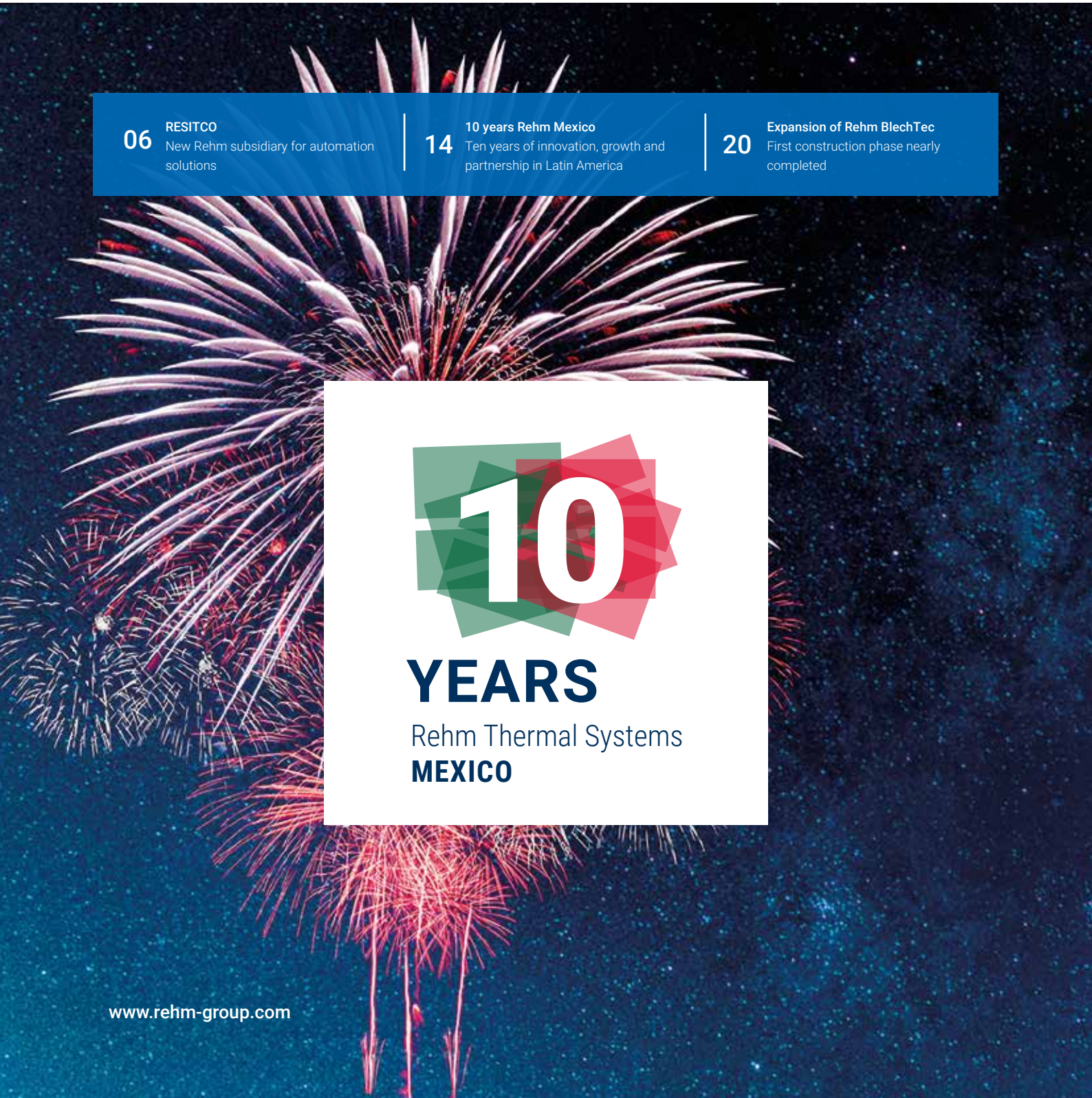
THERMAL SYSTEMS

review

Customer magazine, issue 01, 2025



www.rehm-group.com

Dear readers,

Challenging times call for foresight, innovation and strong collaboration.

Current economic conditions are placing significant demands on many industries – and yet at Rehm Thermal Systems, we remain optimistic about the future. Early signs of economic recovery in the second half of the year give us confidence and reinforce the direction we have taken.

It is especially in turbulent times that a company's true strength becomes evident. Our response to today's challenges is clear: growth and targeted development. With the founding of RESITCO GmbH, we are strategically expanding our expertise in automation and line configuration. At Rehm BlechTec, we are also sending a clear message about sustainable growth and future security through investments in modern buildings and advanced machinery.

A particular highlight this year will be our appearance at Productronica in Munich: with a fresh exhibition concept, a renewed brand identity and cutting-edge technologies, we look forward to shaping the future together with you. And we have even more reason to celebrate: 35 years of Rehm – 35 years of passion for technology – and 10 years of Rehm Mexico: a decade of successful partnerships and continuous growth in Latin America.

We thank you for your trust and look forward to continuing this journey together.

