the quality was not as high as desired; further treatment would have been required. The process was expanded towards selective soldering, in order to permit error-free soldering. And what do you know? During the process, the Lithuanians got exactly what they expected in terms of cycle time, process and quality. The decision to go with the VERSAFLOW 4/55 with VERSAFLEX was then only a matter of form – this was undoubtedly also based on the training in the Democenter in Wertheim, where exhaustive testing was carried out before the order was placed. "With the investment in the Ersa VERSAFLEX system, we achieved the required cycle times with optimum quality – the feedback from our customers is also very positive. We are highly satisfied with the Ersa systems and the technical support," says Daumantas Barčas. No matter what the future demands may be in terms of soldering technology – Ersa's response will be: Yes, we can!

Tailored to efficiency yet still lots of fun (from left): Kitron Production Manager Daumantas Barčas, Kitron Technologist Kęstutis Žukauskas and Ersa Area Sales Manager Tobias van Rossem.

Spot on: Kitron staff fitting out PCBs.

Careful fitting out as an important element in the overall soldering process.

Kęstutis Žukauskas with Tobias van Rossem at the ECOSELECT 1, which has been providing first-class selective soldering quality reliably since 2015.

Jubilee for Kurtz trimming presses!

Over a 100 already? We are proud to answer: YES! In 2009 we took the decision to enter the press construction business and include trimming presses in the product portfolio of Kurtz Foundry Machines. The first presses were delivered in 2010.

We started out with C-frame design presses and a press force of 35 and 50 tonnes. In 2010 we also received the first order for a trimming press with a sliding-tilting table, which was to have a press force of no less than 300 tonnes. The order was placed by GF Casting Solutions in Herzogenburg/Austria. GF is involved in the jubilee, too: "Press 100" was also sold to the GF Group, this time to the Altenmarkt plant. We celebrated this milestone with a KPS 2000/22-12 – which is not a sliding-tilting table press but rather a 4-column press. But no less demanding.

KURTZ JUBILEE PRESS: KPS 2000/22-12

200 tonnes of press force, a clamping area of 2,200 x 1,200 mm with an installation space of 2,200 mm are only indications of the purely mechanical key data. Tools weighing up to 16 tonnes can be clamped – despite a large channel in the base plate for ideal flash removal. Not only powerful, but fast too, was the customer requirement. The press accelerates in rapid motion DOWN to 300 mm/s, in rapid motion UP to 150 mm/s and returns 20 mm/s during pressing. An electrically driven changeover system which simplifies and speeds up the set-up process helps with tool change. The freely programmable control, which is straightforward to operate and makes work easier in so many ways is one of the main reasons for the suc-

Kurtz KPS SKT trimming press with sliding-tilting table.

Kurtz KPS 1000 trimming press.

100

Kurtz KPC 520 trimming press in c-frame design.

cess of Kurtz trimming presses. The "tool protection" deserves a special mention. It prevents improper press operation and protects the tool from damage.

KURTZ PRESSES: A WIDE RANGE OF APPLICATION OPTIONS

While the jubilee press is a classic version with a die casting cell, Kurtz presses have also been convincing in other casting processes. In addition to components made using gravity die casting or sand casting, our presses mainly trim components that have been cast using low-pressure technology. The equipment options for Kurtz presses are as varied as their range of applications. As well as off-the-peg presses, machines and system solutions tailor-made to customer requirements are also available. From standalone machines through to the automated production line, whether in die casting or low-pressure technology: Kurtz covers the entire spectrum. On account of the high product variety, we are able to deliver the optimum trimming press for every application: C-frame design, 3- or 4-column press, sliding-tilting table press – the usage application determines the version!

We would like to take this opportunity to thank all our customers for their trust – without them this jubilee would not have happened. We are proud of this performance and look forward to many more presses in the future.

Glück auf and GOOD LUCK!

1950
EPS
EPSF
1987
EPP
EPE
Copolymer EPS/EPS
2007
Piocelan
E-TPU
2017
E-PPE
TOPF ELASTOMER
E-ABS
E-POM
E-PMMA
E-PEKK
2025

New particle foams, new possibilities!

For a long time, the number of particle foams available was manageable. It all began with EPS (expanded polystyrene), registered for patent in 1950 and also known in Germany under the brand name "Styropor". EPP (expanded polypropylene) and EPE (expanded polyethylene) followed at the end of the 1980s and were mainly used as packaging material. Since 2010, the development of new materials has literally exploded – think of ETPU, for example, which causes a sensation in running thanks to its properties in terms of elasticity and suspension.

