Cement | Construction Minerals | Concrete Solutions | Road & Traffic

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KIRCHDORFER NEWS

For the Employees, Customers, and Partners of the Kirchdorfer Group

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EDITORIAL

TOGETHER THROUGH THICK AND THIN

As a large family of companies, we are particularly fortunate to have mastered the incredibly challenging conditions of the last few years amazingly well so far - from the COVID-19 pandemic to the current war in our neighbourhood.

In business, as in life in general, there is of course not always fair weather - and especially when unexpected storms are brewing, it is all the more important that we manoeuvre through difficult times with good cohesion and an optimistic attitude.

The many interesting stories in this issue of Kirchdorfer News again bear witness to how harmoniously our diversified group has grown together in recent times. I hope that after reading our magazine you will look to the future of our corporate family with the same optimism as Michael Wardian and myself are at the helm of our Group.

Yours sincerely
Erich Frommwald

New dual leadership at Hofmann Holding GmbH: Erich Frommwald (left) and Michael Wardian (right) jointly lead Kirchdorfer Group into the future.

Erich Frommwald (61) joined the Kirchdorfer Group in 1994 as assistant to our long-standing managing partner Max Machanek. After significant involvement in the national and international expansion of the group of companies, he took over the management of Kirchdorfer Group after Machanek's death in 2004 and has since continued the growth course with great success.

Michael Wardian (50) joined MABA Fertigteilindustrie GmbH as controller in 2003. After graduating from the Vienna University of Economics and Business Administration, he worked as a senior SAP consultant. From MABA, he moved to group-wide Kirchdorfer Industries GmbH in 2006. Since January 2013 he has been managing director of Kirchdorfer Fertigteilholding, the largest division of the group.

GROUP HOLDING COMPANY WITH EXPANDED MANAGEMENT STRUCTURE

NEW KIRCHDORFER **DUAL LEADERSHIP**

With more than 50 individual companies in 14 countries, the Kirchdorfer Group has grown over the years into a sizeable group. In order to cope with the complex tasks, as well as in the sense of a long-term succession plan, the Kirchdorfer holding company has been managed in the form of a dual leadership since the beginning of 2022.

After 18 successful years as the sole managing director of Hofmann Holding GmbH, Erich Frommwald has set the course for an expanded management structure at the top of the group in consultation with the two owner families: Since January 2022, the Kirchdorf Group has been managed by a team of two managing directors with equal rights. This not only provides for a long-term succession plan in the Group's management, but also ensures that the complex and demanding tasks will continue to be performed by a management duo in the future.

Long-term oriented corporate culture

Far-sighted management decisions and the consistent development of reliable decision-makers over years and decades are deeply rooted in the corporate culture of the tradition-rich building materials group. Therefore, it was no surprise that Michael Wardian, a consistent and successful division manager, was appointed to the Group Executive Board. The trained business economist has been working for the group for almost two decades and has earned an excellent reputation as head of the precast division.

The decision as to who will ultimately join Michael Wardian in the group management when Mag. Frommwald (61) retires in a few years will also be planned and prepared well in advance.

Future-oriented program

With Mag. Michael Wardian, a representative of "Generation X" is now for the first time taking on top management responsibility. Born in Mödling in 1971, it is therefore also incumbent on him to continue to develop the group with a steady hand in economically, socially and technologically exciting times: "At its core, we are an extremely stable family business that has always been capable of amazing innovations. It is in our DNA that we want to continue to succeed in the future as an innovation driver in many areas and be among the trendsetters in relevant developments such as digitalisation, automation and ecologisation," explains the new managing director.

The Kirchdorfer Group's employees, who now number close to 2,000, are also a central concern: "We are a large and diverse family and it is particularly important to me that we can all identify equally with the successes of our company!"

BRINGING **LEGAL DOCUMENTS TO LIFE**

Almost twenty thousand documents to process, including about 700 notices, from which 3,752 individual requirements arise. In addition, there are 15,864 general legal obligations and ordinances that multiply almost daily. What sounds like an absolute bureaucratic nightmare is Wilhelm Budin's daily bread. Welcome to the Kirchdorfer Group's legal department - theLegal Compliance division.