Johannes Rehm
Managing Director

Content
review 01 | 2025

Imprint

review is a publication of

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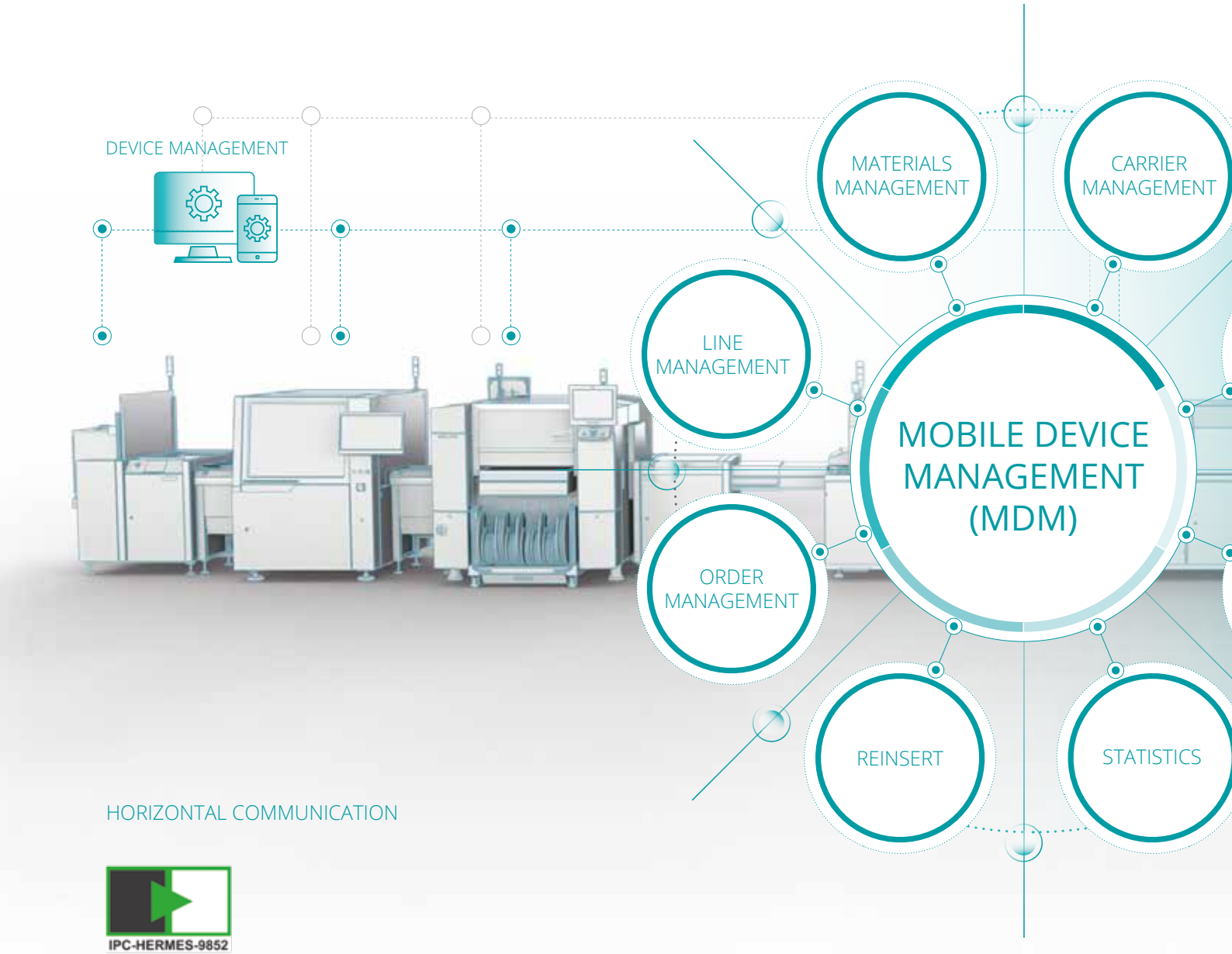
Construction work for the extension of Rehm BlechTec has begun

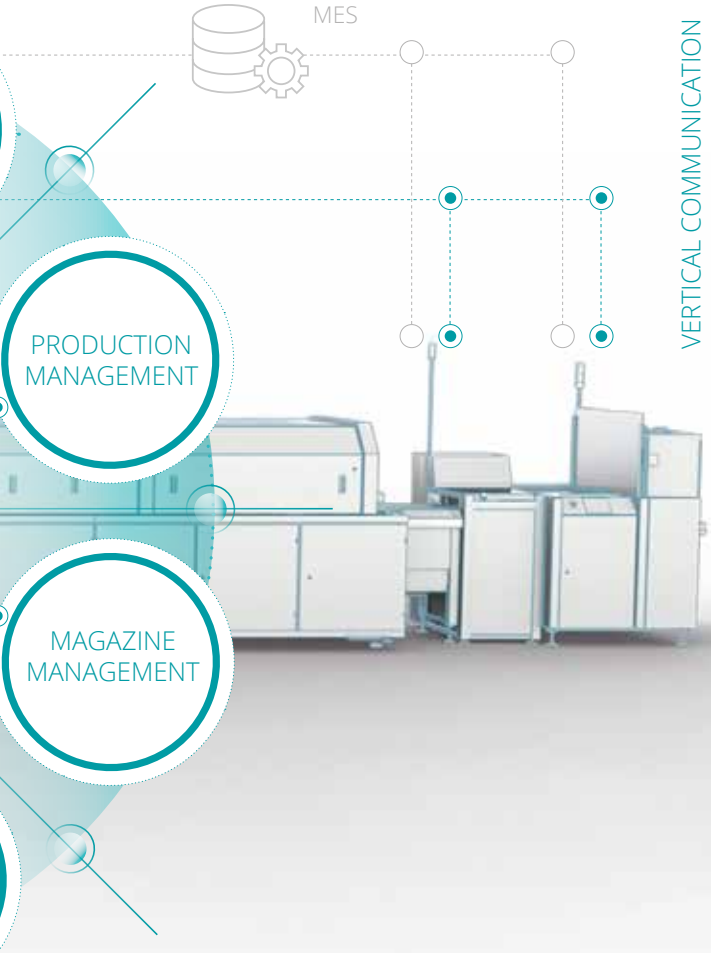
THE REHM GROUP CONTINUES TO GROW STEADILY

Integration of RESITCO into the company group

Markus Scheid, Managing Director of Scheid IT GmbH, has been working for Rehm Thermal Systems as a freelancer for many years. The newly founded RESITCO, established by Rehm Thermal Systems and Scheid IT, has been integrated into the Rehm Group as a subsidiary and marks another significant milestone in the collaboration between the two companies.



RESITCO



With RESITCO, Rehm has integrated a competent business unit with extensive experience in software solutions for SMD production: thanks to the Device Manager, it is possible to meet complex requirements for a production line. With the SMEMA Hermes Bridge “Selma”, systems with a SMEMA connection can be integrated into a Hermes production line. This allows customers to choose from a broader portfolio of systems when configuring a line solution and to introduce the Hermes standard with existing production lines with a SMEMA interface.