Recently, two other particle foams with interesting properties were launched on the market. Both have the makings to revolutionise the branch – we are talking about ecovio® (BASF) and ArmaShape® (Armacell). ecovio® is biologically degradable and made of bioplastics and poly lactic acid (PLA) gained from corn. Thanks to its special chemical structure, the bio-based compound can be degraded in just a few weeks by micro-organisms and their enzymes. As a polymer compound, ecovio® can be processed on standard machines to make particle foam shaped parts (EPS and EPP); it is particularly interesting as packaging material and thanks to its variable share of renewable raw materials.

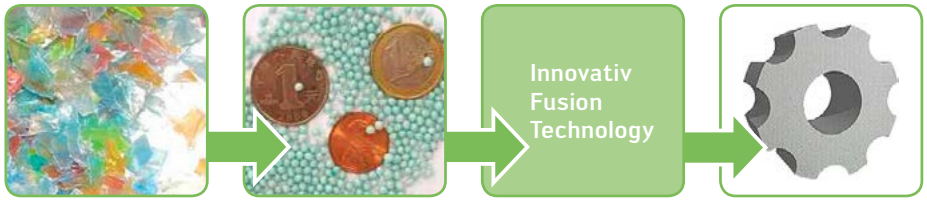
ArmaShape® was presented at the beginning of 2018 and is a particle foam made of 100% recycled PET bottles (PET = polyethylene terephthalate). The expanded PET is produced by Armacell Benelux S.A. from Thimister-Clermont, Belgium – with 3,000 employees and 603 million Euros turnover in 2017 the competence centre for PET foam technology. The latest creation, ArmaShape®, opens up new possibilities for many branches that are relying more and more on light yet sturdy plastic parts. The automotive branch in particular will benefit from large-scale applications for body shells or chassis suspensions. As loose pearls on a PET basis for producing ready-to-use 3D foam cores for sandwich compound structures, ArmaShape® offers better mechanical and thermal properties than EPP or EPS, is heat-resistant up to 200 °C, non-combustible thanks to flame protection additives and can be made in almost any shape. "New materials such as ecovio® and ArmaShape® often need new processing methods – expandable PET requires a bonding temperature of 250 °C. For the standard steam process this means pressures of 25 to 30 bar. This is difficult to achieve in terms of both machines and tools. The Kurtz team has managed to develop a bonding technology on the basis of electromagnetic waves. The particle foam is heated through excitation with high frequency (27.12 MHz) and high voltage up to 10,000 V," says Victor Romanov, Head of Technology Department at Kurtz GmbH, who has already presented the innovative bonding method in Bayreuth and Würzburg (see report opposite). There was a huge amount of interest which led to specific project inquiries – a clear sign that the branch has recognised the potential connected with the new particle foams.

GREAT FUTURE FOR PARTICLE FOAM MATERIALS

New developments for materials and machining processes open up new application options for lightweight engineering in the particle foam branch. Just how great the interest is was demonstrated by the popularity of two events in spring 2018: the NMB Tech-Days in Bayreuth and the SKZ conference "Polymer foam" in Würzburg. More than 100 experts came along to Bayreuth and Würzburg to find out about current trends and developments in particle foam technology. New developments in the fields of tooling technology, pre-foaming and shape-foaming were presented, all of which significantly extend the application possibilities for different particle foams. The challenge is that new particle foams made of technical plastics such as PBT (short for polybutylene terephthalate) must be processed at temperatures up to 220 °C (EPET even requires 250 °C), whereas normal particle foams only require 150 °C. In addition, an innovative high-pressure tool was presented that achieves a steam pressure of up to 25 bar – which corresponds to around 220 °C.

