

2023

GLOBAL SOLUTIONS OF KANSAI HELIOS

TrueColours



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CHANGE**

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CAN BE A CLOSET

FULL OF MEMORIES



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True Colours
2023

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Part of  KANSAI
PAINT

Dear readers,



The International Monetary Fund (IMF) does not paint an overly optimistic picture of economic growth in 2023, nonetheless we would like to spread some optimism in this issue of TRUE COLOURS. The economic engine will keep turning, maybe a little slower, but it will keep turning. The reason for this is the many innovative projects and new approaches that companies are developing and implementing to cushion crises and to recover after the crisis. We have picked out some of these projects and approaches in this issue of TRUE COLOURS for your inspiration.

In an economic environment with significant and ongoing changes in customer behaviour, economic conditions and supply chains, it is necessary to constantly evolve – because those who stand still will be overtaken by the competition. It is also crucial to promote a culture of innovation within the company: Every company can benefit from dynamic and agile organizational forms – not only service companies but also production companies. This is also beneficial for employee retention: When employees get to know a wide variety of areas in the company and feel included and heard, they develop new ideas – and innovation is based on fresh input.

Let this issue of TRUE COLOURS be your fresh input for 2023.

Junichi Kajima

President
KANSAI HELIOS Group Management Board

Junichi Kajima

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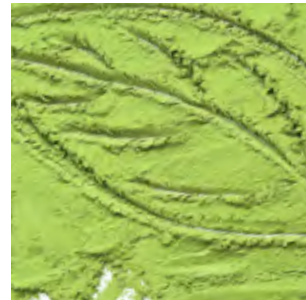
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PROGRESS

“Progress is impossible without change, and those who cannot change their minds cannot change anything.”

George Bernard Shaw

Playwright, critic

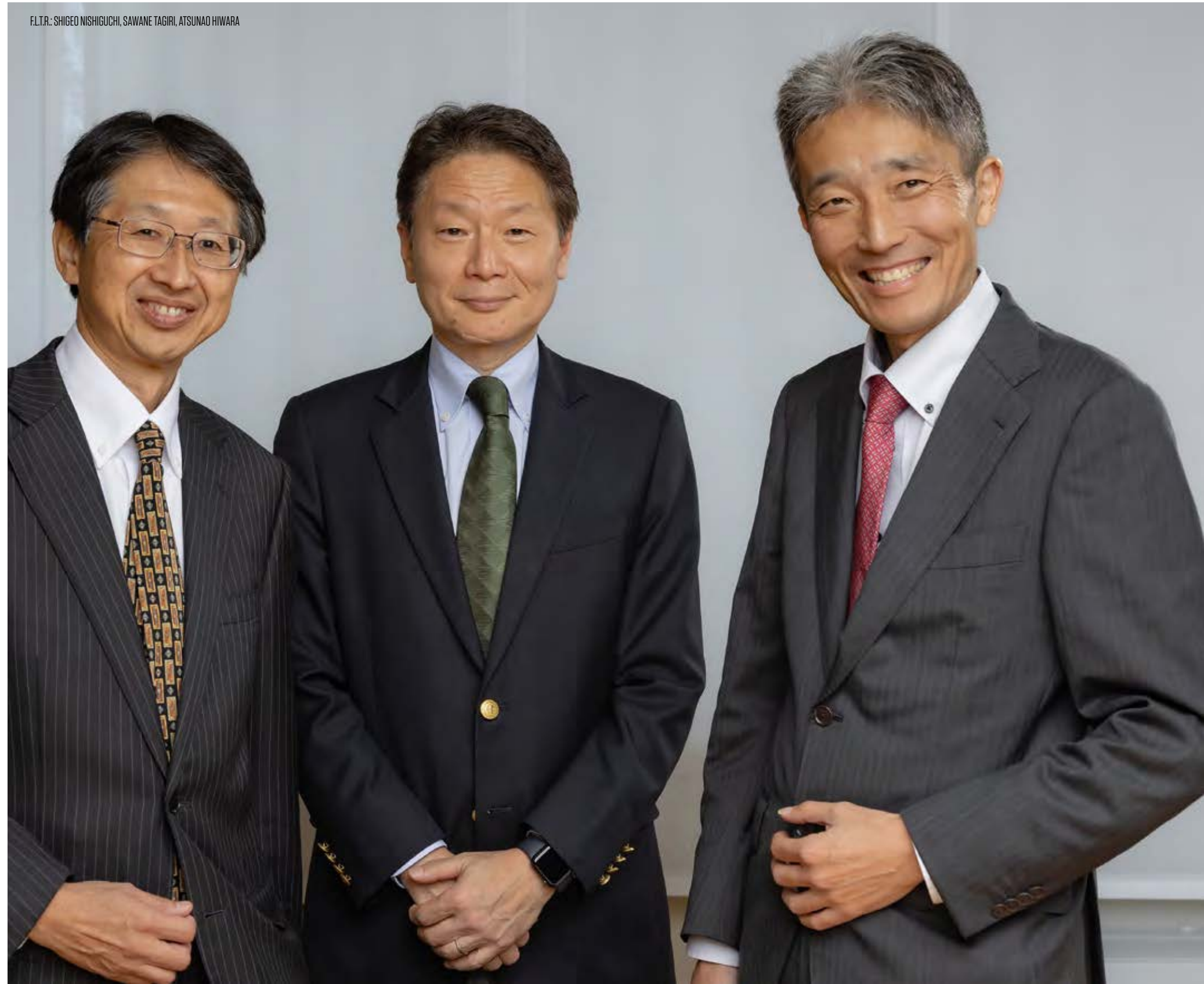
AN INTERVIEW WITH MANAGEMENT REPRESENTATIVES OF KANSAI PAINT JAPAN: MR. SAWANE TAGIRI, MANAGING EXECUTIVE OFFICER AND CHIEF OF CORPORATE RESEARCH AND DEVELOPMENT, MR. ATSUNAO HIWARA, GENERAL MANAGER OF CORPORATE RESEARCH AND DEVELOPMENT / R&D DIVISION, AND MR. SHIGEO NISHIGUCHI, DIRECTOR OF R&D DIVISION / FUNDAMENTAL RESEARCH LABORATORY NO 1. DEPARTMENT.

Megatrends and how they impact the coatings business

Cornelia Camondo-Weifshapl

It seems as if change has never happened faster than it does now. However, by identifying and developing options and activities to adapt to climate change, rethinking values, developing the working environment and being able to respond in a swift yet deliberate manner, challenges can be transformed into new opportunities. In the following interview, Mr. Tagiri will answer which impacts global megatrends have on the coatings industry.

F.L.T.R.: SHIGEO NISHIGUCHI, SAWANE TAGIRI, ATSUNAO HIWARA





Mr. Tagiri, you are the Managing Executive Officer and Chief of Corporate Research and Development of KANSAI PAINT Japan. The megatrend of ecology is establishing a new set of values that extends into every area of our everyday lives and affects purchasing decisions, social morals and corporate strategies. Special focus is placed on sustainability, which then leads to changes in the codes of global society, culture and politics, and fundamental realignment of entrepreneurial action and the entire economic system. How does this trend affect product development in the chemical industry? Traditionally, one of the roles of paints and coatings was to extend the lifespan of goods. Therefore, this industry contributes greatly to a more sustainable world. Furthermore, the reduction of CO₂ emissions is one of the main goals of sustainability management to reduce the environmental impact of products. To achieve this goal, special coating solutions, specifically powder and water-based paints, are used. However, the changes in the global environment are greater than we have anticipated. We are called upon to rethink the very nature of our social development. The chemical industry, which until now has been using raw materials

derived from petroleum and other mineral resources, needs to make substantial changes in various areas, including product design, raw materials, manufacturing, distribution and sales. We believe that it is our challenge but also our opportunity to fundamentally review our own value chain to meet future needs of our customers and of society and also to provide new value for them.

With the 2030 Climate Target Plan, the European Commission proposes to raise the EU's goal of reducing greenhouse gas emissions. By 2030 they should fall at least 55% below 1990 levels. In your opinion, what are the three biggest challenges for the coatings industry in connection with the climate target plan and what contribution can the coatings industry make here?

We know that the EU has set high goals when it comes to dealing with climate change, but we believe that this is a global movement. At KANSAI PAINT Group we see this issue as a common challenge and we have estimated the CO₂ emissions of all processes that use raw materials,

“WE ARE BEING CALLED UPON TO RETHINK.”

of production and distribution of architectural and automotive paints. In the group of architectural paints, emissions from raw materials, (scope 3, category 1), accounted for 95.5%, while in automotive paints, 82.3% were emitted during paint use, (scope 3, category 11), and only 16% of emissions came from raw materials, (scope 3, category 2). Therefore, we will continue to work with our customers and suppliers to further reduce GHG emissions and VOCs and thus the environmental impact of our products. The goal is to enhance the intrinsic environmental value of paints and coatings, in addition to their original "protective" function. One focus will be on the paint production processes, scope 1 and 2. Furthermore, we will develop products with fewer GHG emissions, which are generated during the use of paints and coatings. We will also consider recycling and the use of green raw materials with low GHG emissions.

There are various approaches worldwide how to recycle paints and coatings, or use recycled raw materials in paint production. Our Green Powder solution at KANSAI HELIOS is also based on 100% recycled materials. Could you please outline how the recycling trend in the coatings industry will develop over the next 5 to 10 years?

Recycling of paints and the use of recycled raw materials are of utmost importance in regard to reducing GHG emissions. It is necessary to ensure a stable supply of raw materials. In the mid- to long-term, the paint industry is likely to continue this trend. We are sincerely

impressed with KANSAI HELIOS' efforts in this regard and we believe that Green Powder is a product that represents where the Group is heading in the long-term. We sincerely hope that KANSAI HELIOS can share its accumulated expertise in this area with the rest of the Group to continue to respond to the customer's changing needs.

With innovative technologies, industries are increasing the sustainability of their products. This also applies to coatings. Coating systems made from biomass instead of petroleum are already in use in the transportation industry, in automotive manufacturing and in the general industry. Are products made from bio-based raw materials the future or will other trends also prevail?

The Group's aim is to "realize decarbonization" and to upgrade the compatibility of resources and economic cycles. In this sense, we consider bio-based raw materials one of the most important resources. We believe that it is necessary to look at the entire life cycle of paints and to advance the effective use of resources and the circular economy.

It seems that globalization is regressing, at least for production companies. International economic relations increasingly suffer from fluctuating national interests. Is the trend "back towards local production and raw material sourcing" becoming a megatrend? How do you observe the global development and what is your prognosis for the future?

Throughout history, trends towards globalization and regionalization have

been swinging back and forth like a pendulum. However, nowadays, the changes are much faster and more significant. When considering the connection between globalization and global population growth, which leads to climate change and thus to increased geopolitical risks, we have concluded that what we need to do is to continue to gather wisdom and create a sustainable society. How we perceive these changes will determine our corporate existence. The Group needs to develop and implement strategies based on the assumption that these changes in the external environment will continue to occur. If we can become a company that can confront and respond to these changes at any time, no matter what happens, I believe that these changes are an opportunity for growth.

Across Europe, all industries, including the chemical industry, face a shortage of skilled workers. In your opinion, what measures could be taken to find talented people in this industry, to spark their interest in the chemical industry and, above all, to keep them in the industry?

We need to disseminate information on various occasions to gain recognition for the Group's philosophy and corporate values from as many people as possible. At the same time, it is necessary to recruit diverse human resources in a timely manner, not only in chemistry but also in various other fields, to respond to the ever-changing needs of the market. As an accepted workplace, we believe that it is also important to create a working environment in which employees can experience meaning and joy through programs like internships.



“WHAT WE NEED TO DO IS TO CONTINUE TO GATHER WISDOM AND CREATE A SUSTAINABLE SOCIETY.”

Speaking of keeping experienced talents in the branch, I would appreciate to hear your view on a company level. At least since the Covid-19 pandemic, the labor market has changed drastically. In Europe, we speak of an employee market. Potential workers choose the employer that best meets their needs. It is no longer just about salary but also about flexible working time models, childcare options and CSR concepts. How do you assess this development and what measures would you recommend to companies in the coatings industry to secure their human capital?

Management and employees need to have a deep mutual understanding of the company's policies. At the same time, the thoughts and feelings of the employees have to be understood as well. We believe the word "commitment"

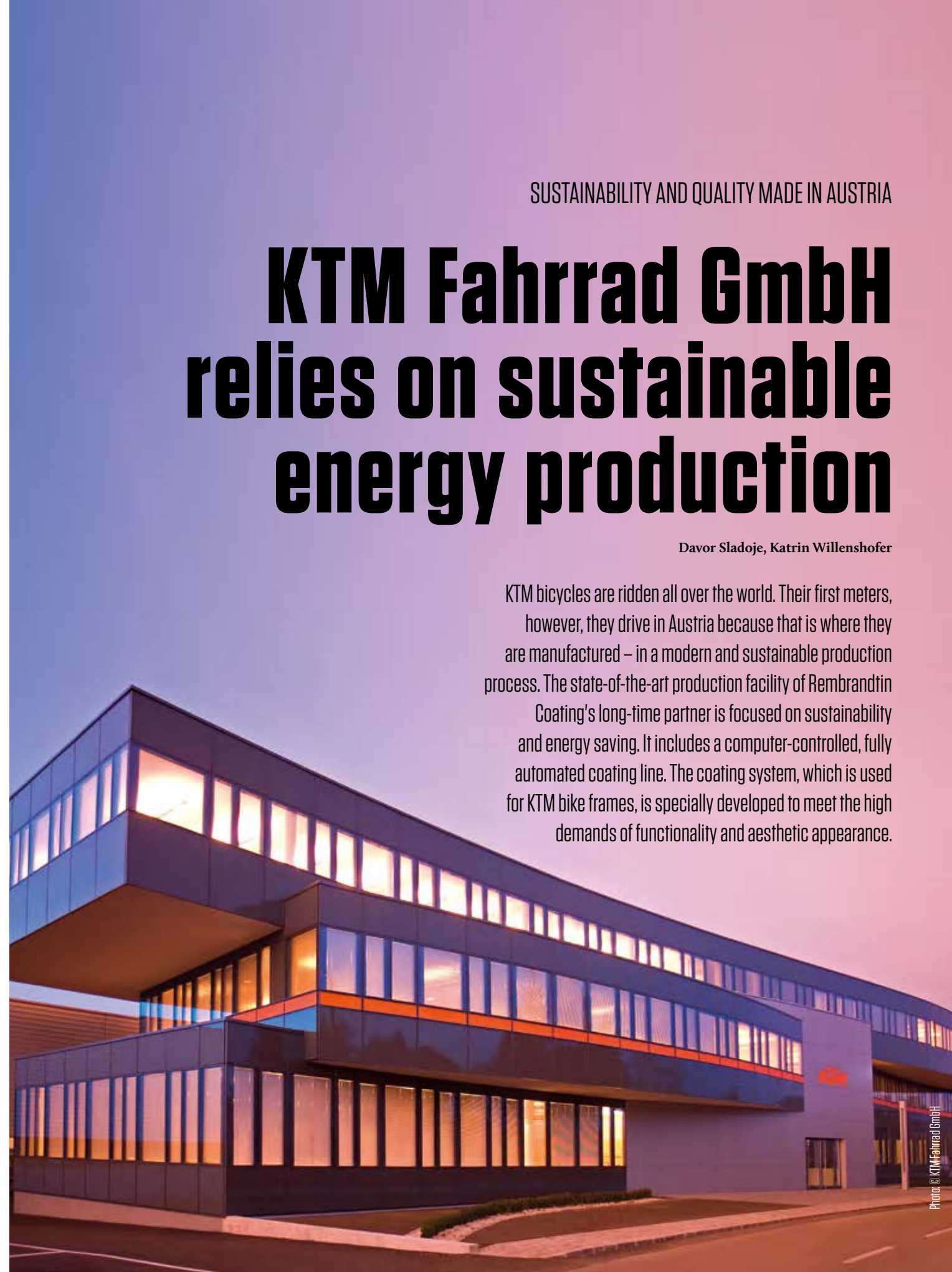
does not mean "employee satisfaction" but rather a relationship of mutual trust between the company and employees. That should be a two-way, not a one-way street. The first and most important step in this process is thorough communication between the company and the employees regarding questions like, where the company wants to go, what the employees want the company to become, and what should be done to achieve that goal. At KANSAI PAINT Japan, through various surveys, we were able to find out what our employees think about the current management and corporate systems and whether they feel that the organization is fair. It is very important to regularly check if the relationship between management and employees has been strengthened and that these changes are reflected in activities and actions. •

SUSTAINABILITY AND QUALITY MADE IN AUSTRIA

KTM Fahrrad GmbH relies on sustainable energy production

Davor Sladoje, Katrin Willenshofer

KTM bicycles are ridden all over the world. Their first meters, however, they drive in Austria because that is where they are manufactured – in a modern and sustainable production process. The state-of-the-art production facility of Rembrandtin Coating's long-time partner is focused on sustainability and energy saving. It includes a computer-controlled, fully automated coating line. The coating system, which is used for KTM bike frames, is specially developed to meet the high demands of functionality and aesthetic appearance.