Electronics manufacturing is facing a fundamental change in view of the shortage of skilled labour, rising operating costs, constantly increasing guidelines and growing complexity. In this context, line solutions and smart factory concepts are becoming increasingly important. Not only do they enable an increase in efficiency and the ability to react quickly to different production requirements, they also guarantee a high level of process reliability and seamless traceability. This requires horizontal and vertical communication interfaces.

Horizontal Communication

The Hermes Standard (IPC-HERMES-9852), the successor to the SMEMA interface (IPC-SMEMA-9851), links the individual systems of a production line with horizontal communication in a direct way – regardless of the respective manufacturer of the machine. Data is exchanged via a TCP/IP and XML-based protocol that uses standardised cables and data formats. This simplifies the integration process and reduces costs. In addition to the barcode of the assembly, various data is also stored and communicated.

RESITCO, the new subsidiary of the Rehm Group, offers “Selma”, a SMEMA Hermes Bridge, so that companies with machines that only have a SMEMA connection can also introduce the Hermes standard. The bridge is a hardware device with upline and downline SMEMA connections, an Ethernet port for Hermes connections and an optional serial port for

integrating scanners. It communicates with the legacy devices via SMEMA, converts their signals into Hermes telegrams and vice versa. This enables seamless horizontal communication via Hermes, which offers a wide range of possibilities:

- **Automatic width adjustment**
- **Automatic speed adjustment**
- **Automatic product changeover**
- **Barcode transfer**
- **Printed circuit board information**
- **Order information for order changes**
- **Routing: assignment of transport routes**
- **Actions: execution of certain functions**
- **Proactive line changeover for shorter set-up changeover and downtimes**
- **Interference loop functionality**
- **Good/bad transmission, also for individual units**
- **Pure insert functionalities**

SMEMA Hermes Bridge "Selma"

The Hermes Standard

As the SMEMA interface (IPC-SMEMA-9851) did not allow the systems to communicate directly with each other, an independent group of leading SMT equipment manufacturers, with Rehm Thermal Systems as the current chair of the initiative, joined forces to develop a new interface: The Hermes Standard (IPC-HERMES-9852). The initiative now comprises almost 90 companies from the electronics manufacturing industry and the IPC has also officially recognised The Hermes Standard.

Vertical Communication

An MES system continuously collects all operating data along the material flow of production lines and makes it available to a higher-level ERP system. For communication with an MES system provided by the customer, Rehm Thermal Systems offers interfaces to all common production control systems, which are customised by the in-house software department.

The Device Manager from RESITCO forms a link between the vertical communication to the MES system and the horizontal communication of individual systems on a line: the software can be installed on a conventional computer or on a server. It enables complete monitoring and control of the line by managing all configured devices, product, order, magazine and goods carrier management and mapping the production history:

Product management refers to the products to be manufactured and the associated information. This involves maintaining the data for identifying the PCB itself, as well as product data such as the product type ID, position, length, width, thickness and component clearance. This data is required later in the process to ensure smooth production.

Order management includes all orders that have either been created manually or synchronised via an MES system. Here it is possible to assign further line-specific characteristics to the order. This can be activated at the start of the line or on selectable systems in parallel. In this way, the Hermes standard board forecast can be used to proactively change over a line without having to run it completely empty.

Effective **magazine management** helps to ensure that production runs smoothly and efficiently. Magazines are maintained in the magazine management system. The relevant magazine can be identified and loaded at the start of the line using a scanner. It is also possible to use magazine data across multiple lines. At the end of a line, the data of the filled magazine is transferred back to the magazine management system so that it is available for further production steps.

It is also easy to manage all the goods carriers in circulation: product-specific or generic goods carrier groups can be created to customise them to individual requirements. In addition, goods carriers can be blocked or ejected for repair. It is also possible to assign orders and products to a goods carrier so that the individual circuits can be assigned to an order or product at a later date. Product production is also controlled via the product assignment: for example, it is possible to specify whether only one side of the PCB is to

Rehm offers flexible line concepts from a single source, featuring custom-tailored coating and dispensing systems, handling solutions, and integrated drying units.

be painted or whether both sides need to be painted. With permanently installed scanners, the order is automatically activated by the product carrier. In addition, the individual circuits with the good/bad information can be displayed after the process.

The **production history** refers to the recording of information about the product and the production parameters. Recording production data enables companies to monitor production steps and tests, evaluate the productivity and efficiency of their production processes, identify and rectify problems, implement improvements and ensure traceability.

Customised Line Solutions

In the coating and dispensing sector, Rehm Thermal Systems offers customised and modular line solutions from a single source in various degrees of automation: thanks to the wide range of system configuration options, Rehm's coating and dispensing systems and drying systems can be optimally customised to the respective customer requirements. When it comes to handling, we work with long-standing partners who can also offer maximum flexibility here, so that the degree of automation of the process can be customised to the needs of the respective company. Thanks to a combination of Hermes interface and vertical communication with a production control system such as The Device Manager, the line solutions are optimally prepared for Industry 4.0.