Another focus was on the processing of humidity-sensitive materials which have been very difficult to process using conventional steam-based methods up to now. As renewable materials, bio-based particle foams in particular open up completely new areas of application. The solutions possible for shape-foaming using steamless processing technology were presented by Kurtz Head of Technology Department, Victor Romanov, in his lecture "Alternative bonding methods with electromagnetic waves". Without any doubt, these are key technologies with enormous potential for new foam applications! ■

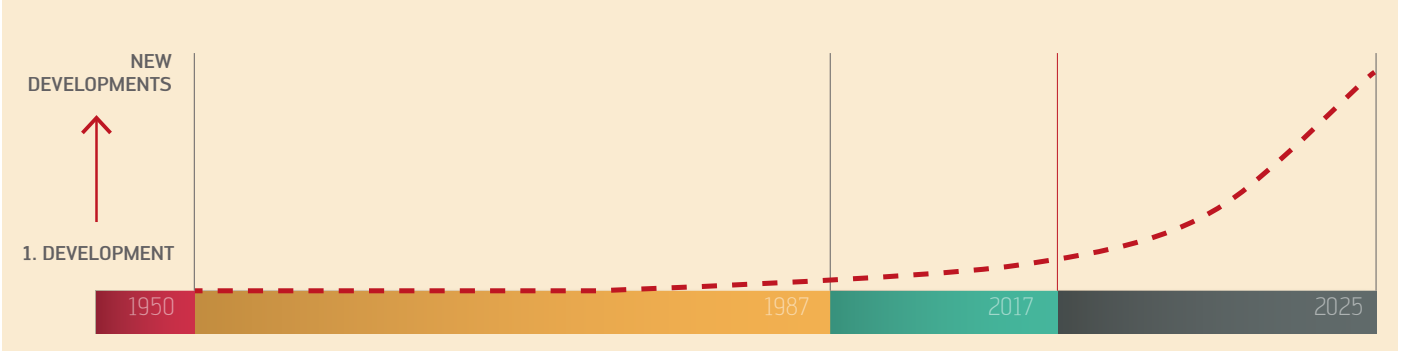
Victor Romanov, Head of Technology Department at Kurtz GmbH, during his lecture in Bayreuth.



ArmaShape® are loose PET pearls made of 100 % recycled PET for the major challenge of ready-to-use 3D foam cores for sandwich compound structures. Photos: Armacell

Two variants of the compostable and partly bio-based plastic ecovio® (BASF): ecovio T2308 is suitable for thermoforming, IS1335 for injection moulding. Photos: BASF

TREND CURVE OF THE DEVELOPMENT OF NEW PARTICLE FOAMS



Kurtz moulding machine for fully automated EPS box production at KNAUF INDUSTRIES.

EPS box production at its best

Top performance at all levels:

- Minimum energy consumption
- Shortest cycle time
- Provision of ready-to-ship containers
- Low management costs

KURTZ GMBH PROVES: IT'S POSSIBLE!

At the beginning of 2017 KNAUF INDUSTRIES, one of the leading international processors of EPS, presented Kurtz with the following ambitious requirement: to achieve a production capacity of 22,500 EPS boxes per day or four million per year with only one shape moulding machine – and automatic setting of different box heights. In addition, bulk packs were to be produced depending on box height, with every stack to be closed with a box base at the top and bottom. The finished stacks were to have adhesive tape – printed with the production data – applied on two sides and then be loaded onto transport carts according to prescribed stacking configurations up to three metres in height. In terms of economic efficiency, steam consumption was to be reduced to a minimum. At the end of the day this translated into fully automated production ready for shipping – a real challenge!

KURTZ GMBH – CHALLENGE ACCEPTED

"In order to achieve the ambitious targets, we decided in favour of a Kurtz Shape Moulding Machine with high-end equipment as well as for the CoreLess technology from Doroteo Olmedo S.L." says Stephan Gesuato, Sales Manager for Kurtz Particle Foam Machines, who has been working for the company for more than 30 years. There was an exciting period of development ahead for the team, made up of members from Kurtz GmbH, tool manufacturer Doroteo Olmedo S.L. and

KNAUF INDUSTRIES. The requirements listed above demanded a perfectly tuned system comprising machine, tool and automation system. This last item was developed and produced by colleagues from Conline GmbH.

INNOVATIVE IDEAS AS THE BASIS FOR SUCCESS

"You have to imagine a CoreLess tool as being a skeleton reduced to a minimum mass that reacts extremely sensitively to influences from process technology. The main task was to master process control in a reproducible way," explains Stephan Gesuato. First of all, a CoreLess prototype tool was built, which then went through several series of trials on a current Kurtz test machine of the latest generation. Mechanical, control-related and process-optimised measures on machine and tool led to perfect results during the long-term tests. Thus the foundation was laid for the high-efficiency system comprising shape moulding machine and lightweight tool.