ALL INVESTMENTS ARE BASED ON THE IDEA OF SUSTAINABILITY AND RENEWABLE, SELF-GENERATED ENERGY.

KTM Fahrrad GmbH is a globally operating bicycle manufacturer. The company focuses on environmentally friendly electric mobility and produces their bicycles sustainably with self-generated electricity in Upper Austria. Accordingly, KTM Fahrrad GmbH also attaches great importance to the selection of its suppliers and to the coating system of their bike frames. In the coatings industry, there is, like in other industries, a trend towards energy-efficient products. 2-component materials meet the requirements for energy-saving application particularly well. At Rembrandtin Coatings GmbH and throughout the KANSAI HELIOS Group, we focus on developing future-oriented, environmentally friendly and economical coatings that help our customers reduce their energy costs. These innovations can only be developed in close cooperation with our customers. Together, we create tailor-made products and innovations for the industry. Due to colour trends and surface appearance, the bicycle market is a particularly dynamic and exciting one.

For more than 14 years, KTM Fahrrad GmbH has been relying on the system solutions of Rembrandtin Coatings and KANSAI HELIOS. A specially aligned system of powder and liquid coatings meets the high demands for mechanical resistance and UV resistance as well as for a premium finish in the desired colour tones. The powder coating system

as well as the 1-component and 2-component water-based coatings are ideal solutions for the carbon and aluminium surfaces of bicycles. Due to the environmentally friendly characteristics of their recipe and of their application process, they fit perfectly into the sustainability strategy of KTM's bicycle production process.

"KTM Bicycle stands for the highest quality. To guarantee this high standard of quality in the long term, we need strong partners. Rembrandtin Coatings GmbH is a company that shares this aim. Due to partnerships like this, over a thousand bikes a day can leave our production hall in Mattighofen", says Matthias Grick, Marketing Manager at KTM Fahrrad GmbH.

Close to nature – through environmentally friendly energy supply

By investing in its own location, KTM further develops quality and service for their customers. In 2019 completely new production facilities were opened, followed by the opening of a logistics center. With these upgrades, two major milestones were set. In 2021, five construction projects, covering an area of over 20,000 m², were realized simultaneously. Expansions and renovations were made in the areas of production, including a completely new computer-controlled, fully automated paint line and additional buildings for product

development and customer service. This was followed by the opening of a new logistics building for the spare parts trade in 2022. Additionally, a new coating line has already been planned.

All investments are based on the idea of sustainability and renewable, self-generated energy by focusing on photovoltaics and the use of geothermal energy. With an output of up to 450,000 watts per hour under ideal conditions,

the photovoltaic system of KTM Fahrrad GmbH is capable of generating a large part of the electricity required for production operations. In combination with a water heat exchange system, the entire cooling and heating of the building can be done without external energy.

According to the motto "quality is a must", all of KTM's investments are a clear commitment to Austria as their location of production.

Thus, high quality products, which bear the seal "Made in Austria", are guaranteed. Almost every year, KTM e-bikes are honored with awards. For example, the KTM bike 2022, is the winner in the test of the Austrian VKI – (Verein für Konsumenten-Information/"KONSUMENT"). KTM has already won in 2018 and 2019 and therefore is the first company worldwide to win in this test for the third time. •



QUALITY IS A MUST. KTM BIKES ARE SUBJECT TO THE STRICTEST QUALITY CONTROLS.



THE PRIMER AND FINISH ARE APPLIED TO THE BICYCLE FRAMES IN THE FULLY AUTOMATED POWDER COATING LINE.



DURING THE CORONA PANDEMIC, THE DEMAND FOR BICYCLES EXPLODED. CURRENTLY, THE INDUSTRY LOOKS SPELLBOUND AT THIS POSITIVE DEVELOPMENT IN THE MARKET.

ABOUT KTM FAHRRAD GMBH

Bicycles have been produced in Mattighofen **since 1964**. Especially under the leadership of Mrs. Carol Urkauf-Chen, who has been the owner since 1996, KTM Fahrrad GmbH has become a global player. In 2018, Mrs. Urkauf-Chen handed over the management to her eldest daughter, Johanna Urkauf, and moved to the supervisory board of KTM Fahrrad

GmbH as chairwoman. More than **800 people** are employed at the several locations of KTM Fahrrad. Furthermore, the company has a very high level of innovation. For many years, **over 40%** of sales have been generated with products that did not exist a year earlier. In the current model year **2022**, the company management plans to build **460,000** high-quality KTM bicycles and KTM e-bikes to ensure another record turnover.



OVEN MANUFACTURE IN THE “HOTTEST” PHASE

Dealing with the increasing demand for woodburning stoves

Thorsten Weier, Christian Ritter

Wood stoves are currently experiencing a true renaissance. This trend is also reflected in figures from the Federal Association of the German Heating Industry (BDH). According to their data, 41 percent more biomass appliances were sold in 2021 than in 2020. This represents the biggest increase in the heating sector. This trend can not only be observed in Germany but in whole Europe. For wood stove manufacturers, this means demand has suddenly risen to record levels. For their customers, this consequently means waiting times of up to a year. However, for the coatings industry it means a stable and gratifying order situation.

Currently, the topics of energy saving, independent and ecological heat supply as well as blackouts are coming to the fore. As a consequence, more and more people are looking for furnace alternatives or more modern and cost-efficient heating solutions. The demand for wood or pellet stoves is, therefore, strongly increasing. Wood-burning stoves for logs or pellets are, as long as a flue is available, a relatively uncomplicated and easy-to-implement option for heating with renewable energies. The high demand for stoves is leading to increased production and thus to an increase in the demand for high-heat resistant coatings, a specialty of KANSAI HELIOS and its daughter company Rembrandtin Coatings.

Manufacturers and their burden of a high demand
Due to strong demand growth, oven manufacturers have largely expanded their capacities. Nevertheless, there is a delivery backlog at many brand suppliers. In some cases, ovens cannot be delivered or installed until spring or summer. However, unlike in many other industries, this is not due to a lack of raw materials or components. Instead, oven manufacturers face different challenges. As in many other sectors, there is a shortage of skilled workers. In addition, machine running times cannot be fully utilized or there is a lack of additionally required machines.

Rembrandtin, a specialist for high heat resistant coating systems and a long-term partner for renowned manufacturers in this

branch, knows the challenges of its customers and can offer them targeted and unrestricted support with regard to one essential raw material: high heat resistant coating systems. However, it is not only the products in premium quality which help customers to satisfy their clients but also the technical service, continuous support and flexibility in terms of delivery. Currently, the latter is in particularly high demand, as customers often expect fast delivery of their coating orders. For coating producers, this poses a major challenge in production planning and warehouse management. The ovens can only be delivered when all parts have been coated. Due to limited storage capacities, it is, therefore, always necessary to produce at short notice, so customers do not experience bottlenecks and thus a delivery stop.



SINCE OVEN MANUFACTURERS HAVE TO DEAL WITH HIGH ENERGY COSTS THEMSELVES, COATING PRODUCERS ARE CHALLENGED TO OFFER PRODUCTS THAT KEEP PROCESS COSTS LOW.

Despite the current challenging situation, oven manufacturers are optimistic about the further development of the market. Due to the high demand, manufacturers are still working to full capacity until well into summer and can plan accordingly.

Future trend versus legal situation

It is clear that energy costs will not fall any time soon. Thus, the demand for stoves and ovens will remain at a high level for a long time to come. However, the trend could be slowed by the likewise rising prices for wood and pellets. It is still unclear if the use of wood stoves will be affected by legal regulations. Since wood combustion produces particulate matter, it is possible that some wood stove types will be banned or prices will rise dramatically due to the mandatory installation of filters. Whether and how the legislator will intervene is not yet foreseeable. Since manufacturers have to deal with high energy costs themselves, coating producers are challenged to offer

coating systems that keep process costs low. At Rembrandtin Coatings, this request is answered with product solutions that offer a very fast drying time at room temperature.

As stoves increasingly adopt the status of furniture, more emphasis is placed on appearance as well as on durability and scratch resistance of surfaces. "For these

requirements, we are also able to offer appropriate coating systems and trials are already run to optimise them even further. One example is a 'no-fumes system' with a glossier and a more resistant surface than the conventional high heat resistant varnishes", says Thorsten Weier, Senior Sales Manager for High Heat Resistant Coatings at Rembrandtin Coatings. •



NEW CHALLENGES FOR THE RAILWAY COATINGS INDUSTRY

Ultra-high-solid coatings as an eco-friendly and economical alternative

Roland Taitl

In all industrial sectors, and thus, also in the railway industry, there is a clear trend towards cost reduction, energy efficiency and environmental protection. Ultra-high-solid products can make an active contribution to this development. Especially in times of rising energy costs and CO₂ taxation, these products have great advantages compared to water-based coating systems. The chemical industry, in particular the coatings industry, plays an essential role in supporting OEMs and their suppliers to fulfil the highest environmental, quality and design standards.

KANSAI HELIOS draws from decades of experience in the railway coatings business. With our brands Rembrandtin and wefa, the latest member of the group, we cover the entire spectrum of railway coatings in Europe, with approvals from rail operators worldwide. The coating systems are used in more than 40 countries, on and in high-speed and regional trains, locomotives, metros, streetcars and track construction vehicles. They meet all requirements in terms of functionality and design for interior and exterior surfaces. On surfaces, corrosion protection, anti-graffiti properties, UV resistance and colour stability are as important as high-quality appearance and design innovations.

Based on our knowledge, we invest intensively in our R&D to develop innovative, environmentally friendly and economical coatings for our customers. Together, we make a significant contribution to the further development of the railway industry with particular attention to environmental protection, sustainability, economy and quality.

Water-based coating systems – a long-term trend reaches its limits

Liquid coatings, and especially water-based systems, are still proven systems for railway coatings. Compared to solvent-based coating systems, waterborne coatings meet the requirements of the VOC directive and thus make a significant contribution to

environmental protection. Due to intensive research and development work by experienced coating specialists, water-based coatings are in no way inferior in quality to their solvent-based counterparts. They meet all requirements in terms of corrosion protection, durability and appearance and comply with current standards. Nevertheless, water-based coatings also have a downside.

Due to their composition, the drying time is relatively long. For the coating of new vehicles, approximately 5 days are needed, depending on the objects, coating structures and the respective designs. To meet specified cycle times, forced drying at high temperatures is required. This step in the coating process is, therefore,



Photo © Ruesch

particularly energy and cost-intensive.

Current coating systems still have great potential for reducing drying times in primer, filler, clearcoat and pigmented topcoat. To meet specified cycle times and the performance requirements in paint stores, forced drying at high temperatures is necessary. The drying temperature depends on the respective products, layers and production processes. For a primer, for example, depending on further processing, forced drying at 50 to 60 °C for a period of 3 h is required. These are the usual drying conditions, when further coating is subsequently carried out with polyester fillers. For UHS products (Ultra-high-solid products), these drying times and temperatures can be reduced

to 1.5 h at 40 to 45 °C. The advantage is even greater with topcoats and clearcoats. Currently, drying is carried out at 50 °C for 3 to 4 h (depending on the further treatment of the coated components). With UHS coatings of the newest generation, the same degree of drying can be achieved after 60 minutes at room temperature.

High solid content, high quality, low costs UHS systems are the latest result of intensive research and development work in the coatings industry. Based on state-of-the-art binder technologies, these high-performance coatings offer the ideal alternative to water-based coatings and also have many other benefits.

COMBINED RAILWAY COATINGS KNOW-HOW – FROM SPECIAL ANTI-GRAFFITI COATINGS TO ULTRA-HIGH-SOLID SYSTEMS AND SPECIAL METALLIC EFFECTS: TOGETHER, THE BRANDS WEFA AND REMBRANDTIN COVER EUROPE'S FULL RANGE OF COATING SYSTEMS.





Excellent corrosion protection and other characteristics of UHS systems
 Strict regulations apply to the railway industry with regard to corrosion protection. UHS systems meet all the requirements for this industry and achieve the same corrosion protection values as conventional products. Their climate and corrosion resistance has been proven, for example, in salt spray tests lasting 1,000 h in accordance with EN ISO 9227. Depending on the coating structure, the requirements of various classes of EN ISO 12944 (corrosion

protection of steel structures by coating systems) and all requirements of Deutsche Bahn (DB) can also be met. The solvent content of UHS systems is less than 15%, making their VOC values, calculated based on the coated area, comparable to water-based coatings. Reactivity and drying speed can be positively influenced with UHS products. Drying is already possible at room temperature. Calculations show an energy saving potential of up to 70% compared to water-based coatings and thus also a corresponding CO₂ reduction. •



ULTRA-HIGH-SOLID SYSTEMS ARE AN OPTIMAL CHOICE FOR A ENVIRONMENTALLY-FRIENDLY COATING SOLUTION THAT MEETS HIGHEST QUALITY REQUIREMENTS AND ENSURES STABLE PRODUCTIVITY IN THE COATING PROCESS.



In addition to cost-effectiveness, the railway industry benefits in particular from the flexibility, adaptability and combinability of UHS systems. The essential coating properties, such as UV stability, mechanical load-bearing capacity and chemical resistance (cleaning agents and graffiti protection), are comparable to those of tried-and-tested coating systems. The processing parameters of ultra-high-solid materials are specially adapted for painting very large surfaces and are therefore ideally suited for rail vehicles. In a multi-layer structure, a combination of these new products with the standard materials is

possible. For example, the UHS-based primer and filler can be combined with a waterborne basecoat and a high-solid clearcoat, ensuring optimum protection and a perfect finish. The formulation options for UHS products are more flexible and varied than those for water-based products. This makes an adaptation to the application conditions of the user much easier. To support and consult customers in the best way and directly on their premises, Rembrandtin Coatings GmbH has invested in a state-of-the-art spraying unit for two-component UHS products with short pot life. This unit is used on the customers' premises for on-site test application.



AT INNOTRANS 2022, KANSAI HELIOS PRESENTED THE WHOLE COATING SPECTRUM OF ITS BRANDS REMBRANDTIN AND WEFA: FROM METALLIC EFFECT COATINGS TO ECONOMICAL SPECIAL SOLUTIONS, SUCH AS ULTRA-HIGH-SOLID COATINGS AND WATER-BASED COATINGS.

MA(R)KING THE ROAD INTO THE FUTURE

Autonomous vehicles and the demand for a well marked infrastructure

Hubert Culik

Imagine reading your favorite book in the car on the way to your next appointment, or writing a few e-mails before your first meeting at the office, or just closing your eyes for a few minutes while parking at the mall. And now imagine doing all that in the driver's seat while your car does all the driving tasks without your intervention. Even though it will take some more time before this imagination will become reality, the development of autonomous driving is progressing rapidly. With them, the importance of efficient, safe and durable road markings is also increasing.