Rehm as a Turnkey Partner

- **Conceptualisation and design**
- **Coordination of all trades**
- **Coordination of the interfaces**
- **Test phase/test operation**
- **Realisation**
- **Centralised service**

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FROM SOLDER JOINT TO LASTING CONNECTION

The Art of Soldering: Recognising and Avoiding Sources of Defects

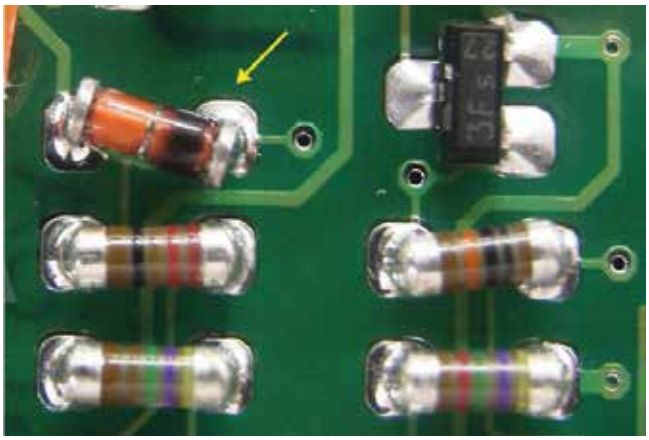
Soldering, a technique that originated in ancient Egypt, is indispensable in electronics production today. Despite all the progress made, defects can still occur, which can lead to unreliable solder connections and thus to malfunctions or even failure of the end product. It is therefore important to know the causes of soldering defects so that preventive action can be taken. With our expertise in soldering technology, we have been supporting our customers for over 30 years with all questions and problems in the field of reflow soldering and provide an overview below of some common causes of misaligned and missing components.

Soldering has a long history dating back to ancient Egypt. Today, it plays an indispensable role in the manufacture of electronics, among other things. Despite numerous developments in soldering technology, soldering defects can still occur, resulting in electronic components not being reliably connected.

Such a faulty solder connection means that the circuit is not reliably closed, which can lead to malfunctions and even failure of the end product. In addition, defective connections can result in high electrical resistance and thus increased heat generation, which can damage the components or cause fires.

Unreliable end products and safety issues: they damage a company's reputation and customer confidence in the brand. Manufacturers therefore endeavour to identify soldering defects during the production process and to sort out or repair faulty PCBs, although this is associated with significantly higher costs.

In addition, the probability of soldering defects can also be reduced before and during the soldering process: some causes of misaligned and missing components are shown below.



Offset of a glass diode due to an uncentered connector

Misaligned Components

In the past, electronic assemblies floating in lead-containing solder were able to correct a slight displacement during the soldering process (self-alignment). As assemblies sink deeper into lead-free solders due to the lower wetting power as well as lower density and consequently a weaker buoyancy force, this phenomenon is less pronounced here (see Bell et al. 2021: 81f.): nevertheless, in the area of lead-free solders, the occurrence of component offset can also be reduced by selecting a solder paste with a high wetting force (see Neathway et al. 2008: 7ff.).

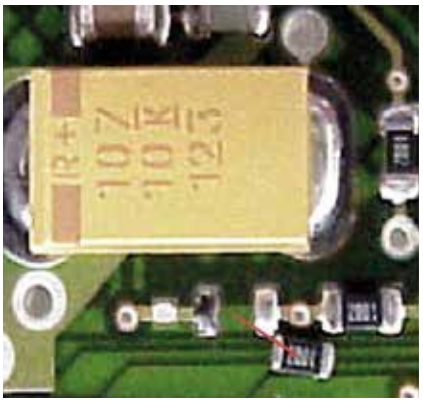
Attention must also be paid to the size of the pads: "In the case of large pads, there`s always the danger of subjecting the component to a torque force when only one paste deposit is melted initially. […] [W]etting dynamics are not sufficient in order to align the component when the second paste deposit is melted" (Bell et al. 2021: 84).

If the curtains at the inlet of the oven are too long, touching them can cause the assemblies to fall over or shift. The poor condition of the conveyor chains can also result in a shaking, which can cause larger, heavier components to move on the PCBs (see Bell et al. 2021: 88f.).

When soldering the second side of the circuit board, there is also a risk that soldered connections on the other side will be separated again and components will become partially or completely detached. To counteract this, the holding force of the molten solder must exceed the weight force of the various assemblies by at least the factor of two, with an ideal ratio of four. However, it should be noted that the holding force also depends on external conditions, such as shakings, as well as the changing surface tension of the solder depending on the temperature (see Bell et al. 2021: 89-92).

Missing Components

If a component can no longer be found in the desired position on the PCB after soldering, this is referred to as "blown away". However, convection currents are not responsible for this, as is often assumed. Instead, moisture trapped in nearby components, such as tantalum capacitors, during the soldering process is blown out as gas, which can result in the displacement of other smaller elements. To counteract this, PCB components should be stored dry or dried before the soldering process (see Bell et al. 2021: 92f.).



Chip blown out of place next to a tantalum capacitor (Öttl 2003)

Tombstones

Tombstones occur as soon as one solder joint of two-pole components (e.g. capacitors or resistors) melts before the other. If this is the case, the wetting forces and the surface tension cause the element to lift on one side (see Bell et al. 2021: 94). "An adequately large imbalance of forces between the component's weight force and the wetting forces which act upon it, as well as surface tension, is a prerequisite for the occurrence of tombstones" (Bell et al. 2021: 95). This leads to the assumption that with a solder paste with a lower surface tension, the weight force of the component is sufficient to hold it in position and, as a result, the occurrence of tombstones can be reduced.

In contrast, however, lead-free solders have a higher surface tension and lower tombstone rates (see Bell et al. 2021: 95). Instead, the results of several studies (see also Nowottnick & Trodler 2010: 153ff.) speak in favour of a correlation between increasing wetting time and decreasing tombstone rates (see Bell et al. 2021: 96-99).

To counteract the asynchronous melting of solder joints and thus the formation of tombstones, large differences in the amount of solder paste between the two connection pads can be avoided, as the smaller deposit always melts before the larger one (Bell et al. 2019: 100f.).

The conveyor speed can also counteract the tombstone effect. The higher the speed, the greater the risk that the soldering material is not heated through evenly and that one solder joint melts earlier than the other (see Bell et al. 2021: 101f.).

The soldering profile also influences tombstone formation: depending on the solder paste formulation, the PCB design as well as printing and placement tolerances, tombstones can occur in both linear and saddle-shaped profiles. If pads have a ground connection, more copper layers in the vicinity, vias, etc., the solder paste tends to melt later due to the greater thermal mass (see Bell et al. 2021: 102f.). To counteract this effect, the saddle profile can be advantageous because it homogenises the temperature distribution in the assembly through the holding phase.