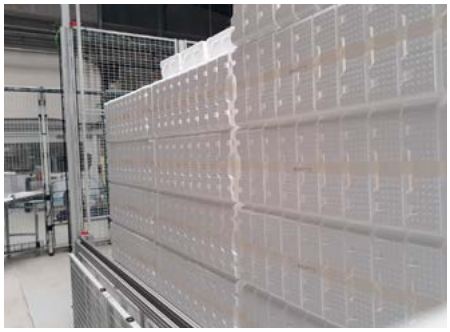
AUTOMATION SOLUTION: FLEXIBLE, EXTREMELY FAST, SPACE-SAVING

Thanks to the fully automatic adjustment of the tool in the shape moulding machine, the customer is in a position to gradually set the box heights and produce these fully automatically depending on the production order. The space-saving robot solution from the Conline automation specialists from the Kurtz Group is closely oriented to the production capacity of the shape moulding machine. With a production capacity of around 1,100 boxes per hour, these have to be turned and sorted, then have printed adhesive tape applied to both sides. Special linear and rotating axes for extremely fast sorting and rotation of the boxes produced as well as special vacuum suction cups for the handling robot grippers make up a high-performance substructure which meets the high-speed automation requirements.

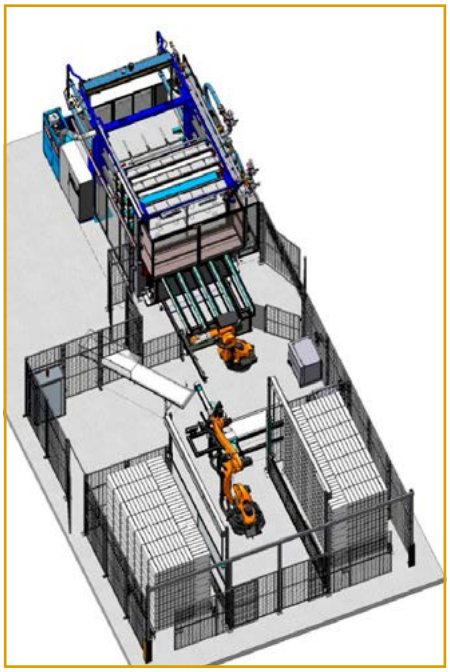
SMOOTH PRODUCTION IN 3-SHIFT OPERATION

Depending on the stacking configurations and stack size, the containers produced are prepared on transport carts and can be passed on to Logistics by the system operator. Two mutually separated transport carts in the working area of the robot and safety area of the system make cart replacement possible during production. According to current information from the operating company, the system is running in 3-shift operation and delivering the promised production capacity with consistently good quality and low energy consumption. Kurtz has thus met the requirements completely and even exceeded them, because we have achieved the highest goal: customer satisfaction. We are very proud of this and would like to extend our thanks to all project partners involved.

We are looking forward to further exciting challenges in the field of particle foam machines and advanced automation solutions. What are your challenges? Let us join forces to push particle foam processing to the next level! ■



Space-saving, highly productive robot solution with approx. 1,100 crates per hour.



EPP: small parts, major effect!

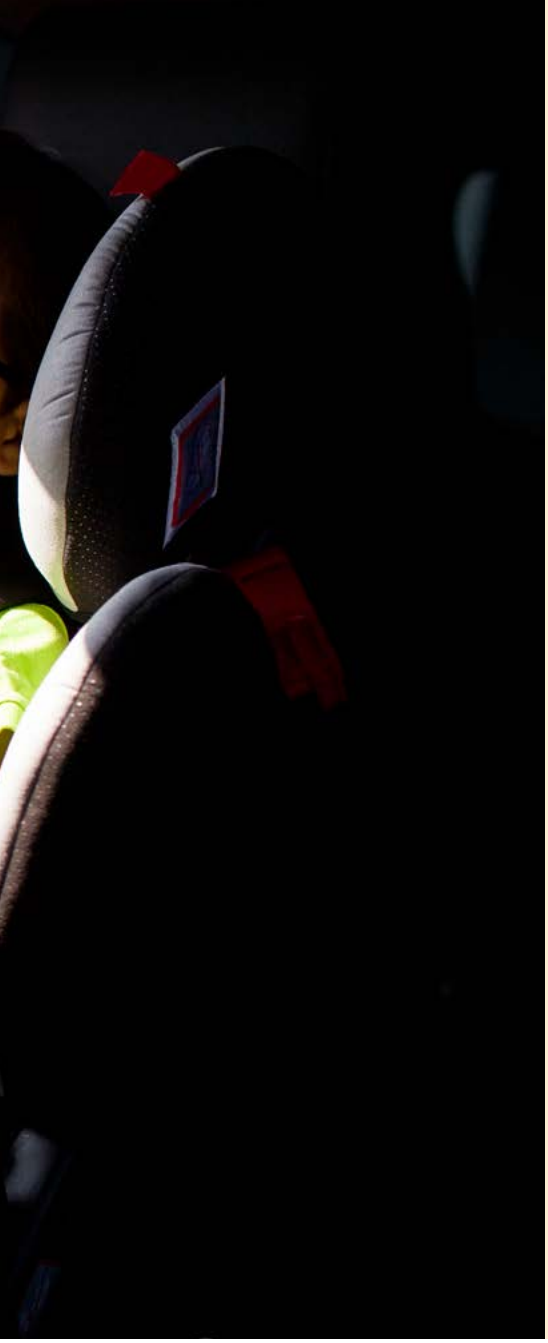
Writing about lightweight engineering and the automotive sector is like taking coals to Newcastle, because there are extensive reports about both in all kinds of offline and online media. For particle foams, however, they mean unforeseen, innovative application possibilities. These can be demonstrated using the example of EPP – expanded polypropylene.