Autonomous cars are no longer just science fiction. Manufacturers and renowned high-tech companies are focusing on the development of self-driving vehicles. However, the self-driving vehicle revolution is not only dependant on development of ever smarter cars, but it is also a matter of road infrastructure adaption – in particular, of road construction, markings, signs and routing. Linking road infrastructure

and vehicles aims to improve traffic flow and reduce emissions. It should also make traffic safer and our journeys more comfortable.

From the active driver to the passive passenger: 5 levels of automated driving

The Society of Automotive Engineers (SAE) differentiates five levels of driving automation – ranging from level zero, where the driver is fully responsible

for all driving tasks, to level five, which means entirely self-driving vehicles. Developments and processes in this technology are not only related to technological aspects but are also subject to social and political issues.

In Level 0, Level 1 or Level 2, an committed driver is needed who has full responsibility for the driving operation. In this case, the person must take complete control of the vehicle. Vehicles of Level 3,

Level 4 and Level 5 are not yet in use in the ordinary road traffic in Europe. Vehicles of this level will be equipped with an automated driving system (ADS). This means that the vehicle takes full control of the driving process and no human supervision is required. With Level 3, however, the driver must be prepared and able to take control of the vehicle if it tells them to do so or gives a warning signal.

International standards bodies are pushing on standardization of road markings

Currently, camera and lidar are the only sensors for the detection of road markings. Even the most advanced vehicles equipped with high-resolution maps need such sensors to detect road markings and traffic signs. However, the markings and traffic signs on roads are not uniform across the

TO ENSURE A SAFE AND RELIABLE AUTONOMOUS DRIVING IN THE FUTURE, ROADS NEED TO BE IMPROVED IN TERMS OF COLOUR TONE, CONTRAST RATIO, RETROFLECTIVITY AND BRIGHTNESS OF THE MARKINGS.

EU. To improve the reliability of sensor genes, uniform markings and signs must be created. Among others, the width of the marking lines as well as the dotted lines at freeway exits and the gap width for broken lines should be unified.

To ensure safe and reliable autonomous driving in the future, thousands of kilometers of road need to be improved in terms of colour tone, contrast ratio, retroflectivity and brightness of markings. Damaged, interrupted or faded markings already are a potential danger today. However, for self-driving cars of the future, they are even more dangerous. While humans can interpret and draw conclusions, machines need clear inputs based on modern technology. Subsequently, this also means clearer and stricter guidelines for maintenance measures and intervals are needed.

Furthermore, the improvement of road markings in construction areas is currently in the spotlight. Reliable and consistent machine readability for automated or assisted driving should be reached. Within the EU, plans are in progress to design and maintain road signs and lane markings that can be recognized not only by human drivers but also by vehicles equipped with driver assistance systems or higher levels of automation. However, the discussion

about road infrastructure improvements does not end at EU borders – they are a global topic.

"We really need better lane markings. This is crazy." Tesla CEO Elon Musk told reporters as he showed them a section of the 405 Freeway in Los Angeles. He was apparently referring to two intersecting lane markings that his company's autonomous vehicles could not properly detect and thus ran the risk of veering off the roadway.

Changes in the US MUTCD (Manual on Uniform Traffic Control Devices)

According to Bloomberg data, "US motorists do only a quarter of their driving at night, but roughly half of all deaths on the road take place after dark." (www.bloomberg.com). Most of these fatal crashes occur due to vehicles leaving the edge of the roadway or crossing the center line.

A new Federal Highway Administration set up a new rule in the Manual of Uniform Traffic Control Devices (MUTCD), which aims to make lines brighter and thus promotes safety, inclusion and mobility for all transportation users. It sets a minimum standard for the retroflectivity, which is the amount of light that is reflected, of pavement markings. •

“GREEN POWDER”

A significant contribution to the circular economy

Michael Bartsch, Stefanie Hamann

“Earth Overshoot Day” is the day in the year when humanity has used up what nature can provide during the course of one year. In 2022, that day was on July 28th, earlier than ever before. This overuse by humanity is getting worse every year. However, the government and the industries set goals and take measures to counteract this negative development. The chemical industry is striving for environmentally friendly developments. Not all companies show the same level of commitment but there are chemical companies which put great effort into developing environmentally friendly products. So does KANSAI HELIOS as part of its ESG strategy. One innovative design is the so called “Green Powder” – a particularly sustainable and environmentally friendly powder coating solution.

“ALMOST 100% OF THE POWDER COATING CAN BE FED BACK INTO THE APPLICATION PROCESS.”

KANSAI HELIOS Germany, one of the production units of the KANSAI HELIOS Group, has been specialized in the development and production of powder coatings for many decades. Now, the company has combined its comprehensive know-how for the development of a new powder coating product. Powder coatings already have many ecological benefits and a comparatively low negative impact on the environment, as they are free from any solvents and do not contain VOCs. What makes “Green Powder” so innovative are the special resins ingredient and some additives, which both consist of renewable and recycled raw materials.

Renewable and recycled raw materials
While the fillers included in “Green Powder” are already of natural origin and free from other fossil components (except for extraction and transport), their resins are polyester resins produced from renewable bio-based monomers and recycled PET. Thus, the use of fresh fossil fuels can be widely eliminated – again with the exception of the manufacturing process and transport. Powder coatings and “Green Powder” in particular enable that overspray materials are reused in production. Almost 100% of the powder coating or its resulting overspray can be recovered in the application process and fed back into the process. Consequently, a very small amount of waste is produced. Therefore, the “Green Powder” coating solution makes a significant contribution to the circular economy.

“GREEN POWDER” INCLUDES POLYESTER RESINS PRODUCED FROM RENEWABLE BIO-BASED MONOMERS AND RECYCLED PET.

“Green Powder” in all colours!
KANSAI HELIOS’ “Green Powder” comes in two different variations: as a mixed polyester-epoxy powder and as a pure polyester powder coating based on resins and hardener. Due to the stoichiometry, the polyester resin content is lower and thus the percentage of renewable or recycled raw materials. Depending on the binder content, the proportion of renewable and recycled raw materials can be between approximately 37% and 47%. The green polyester-epoxy powder coatings are in no way inferior to “conventional” powder coatings. All common colours, gloss levels and, of course, low-temperature systems with a 160 °C curing temperature are possible. However, due to the somewhat inherent darker coloration of the resin, white shades are not feasible.

Its special characteristics make this powder coating system highly efficient in terms of reduced oven times and temperatures as well as energy savings. In addition, levelling and mechanical properties are nearly comparable to those of “conventional” hybrid powder coatings.

Pure polyester – powder coatings based on resin and hardener:

The stoichiometric ratios of this “Green Powder” type result in a significantly higher resin content and consequently in a higher proportion of renewable and recycled raw materials. Depending on the choice of binder, the product contains between 52% and 67% of biobased raw materials. This formulation results in weather resistant powder coatings of industrial quality.

Pure polyester powder coatings are roughly comparable with “conventional” industrial powders. In terms of colours, they have the same limitations as hybrid powders when it comes to white shades, because the inherent dark coloration of the resin interferes. Furthermore, only high to silk gloss levels can be reached with this systems so far. Pure polyester powder coatings offer good mechanical and surface properties.

Due to their characteristics, both hybrid and pure “Green Powder” types offer a good alternative to conventional powder coatings – especially for those who value sustainability and environmental protection and want to reduce their ecological footprint by using environmentally friendly industrial product solutions. •

SUCCESS

“It is not where you start but how high you aim that matters for success.”

Nelson Mandela
Politician

HOW A STAR WAS BORN

Helios Srbija a.d. celebrates its 70th anniversary

Jadranka Orlović, Mina Marković

Helios Srbija a.d. has a long tradition as a specialist for coatings. Since its establishment, it has passed through numerous changes. A clear focus on customer service and continuous product development are the reasons for the company's growth and their expansion into new areas and segments. We invite you to accompany us on a journey through the 70 year long history of one of Serbia's leading coatings manufacturers. The business started "under a good star" and today the company is still growing and recently bought a new brand to further enrich its already wide product portfolio.

Helios Srbija a.d. was founded in 1953 in Gornji Milanovac, Serbia under the name Granit. It originally operated as a company for stone processing as well as cube and non-metal production. Soon after its founding, it started with the production of façade and interior wall paints. In 1956 the company was renamed to Zvezda, meaning "star" in Serbian. Very quickly, the company developed to a literal "star" on the coatings market and still holds this position today. By using the latest technological achievements in the production of retail and industrial paints and varnishes, Zvezda developed and expanded its product range constantly. By now, it has grown to an expert manufacturer of architectural coatings, wood coatings, metal coatings,

powder coatings and road marking materials.

Zvezda's successful path quickly became visible in the industry. No wonder, that the brand caught the attention of various global coatings groups, among them also KANSAI HELIOS. Since 2003, Helios Srbija has been a member of KANSAI HELIOS. Today, the company offers system solutions for various types of substrates and has a well-balanced product portfolio in various architectural and industrial areas.

A unique coating production site in Serbia Helios Srbija a.d. successfully operates at two locations, in Gornji Milanovac and Belgrade. In addition to selling its products on the domestic market, the company exports them to 18 countries. The wide

product portfolio along with the excellent layout and the high number of markets, in which the company operates, are its key strengths.

One secret of the company's success is their dominant share of local production in its own production plants at Gornji Milanovac. This fact makes Helios Srbija unique on the Serbian coatings market. In 2022, more than 30,000 tons of coatings were produced at this site, including powder and liquid coatings, alkyd and water-based architectural coatings, nitro coatings, road marking materials, industrial metal and wood coatings as well as some auxiliary car refinishing paints. This wide product assortment makes the production highly complex. Therefore, modern production processes, which are aligned



THE DOMINANT SHARE OF LOCAL PRODUCTION IN ITS OWN PRODUCTION PLANTS MAKES THE COMPANY UNIQUE ON THE SERBIAN COATINGS MARKET.

with KANSAI HELIOS standards as well as European standards, are implemented. Processes, incoming quality of raw materials, intermediate quality during the production process and the final products are subject to strict and standardized controls. This ensures that all parameters are within the defined values and that products are certified by competent institutions. Thus, all product solutions are of constant quality.

Helios Srbija is the only authorized distributor of KANSAI HELIOS products in Serbia, and is therefore also distributing products of sister companies of the group. In the past years, continuous growth of sales in all segments was recorded. Now, the share of sales on the Serbian market and of exports is in the ratio of 50:50.

New challenges at the threshold of the company's eighth decade

The start of the eighth decade of existence includes new challenges but also new chances. At the very beginning of 2022, Helios Srbija became the new owner of the brand Zorka Color, including its assets, recipes, the complete technological process

and know-how, stocks of finished products and raw materials. This acquisition created the perfect conditions for significant growth for the future.

Beyond the borders of Serbia, Zorka Color has established as a renowned quality brand for paints and coatings. The brand offers a comprehensive and valued portfolio for professionals and end customers, mostly in the segment of architectural coatings. The transfer of all included processes by Helios Srbija, from the raw material takeover to the technological equipment and recipes, was exemplary. With this strategic move, Helios Srbija doubled its production output and has become the third largest company in KANSAI HELIOS in terms of sales. Furthermore, the transfer made the company one of the most respectable production sites in Serbia and the wider region. "This step is another milestone in the 70-year history of the company and one of the biggest success stories in 2022. However, we do not want "to rest on our laurels" but let this success provide tailwinds for our further development", says Vladimir Simić, Managing director.



ZORKA COLOR IS A RENOWNED PREMIUM BRAND, OFFERING A COMPREHENSIVE PRODUCT PORTFOLIO FOR PROFESSIONALS AND END CUSTOMERS.

Continuous investments in a greener and more sustainable future

In alignment with the ESG strategy of KANSAI HELIOS, there will be continuous investments in production, logistics, safety and environmental projects. Due to past investments, the company has already realized a significant number of projects. Many of them improved energy efficiency, increased productivity and supported monitoring of all important parameters during production. These changes as well as the expansion of production and warehouse capacities and the introduction of modern technologies, helped to optimize production processes. Furthermore, higher product quality and significant energy savings were achieved.

Like the whole group, Helios Srbija takes specific measures in all business units to preserve resources and reduce negative effects on the environment. Moreover, there is a focus on the establishment of healthy and efficient

relationships and positive energy in the workplace. A good working atmosphere is important for all employees and at the same time it forms the perfect basis for finding future talents.

As a socially responsible company, Helios Srbija strives to be of benefit to the local community to the greatest extent possible. For almost twenty years, the company has been organizing the "Zvezda Helios" painting workshop. At this event, school children of all ages are introduced to the world of painting and fine art in a playful and creative way. Some of their artworks still decorate our premises. Moreover, Helios Srbija is a long-term sponsor of the volleyball club "Takovo – Zvezda Helios". In 2021, they even performed in the elite ranks of the Super League of Serbia competition.

"It is one of our greatest goals to make a contribution to society in various fields, such as health, education, culture or art. However, children and a healthy lifestyle

are our key focuses when it comes to long-term partnerships", Vladimir Simić explains.

Helios Srbija continues its operations with optimism and big plans. There is still room to increase the volume of production and to improve customer service, logistics functions, distribution channels and the use of internal resources. There is great potential in utilizing all synergistic opportunities within KANSAI HELIOS and KANSAI PAINT.

Despite the uncertainties in the global economy, the company is committed to innovation, quality and confidence, drawn from 70 years of experience. By continuing its successful and proven path with frankness and foresight, the future of Helios Srbija will not be "written in the stars" but our long-term expertise and continuous will to improve form a solid basis for its prospective employees, business partners and customers. •



FROM SURVIVAL TO SUSTAINABLE GROWTH

The coatings market in Ukraine

Oleksii Ilchuk

Against the backdrop of the war in Ukraine, the coatings business in the country is undergoing huge transformations and is at the same time preparing for unpredictable challenges. Fortunately, the production facilities of Helios Ukraine in Cherkasy city have remained unscathed. Operations work in full compliance with the safety measures to keep the companies' functionality, provide employees with income and support the local community and the country through taxes. As one of the leading manufacturers of coating products in Ukraine with a long and successful history, Helios Ukraine is intensively committed to continuing the working processes, improving and modernizing production and overcoming all temporary difficulties.

AS SERIOUS AS THE SITUATION IS, SITTING BACK AND COMPLAINING IS NOT THE SPIRIT OF THE TEAM IN HELIOS UKRAINE.



Under the current circumstances Helios Ukraine has to consider some new global problems, such as the devaluation of the national currency and increasing structural inflation processes. However, the biggest negative impact has the lack of raw materials and an interrupted regular supply chain both with suppliers and customers. All of this is accompanied by a rapid increase in the costs and availability of energy resources. The energy supply and reconfiguration of production facilities for different types of energy are two of the biggest challenges for the industry.

The loss of some enterprises in the south and east of the country, including both the manufacturers of goods and trading companies, became a serious problem for the segment of industrial coatings. Furthermore, the functioning of several industries, including big industrial coatings customers, is limited. These are, first and foremost, road construction, metallurgical, heavy machine construction and furniture industries.

Between challenges, uncertainty and commitment

As serious as the situation is, sitting back and complaining is not the spirit of the team in Helios Ukraine. From the beginning of March 2022, the company has been taking clear steps towards the restoration and systematic operation of production and sales. Several chemical

and coatings production facilities as well as warehouses in Ukraine were destroyed. Therefore, there is a shortage of certain types of products and pigments in the country and this limitation in the supply chain is very likely to increase in the nearest future. However, the goal is to maintain a stable production and supply. Thus, the company is adjusting the production to meet the increasing needs in the architectural coatings segment. Despite all difficulties, Helios Ukraine launched some new products, improved the recipes of existing bestsellers and continued their marketing support. Even a new Informational & Distribution Centre (IDC) was opened.