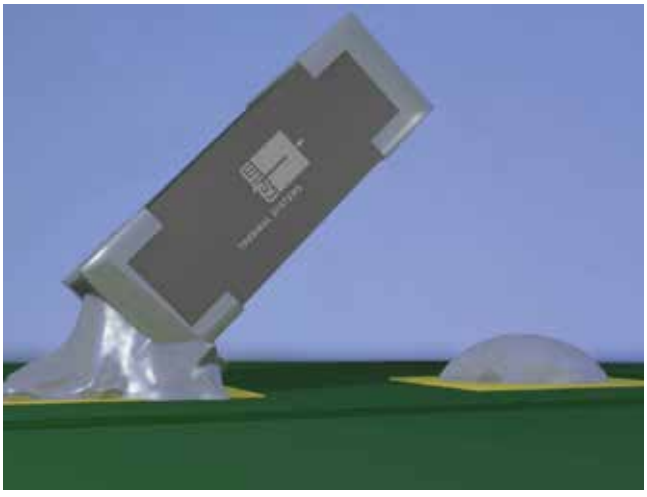
Curious?

The technology manuals from Rehm Thermal Systems deal with many other exciting topics relating to reflow soldering: take a closer look at the reliability of soft solder joints and other soldering defects or immerse yourself in the technology and engineering of soft soldering. Find out what effects reflow profiles have on the soldering process and the soldering result, and what about bottom termination components and migration. You can order the volumes by e-mail: **sales@rehm-group.com**

Technology manuals volume 1 – 5

Do you have questions on a specific topic?

We advise our customers and interested parties on all technological issues and provide support in selecting the right production process and associated parameters. Our employees in the Technology Centre will be happy to help you: **applikation@rehm-group.com**



Paste deposit at right is melted but is no longer able to reach the connector.

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REHM THERMAL SYSTEMS MEXICO WINS TECHNOLOGY AWARD

Award for the patented mechatronic curtain for convection soldering systems

Rehm Thermal Systems Mexico has won the Mexico Technology Award in the category convection soldering with the patented mechatronic curtain for convection soldering systems. The award ceremony took place on 11 September 2024 before the start of SMTA Guadalajara in Mexico.

State of the art

Due to the variety of electronic component geometries, the assembly height varies from 0.5 to 30 mm. In order to be able to react flexibly to this wide variance in production, convection soldering systems are designed with a large opening at the inlet and outlet. However, reality shows that although there are assemblies with a total height of 30 mm, the majority of assemblies soldered are no higher than 7 mm (Figure 1). This means that the opening at the inlet and outlet of the system is oversized for many assemblies, so that more nitrogen can escape from the system and the consumption of the gas required for process inerting is higher than would be the case with a design optimised for this level.

Solution approach

To achieve both the maximum required throughput height and the always optimal nitrogen consumption for lower assemblies, Rehm Thermal Systems has patented, developed and mass-produced the mechatronic curtain. In the process, movable curtains are installed at the inlet and outlet of the oven, which guarantee the optimal distance to the assembly depending on its height.

As an example, for an assembly with a width of 244 mm, a length of 305 mm and a height of 7 mm, a nitrogen saving of approx. 27 % can be achieved with 500 ppm residual oxygen and a saving of approx. 20 % with 1000 ppm residual oxygen (Figure 2).

The awards ceremony brought together industry leaders, innovators and professionals to celebrate the latest technological advances and achievements in electronics manufacturing. “We are honored to receive the Mexico Technology Award for our patented mechatronic curtain for convection soldering systems,” said Luis García, Managing Director of Rehm Thermal Systems Mexico. “This award reflects our team’s dedication to creating a more efficient system for our customers.”

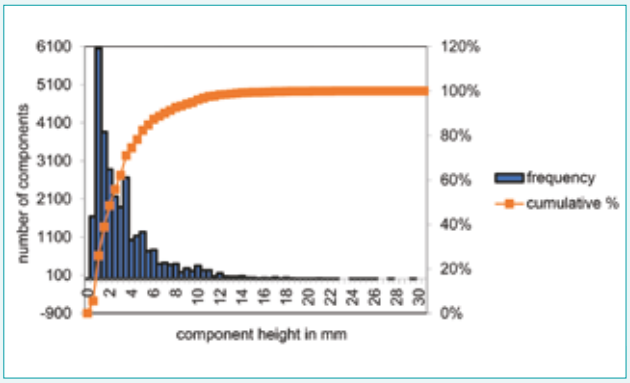


Figure 1: Distribution of component height from a product mix on an SMT line

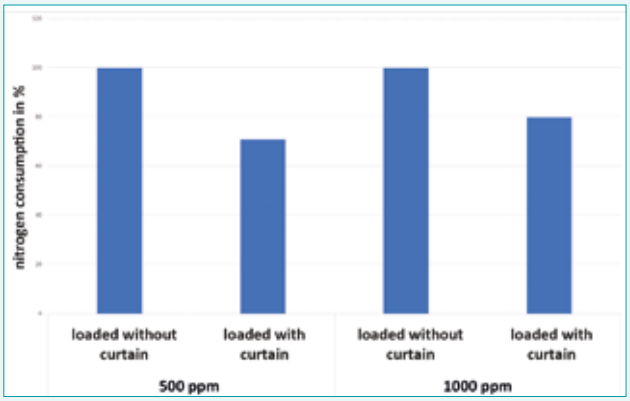


Figure 2: Comparison of N2 consumption for 500 and 1000 ppm residual oxygen target values

Award presentation of the Mexico Technology Awards in Guadalajara: Luis Antonio Garcia G., Ron Friedman, Karina Pelayo Godinez, and Rodrigo Sánchez.

10 YEARS OF REHM THERMAL SYSTEMS MEXICO

Ten years of growth and innovation in an emerging market

Over ten years ago, Luis A. Garcia began his success story at Rehm Thermal Systems. On May 15, 2013, he initially joined as a member of the Rehm USA team. By the fall of the same year, Johannes Rehm, Managing Director of the parent company Rehm Thermal Systems in Blaubeuren, decided to establish a dedicated subsidiary in Mexico – a decision that would prove to be visionary. At productronica 2013, the groundwork for the foundation of Rehm Thermal Systems Mexico was already being laid.