For more than 20 years, the main use of expanded polypropylene has been in the automotive industry, which consumes around 80 percent of the particle foam used in Europe.

There are several really good reasons for this long-term use of EPP in the automotive sector: thanks to its high lightweight engineering potential, such as for use in rear seat benches or wheel arches, it effectively reduces vehicle weight. An extremely eco-friendly implication of this: less fuel consumption, lower emissions! And EPP offers a further advantage in terms of sustainability – the polymer foam can be recycled optimally. EPP is convincing both in terms of static and dynamic load thanks to outstanding energy absorption and impressive resilience – an excellent basis for safety-related components in vehicle construction. Reliable protection of transported goods and functional safety within large temperature ranges as well as resistance to oil and chemicals are further points in favour of expanded polypropylene, making it the ideal material for the automotive sector. The universal particle foam has all the visual advantages on its side, too – all visible EPP parts of the vehicle such as sun visors or lining elements can be adapted in terms of colour to the prevailing design.

IMPACT ABSORBERS: FOAM PROTECTS!

These are only small EPP moulded parts, but they have a major effect: Car engineers have developed impact absorbers made of EPP in order to exploit two decisive properties of expanded polypropylene – their outstanding resilience and ability to absorb impact en-



ergy. With EPP moulded parts integrated in shock absorber systems, pressure is cushioned following impact, reducing the impact energy acting on the chassis. Such a protective measure is particularly valuable in the case of small bumps, in other words crashes at low speeds. Expensive chassis damage can be avoided. Further advantages of impact absorbers made of particle foam: their low weight reduces the overall weight of the vehicle, thus reducing fuel consumption. One practical aspect: distance sensors or temperature sensors can easily be integrated in the innovative system.

Vehicle manufacturers are impressed by the high rigidity of expanded polypropylene and its good bonding possibilities to other materials. These characteristics lead to high-density EPP also being used as a design element.

STANDARD VEHICLE PARTS: ATTRACTIVE-LOOKING SAFETY

Expanded polypropylene offers additional safety on vehicle interiors, too: crash pads and other cushioned inserts made of EPP improve passenger protection, whereby the foam's good resilience has proved its worth. Adaptation of the cushioning values to requirements is possible thanks to the (almost) freely adjustable EPP density from 20 to 180 mg/l. Films and fabrics are used to "finish" EPP moulded parts and turn them into attractive visible parts on vehicle interiors. The lightweight EPP components make a double contribution to the environment: they can be reused and contribute to reducing CO_2 pollution due to their low weight. And because a car is much more than just a means of getting from A to B for most owners these days, integration of designable EPP moulded parts contributes to adapting the look of the standard parts to the prevailing design.

Those who ask themselves where the innovative material could be integrated in their car, should take a closer look at luggage compartment inserts, filler pieces or finished parts. These are just three examples of uses in the automotive sector – EPP is used in lots of other places, too, such as: battery cover, knee pads, seat reinforcement, roof braces, head restraints, rear shelf, armrests ... Yet no matter where the numerous EPP parts can be found in vehicles, there is one thing they all have in common: they make the vehicle safer, lighter and thus more environmentally friendly! ■

Kurtz Ersa exhibition stand with virtual Demo Center at the Chinaplas in Shanghai.