Architectural coatings: a chance in the middle of the crisis

The potential need for coating systems is expected to be huge in the future – not least for repair and reconstruction. Currently, one of the most promising segments is the one of architectural coatings. Decorative materials are currently a "sales engine". These are primarily water-based facade and interior paints as well as universal solvent-based enamels and primers with improved anti-corrosion properties. Trendy colours are in demand in the DIY business. This results mainly in an increase of the colour range of Miks Color products and in the expansion of tinting studios, both within the premises of Helios Ukraine dealers

and its own IDCs. Some new shades have appeared in the line of alkyd enamels (turquoise, khaki) and floor enamels (grey), also Miks Color 3-in-1 primer-enamel is now available in 9 colours, which is almost an USP on the market in Ukraine.

New market potentials for industrial coatings

In the segment of industrial metal coatings, the demand is slightly decreasing. This is due to the general decline of industrial production in Ukraine. Helios Ukraine localizes the production of particular systems that can satisfy specific needs of the Ukrainian market. A one-component primer-enamel ZP base WL for metal structures is one example. This product provides an increased anti-corrosion protection, an additional structural effect and good resistance to mechanical damage. Several coating systems for concrete structures of bridges, overpasses, road infrastructure and elements of shelters or buildings are in development. They are specially formulated to protect against carbonation of concrete and to offer resistance to CO₂ penetration as well as chemical resistance to alkaline. Despite the loss in some market segments, Helios Ukraine is focusing on new possibilities in new sectors. Coatings for metal packaging, metal pipes and industrial metal structures under construction are quite promising options, which are now in the spotlight.

ONE OF THE BIGGEST CHALLENGES IS TO MAINTAIN A BALANCE BETWEEN THE FORCED INCREASE IN PRICES AND THE PURCHASING POWER OF OUR CONSUMERS TO BUY HIGH-QUALITY COATINGS.

The situation in the wood coatings segment is more complicated. In addition to all general problems, the woodworking market and the furniture industry are experiencing a shortage in their supply and an increase in the price. Consequently, there is a clear reduction in the wood and furniture production and thus in the demand of coatings. This is a sensitive and challenging situation for the whole branch. Our coatings experts are in constant communication with their customers to provide trials and adaptations. However, there is also an expansion of the customer base through the cooperation with furniture manufacturers in Western Ukraine. For example, in the Zakarpattya region and at the new Informational & Distributional Center in Ivano-Frankivsk, Helios Ukraine provides wood coatings for local consumers as well as for producers who moved their business to the western part of the country.

Internal optimisations and improvements for a stable, safe and sustainable business operation

To meet the operational needs of our customers and avoid being out-of-stock in DIYs, Helios Ukraine regularly analyses customer needs. The company has also installed a safety stock for fast-moving products in the local warehouses. Following the fundamental values of the whole KANSAI HELIOS Group, Helios Ukraine ensures the production of environmentally safe coatings and their compliance with all regulatory documents. Additionally in 2022, the recipes of all materials have been adjusted to meet the requirements on



VOCs and the contents of lead in pigments even better. To improve working conditions for employees, the ventilation system in production areas was reconstructed.

One of the biggest challenges is to maintain a balance between the forced increase in prices and the purchasing power of our consumers to buy high-quality coatings. All these processes require constant coordination and control, which is reached through a strong focus on corporate communication and close interaction within the Helios Ukraine departments.

“With state funds and money provided by Ukraine’s international donors, the Ukrainian governmental authorities are taking steps for engaging national manufactures of building materials in the restoration of the damaged infrastructure. We are in close contact with local and governmental authorities. Despite this incomparable difficult situation, we are looking into the future with optimism. Ukraine will need coatings. And we want to support our country and community in the reconstruction. We take all new circumstances into consideration and due to the support of KANSAI HELIOS, we are able to gradually move from survival mode to the development and reformatting of production and to stable relations with our customers and partners. Ukraine was and still remains an open and attractive market for both local manufacturers and global brands. Therefore, when the war is over, we will continue our efforts with doubled energy to restore the country and expand the market for paints and varnishes of all kinds”, says Ivan Zlobov, Managing Director of Helios Ukraine. •

PAINTS GOING ONLINE

An e-commerce cooperation based on passion and honest advice

Jana Simonič, Kate Gaynor

Looking proudly at the fresh painted living room wall, enjoying the summer evening on the renovated wooden terrace, presenting the new facade to the neighbourhood – Who doesn't love these moments? With online shops, this can be achieved without having to stand in line at the retailer shop after too many minutes of wandering around for the right product choice. It's the same for clothes, electronics or even groceries – people like to shop online. Since the pandemic, this preference has grown even more. KANSAI HELIOS is also taking steps in the direction of e-commerce. One successful project is the one with the Irish company Advanced Coating Technology Limited (ACT).

ACT is one of the latest partners of KANSAI HELIOS. Owned by Managing Director Kate Gaynor, the company has been specialised in the supply of industrial coatings to the OEM sector in Ireland for decades. Over time it became heavily reliant on this sector. In 2017, in an effort to diversify the business, Kate first introduced a range of decorative paints to the company's product portfolio. This venture was initially unsuccessful, as the chosen brands were unknown in the Irish marketplace. In 2019, Kate made a second effort to make this diversification strategy a success by abandoning the B2B model they

had pursued for 20 years, and introducing the new products to the marketplace herself. ACT set up a paint store, The Paint Hub, and, for the first time, they sold directly to the consumer. This marked the beginning of their online and e-commerce journey.

The beginning of The Paint Hub

In the first months after the opening of The Paint Hub, sales were poor and very few customers visited the store. "We were surprised that we didn't have more customers. We were paint specialists after all. We thought that if we opened a paint store that people would come to us because

they would know that we had an in-depth knowledge of paint", states Kate Gaynor. However, that didn't happen. The shop was making a loss. "I knew we had great products, great people and a really well designed store, but people hadn't heard of the brands or products that we were selling. It was a real struggle. I felt that we had done everything right, I had even hired in staff 6 weeks before the store's opening date to ensure that everyone in the shop had exceptional training. I knew that if people entered our shop they would get the best paint advice possible, and would leave with products that would perform wonderfully for them."



"OUR BUSINESS IS BASED ON TRUST. WE DON'T RECOMMEND ANY PRODUCTS THAT WE HAVEN'T TRIED OUT AND LOVED OURSELVES."

KATE GAYNOR IS THE OWNER AND MANAGING DIRECTOR OF THE IRISH PAINT COMPANY, ADVANCED COATING TECHNOLOGY LIMITED (ACT). THE COMPANY WAS SET UP BY HER FATHER, PAT GAYNOR, IN 1995.

Kate identified two critical issues with the paint store: "First, people hadn't heard of the brands that we were selling and second, not enough people knew about the existence of the store." Running the store had caused the business to lose money for months now, so there was no budget for expensive above-the-line marketing, like radio, newspaper, TV or any other print media.

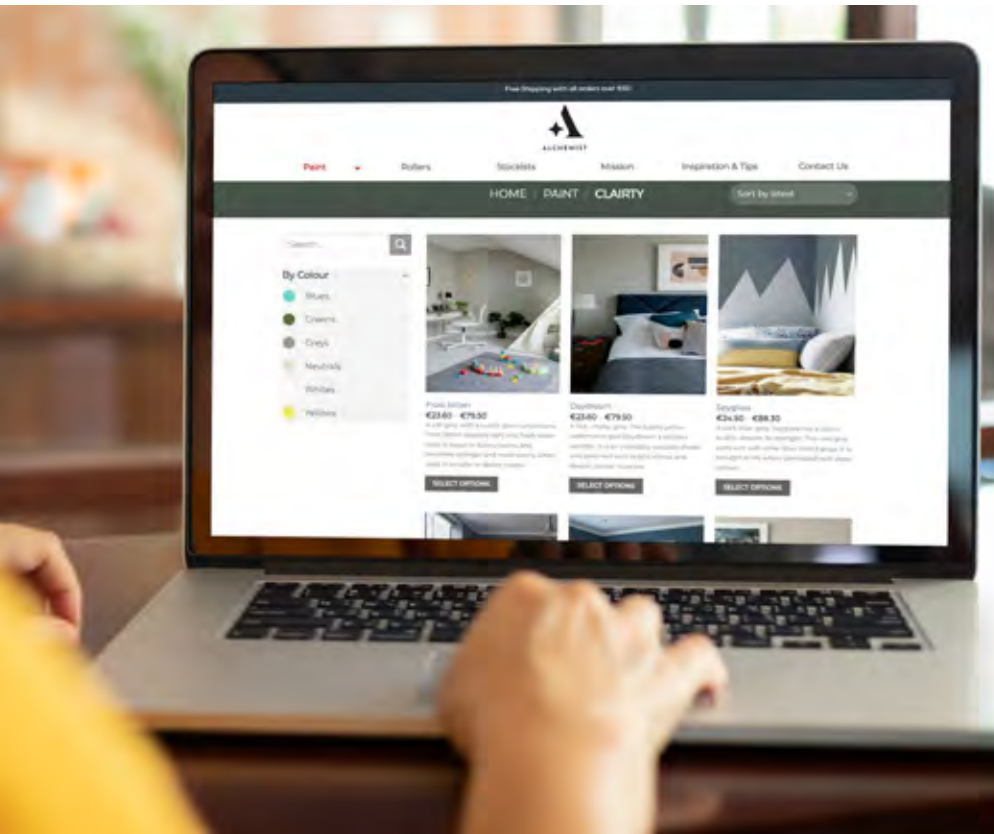
The only option to increase presence: going online

Going online was, Kate felt, the only option available to them. The overall aim of the shop was never to sell paint, it was to increase the presence of these brands on the Irish market and to prove to the paint shop owners in Ireland that these products could be sold. This also became the final goal for the online marketing campaign. "Plan A was always to continue our role as a specialist paint wholesaler. We didn't want to retail these products to

end users. We wanted our retail partners to do that, but they had yet to believe in the potential of our products, so we did it ourselves", says Kate. The online strategy was simple: to increase the brand presence of the products that they sold, so that the national paint stores which are already buying their industrial paint ranges, would also start to stock their new decorative paint ranges. The aim wasn't to sell paint online but rather to answer questions, such as what types of paints are good and why they are good. This involved a lot of product demonstrations. Kate knew that if they only talked about the products, people would lose interest, so they filmed themselves opening the products, using the products, testing them and talking about, for example, how they worked, how best to apply them and what products to pair them with. "You need to be your own customer first, use the products in your home, film the process, show people the products that you used, tell them why you

chose them, and how you applied them", explains Kate. Her first project was painting her downstairs bathroom walls and ceilings in a deep dark cavernous black colour. "Thousands of people tuned in every evening to see how I was progressing with this painting project. Many of them hated the colour, but they all tuned in, as they felt part of the process." For Kate, being authentic was critical to their success. "We didn't sell anything, we just spoke honestly about the products that we liked or didn't like and people responded positively to that honesty", she says.

Within one year of establishing themselves online, The Paint Hub was making approximately 90% of its sales online. After one year of being online, walk-ins amounted to less than 10% of their sales. "Our only cost was our time. We invested time in engaging with customers online and making content for them." As of 2022 the company's sales are split into 71% industrial and 29% decorative/wholesale.



IN THE MOOD FOR TRENDING COLOURS: ALCHEMISTPAINT.IE IS THE NEWEST PROJECT OF ACT, SHOWING A SPECIAL COLLECTION OF COLOURS AND PAINTS THAT HELP PEOPLE TO CREATE A HOME THAT THEY CAN FEEL GOOD IN.

Only loved products find their way into the shop

“Our business is based on trust. We don’t recommend any products that we haven’t tried out and loved ourselves.” Kate says that her passion is finding out what paint products work better than the rest, and which ones make life easier for painters and DIYers. Her role is to globally look for products that are new or innovative and then launch these products on the Irish market on a shoestring budget. Her competitors are mostly multi-billion euro companies, so she has to be very creative in her marketing efforts.

The latest project of ACT is the new online paint store Alchemist Paint (www.alchemistpaint.ie). “This is our newest venture, a wonderful range of paint products made for us by our

partners at Helios TBLUS in Slovenia. We responded to feedback from our Irish painters, both professional and DIY, and launched a small range of products focused completely on colour and mood.” Instead of a “show home”, people want a home that they can feel good in. This collection of colours and paints helps people to create this haven for themselves and their family. **“We have done everything differently with this paint range, we have really listened to peoples’ wishes.”** One improvement were mess-free, hassle-free testers. ACT introduced the very first “Peel & Stick Samples” to the Irish market. They take all the hassle out of testing colours in your home. You simply peel the backing off the large colour swatch and stick it to your walls. You can easily take it off again and see how

the colour looks in various locations in that room. The samples were a big hit with DIYers and painters alike.

“Moving forward, we feel that online and social media platforms will be increasingly important for maintaining and growing our business. They are our main method of communication with current and future customers. For businesses nowadays, their website and their presence on social platforms are their shop front. These online tools are the means by which you let people see who you are and what you have to offer. I use e-commerce in my business to show people that I am a passionate paint professional, who gives honest advice. When it comes to paint products, this has been a key part of our growth process as a company”, Kate says. •

ON THE WAY TO GREEN STEEL PRODUCTION:

A good practice example of a leading steel group

Angelika Rami

voestalpine is a globally leading steel and technology group and one of the leading partners of the automotive, electrical and appliance industries as well as of the aerospace and oil and gas industries. As a specialist for premium electrical steel, voestalpine has been relying on Rembrandtin core plate varnishes for many years. We are proud to work with customers who put great effort into innovative projects for the environment and in their CO₂ reduction, just as voestalpine does: greentec steel is an initiative of voestalpine with the intention of decarbonizing steel production. We provide you with a look behind the scenes of a CO₂ reduced steel production.



Photo: © voestalpine



AT THE BEGINNING OF 2027, CO₂ EMISSIONS WILL BE SIGNIFICANTLY REDUCED BY UP TO 30%.

THE STEEL DIVISION OF THE VOESTALPINE GROUP IS LOCATED IN LINZ, AUSTRIA.

The technological transition to green production faces the entire European steel industry with major challenges. voestalpine, Austria's only producer of crude steel and a global pioneer in environmental protection, has drawn up an ambitious phased plan for green steel production: greentec steel. Starting in 2027, the existing blast furnace route will be partially replaced by a hybrid electric steel route. Subsequently, the use of green hydrogen in the steelmaking process will be successively increased to enable CO₂-neutral steel production by 2050.

As a first step, the Steel Division of the voestalpine Group also offers all flat steel products in a CO₂-reduced version. These include, for example, electrical steel strips, such as those used in wind turbines, and high-strength steels for lightweight automotive construction. An innovative raw material mix and efficient processes reduce direct emissions by approximately 10%. This is achieved by

adapting the manufacturing process, for example, by partially replacing coke with hydrogen-containing reducing agents. Furthermore, voestalpine relies on energy from renewable sources. The voestalpine Steel Division generates around 70% of the electricity used in steel production in Linz, Austria, itself by using gases generated during production. The remaining energy portfolio is progressively including more renewable sources.

Significant CO₂ reduction as of 2027
As of 2027, the Steel Division of voestalpine will gradually switch from a blast furnace route to an electric steel route. With the start-up of one electric arc furnace in Linz, Austria, and one in Donawitz, Austria, at the beginning of 2027, CO₂ emissions will be significantly reduced by up to 30%, which corresponds to almost 5% of Austria's annual CO₂ emissions. In the long term the steel and technology group will focus on CO₂-neutral steel production based on

green hydrogen and is already conducting intensive research into promising breakthrough technologies for this purpose.

Rembrandtin Coatings and voestalpine – a strong cooperation since 1991
For more than 30 years, Rembrandtin Coatings has been supplying premium and tailor-made products of the REMISOL core plate varnish range to voestalpine. These products are specifically formulated and developed for the electrical insulation of electrical steel strips. Especially for the electric vehicles segment, Rembrandtin Coatings offers a wide range of organic-inorganic hybrid varnishes, which are the best compromise for insulation, thermal endurance and weldability. Rembrandtin also supports its customers with their environmental goals and quality standards, special emphasis is given to environmental compatibility of the coatings. Therefore, all Remisol product solutions are waterborne and 100% chromium-free. •

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STRENGTHENING THE BRAND POSITIONING IN HUNGARY

New distribution partner in architectural coatings

Petra Slabe

Mutual growth as well as long-term, trustworthy partnerships are part of the KANSAI HELIOS core goals in all market segments. Furthermore, in the architectural coatings business, our group relies on a network of distributors on various markets. Trust and cooperation are especially important, as the distributor is the local and direct contact to the end customers. In this article, we will illustrate the dynamic cooperation between manufacturer and marketer by the example of the cooperation with Anda on the Hungarian market.