Foundation and First Steps

With the official founding of Rehm Thermal Systems SA de CV on February 25, 2014, an exciting journey began. Initially, Luis A. Garcia's own home served as the first official address for Rehm Mexico. In the beginning, he was supported solely by Service Engineer Rodrigo Sanchez. Later in 2014, a suitable office and demo centre was established in Guadalajara, covering an area of 295 m², laying the foundation for further growth.

First Customers and Early Successes

From the start, Rehm Mexico supported major clients, especially OEMs in the automotive industry and the top 10 EMS providers. The focus on excellent service and local presence paid off: the customer base grew steadily.

Luis Antonio Garcia G. and his team at SMTA Guadalajara

Continuous Growth and Key Milestones

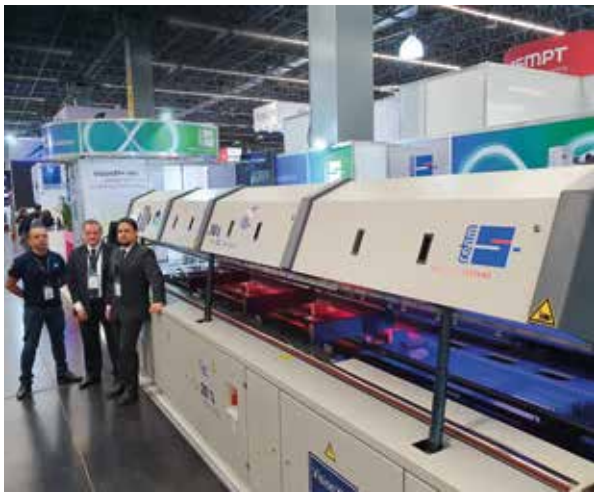
Over the past years, Rehm Mexico has experienced impressive development:

- **Employee Growth:**
  From two employees in 2013 to currently eight highly qualified specialists.
- **New Facilities:**
  In 2024, the company moved into a new 960 m² building located in a modern industrial park.
- **Expanded Services:**
  In addition to an extensive spare parts warehouse, Rehm Mexico now also offers a state-of-the-art technology centre for demos and customer training.
- **Events and Presence:**
  Participation in major industry events such as SMTA in Guadalajara, Monterrey, Chihuahua, Juárez, Tijuana, and Querétaro, as well as organizing its own seminars and technology days.

Particularly noteworthy is the close cooperation with customers through regular training programs, focusing on VisionX reflow soldering systems, condensation soldering (Condenso), and specialized process training.

Market Environment: Electronics Boom in Mexico

In recent years, Mexico has developed into a key hub for electronics manufacturing. Demand for advanced production technology is growing rapidly, particularly in the automotive and consumer electronics sectors.



Highlights from 10 Years of Rehm Mexico

- **Automotive Sector:**
  Mexico is now the world's fourth-largest vehicle exporter. The demand for innovative electronics in driver assistance systems, electromobility, and infotainment is driving local production.
- **Consumer Electronics:**
  Multinational EMS providers for high-quality consumer goods have established major production sites to meet the rising demand from North and South America, and increasingly from Asia.
- **Nearshoring Trend:**
  Geopolitical shifts and shorter supply chains are prompting many companies to move production from Asia to Mexico – driving strong demand for advanced electronics manufacturing technology, directly benefiting Rehm Mexico.

10
YEARS
Rehm Thermal Systems
MEXICO

Anniversary Celebration & Technology Days

Join us in celebrating! On 2nd and 3rd July 2025, we warmly invite you to two exciting days filled with innovation, technology, and networking.

Discover the programme & details via QR code:
Scan the QR code to learn more about our high-profile event schedule!

FOCUS ON EVENTS
REVIEW 2024/25

New ideas can only be developed through the regular exchange of knowledge and experience with specialist colleagues: Rehm was on site

NEPCON ASIA

Electronics on the Road

Rehm at the NEPCON ASIA

From 6 to 8 November 2024, the team from Rehm Thermal Systems China presented the VisionXP+ Vac at NEPCON ASIA in Shenzhen. With 60,000 visitors, the trade fair provided an excellent platform to present this efficient and reliable system in the field of reflow convection soldering under vacuum to a broad audience of international electronics manufacturers. "We were very pleased about the great interest. The many visitors from all over the world were a clear signal that trade fairs continue to play a central role in industrial networking," said Ralf Wagenfuhr, Director of Operations at Rehm Thermal Systems China. "This personal exchange remains indispensable in order to jointly tackle the challenges facing the industry and develop solutions for the future."

Start of Electronics on the Road

At the end of January, we launched our new event format Electronics on the Road. In Hamburg, participants were welcomed with inspiring expert presentations from industry professionals on the latest technologies and developments in electronics manufacturing. Among other topics, the speakers addressed networked production for small and medium-sized series, practical digital reflow simulation of PCB assemblies, and testing procedures in electronics production. In addition, the breaks between presentation sessions and the concluding discussion round provided valuable opportunities for networking and exchanging experiences with industry peers and speakers.The program also attracted great interest at the following event locations in Düsseldorf and Karlsruhe. Registrations for the final events in Dresden are still open: **www.electronicsontheroad.com**

First Participation at the New Battery World

For years, renowned companies in the automotive industry have relied on our solutions in the areas of bonding, sealing, protecting, drying, curing, reflow soldering, deoxidising, testing and inspecting to produce high-performance electronics, lighting systems, camera technology, sensors and electric drive units. However, our diverse portfolio also makes us interesting for future markets such as fuel cell or electrolyser production. At the kick-off event focusing on the potential of hydrogen and fuel cell technology as well as pioneering plastics, Jasmin Fuchs, Sales Manager New Markets, presented our thermal systems for drying and curing to produce fuel cell and electrolyser components, dosing and coating systems including line concepts and our in-house developed software for Industry 4.0. This was followed by a two-day congress, which provided an ideal platform for exchanging ideas and establishing business relationships.