Kurtz Ersa Asia Ltd. at the Chinaplas

Chinaplas®
国 际 橡 塑 展
2018

After a two-year break, Kurtz Particle Foam Machines took part in the Chinaplas once again in 2018. More than 180,000 interested trade visitors and decision-makers travelled to Shanghai to find out more about innovations concerning plastics processing machines, plastic raw materials and finished products at Asia's largest trade fair for plastics and rubber. Kurtz GmbH – represented by Kurtz Ersa Asia Ltd. – presented highlights from its current product portfolio on an area of 96 m^2. These included the new shape moulding machines and smart software solutions such as the intelligent filler maintenance Kurtz Injector Maintenance 4.0, the optical demoulding control Kurtz Eject Control 4.0 and the mobile Kurtz Central Monitoring System. There was a great deal of interest in the Kurtz automation solutions as well as in the new radio frequency technology (RF) for processing high-temperature materials. The Kurtz booth concept relied on digital presentations with videos, animations and digital consultation stations, thus creating a comprehensive virtual demonstration centre. The virtual reality application of the PRO FOAMER attracted many visitors who were able to scrutinise the high-end shape moulding machine up close and from all sides. Other Kurtz highlights were ROTO FOAMER, THERMO FOAMER and the new BOX FOAMER with electric drive for the production of crates for fish and fruit. Kurtz Ersa Asia Managing Director, Bernd Schenker, was extremely satisfied with how the Chinaplas went. "The entire Asian market for the processing of particle foams is still growing. Our automation solutions in particular were in great demand." ■

Interplastica 2018 – Kurtz greetings from Moscow

Exhibition stand of Kurtz Particle Foam Machines at the Interplastica.

At the 21st edition of the Interplastica in January 2018, Kurtz showcased particle foam machines through an attractive presentation once again. More than 550 exhibitors from 34 countries had registered for the most important plastics fair for Russia and eastern Europe – which was honoured by a great reception by trade visitors. During the four days of the fair, 23,000 visitors from Russia and the Commonwealth of Independent States (CIS) came to the Interplastica. The Kurtz team welcomed numerous highly interested guests to the booth, and quickly become engrossed in expert conversations with them – the trade fair highlights PRO FOAMER, the vertical BLOCK FOAMER as well as intelligent filler and maintenance systems and Remote Service 4.0 provided plenty to talk about. "Growth has recently picked up again in Russia, and this could be felt at the Interplastica through specific machine and project inquiries. The trip to Moscow and the effort and expense involved were worth it – not least due to several contracts concluded directly there," said the satisfied head of the Particle Foam Machines Profit Centre, Harald Sommer, as the trade fair drew to a close. ■

VDMA Plastics and Rubber Machinery Association: Michael Baumeister (Brückner Maschinenbau), Lutz Busch (Kampf Schneid- und Wickeltechnik), Sandra Füllsack (Motan Holding), Ulrich Reifenhäuser (Reifenhäuser), Uwe Rothaug (Kurtz GmbH), Gerold Schley (battenfeld-cincinnati Germany), Dr. Peter Schmidt (Troester), Dr. Christoph Steger (ENGEL Austria), Peter Steinbeck (Windmöller & Hölscher), Dr. Frank Stieler (KraussMaffei Group), Dr. Olaf Weiland (Kautex Maschinenbau) and Rainer Zimmermann (AZO); picture: VDMA.

VDMA PLASTICS AND RUBBER MACHINERY ASSOCIATION

New VDMA Board Member elected

At their general meeting, the representatives of the member companies of the VDMA Plastics and Rubber Machinery Association elected their new Executive Board for the period 2018 to 2021, followed by a constitutive meeting at which Ulrich Reifenhäuser, Managing Partner of the Reifenhäuser Group, was elected Chairman and Peter Steinbeck, Managing Partner of Windmöller & Hölscher KG, as his deputy.

The highest steering committee of the VDMA Plastics and Rubber Machinery Association starts its new term of office under good economic conditions: Following growth in German production of 4.1 percent in 2017 – corresponding to a value of 7.7 billion euros – growth of 3 percent is also forecast for the current year.

However, despite a boom that has now lasted almost eight years, the global competitive advantage of mechanical engineering companies can only be maintained in the future through constant further thinking, development and action. ■

Guided tour through the SMART FOUNDRY production

Germany´s foundry companies visit Kurtz Ersa

AfA spring meeting in the manor house in Hasloch.