The relationship between manufacturer and distributor is an active one and it is constantly evolving. The competition as well as the market situation forces both parties to continue to grow and adapt to current circumstances. In the architectural coatings business, the manufacturer and the distributor have different roles in the process of supplying the products to the end customer. However, both parties are equally important for the supply chain to run smoothly. The distributor represents the manufacturer's local contact with potential customers – they are the "longer arm" of the manufacturer. The distributor has the knowledge, human resources and established processes, which enable the manufacturer to reach the end customer. Furthermore, the manufacturer not

only provides the distributor with products but also with specific marketing material, know-how and constant information.

The cooperation with Anda

In 2021, the management of KANSAI HELIOS and the management of Helios Hungary, at the time distributor of KANSAI HELIOS architectural coatings, decided to enter the negotiation process with the external distributor ANDA Kft. The key objective of this strategic step was the expansion of the distribution network for architectural coatings in Hungary. At the same time it was the aim to enable Helios Hungary to focus on their primary distribution fields of industrial and car refinish coatings and consequently help the company to improve their competitiveness.

ANDA KFT., KANSAI HELIOS' NEW EXTERNAL DISTRIBUTOR FOR ARCHITECTURAL COATINGS, IS INTENDED TO EXPAND THE SALES NETWORK FOR DECORATIVE COATINGS IN HUNGARY.



Right after the contract with ANDA had been signed in March 2022, the new distributor of the group started with the distribution of the flagship DIY brands Helios and Belinka. The distribution of Neostik and Zvezda followed later in Spring 2022.

All trading agreements usually involve two parties, aiming for mutual growth and a trustworthy,

long-term cooperation. At KANSAI HELIOS, the ambition to strengthen the presence on the Hungarian market in the architectural coatings segment represented the main factor in the decision for a cooperation with ANDA. The net sales value of 700,000 euros in the first 5 months of the cooperation shows that the company successfully met our objectives and market demand. •

F.L.T.R.: DIETMAR JOST (EXECUTIVE DIRECTOR KANSAI HELIOS), ISTVÁN TONK (CEO ANDA), ARNOLD MÁGORI (MANAGING DIRECTOR KANSAI HELIOS HUNGARY), JANA SIMONIČ (SALES DIRECTOR HELIOS AND BELINKA, HELIOS TBLUS), FERENC LORCH (CEO ANDA), NIKOLETTA GYÖRGYDEÁK-SÁRZÓ (SALES MANAGER ANDA), BALÁZS LORCH (COMPANY DIRECTOR ANDA)

ABOUT ANDA

- Family-owned business, established in **1991**.
- More than **30 years** of tradition and experience.
- Annual turnover of **16 million euros**.
- Recognized as a stable employer with over **150 employees**.
- **26** retail stores.
- **Wide network** of business partners in architectural coatings.
- Have their own logistic system, warehouse locations and **advanced** technical support team.

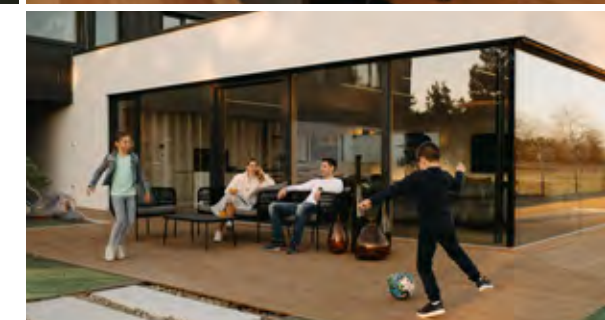


"GREEN BUILDING" TRENDS

Smart architecture for a healthy living environment

Barbara Sova, Hatice Akyokus

Sustainable materials as well as comfort and energy independence are the guiding principles of quality architecture. This has been taken one step further by the creators of a fascinating smart house called "Home24h – Smart Home of Tomorrow". This Slovenian project has been chosen as one of the breakthrough economic achievements by the Slovenian Chamber of Commerce and Industry. Twelve Slovenian companies have combined their strengths to create a harmonious living and working environment.



Trends in interior and exterior design are always changing. However, in the face of the global climate crisis, "green building" is the focus of interior and exterior architecture. Green buildings are more attractive in many ways, and not least from an economic perspective. Operating and maintenance costs are lower, and higher rents and resale values can be achieved. Furthermore, they contribute to people's health and well-being due to their special construction methods and the included construction and maintaining materials, part of which are coatings and paints.

Smart coatings for a smart home

Home24h is located in Maribor, Slovenia and is considered an economical masterpiece which offers smart, user-friendly, connectable and advanced living and working. This flagship project represents the principle of

raising awareness for sustainable and economical construction. Under this smart single roof, an innovative concept of living and working at home – for 24 hours per day – can be found. Close cooperation and dedication of all stakeholders resulted in an all-round smart home that produces more energy than it consumes. It alerts occupants if anything needs to be changed or the pantry needs to be restocked. All that is left to do for users is, to take advantage of the comforts and live in the home of the future.

KANSAI HELIOS was one of the cooperating companies providing its environmentally friendly wood coating assortment. Different product types were created for different areas and surfaces in Home24h. Water-based UV curing coatings protect heavily used wooden surfaces in the interior spaces. More lightly used surfaces receive protection

from water-based wood coatings, which enable easy maintenance and reduce dust accumulation. For exterior wooden surfaces, water-based varnish coating systems were used, because they ensure longevity. The wooden terrace of the house was coated with a bio-based oil, which provides a silky appearance, elasticity as well as good weather and water resistance. The combination of this assortment assures an environmentally friendly coating system with highly aesthetic and resilient qualities.



The driving forces for greener building methods

The urgency regarding environmentally friendly construction methods not only comes from the industry itself. It also results from global megatrends, such as population growth, urbanization, rising living standards and a growing middle class. Improvements in resource efficiency and a shift away from a throwaway society are aimed at curbing climate change. According to the World Green Building Council, “buildings are currently responsible for 39% of global energy related carbon emissions: 28% are operational emissions which include energy needed to heat, cool and power the buildings, and the remaining 11% stem from materials and construction.”

One of the driving forces of “green building” innovations is the European Green Deal and the EU’s commitment to be carbon neutral by 2050. “Green building” is affecting all of us – people’s mindsets are changing and the living culture is evolving. The focus is on “green architecture”, which includes features like energy efficiency, renewable energy,

more environmentally friendly furniture and materials as well as waste reduction.

Property owners also benefit from environmentally friendly construction. This kind of building leads to slower depreciation of the property, higher occupancy, lower maintenance costs and often a higher sales price. Special certifications for sustainable construction, such as the world’s leading “green building” rating system LEED, also encourage the pursuit of greener building methods. Around 58 green building certificates have been established worldwide. They are an instrument to make sustainable construction plannable, assessable and measurable. Their goal is simple: Buildings should be optimized through a holistic approach to the handling and consumption of energy. Various environmental aspects, such as energy consumption, heat island effect and toxic materials, are in the focus of the rating system. High indoor air quality contributes to the well-being of the occupants. To ensure this quality, products with minimal emissions must be applied. High-quality indoor air is a

SUSTAINABLE INTERIOR INTEGRATES A RANGE OF GREEN BUILDING CONCEPTS, SUCH AS ECO-FRIENDLY SUSTAINABLE MATERIALS, NATURAL DAYLIGHTING, WASTE REDUCTION, RECYCLING OR LOW-ENERGY LIGHTING SYSTEMS.

competitive advantage in many European countries. Therefore, LEED rates paints and coatings as well as adhesives and sealants according to their VOC content.

The coatings industry is investing in their R&D and production facilities to further develop smarter coating solutions for smarter buildings, like Home24h. The focus of these innovations is on developing more environmentally friendly recipes for paints and coatings. Water-based materials or ultra-high-solid coatings are currently state-of-the-art. Other innovations, like digital printing inks for coils, are already on the market and are becoming increasingly important.

Coatings are also developing in terms of their durability. Preference is given to products and construction methods that extend the lifespan of a property. By increasing the durability of paints and coatings, sustainable protection of buildings and architectural elements can be achieved. The value of buildings will not decrease for many decades and last but not least, waste can be minimized and energy and resources can be saved. •

HELIOS TBLUS IS THE FIRST COMPANY IN SLOVENIA THAT IS AWARDED THE ISCC PLUS CERTIFICATE

A new generation of sustainable coating binders

Radmila Wollrab, Martin Ocepek

An ever-increasing push for sustainability and a reduced carbon footprint has led many synthetic resins producers to start developing products with environmental benefits. The latest innovation of the Helios Resins R&D team represents a new generation of sustainable coating binders for wood and metal. For these new polyurethane-modified alkyd dispersions, Helios TBLUS has been awarded the EcoVadis Sustainability Silver Medal and the ISCC PLUS certificate.





ISCC PLUS certificate

HELIOS RESINS HAS REDUCED THE PRODUCT CARBON FOOTPRINT OF THE POLYURETHANE-MODIFIED ALKYD DISPERSIONS BY 67%.

The main purpose of most coatings is to prevent deterioration of the underlying substrate when exposed to various environments. To achieve this goal, resins, which function as a coating raw material, are used. Helios Resins has gone one step further and additionally aims to improve environmental safety and sustainability of its products.

Common alkyd resins contain more than 50% natural fatty acids and polyols from renewable plant sources. They have been used for a long time and thus appear to be the logical choice for sustainable coatings, yet they have some drawbacks. Traditionally, alkyd resins are solvent-based, but regulatory requirements to reduce VOC emissions have been a key driver in the development of water-based alternatives.

In 2022, Helios Resins has developed polyurethane-modified alkyd dispersions, which represent a new generation of sustainable coating binders for wood and metal. Consisting of 70-90% natural renewable components, this group of innovative polymer dispersions significantly reduces the use of raw materials from fossil fuels and lowers the product carbon footprint. The production process has been optimized by recycling one of the waste by-products, which is then used as secondary raw material.

The ISCC PLUS certification scheme

The innovative resins contain bio-based material, which can be verified with ¹⁴C carbon dating. Furthermore, the raw materials are certified to be sustainable via the mass balance method according to the ISCC PLUS certification scheme. A carbon dating method that checks the radioactivity of the carbon isotope, is commonly used to determine the percentage of renewable raw materials. Carbon-based materials originating from living organisms (the

biobased component) contain carbon-14, while fossil materials (derived from petroleum) no longer have this weakly radioactive carbon isotope. Hence, all the ¹⁴C in the product comes from the biobased component. Some companies prefer to use bio-based raw materials with ¹⁴C, but there is not enough of these raw materials to completely replace the raw materials derived from fossil fuel we use currently.

Costs are another factor to consider when using plant-based materials, since they are more costly to process and produce than straight petrochemicals. The oil industry has been optimizing its processes for a century, but modern bio-refineries only started working on the production of building blocks for polymers 10 to 20 years ago. Thus, the processes are not yet optimized to ensure cost competitiveness.

Moreover, the question of sustainability still remains. Just because the material contains ¹⁴C, it does not mean it is sustainably produced. Many factors determine the sustainability of bio raw materials, such as local production circumstances, agricultural influences as well as the material's source and production processes.

Capture and trace the use of sustainable biomass

"Like many sustainable leaders in the chemical industry, we at Helios Resins consider the use of the mass balance approach, such as the one used by the ISCC PLUS certification scheme. We see it as a step in the right direction. A certification based on mass balance principles can facilitate a gradual increase in the use of renewable and recycled raw materials since existing infrastructure and equipment can be used. Therefore, no separate plants and value chains for renewable and/or recycled raw materials need to be constructed", says Peter Venturini, Director of Helios Resins.



Given the sometimes specific and complex production and process requirements in the chemical industry, this approach is optimally suited to capture and trace the use of sustainable biomass. In the production process, the manufacturer can use both certified sustainable biomass and fossil raw materials and then assign sustainable quantities to one or more batches of products. The principle is, therefore, similar to the purchase of "green" electricity: Although consumers cannot be sure that the electricity they use in their homes comes directly from renewable sources, the total share of green energy in the grid is growing in line with the demand. This approach also ensures product sustainability, as certification schemes have been developed to meet the requirements of the EU Renewable Energy Directive (RED). However, it is emphasized that there is no physical or chemical difference between the certified

and non-certified products and that there is no guarantee of any certified content in the respective final products. What it does guarantee is that the total amount of certified product corresponds to the amount of certified input. Peter Venturini is proud: "We are the first company in Slovenia that was awarded the ISCC PLUS certificate and we have recently successfully completed the recertification process."

With this multi-pronged approach, Helios Resins has reduced the product carbon footprint of the polyurethane-modified alkyd dispersions by 67% compared to conventional alkyd binders, or by 45% compared to water-based alkyd resins. This innovation was titled "sustainable polyurethane-modified alkyd dispersions for coatings" and received the golden award on the regional level. The prize is presented by the Chamber of Commerce and Industry of Slovenia.

EcoVadis award for the development of sustainable products

Helios Resins business unit, member of KANSAL HELIOS, is committed to the principles of sustainable development and relies on clean, energy-saving production technologies and the responsible use of resources. We are very proud that this commitment was crowned with another award this year. The EcoVadis Sustainability Silver Medal, which has been awarded to Helios Resins this year, places Helios TBLUS, d.o.o. among the top 25% of companies, as assessed by EcoVadis. The evaluation procedure analyzed 21 aspects of Helios TBLUS. The focus fields were environment, labour and human rights, ethics and sustainable procurement. Our overall score reflects the quality of our CSR management system at the time of the assessment.

Nevertheless, we will further improve our environmental performance through major steps towards our sustainability goals in the future. •

TACKLING A MAJOR PROBLEM OF PHOTOVOLTAIC PLANTS

Repairing microcracks with coatings

Petra Gomez, Tamara Löffler

Renewable energy systems need products from the chemical industry to fulfil their function in the long term. Special coatings protect systems from the most extreme environmental influences and ensure longer durability. These modern surface technologies protect solar modules from premature damage. They prevent or delay the development of microcracks and can repair cracked films. Thus, they contribute to a longer lifetime of the photovoltaic plant.

Technologies in the field of renewable energy systems are developing rapidly. The goals are sustainability, energy savings as well as climate and environmental protection. All sectors and industries are taking targeted measures to make their contribution to these goals. However, public discourse on the subject of renewable energy systems often leaves out one subarea: the plants themselves and their adequate protection, especially

corrosion protection, which can only be achieved by the right coating. Thus, the chemical industry, plays a significant role in the protection of renewable energy systems. All systems, generators, transformers, wind turbines, hydroelectric power plants and solar installations, are permanently exposed to extreme conditions. Among other things, photovoltaic systems, in particular solar panels, have to withstand constant UV radiation.

Extending the life of PV modules
Photovoltaic systems are among the most important energy suppliers and are expected to perform their function for more than 25 years. However, the strength of the solar radiation in combination with high daily and seasonal temperature changes often leads to defects and failures in the complex structures of the PV modules. As a result, the service life of solar panels is often shorter than expected.

THE PUBLIC DISCOURSE ON THE SUBJECT OF RENEWABLE ENERGY SYSTEMS OFTEN LEAVES OUT THE PLANTS THEMSELVES AND THEIR ADEQUATE PROTECTION, WHICH CAN ONLY BE ACHIEVED BY THE RIGHT COATING.

For system operators, this often means unexpected costs and declining returns. The Austrian company Rembrandtin Coatings is specialized in industrial coatings and is familiar with the challenges in the industrial sectors, including those in the field of renewable energy systems. Their response is a state-of-the-art surface technology – a special coating for photovoltaic backsheets, tailored to the problem of microcracking and cracking. This phenomenon is becoming increasingly common in photovoltaic systems. As is reported, PV modules with cracked backsheets continuously show more power losses and also pose a safety risk.