New Battery World

IPC APEX EXPO in Anaheim, USA

As the largest and most important trade fair for electronics manufacturing in North America, the IPC APEX EXPO has long been a mainstay of our event calendar. That is why Rehm Thermal Systems once again presented its further developments in the areas of condensation soldering, coating and dispensing with the CondensoXC and ProtectoXC this year, true to the motto "Reimagine the Possibilities": with the Condenso series, the main focus was on more economical vapour phase soldering thanks to the integrated closed-loop system for the injected Galden® medium. With the Protecto series, Rehm Thermal Systems offers a system that can be used for a wide range of coating and dispensing applications thanks to a broad portfolio of applicators. "In times of increasing competition and cost pressure, companies must be able to reduce their production costs and react flexibly to market changes and individual customer requirements. We are proud to be able to support our customers in this with our expertise and our systems," emphasised Michael Hanke, Chief Sales Officer at Rehm Thermal Systems.

IPC APEX EXPO

productronica China

productronica in China is one of the most important events in Asia. Once again this year, the trade fair offered the opportunity to attend specialist presentations, make business contacts and find out about the latest innovations in the entire electronics production value chain. With the VisionXP+ Vac, Condenso and Protecto, Rehm Thermal Systems also showcased its system solutions in the areas of convection soldering under vacuum, condensation soldering, coating and dispensing. In addition, productronica China offered an excellent opportunity to exchange ideas with experts and colleagues from the electronics manufacturing industry.

Anniversary Event – 25th EE-Kolleg

In April, experts and colleagues came together for the 25th time in Colonia de Sant Jordi (Mallorca) to take part in our event. Under the motto "Transformation in Manufacturing: Additive Technologies, Design for Excellence and Management Strategies", this year's focus was on current topics and innovations that are shaping the manufacturing world of tomorrow. For example, the presentations dealt with additive manufacturing and its applications in sensor and electronics production, strategies for change and innovation in manufacturing, advances in power electronics, artificial intelligence and sustainability in production. Many participants have remained loyal to the event for years due to the constructive dialogue in a special atmosphere. At the same time, we also welcomed many new faces to this special anniversary event.

A NEW BENCHMARK FOR QUALITY

Rehm Thermal Systems Produces for Cleanroom Applications

For the manufacture of many products, such as semiconductors, cleanrooms are a mandatory requirement for high quality and product safety, as even the smallest impurities can damage the product. To ensure that the systems can also be used in cleanrooms, Rehm Thermal Systems has set up a cleanroom at its factory in Dongguan, China, which meets the highest international standards.

For certain industries, such as medical technology, aerospace technology or the semiconductor industry, particularly high hygiene requirements apply to the workplace: here, the concentration of microparticles (e.g. dust, exhaust fumes or pollen) in the room air must not exceed a certain limit value. A room that fulfils these requirements is known as a cleanroom. Cleanrooms are categorised into special cleanroom classes depending on the particle density. Their operation is subject to strict standards: for example, the furnishings, equipment and machines must also fulfil the requirements of the cleanroom in order to prevent damage caused by contamination during production and to achieve high-quality end results.

Rehm Thermal Systems has set up a clean room at its factory in Dongguan, China, to ensure that the produced systems are as free of tiny particles as possible. To ensure that it meets the highest international standards, Rehm Thermal Systems commissioned comprehensive tests. These show that the cleanroom fully fulfils the requirements of the GB 50472-2008 (CN) and ISO Class 5 (EU) standards (US old: Class 100).

This makes the cleanroom ideal for testing the VisionX Semico, a reflow soldering system for semiconductor production, for example, in order to protect the highly complex circuits of the semiconductor components from impurities that could affect the functionality of the components:

The low-vibration transport, whether designed as braided tape, pin chain or combined transport, and as single lane or dual lane, meets the high demands of semiconductor production and ensures additional process reliability. A particular advantage of the system is the flexible configuration of the cooling line. Here, the components in the respective zones can be supplied with either cold air or warm air. A combination of cold air above, warm air below or vice versa is also possible. This enables gentle, stress-free cooling of components and guarantees flexible outlet temperatures.

The development of the VisionX Semico naturally also focused on energy efficiency and ease of maintenance: the system is equipped with particularly high-quality insulation which meets the requirements of the cleanroom class and ensures maximum energy efficiency within the process chamber. Pyrolysis is integrated as standard for reliable cleaning of the process air. This ensures a dry and clean process chamber and compliance with the exhaust air specifications for cleanroom concepts and requires maintenance only once a year. In addition, a condensate trap is installed as standard in the cooling track, which reliably separates the crystalline residues and ensures simple maintenance and extended maintenance cycles.


广州远瞻检测技术有限公司

检测合格证明

Testing Qualification Statement

锐德热力设备(东莞)有限公司

Rehm Thermal Systems (Dongguan) Limited

检测报告日期 Date of Testreport

2024 年 07 月 18 日

INTERVIEW

In conversation with Thomas Hack

Top quality and punctual delivery times for customers – Thomas Hack and his team are committed to this every day

In 2003, the metalworking shop of Rehm Thermal Systems GmbH was spun off as an independent company: since then, Rehm BlechTec GmbH has established itself as a specialist in the processing of stainless steel, aluminium and steel sheets. Thomas Hack has headed the company as Plant Manager since 2014 and took over as Managing Director at the beginning of 2022. The company headquarters of Rehm BlechTec were last expanded in 2016. To mark the end of the first construction phase, we visited Thomas Hack on the building site.

What distinguishes Rehm BlechTec from other competitors in the sheet metal processing industry?

Thomas Hack: Rehm BlechTec is characterised by a combination of many years of experience, high customer orientation, flexibility and quality: we support our customers in all project phases. We also continuously invest in modern machines and digital production technologies to ensure the highest precision and quality. This enables us to offer customers from a wide range of industries a broad spectrum of services in the areas of metal processing and powder coating. Thanks to this one-stop-shop strategy, we can guarantee very short production times.