Twice a year, the working group for sales marketing (AfA) of the Federal Association of the German Foundry Industry (BDG) meets for an exchange of experience. This time, Kurtz Eisenguss GmbH & Co. KG invited them to the SMART FOUNDRY in Hasloch in early March. The two-day spring meeting started with a programme and a first highlight on the previous evening: a climb up to Burg Wertheim and then an evening meal in a pleasant castle atmosphere.

The day after, the actual meeting programme started: after a presentation of the company by Head of Sales Detlef Henze, the attendees had a walk around the factory to gain further insights into the automated production processes of the SMART FOUNDRY. Martin Rölke, head of department Raw Materials at BDG, ran the AfA meeting from the late morning on. ABRAMS world trade wiki had been obtained as guest speakers – the two speakers Nur Hayat Nezir and Kerstin Wolf talked about the future of world trade. Some iron foundry experts attended a guided tour around the HAMMERMUSEUM after the meeting and at the end saw the historical iron hammer in action. The last functioning hammer in the Spessart has been in operation for more than 240 years and even now gives lasting impressions of smiths´ production in the past. ■

SMART FOUNDRY at the Hannover Fair

Like every year, thousands of interested specialist visitors went to the Hannover Fair at the end of April. Under the motto "Connect und Collaborate", the world´s leading industrial fair presented highly topical trends and innovations on artificial intelligence. One of the 5,000 exhibitors from more than 75 countries was also Kurtz Eisenguss: in detail, the Eisenguss team presented a planetary carrier weighing only 436 kg from the firm of Moventas under the motto "Shaping the Future together". Finished in the GJS 700-2 material and with a height of 700 mm, this was an outstanding introduction to the topic of hand moulding. A further highlight was a cylinder weighing 4,000 kg with the dimensions 2,000 x 1,820 x 1,820 mm (L x B x H). It had been manufactured for the Aerzen customer in the GJL 200 material, its field of use is fans in steel factories. After five intensive days, we returned to Hasloch with specific inquiries, in order to convert them to actual orders for complex hand-moulding of up to 8,000 kg in machine and marine construction and also in wind power. ■

Kurtz Eisenguss team at the Hanover Fair.

Big Point for Conline!

After the completed restructuring phase, the former MBW Metallbearbeitung Wertheim GmbH is now actively shaping the future – since the beginning of 2018 the successor Conline GmbH has concentrated on contract manufacturing, mechanical engineering for automation and automation solutions. With success: A contract worth EUR 2.5 million was recently won!

While MBW had still built sheet metal assemblies, today the Conline team supplies complete systems. In May, the largest order in the company's history was booked. This will be handled in the contract manufacturing sector, the order amounts to a total of ten complete cooling lines for the production of thin-film solar modules. Each of these cooling lines is about 30 meters long and consists of six individual machines. Due to the extensive possibilities at Conline, these machines are assembled mechanically, electrically and pneumatically and extensively tested. MBW had already built these machines in 2016 – but "only" 50 percent of the volume and also in a lower expansion stage. The final acceptance by the customer also takes place at Conline. "Particular attention is paid to the processing of the stainless steel assemblies, because even the smallest impurities can cause errors in the manufacturing process of the solar modules," says Markus Werner, Project Manager Line Automation at Conline. To ensure that prices and delivery dates are "safe" for this order volume, Conline works together with four major suppliers who continuously supply the main welding assemblies. For this reason, great care has been taken to ensure that suppliers can produce such high-quality components – and the available capacities have also been checked to ensure maximum deadline reliability.

EIGHT MONTHS FOR COMPLETE PROCESSING

"Only eight months remain for the processing of this order – after agreement of the contract and down payment. All ten cooling lines must be on their way to China by February 2019. In order to process this quantity in a relatively short time, 15 workers will be working on this project at the same time during assembly," says Conline Managing Director Matthias Sacher. Further discussions regarding an extended range of tasks up to assembly at the end customer show that Conline is directly in line with the market trend of purchasing more and more components. By selecting the most suitable suppliers for the respective individual parts, Conline always succeeds in being an interesting supplier and business partner in terms of price for its customers. ■

Cooling line for the production of thin-film solar modules.

Sporty presence:
64 Kurtz Ersa employees took part in the WÜ2RUN company run.

Strong and stronger in team!