The innovative Rembrandtin repair coating system for cracked backsheets can repair the defective PV modules, restore their insulating properties and maintain the safe operation of the whole system. Furthermore, the innovative repair coating system can prevent or delay further crack propagation of microcracks and even repair deep cracks. The defective PV modules can be easily repaired at the site.

Easy repair process taking just a few minutes
Rembrandtin Coating's Remisol photovoltaic backsheet repair coatings were developed for the effective repair of deep cracks on PV modules and the filling and repair of microcracks. Thus, the system prolongs the lifespan of the photovoltaic plant and maintains a safe operation. It matches the demands of PV line operators and even restores electrical insulation properties of backsheets with deep cracks and completely collapsed

insulation. The easy and efficient repair process can be performed in-house on dismantled PV modules or directly at the site with a brush, spatula or spray. The application only takes a few minutes per module.

A rewarded coating technology

On March 31, 2022, the Austrian Society for Environment and Technology (ÖGUT) awarded the “ÖGUT Umweltpreis” to the best sustainability projects. The performance and applicability of the coating structure was evaluated and tested in the course of the PV Re2 project. The project consortium was composed of national experts in the field of photovoltaic and coating systems: OFI, PCCL Polymer Competence Center Leoben GmbH, SAL, Montanuniversität Leoben, ENcome Energy Performance GmbH, KIOTO Photovoltaics GmbH, VDE Renewables GmbH and Rembrandtin Coatings GmbH.

The main prize in the category “Mit Forschung und Innovation zur Kreislaufwirtschaft“ went to this new solution from Rembrandtin Coatings. According to the ÖGUT jury, this product “makes a significant contribution to increasing confidence in PV technology” and “[...] can help Austrian companies, like Rembrandtin Coatings GmbH and Kioto, as well as research institutions involved in the PV Re2 project, such as the consortium partners PCCL, OFI, MUL and SAL, to take a leading role in PV module technology, strengthen their international competitiveness and further expand the renewable energy sector.” •



CRACKED BACKSHEET



CLEANING WITH A WET TOWEL



FILLING OFF THE CRACKS WITH REMISOL PV REPAIR PRIMER (2-COMPONENT COATING)



SEALING AND PROTECTION OF THE BACKSHEET WITH REMISOL PV REPAIR TOP (2-COMPONENT COATING)

YOUR SYSTEM SUPPLIER FOR INDUSTRIAL COATINGS



POWDER COATINGS



E-COAT



POWDER COATINGS



LIQUID COATINGS



ADHESIVES/
SEALANTS



GELCOATS



E-COAT



LIQUID COATINGS



GELCOATS



ADHESIVES/
SEALANTS

INDUSTRIAL COATING SYSTEMS



PERFECTLY ALIGNED FOR HIGHEST SURFACE PROTECTION AND OPTIMAL FINISH



FOUNDATIONS

“Great leaders find ways to connect with their people
and help them fulfil their potential.”

Steven J. Stowell, Ph.D.

Founder and President of the Center for Management and Organization Effectiveness (CMOE)

BEING A STEP AHEAD

New leadership strategies change the way of working

Katja Možina

We are living in very turbulent times where new challenges are constantly arising, and presumably this situation will not change anytime soon. Although it seemed as if the pandemic stopped time, or at least slowed down events and progress, in the background, companies were working diligently. Our carefully constructed plans were turned upside down and we were forced to change our strategies, while at the same time we had to be agile and able to make quick decisions with positive results. Changes can bring uncertainty, but we believe we used them as an opportunity to reprioritize and rethink our strategies and become stronger.

We have faced events that had a major impact on the business world, such as the great resignation. In addition to other challenges, employers had to identify the main reasons for employees leaving the company and find ways to retain them. Furthermore, digitalization, artificial intelligence and automation of processes are expanding rapidly. These developments led to new ways of communication, which require new skills and behaviour as well as an adaption of jobs and tasks.

Today for tomorrow – defining companies’ core values

The past few years have been marked by numerous challenges and

rapid changes. In this new reality, companies need to be prepared for unstable times, be proactive and have different tools which lead them to success. Therefore, companies’ values lie at the heart of corporate culture. A company should clearly communicate its values to employees. When managers and leaders “walk the talk” and company values define thinking patterns and behaviour, they encourage good relationships and honest collaboration.

However, creating a strong corporate culture needs time. Companies, which had clearly established values and a strong corporate culture before the pandemic, were more successful in communicating with their employees,

concerning continued focus on the employees’ progress and retention in the company. At KANSAI HELIOS, Responsibility, Customer Focus, Professionalism as well as Speed and Efficiency, form the core values of our corporate culture. They are communicated to existing and future employees during different activities.

Human relations – more than human resources

During the pandemic, a stronger focus was put on people and their needs. The situation affected peoples’ private lives as well as their attitude towards work and colleagues. The HR department played an important role in maintaining a smooth work process and professional relations between employees.

WHEN MANAGERS AND LEADERS “WALK THE TALK” AND COMPANY VALUES DEFINE THINKING PATTERNS AND BEHAVIOUR, THEY ENCOURAGE GOOD RELATIONSHIPS AND HONEST COLLABORATION.



THERE IS A SWITCH FROM HUMAN RESOURCES TO HUMAN RELATIONS.



Studies show that many HR professionals now use a different concept than they did in the past; they switched from human resources to human relations. However, the human resources approach remains the main starting point. It includes several steps, namely recruitment processes, onboarding, training, salary systems, reward systems and administration. The human relations approach, on the other hand, encourages the cooperation of HR professionals, leaders and their employees to a greater extent. In this concept, HR focuses more on soft approaches which assign great importance to the satisfaction of employees. They are introduced based on data obtained by leaders or the results of research conducted among employees. Even though employee satisfaction is becoming more important, a proportional presence of both approaches is necessary for a successful and efficient operation. While Human Resources forms the basis and defines work rules to achieve results, Human Relations is a wider approach, which introduces activities to strengthen a positive organizational climate. During the Covid-19 pandemic, we at KANSAI HELIOS adjusted some HR processes and also developed new ones. We believe that the strong involvement of HR in various areas contributes positively to the value of the company.

Flexible reality – hybrid work

Traditional models of work and cooperation within companies are being replaced by agile models that ensure

a faster and more flexible working organization. According to a survey conducted by Gallup in 2022, in 2019 32 percent of included employees preferred hybrid work and in 2022 this percentage rose to 59 percent. It is a fact that hybrid work is here to stay and most employees expect that their company adopts a hybrid working model. Changing the way we work has many positive aspects. Not only does it improve employees' health but it also raises productivity, flexibility, and employee satisfaction. Furthermore, new working models help to save commuting time and promote a better balance between the professional career and the personal life of employees. However, hybrid working also includes challenges: Skills for remote leadership must be upgraded, activities for higher employee motivation must be planned and information important for work must be made available. Additionally, employees have to deal with social distance and maintaining relationships, teamwork, cooperation as well as transparent communication might be harder. Some employees also feel that they have less access to career opportunities. Therefore, leaders need to understand the growing importance of workplace flexibility and accept a different way of leading. Moreover, they need to maintain transparent communication, team spirit, humility, openness and respect in the departments, in individual organizations and in the entire company. The health and safety of our employees is KANSAI HELIOS' highest priority. Thus, we

adjusted to the pandemic very quickly and started working from home. After that period, we successfully introduced the model of hybrid work. Since then, it has become our “new reality”.

Learn and lead with a growth mindset

Could leadership be defined as a lifelong learning process? The answer is yes, definitely. Given the current pace of events, a leader who sticks to traditional approaches they learned early in their career will probably be replaced soon. Due to employees' needs and a rapidly developing business environment, modern ways of leadership, which are based on clear purpose and outcome, gradually supersede traditional concepts.

The energy of modern leaders should be focused on value-adding approaches and contemporary answers. The most desired competencies of a leader today are to listen, be empathic, have a value-adding approach, define clear responsibilities to each member of the team, allow space for co-creating and enable co-decision making. Through their way of thinking and in their actions, effective leaders inspire others to fulfil their potential, achieve great results and even exceed them. Each team or department could be more successful in an environment where employees feel connected with the organization and trust between employees and leaders is on a high level. We are proud that leaders at KANSAI HELIOS have adapted to the given situation. They successfully and efficiently lead their teams with a high

level of trust, they motivate them and provide them with the information they need for their work in a timely manner.

Opportunities of digitalization

In a world of big data and artificial intelligence, modern companies need digital innovations to stay competitive, innovative, efficient and productive. All business processes, including HR processes, require digitalization to follow trends in data sharing, clouds and digital devices.

The function of HR is to help the company achieve its goals, increase productivity and ensure that employees are competent, enthusiastic and satisfied. Digital processes facilitate executing these functions. In HR of modern companies, digitalization is essential to achieve data transparency as well as digitized personnel procedures and processes. Decision making is easier when it is supported by digital data and analytical tools. Furthermore, through digitalization, employees can access relevant documents and information everywhere and at any time. At KANSAI HELIOS we strive to harmonize the required processes for better cooperation, feedback, easy creation, access and delivery of documents and analytics in all HR processes.

Healthy organization – resilient employees

Employers are becoming more and more aware of the changing and growing expectations of their employees. Their perspective gives employers the

opportunity to support employees in all aspects of their personal and professional lives. Therefore, companies are taking measures to not only make their employee more productive and motivated but also happier and more balanced. Especially during the coronavirus pandemic, the HR trend moved on from work-life balance of employees to well-being harmonization of personal and business time. Companies' actions should prevent stress at work, establish a healthy organization, which encourages employees to perform their best, and put a focus on equality and inclusion. Employee well-being is more than just physical well-being; it also includes emotional, financial, social, and career wellness. We are aware that KANSAI HELIOS needs proactive approaches in this field to rank among the list of respected global companies. High priority is given to the health of our employees. By organizing different workshops within KANSAI HELIOS Academy and with counselling for improvement of mental health, we want to ensure that our employees are healthy and feel psychological safety and trust.

An environment for success

Employees are a company's greatest asset and dedicated employees represent the company. Companies who are real “talent magnets” focus on answering questions like “How do candidates get the best experience?” or “How do we attract and retain the best people?” Employees expect a personalized approach and

employers must provide it throughout the entire cooperation period. This also means strong support through HR processes from recruitment to retention. Innovative approaches need to be found to attract talents before they are on the labour market and to identify open opportunities for networking. Talent management's best practices start with employer branding, employer reputation and a candidate's experience with a possible future employer. Preboarding and the company's recruitment process have to be strategic, include transparent communication and provide relevant information on time. These factors are essential for a candidate's interest in employment at a specific company. Between the decision for a candidate and their first working day, the employer must stay connected and share information and details about the company. This involves the new employee in the company even before their official start. Once they become an active part of the company, a suitable onboarding process should increase their productivity, their retention and commitment. In the further course, it is important to recognize the employee's potential and prepare a career plan with clear goals to help them acquire new knowledge and upgrade their skills and competences.

At KANSAI HELIOS, we pay special attention to building relationships on a solid foundation. We are empowering our employer brand and we are a professional partner to our potential and existing employees. •

CHILDPROOFING PROTECTION SYSTEMS

Meeting environmental standards for children's furniture

Gordana Savković



Young kids are playful and full of energy. As a result, children's furniture has to meet a long list of requirements: it should encourage play, physical activity, creativity and enhanced cognitive functioning as well as comply with strict health and safety standards. To achieve all of this, it is crucial for designers to consciously select child-friendly materials. Sustainable and "healthy" furniture, which grows with the child and is free of harmful substances, is in great demand. Therefore, environmentally favorable coatings for children's furniture, such as the HIDROHEL wood coatings line, are also highly requested.

"OUR GOAL IS TO OFFER AN OPTIMAL AND ENVIRONMENTALLY FAVORABLE SOLUTION FOR ADVANCED MANUFACTURERS OF CHILDREN'S WOODEN FURNITURE AND TOYS."

Children's furniture, especially children's beds, have to meet very specific requirements in regard to the coating system. The system not only has to fit the application techniques but also has to meet very high health standards. HIDROHEL wood coatings, produced by KANSAI HELIOS, are an ecologically favorable option for surface treatment of interior furniture, especially children's beds and related furniture. The product line consists of transparent lacquers and pigmented enamels. For elements made of MDF, HIDROHEL provides a specific system, including a pigmented primer and a top enamel. When processing massive beech, HIDROHEL universal coatings are increasingly popular because products of this line can be easily applied.

HIDROHEL in practice at Bambino children's bed producer

HIDROHEL products are suited for various application methods and meet health and environmental standards. This is also valued by furniture producers, such as Bambino in Serbia. The company is a long-term partner of KANSAI HELIOS and relies on the HIDROHEL coatings range for quality products. At their production plant in Subotica, Serbia, the coatings are applied with the vertical electrostatic spraying method, which is one of the most common application techniques for the coatings of children's beds. As a result, they offer safe furniture with excellent chemical and mechanical resistance.

Meeting environmental and health standards

HIDROHEL coatings meet the current European requirements for children's furniture due to their chemical composition. All products are certified in accordance with the norm EN 71-3, which determines the safety of toys. Moreover, they accord to the DIN 53160 standard; thus, they are resistant to sweat and saliva and do not contain any chemicals listed as an SVHC substance in the REACH regulation. HIDROHEL coatings also fulfil chemical requirements for children's products according to IOS-MAT-0054 (applies to children under 7 years). Furthermore, they have a very low VOC content of 20-70 g/l and can be used in the treatment of children's beds, which, according to IKEA requirements, must comply with EN 716-1. This standard refers to the general safety of this type of children's furniture. Other types are certified according to the resistance classes IKEA R4 and R2.

"Our goal is to offer an optimal and environmentally favorable solution for advanced manufacturers of children's wooden furniture and toys. The water-based systems we produce at KANSAI HELIOS are eco-friendly and follow European standards for the safe use of furniture and toys by children", says Mojca Šemen, Director of Industrial Wood Coatings, KANSAI HELIOS. •

“3IN1” – A UNIQUE PRODUCT IN DEVELOPMENT

Sustainable and effective detergents for low-temperature washing

Andrej Podkoritnik, Matej Virant, Ivan Grčar

Today's customers want to save time and money and are therefore increasingly opting for low-temperature washing cycles. As a result, the chemical industry was prompted to develop smarter product solutions that maintain performance at low temperatures. The aim is to introduce a sustainable product with efficient washing properties, especially in relation to disinfection.

In Belinka Perkemija the R&D team is developing an innovative and environmentally efficient solution – a biodegradable liquid detergent based on hydrogen peroxide, with excellent washing and disinfecting properties. This product represents a unique approach and is not yet present on the global market. It provides a sustainable solution to the current issue of poor microbiological efficiency of existing liquid detergents.

The new product, called “3in1” will offer three solutions in one product: washing the textiles, disinfection of the textiles, and cleaning the machine.

Developing a world novelty

“3in1” is the very first product in the world based on liquid hydrogen peroxide,

which solves the problem of washing and disinfecting textiles at the same time. Currently, the main challenge in development is to combine oxidative hydrogen peroxide and liquid detergent. Furthermore, it must be ensured that the hydrogen peroxide is stable during product storage and only active when in contact with laundry in the washing machine. This new hydrogen peroxide formulation for washing at low temperatures, especially in the neutral pH range, will be a breakthrough on the market. Hydrogen peroxide will not damage textile fibers. The degree of reduction of microorganisms will accord to the requirements of the relevant EN standards. The product will be prepared in accordance with the EU biocidal (BPR) legislation.

“3in1” will enable efficient operation or activation, the so-called mobilization of different chemical states of oxygen, which will be released from hydrogen peroxide during washing in synergy with various surfactants. This unique product is an upgrade to existing chlorine-based washing agents. It ensures the best possible low-temperature microbiological cleanliness of laundry and washing machines. The effectiveness at low temperatures under 40 °C means high energy savings, including lower water consumption.