Why did you decide to further expand the company headquarters?

T. H.: Back in 2016, we expanded the existing production hall with a new building to a total of 5,600 square metres of production space to further expand our range of services and production capacities. Since then, we have seen a continuous increase in incoming orders and are slowly reaching our capacity, also in terms of space requirements. Our parent company Rehm Thermal Systems, for which we manufacture cladding and machine frames as well as tubes for process technology, is also expecting demand for industrial solutions to increase over the next few years. Contrary to the trend of relocating production from Germany to other countries, we want to be able to guarantee that all metal parts of Rehm

The first construction phase for the new extension of Rehm BlechTec is almost complete.

Thermal Systems' systems are 100 percent “Made in Germany”, also in the future. At the same time, we want to continue to supply our other customers on time and in the usual quality and want to make further investments. A further extension was therefore the logical consequence: this will cover around 4,100 square metres and should be completed by spring 2026 at the latest.

What innovations in the range of services will result from the expansion of the production building?

T. H.: Firstly, we are planning to move our steel welding shop to the extension: we are currently working with a crane system with a maximum lifting capacity of one tonne. With our new crane system in the extension, we will be able to move heavier assemblies weighing up to ten tonnes. But I already have ideas for further investments ... laughs. In any case, we are planning to further expand our vertical integration and invest in new machines.

What is the biggest challenge for companies in the metal-working industry? And how do you deal with it?

T. H.: At a time when environmental awareness is becoming increasingly important, the issues of sustainability and resource conservation are also becoming a decisive factor in our industry, especially as the manufacture of metal products is very energy-intensive. In the past, we have taken an important step towards sustainability by reducing and recycling metal waste, investing in energy-optimised systems and using environmentally friendly processes. We are particularly proud of our photovoltaic system: with an output of 521,000 kWh per year, it generates enough electricity to supply Rehm BlechTec with 31 percent of its power from renewable sources.

What sustainability measures are planned for the new extension?

T. H.: A photovoltaic system will also be installed on the extension. In addition, air-to-water heat pumps are to be installed for the heating system: we will utilise the waste heat from the powder coating process to operate the air-to-water heat pumps even more efficiently. As in the existing buildings, the hall's ventilation and extraction systems will run via cross heat exchangers to save energy.

If you look back over the last few years, is there a customer project that you are particularly proud that you were able to realise?

T. H.: We are regularly commissioned by a large technology company in the optical and optoelectronic industry to manufacture large parts for coordinate measuring machines. It's still something special for me when these parts leave our premises ... smiles.

"White are towers, roofs, branches, and the year is drawing to a close, and the most beautiful festival is here." (Theodor Fontane)

AN ALL-ROUND WONDERFUL END TO THE YEAR

Rehm Thermal Systems celebrates the end of 2024

In the usual tradition, Managing Director Johannes Rehm, Chief Operating Officer Rainer Trometer, Head of Human Resources Joachim Erhard and several department heads looked back on the 2024 financial year together with the employees of Rehm Thermal Systems and Rehm BlechTec and expressed their special thanks to several long-standing employees. The year ended with the traditional Christmas party.

Last year, Rehm Thermal Systems focused primarily on strengthening its position in its core markets and at the same time worked on expanding its portfolio for new industries: Rehm Thermal Systems invested in its subsidiary in Mexico and in a new CNC milling centre at its headquarters in Blaubeuren. By moving the Rehm Academy to a larger neighbouring building with state-of-the-art equipment, the range of further education and training courses on offer was expanded.

Rehm Thermal Systems was also represented at hy-fcell in Stuttgart for the first time with a drying system for fuel cell production. In the field of medical technology, turnkey solutions for bonding and thermal forming of flexible parts can be offered thanks to a new partnership. Further partnerships are expected to steadily expand Rehm Thermal Systems' product range in the medical technology sector in the future.

Immediately after the official information event, all employees met in the festively decorated production hall on 6 December. Over mulled wine or punch and a traditional Christmas dinner with a sumptuous dessert, everyone enjoyed socialising with their colleagues, with some staying until the early evening.

SAVE THE DATE
SHOWS & EVENTS 2025

Rehm is present at the most important venues in the electronics industry with interesting trade shows and events

Whether it's a trade fair, technology event, seminar, training or workshop – take advantage of the opportunity to get to know our system technology and receive advice from Rehm experts. If you are interested, you can find more information about the events at **www.rehm-group.com.**

DATE	EVENT
18.06. – 21.06.2025	**NEPCON Thailand**, Bangkok, Thailand
02.07. – 03.07.2025	**10 Years Mexico & Technology Day**, Guadalajara, Mexico
09.07. – 10.07.2025	**Medical Technology Germany**, Ulm, Germany
22.07.2025	**On-site Seminar Temperature Profiling,** Blaubeuren, Germany
10.09. – 12.09.2025	**SEMICON Taiwan**, Taipei, Taiwan
10.09. – 12.09.2025	**NEPCON Vietnam**, Hanoi, Vietnam
17.09.2025	**SMTA Guadalajara Expo & Tech Forum,** Guadalajara, Mexico
23.09. – 24.09.2025	**Conformal Coating Insights**, Willich, Germany
24.09. – 25.09.2025	**Electronics on the Road,** Dresden, Germany
07.10. – 09.10.2025	**Bondexpo**, Stuttgart, Germany
28.10. – 30.10.2025	**NEPCON Shenzhen**, Shenzhen, China
18.11. – 21.11.2025	**productronica**, Munich, Germany

Dates

Here you will find the current dates for trade fairs and events.

We look forward to welcoming you at one of our next events!

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Rehm Worldwide

As a leading manufacturer of innovative thermal system solutions, we have customers on every continent. With our own locations in Europe, the Americas and Asia as well as agencies in 24 countries we are in position to serve the international markets quickly and to offer outstanding on-site service – worldwide and round the clock!

June 2025. Technical changes without prior notice. Art.-No. 1105957