For years, the Kurtz Ersa business has been developing in one direction: upwards. To this end, the team has grown strongly. However, this alone does not explain the success. Rather, it is the intelligent use of smart tools with whose help upcoming tasks are simply completed faster. But the decisive difference is made by a fit team that stands behind all this and pulls together!

Time is a scarce commodity, especially in times of increasing digitalization. How should there be room to stay fit – or better: to get fitter? Through its in-house Hammer Academy, Kurtz Ersa offers numerous health and sports courses that can be easily integrated into everyday working life. Thus, two running courses started in April, which the participants prepared specifically for the WÜ2RUN company run in June in eight weeks – Ersa Managing Director Ralph Knecht also laced the running shoes for regular training.

With super-summer temperatures and after a good two months of preparation, the starting signal for the annual WÜ2RUN was finally given on 20 June at 7:30 p.m. – more than 4,000 runners were hot to take the 7.4 km long course under the sole. From Dallenbergbad the river Main was crossed, along the river, around the Vierröhrenbrunnen and across the Alte Mainbrücke back to the starting point. Among the athletes – all in the running dress of their company – were 64 running enthusiasts from Kurtz Ersa, who travelled by charter bus from Wertheim via Kreuzwertheim to Würzburg and all came safely to the finish.

The fastest Kurtz Ersa woman, human resources manager Christina Schmitt crossed the finish line after 32:11 min, which meant 10th place for the women. Our men were also on top: Michael Regele from Kurtz Eisenguss finished on an excellent 15th place with 27:39 min. Three other colleagues undercut the 35:00 min to the 7,400 m and ran the

Arrive together, celebrate together: our runners after successfully mastered 7.4 km.

1,000 m in less than 04:30 min: Alexander Gehlfuß (31:48), Yannic Süßkoch (32:07) and Nicolas Bartschat (32:47).

We had a fantastic run in a unique atmosphere, after that the Kurtz Ersa team strengthened themselves with drinks and barbecue food. Congratulations to all runners – see you at the next run, for example at the Wertheim fair run over 10 km, where Kurtz Ersa is the main sponsor and name giver.

Preparatory running courses for this Kurtz Ersa run on 06 October have already started at the end of June, we are already keeping our fingers crossed for all participants and are looking forward to as much and loud support as possible. Whatever the future holds: We are prepared and take it sporty! ■

269 Mio. € Turnover · 1,400 Employees

Worldwide Presence

Germany
Kurtz Ersa-Konzern
Wiebelbach
info@kurtzersa.de

Ersa GmbH
Wertheim
info@ersa.de

Kurtz GmbH
Wiebelbach/Hasloch
info@kurtz.de

Kurtz Eisenguss GmbH & Co. KG
Hasloch
smart-foundry@kurtzersa.de

Conline GmbH
Wertheim
conline@kurtzersa.de

globalPoint ICS GmbH & Co. KG
globalPoint@kurtzersa.de

China
Kurtz Ersa Asia Ltd.
asia@kurtzersa.com

Kurtz Shanghai Ltd.
info-ksl@kurtzersa.com

Kurtz Zhuhai Manufacturing Ltd.
info-kzm@kurtzersa.com

Ersa Asia Pacific
info-eap@kurtzersa.com

Ersa Shanghai, China
info-esh@kurtzersa.com

France
Kurtz France S.A.R.L.
info-kfr@kurtzersa.com

Ersa France, Frankreich
info-efr@kurtzersa.com

Russia
OOO Kurtz Ost
info-kru@kurtzersa.com

USA
Kurtz Ersa Inc.
usa@kurtzersa.com

Mexico
Kurtz Ersa Mexico, S.A. DE C.V.
info-kmx@kurtzersa.com

Korea
Ersa Korea, Korea
kmc@kmckr.co.kr

Technology fan? Passionate interest in industrial history?

The story of Kurtz Ersa comes to life in the HAMMERMUSEUM – let yourself be infected with the enthusiasm for technology that still marks us out in the 21st century.

We're looking forward to your visit!

Kurtz Ersa HAMMERMUSEUM
Eisenhammer 1, 97907 Hasloch
www.kurtzersa-museum.com

Imprint

Publisher
Kurtz Holding GmbH & Co.
Beteiligungs KG
Frankenstr. 2
97892 Kreuzwertheim

Phone +49 9342 807-0
Fax +49 9342 807-404
info@kurtzersa.de
www.kurtzersa.com

Responsible
according to the press law
Thomas Mühleck

kurtz ersa