“3in1” will have a lower negative impact on the environment because hydrogen peroxide breaks down into oxygen and water during its operation and is thus not harmful to people or the environment. •



THE SEAMLESS ROOM

Exceptional designs for walls and floors

Tatjana Galić, Franjo Božič



The design of floors and walls in our living spaces is subject to change and follows different trends, similar to clothing styles. However, there are also timeless styles, which stand out for their refined and natural appearance. Our new protective and decorative system for floors and walls combines unique aesthetic appearance and simple maintenance in daily use. The system creates a seamless floor or wall with a distinctive design, high durability and other impressive advantages.

Floor and wall surfaces in spaces like living rooms, kitchens, hallways, bathrooms, bedrooms, stairs and walls are usually interrupted by joints, and also have a different surface gloss and structure. A completely homogeneous surface with mineral appearance is a new trend in architecture – a refined and simple design with a luxurious look.

The "MicroTopp" flooring system has immense possibilities for decorative design and is not only visually impressive but also practical and simple in many respects. It creates a scratch-resistant, durable and easy-to-clean surface.

AS THERE ARE NO JOINTS OR COMPOUND SPACES, AREAS CREATED WITH "MICROTOPP" ARE EASY TO CLEAN AND RENOVATE.



Seamless aesthetics for interior and exterior areas

There are specific coating systems on the market, which are used to create this extraordinary living experience. With "MicroTopp", a product from Chromos, each application pattern is unique, as it is made by skilled professional applicators. The product is available in 45 standard shades as well as in semi-gloss and matt-gloss degrees.

It is ideal for creating new spaces, giving them a minimalistic, modern and continuous look, as well as for renovating existing areas, both interior and exterior. "MicroTopp" is based on a specific ratio of liquid polymer and cement mixture, which makes it a more environmentally friendly solution compared to the conventional systems.

When living dreams come alive

A durable, robust surface that is also easy to maintain – who does not dream of such a combination? Especially when living with kids or pets, practicality is of great importance. If this then also comes in beautiful garb, the dream home becomes reality. As there are no joints or compound spaces, areas created with "MicroTopp" are easy to clean and renovate. A damp microfiber cloth and some neutral cleaner is all it takes to get the

surface sparkling clean again. Even the application method fits the simple but modern overall concept. Compared to a conventional renovation of a bathroom, for example, there is little pollution from dust and few remains of plaster or rubble.

The "MicroTopp" system at a glance

The "MicroTopp" system consists of several products, which can be used by a trained amateur or by a professional. First, MicroTopp grund is a primer, which is based on acrylate water dispersion with mineral fillers. It is used on mineral substrates or ceramic tiles. Second, MicroTopp BC, a two-component polymer-cement mortar, protects new and renovates old floors or walls. The polymer-cement mortar is applied to prepare the surface before applying MicroTopp FC decorative cement, which gives the surface its particular design. This third part of the system is a two-component polymer-cement mortar. It is used for surface preparation before applying the MicroTopp finishing coat. MicroTopp PU 300W is a finishing coating with matt or semi matt appearance. Due to this final layer the surface is resistant to water and chemicals and shows increased scratch resistance. •

DURABLE, ROBUST, EASY TO CLEAN. JOINT-FREE SURFACES ARE THE TREND IN MODERN ARCHITECTURE.

"MICROTOPP" IS AVAILABLE IN 45 STANDARD SHADES AND SEMI-GLOSS AND MATT GLOSS DEGREES.



ACHIEVING ECONOMIC AND ENVIRONMENTAL OPTIMISATION

Creating coating innovations in cooperation with industrial global players

Massimo Bazzucco, Miha Steinbücher, Miro Treven

Manitowoc is the world's best-known manufacturer of crawler cranes and Komatsu Ltd. is the world's second largest producer of construction equipment. Both multinational companies rely on the product quality, technology, know-how and service of KANSAI HELIOS, their system supplier for industrial coatings. Komatsu and MANITOWOC machinery is exposed to harsh conditions and thus requires the strongest and most resistant surface protection. Maximum corrosion protection as well as chemical and mechanical resistance are required for numerous activities, such as digging in the ground or maneuvering at a height of around 100 meters.

This article presents two examples of successful coating projects, which led to innovative coating technologies suited for complex environments. Due to these special coating technologies, both companies benefit from significant cost savings, quality increase of their products and the reduction of their VOC emissions. All of this results in global homologation of each company.

Komatsu UK changed its coating system, reducing its effects on the environment

“Creating Value Together” and “Designing Excellence” – these are the mottos of Komatsu and KANSAI HELIOS. Their values go hand in hand with high quality products as well as economical and ecological advantages. In Asia, Kansai Paint has been a long-term partner of Komatsu Ltd. for many years. After Kansai Paint gained a foothold in Europe in 2017 with the acquisition of KANSAI HELIOS Group, the group took advantage of all synergies and knowledge of new markets and potential customers. As Kansai

DUE TO SPECIAL COATING TECHNOLOGIES, BOTH COMPANIES BENEFIT FROM SIGNIFICANT COST SAVINGS, QUALITY INCREASE OF THEIR PRODUCTS AND THE REDUCTION OF THEIR VOC EMISSIONS.

Paint's coating systems have been approved by Komatsu in Asia, it was an obvious and an essential goal to also become a system supplier for Komatsu in Europe. The journey began in Northern England, where the production of Komatsu UK is based. At this location, Komatsu produces the well-known excavators in their distinctive yellow colour. As a specialist for coatings for the ACE segment (agricultural, construction and earthmoving equipment and machinery), Helios TBLUS approached Komatsu UK, offering a comprehensive product range and the corresponding technical service to Komatsu UK.

Environmental standards and VOC regulations in Europe differ significantly from those in Asia. Thus, the coating solutions for Komatsu UK had to be developed based on European environmental standards as well as on Komatsu's engineering standards. An intensive coating testing phase began and resulted in a very close cooperation between Komatsu and KANSAI HELIOS. With a different approach and an intensive exchange between both companies, an innovative product was developed, which meets the special demands of Komatsu UK. The main focus of the research and development team was the establishment of an excellent weathering resistance of the coating system and its optimal workability along the lines of Komatsu UK. The result is DTM HELIOPUR 41-05, a product which not only meets but

even exceeds the requirements of Komatsu. It was globally certified by Komatsu in Japan, together with a 2-layer system, which consists of Helios standard products, the top coat HELIOPUR 31-19 and the primer HELIOPOX 11-25.

“The pandemic was a challenge during the introduction process of our system at Komatsu UK. However, as soon as the circumstances allowed it, our technical service team commenced a thorough and lengthy line test phase. We built confidence with Komatsu's production and quality control team and thus the introduction of our material to the regular production followed in the beginning of 2022. This new coating system increased the product quality of Komatsu UK. Furthermore, they notified a remarkable reduction of their costs, accelerated production and solved their VOC issues”, says Miro Treven, sales director for ACE coatings at Helios TBLUS.

And the journey will be continued: Currently, the ACE coatings sales team at Helios TBLUS aims to introduce the new coating system to Komatsu plants in Germany, Sweden and Italy.

The second best practice example, KANSAI HELIOS' partner Potain Manitowoc, is also situated in Italy. By the end of 2021, KANSAI HELIOS' brand-new waterborne system for ACE and general industry was successfully tested and confirmed by Potain Manitowoc.



Manitowoc cranes “turning green”
Manitowoc cranes have been at the fore of the lifting industry for a century. Today, the company name is synonymous with crawler cranes worldwide. With numerous technological breakthroughs, Potain Manitowoc has continually increased lifting capacities, improved efficiency, enhanced transportation, simplified erection and provided owners with an exceptional return on investment. Potain Manitowoc in Italy builds more than 60 types of tower cranes to fulfil the requirements of various job sites.

To meet their demands in terms of product quality and surface protection, the KANSAI HELIOS team started an intense development project. A new two-layer waterborne coating system with excellent anti-corrosion

and weathering resistance has been developed specially for Manitowoc cranes and is now verified by the Manitowoc’s official laboratory. The system consists of an epoxy primer and a polyurethane topcoat. An exposure test to neutral salt spray (1000 h) and UV-B (600 h) was passed with excellent results. In addition to superb protective properties, this system allows a short flash-off time, wet on wet application and a lower curing temperature in comparison to products from the competition. By using this system, Potain Manitowoc not only reduces VOC emissions but also their overall carbon footprint due to significant energy savings in curing.

“These coating systems perfectly satisfies our customer

and it gained homologation by Potain in France as well. This is a global homologation and we are the only supplier of a water-based system”, explains Massimo Bazzucco, sales manager for industrial coatings at Helios Coatings Italia.

These projects show that “turning green” is no empty phrase but an active measure built on trust and intensive cooperation between manufacturer and user. Furthermore, it includes the highest level of technical and development know-how and service. We are grateful that we have the possibilities and resources to cooperate with great partners, like Potain Manitowoc and Komatsu, and to further develop product innovations, which bring us one step closer to a greener world. •

RESINS FOR FLOORING

Fast curing and versatile flooring options for domestic and commercial settings

Ana Zafran





Flooring constitutes an important part of every building and area, as it needs to provide optimal functionality and safety properties as well as enable a fast installation. The latter is especially important in educational facilities as well as in manufacturing and retail areas. In addition to being aesthetically pleasing, the surface has to be resistant to extreme temperatures and heavy traffic. These characteristics are essential for food and beverage facilities. In sports and entertainment areas the flooring must also be slip-resistant to reduce potential falls and injuries. A new and innovative product, MMA resins for flooring, has been developed to meet all these demands.

BENEFITS OF THE HELIOS MMA FLOORING RESINS

- UV stability,
- Low maintenance,
- Excellent chemical, water and abrasion resistance,
- Very fast curing, even at low temperatures,
- Outstanding strength capabilities,
- Low degradation,
- Slip resistance,
- Antimicrobial properties,
- Low VOC content.

There exist six key elements, when selecting the right type of industrial resin floor: traffic, purpose, environment, colour, finish and budget. The latter includes more than the costs for materials and installation. Cleaning and maintenance costs must also be considered as well as the costs for repairing any damage or replacing the floor in the future.

The methyl methacrylate flooring system (MMA) is the ultimate solution for rapid installations in low-temperature environments. MMA flooring provides chemical, slip and water resistance-properties that have been proven to be beneficial in food and beverage industries as well as in retail industries.

Helios Resins has introduced MMA flooring resins to meet the needs of various working environments, such as food processing facilities, retail areas, pool decks, driveways and walkways, sports and educational facilities, hotels and restaurants, industrial facilities and laboratories. This indoor and outdoor flooring solution is recommended for areas which quickly need to be “back to normal”. One of the main benefits of using Helios Resins for flooring is that the system consists of three resins: primer, base coat and topcoat. All three can be applied at temperatures below 0 °C. Hence, the system offers high resistance to extreme conditions. •

“OUT OF THE BOX” ROAD MARKING

Enabling an easy marking process with preformed thermoplastic

Andreas Nemeth, Melanie Vujeva

Highly trafficked roads, highways, bike lanes and paths require durable markings to organise the traffic or to provide guidance and information for drivers and pedestrians. The use of classic road marking paints leads to high maintenance costs. Therefore, local and state institutions demanded alternative solutions. In recent years, thermoplastics have become increasingly popular for painting lines and markings on paved surfaces due to their special properties and cost-saving and simple application process.

FOR THE APPLICATION PROCESS, NEITHER EXPENSIVE STENCILS NOR SPECIAL MACHINERY OR EQUIPMENT ARE REQUIRED.



A low workload and minimal lead times, combined with high durability, make preformed thermoplastics one of the most popular road marking materials in public areas, municipalities and cities. They can be applied without major barrier and preparation measures and the treated surface can be used again unrestrictedly in the shortest possible time.

Compared to classic thermoplastics, the preformed version comes in premade (preformed) symbols and shapes. In the KANSAI HELIOS product assortment of SIGNOFORM, lines, arrows, letters, numbers and many other special signs are available in 24 RAL colours. The material is supplied in large pieces, which are put together like a giant puzzle.

For the application process, neither expensive stencils nor special machinery or equipment are required. Instead, the material is simply flamed with a gas burner on a solid substrate, such as asphalt, concrete or natural pavement or cobblestone pavement. However, due to adhesion, the use of a primer is recommended for the application on concrete. The application is completely odour-free. After preheating the substrate, the thermoplastic pieces are applied and scarfed at approximately 220 °C and at least 4 bar gas pressure. This causes the material to melt and simmer until it completely bonds with the substrate. The addition of reflective glass beads or sprinkling agent makes the marking even more visible in all light and weather conditions. The curing process is temperature-dependent and takes approximately 10 minutes at an outside temperature of 26 °C.

Preformed thermoplastics are not only used for new marking areas but also for the renovation of already marked areas. Due to the gentle demarking process, the removal of an old or damaged marking will not destroy the pavement. The surface is slightly heated

and the sign is then scraped off manually. Thus, the floor covering does not have to be milled off and therefore no additional machinery is needed.

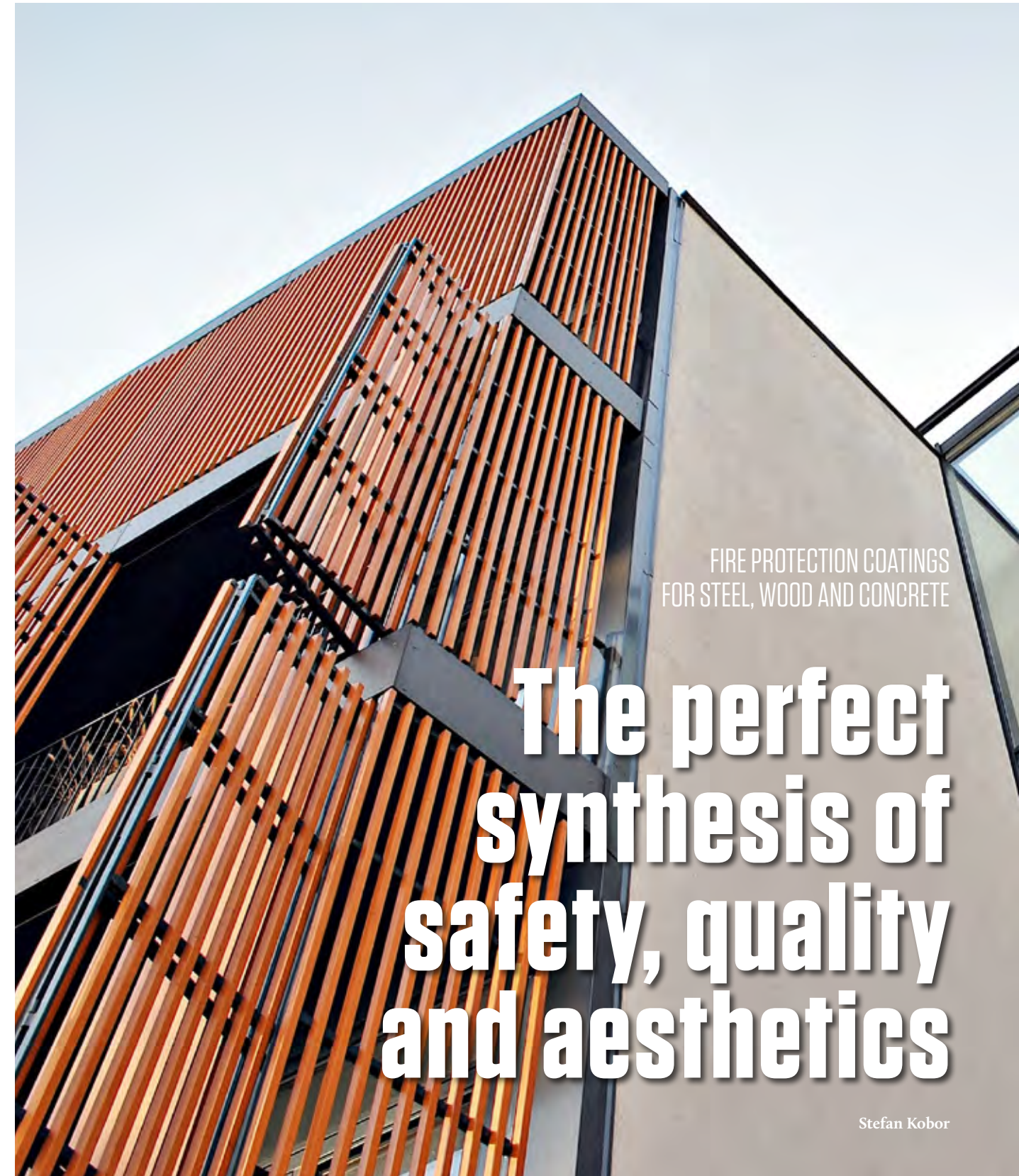
Safety with a touch of colour

Especially in public areas, diverse, colourful and smart marking solutions are requested. In addition to classic traffic floor markings, decorative markings with colourful patterns and surfaces are very popular. In combination with roll plastics, SIGNOFORM makes coloured parking spaces or cycle paths possible. Thus, due to a cheerful variety of colours, recreational facilities, sports facilities as well as kindergardens become places where people like to spend time.

Higher durability and resistance

Preformed thermoplastics, like SIGNOFORM, are highly durable pavement markings. SIGNOFORM was designed to deliver excellent levels of retroreflective performance. Compared to conventional 1-component road marking material, the durability of preformed thermoplastic is four times higher. SIGNOFORM is also certified by BAST P7, which guarantees a service life of 4 million tire passes. The product has a luminance coefficient in retroreflection of >150 mcd/m² and an SRT value of >45. Due to these values, SIGNOFORM thermoplastics provide increased safety in wet and dark conditions as well as good skid resistance for pedestrians, cyclists and motor vehicles.

With preformed thermoplastics, customers benefit from a premium, out-of-the-box road marking solution, which is, however, extremely simple. By taking SIGNOFORM into its road marking material assortment, KANSAI HELIOS makes a sustainable contribution to road safety and further strengthens reliable and strategic partnerships with authorities, public institutions and municipalities. •



FIRE PROTECTION COATINGS FOR STEEL, WOOD AND CONCRETE

The perfect synthesis of safety, quality and aesthetics

Stefan Kobor

Modern architecture is mainly based on steel, wood and concrete components and their combination. Each component or surface requires an optimal coating system to preserve their appearance. Furthermore, fire protection requirements must be met. Specially developed fire protection systems ensure a long life span, maximum protection and safety. In the event of fire, intumescent coatings not only protect wood but also steel structures and concrete components from structural failure. Moreover, they offer protection from ignition and loss of function to cables and cable trays. In combination with a fire protection filler, they are also used in the construction of wall and ceiling partitions.

These special fire protection coating systems are based on a foam layer. This stable carbon foam develops at temperatures above 200 °C and is insulating against heat. It protects the coated components from overheating, ignition and loss of their structural load-bearing capacity for a period defined in the product approvals. During this time window, people and material assets can be saved from structures. Due to their safety relevance, fire protection coatings are subject to a strict market approval procedure. Processing companies are familiarized with the products and certified in training courses at the manufacturer.

Each material (steel, wood or concrete) has specific characteristics that have to be considered for choosing the right protective coating system.

Steel: modern fire protection coatings fulfil highest economical and qualitative requirements

Steel is very much in demand as a building material for large buildings. Especially in combination with glass, it can be used to create architecturally spectacular buildings. Although steel structures do not burn, they can lose their load-bearing capacity and thus their static stability after being exposed to high heat for just a few minutes. This results in a high

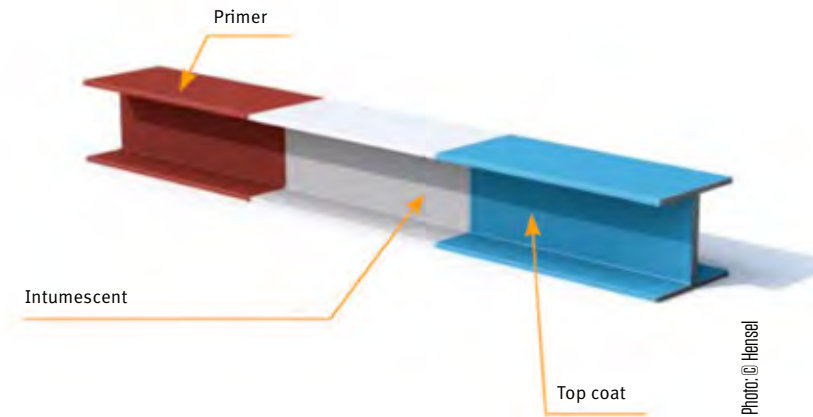
safety risk. Steel reaches its critical failure temperature between 350 °C and 750 °C. In the past, to avoid this failure in the event of fire, steel was encapsulated either in concrete, cementitious sprayed material or fire-resistant plates. Today a more modern method is used in architecture, not least for aesthetic reasons. High-quality fire protection coatings have special advantages in protecting steel structures. They are not only economical and efficient, but they also meet all requirements in terms of surface quality.

The functional principle of fire protection coatings is based on a specific and very complex chemical product composition. The thermal energy of the fire causes the binder in the coating to soften on the surface. Subsequently, the gases contained in the blowing agent escape and expand to form a foam. In this way, the originally millimeter-thin coating develops into a centimeter-thick, microporous, insulating foam layer that insulates the steel against heat. Fire-resistant coatings, thus, ensure highly effective protection that delays reaching the critical temperature. Therefore, additional time is gained to evacuate the building and ultimately save lives.

Fire protection coating systems for steel are offered for interior and exterior use. Depending on the application area, water-



IN CASE OF FIRE, FIRE RESISTANT COATINGS DEVELOP INTO A CENTIMETER-THICK, MICROPOROUS, INSULATING FOAM LAYER. THIS ENSURES HIGHLY EFFECTIVE PROTECTION THAT DELAYS REACHING THE CRITICAL TEMPERATURE.



PRIMER COATING, FIRE PROTECTION COATING (INTUMESCENT) AND TOP COAT FORM THE COATING SYSTEM. ALL COMPONENTS MUST BE PROCESSED AND DOCUMENTED IN ACCORDANCE WITH THE CURRENTLY VALID APPROVAL.

borne, solvent-borne or solvent-free systems are used for open and closed profiles. They cover fire resistance classes from 30 to 120 minutes and, due to their low weight, do not have to be included in structural calculations, nor do they require costly maintenance. The function, profile, length, thickness and material of the steel component determine the required structure and design of the coating system. By using the right system, a very high surface quality can be achieved in just a few work steps. Coating thicknesses of up to 1000 µm can be applied in a single operation. The coating system dries very quickly. The products can be applied in the factory or on the customer's premises. Airless spraying is the most popular application technique, yet roller or brush application is also possible. Polyurethane coatings are used for the top coat to protect the fire protection coatings from external influences and to ensure a special colour shade diversity.

In the oil and gas industry, a "hydrocarbon" fire requires an intumescent coating that is specially formulated to withstand aggressive conditions and temperatures of up to 1,300 °C. In contrast, in civil structures, paper, textile or wood

provides the fuel for the fire and therefore they require a different system formulation. The amount or dry film thickness that must be applied to steel for cellulose fire resistance is much less than required for hydrocarbon fire. Typically, 1 mm is sufficient to provide 60 minutes of protection. Coatings for cellulose-based fire protection are usually based on 1-component thermoplastic resin systems, such as acrylate copolymers or vinyl acetate copolymers. In the event of fire, they expand by 30 to 100 times their original thickness.

Wood: Protecting a "feel-good atmosphere"

Vibrant, lightweight, versatile, aesthetic and robust – the list of advantages of wood as a construction component is long. As one of the most environmentally friendly materials, in recent years, wood has made a comeback in construction and the trend continues. Wood is a renewable raw material. It stores the carbon dioxide, which the plants originally absorbed during growth, for a long period of time and usually requires little energy in production. Thus, compared to building with concrete and steel, building with wood can save **up to 50% of CO₂**

emissions. The construction method of wood is durable and the high degree of prefabrication ensures a short construction time. Wood is often used for a healthy and pleasant indoor climate to create a "feel-good atmosphere". Additionally, wood and wood-based materials have an excellent insulating effect.

For optimum protection of this popular ecological building material, special fire protection coatings are available in many colours. They are formulated to optimally meet the required fire protection classes in the construction industry.

In the EU, the building codes of the countries define minimum requirements concerning the combustibility of the building materials and the fire resistance duration of building components. Unlike masonry, concrete or steel, untreated wood is combustible. Wood largely complies with building material class B2 according to DIN 4102-1, or with the European classification D-s2,do according to DIN EN 13501-1 (SBI test). It is, therefore, classified as a "normally flammable" building material. By applying a fire protection coating, a higher building material class – up to class B1 according to DIN 4102-1 or

up to B-s1,do according to DIN EN 13501-1, (SBI test) – can be achieved. Due to these special coating systems, wood can also be used where flame-retardant building materials are required – without limiting the benefits of wood as an architectural design element.

A fire protection coating for wood, thus, has no effect on the fire resistance duration of the component. However, it influences its building material class. In addition to their excellent fire protection performance, wood fire protection coatings have a high durability. The coating systems are suitable for interior and exterior use. When exposed to fire, the fire protection systems form a voluminous heat-repellent foam layer. This layer protects the underlying wood and prevents or delays its ignition. It can also reduce the rate of burning. Due to the fire protection coating, the load-bearing function of the wooden components is retained for longer. The application of the systems is quick and easy. Fire protection coatings for wooden components, are opaque or transparent. For smaller areas, application with a roller and a brush is suitable. For larger surfaces, airless application, using electric or

pneumatic piston pumps, has proved successful. For all types of wood, before applying the coating, it should be tested on a suitable sample area to check compatibility.

The protective topcoats can also be customized **with almost all RAL and NCS colour shades.** It is also possible to leave the wood visible in its natural colour and grain or emphasize the surface structure and natural beauty of the wood. Thus, an individual and creative design is possible for any building project.

Concrete: systems for a smooth surface and highest protection

During the refurbishment of buildings, unpredictable circumstances may occur. Especially public buildings are subject to strict building regulations, and often require an upgrade in terms of preventive structural fire protection. In concrete ceilings, an inadequate reinforcement leads to insufficient fire resistance and consequently, upgrading the concrete is required.

The dry film thicknesses of the fire protection coatings are between 0.4 mm and 3,5 mm, depending on the required fire resistance duration. Therefore, they have a low static load and are space-saving.

Unlike spray plaster, fire protection

coatings for concrete create a relatively smooth and white surface. Thus, they optimize the light output of the lighting, which is, for example, installed in car parks or underground garages. This saves illuminants and electricity. The visually appealing surface and the option of a colored overcoat also offer architectural design possibilities. A special primer provides protection against the penetration of pollutants and water.

Environmental compatibility and sustainability in the focus of product development

Environmental compatibility and sustainability of fire protection coatings have long been the focus of KANSAI HELIOS' development work. Addressing the need for healthy and sustainable products means offering low-emission products that have little or no impact on indoor air. There are also fire protection products that predominantly contain no volatile organic compounds (non-VOC) and thus qualify as building materials for ecological construction in accordance with European and international emission requirements. •



Cornelia Camondo-Weifshappl
Director of Corporate
Communication & Marketing
KANSAI HELIOS Group

STRONG BRANDS ALWAYS WIN

Having a strong brand means being considered as a purchase option – in good times and bad. In good times, customers treat themselves to a certain brand, and in bad times, they trust it. We live in a time when progress and change are happening faster than ever before. Thus, working on brand awareness and brand image is more important than ever.

A company or product is not automatically a brand. This "label" is given to them by the market. Consequently, the status of a strong brand must be earned. This is possible when the company is consistently focused on top performance, invests in its brand and brand communication, and puts the customer first.

Strong brands evoke clear images or associations in the minds of customers.

From a neuronal point of view, they go hand in hand with positive feelings. The clearer the image, the stronger are the preferences. A clear image makes the brand more independent and less interchangeable with other competitors. The brand becomes unique because, from the customer's point of view, there is no real alternative.

Strong brands take the pressure off customers and clear the "jungle of offers". They help customers with their decision and thus accelerate the purchasing process. Eventually, customers buy a certain brand habitually because they know exactly what they can expect from it. Their so-called "somatic marker" decides for them because they automatically connect positive experiences with the brand.

Strong brands are anchors of trust. In times of crisis they are especially important. Accordingly, the importance of brands increases due to the internet. Since customers cannot compare offers before buying, they choose the brand they trust. Earning the customers' trust is extremely important in online business.

Strong brands attract potential employees. They are the best pre-sellers, as studies worldwide prove. Strong brands are also ideal employer brands. Without a shining brand, companies are often an applicant's "last resort". Moreover, they increase identification and commitment among employees.

Last but not least, reliability is the key to loyalty. Customers must be able to rely on getting exactly what they expect. Exceeding expectations is always allowed but disappointing them is not. •

**“STRONG BRANDS
HAVE THE GREATEST
OPPORTUNITIES IN
TIMES OF CRISIS.”**



Uroš Primožič
Director of Purchasing
KANSAI HELIOS Group

WE ARE TESTED FOR FLEXIBILITY AND RESILIENCE

Volatility, uncertainty and complexity have become a part of our everyday lives. In procurement, we are currently experiencing fast and significant changes that demand responses from us.

The pandemic had an enormous impact on all our activities. Due to this sudden and unforeseen situation, it has become a tremendous challenge to source, produce and deliver goods. Broken supply chains were one of the greatest problems we were facing. This forced us to break some well-established patterns and practices.

Border closures within EU countries, stopped trucks and traffic jams as well as daily changes in entry regulations – we could have never predicted such circumstances. Numerous production sites of KANSAI HELIOS were desperately waiting for raw materials. Each morning we checked new rules which were only valid for a few days. The scale and the speed of changes were enormous. New challenges arose almost on a daily basis and we were constantly asking ourselves “How should we react to this?” Yet, our reaction had to be quick, and we responded to the best of our knowledge.

Raw materials – a rare treasure

The shortage of raw materials was mainly connected to the break of our usual supply channels. Border crossing congestions lead to a lack of trucks and drivers. Furthermore, there was an unprecedented disruption to maritime transport operations. During this period, the demand was still high but the transport was in many cases impossible. Ultimately it culminated in lack of containers which remained in factories that were temporarily closed. Ocean transport prices increased more than tenfold and delivery times became longer and very uncertain. In addition to these logistic problems, many of the raw material producers struggled to meet

the increased demand. This resulted in an unprecedented number of production issues and Force Majeures. Even the smallest amount of raw material became very precious. Our regular customers always had the highest priority; however, we also tried to meet the requests of new potential customers.

In regular online meetings with people from different sectors, we discussed the current situation, exchanged information and attempted to identify or forecast the potential impact on our business. All our decisions were made in collaboration with our top management to ensure that each one was assigned the right priority.

Performance and experience in challenging times

During my career in procurement, we had many challenging situations, but the extremes we are facing now are new. In the recent months, maintaining our purchasing strategy was a kind of “stress test”. However, we have passed this test successfully by combining long-term strategic partnerships with selected suppliers and alternative sources of supply. Furthermore, proximity to suppliers is very important, especially when there are frequent interruptions in the supply chain. Maximum effort of all our colleagues ensured successful production, even in the most critical times. Accordingly, we proved our flexibility and resilience. For our customers it has become clear: We are a reliable supplier, even in times of crisis. Markets change quickly and constantly, but what remains is performance and experience in difficult times. As long as our business is based on long-term relationships with our partners, and we maintain intensive and open communication, we do not need to fear the challenges that lie ahead. •

**“MARKETS CHANGE
QUICKLY AND
CONSTANTLY, BUT
WHAT REMAINS IS
PERFORMANCE
AND EXPERIENCE IN
DIFFICULT TIMES.”**

Get in touch

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Czech Republic

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Austria

Hungary

Romania

Slovenia

Croatia

Serbia

Italy

Bosnia & Hercegovina

Montenegro

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Peter F. Drucker
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