A legal department, you might think, occasionally handles disputes with customers, suppliers or employees. But this is fortunately a rare exception in a well and responsibly managed company. Legal compliance, on the other hand, is a daily concern: namely, it ensures that a company complies with all legal requirements and conditions at all times and is thus protected from conscious or unconscious misconduct in order to avert imminent loss or damage. Or in other words, legal compliance keeps responsible managers out of prison if something serious should ever go wrong ...

Master of documentation: Wilhelm Budin manages thousands of legal documents, which are brought to life digitally in the "Legal Compliance" department and implemented in compliance with the law during ongoing operations.

From a paper economy to a living system

"In the beginning was the word" - something like that is already written in the handbook of our civilisation: The word constantly reaches every business operation in the form of official notices, requirements, regulations and laws. And the word is, of course, the law: those who do not comply with it will be punished by the judges!

Simply imagine that a new machine is being installed somewhere in a factory hall: before it can go into operation, it has to be approved. This results in all kinds of notices, conditions, feedbacks and the like. Now let's multiply the number of machines by the number of factory buildings and spread the whole thing over 15 locations over the average company history of the last 40 years. This adds up to a gigantic pile of paper that is filed away in filing cabinets and that normally only rarely reports itself when something doesn't square or something else needs to be done ...

For this very purpose, there is now sophisticated software that is precisely tailored to the challenge: it seamlessly traces the path of the relevant information and continuously determines the resulting need for action. But like so many companies, Kirchdorfer Group has only been equipped with such blessings of technology rather recently. Fortunately, Wilhelm Budin is an extremely patient and conscientious guardian of the KCS compliance agenda and has already sifted through the equivalent of 600 years of company history (on average 40 years per location) in the form of 20,000 (!) documents over the past three years and brought more than half of them to life digitally. Many of the old notices are still relevant - for example as the basis for the obligatory self-inspection according to the Trade Regulation Act, which can lead to a threatening backlog of defects over the years: If deficiencies are not reported, the authorities assume that everything is in order. Until it comes to an inspection ...

In the past, it was therefore quite common to commission an external auditor to determine such deficiencies. But those commissioned reports are not only expensive, they are often incomplete. In the future, inspections will therefore increasingly be carried out in-house - because no one knows the various specific conditions and processes of the workplace better than the owner of the company! And as the master of documents, Wilhelm Budin knows exactly what really matters in legal compliance. And you, dear reader, now know it too!

NEW CAMPAIGN TO PROMOTE OCCUPATIONAL SAFETY

WE ARE **LEO +** **SAFE TOGETHER**

"Leading in Performance, Explorative, Open-minded": For several years now, Kirchdorfer Group has made its common value base visible and tangible for all employees. LEO, the popular lion is getting a new additionin the form of a new company-wide safety campaign: LEO + Safe together!

Occupational safety is a very important and serious topic in every industrial group. Over the years, the companies of the Kirchdorfer Group have repeatedly set different focal points to draw attention to the importance of the topic. 2022, however, marks the start of a company-wide, comprehensive and sustainable safety campaign that is now directly and visibly anchored in the central catalogue of values of the tradition-rich Group: LEO+S, as a shortcut for "safe together".

A green "S" for safe together

With LEO+S, this year will see the start of an initially Austria-wide campaign that, on the one hand, serves to raise awareness and ongoing communication regarding safety issues and also forms the framework for a series of concrete and targeted campaigns in the individual divisions and plants. For example, there will be a series of specific workshops at the 15 Kirchdorfer Concrete Solutions sites, which will be conducted by the KCS safety officers with all employees: With a mix of specific safety requirements of the respective machines and plants, as well as general rules of conduct and tips, the topic is to be anchored firmly in the minds of the employees.

Better cooperation, ongoing communication

An essential aspect of the extensive campaign is also an improved networking between individual safety specialists. "We want to do our best to ensure that our employees come home healthy to their families every evening. This also requires a corresponding awareness on the part of each individual," explains Erich Frommwald, Managing Director of Kirchdorfer Group.

The LEO+S safety campaign will be rolled out step by step over the coming months and includes various communication measures, workshops, exchanges among experts and one or two souvenirs for the employees. Starting in Austria, the campaign will also be expanded to the Group companies abroad from 2023. The first LEO+S safety/sunglasses are already being distributed in time for the start of summer - as a chic and visible reminder of the important topic.

WE ARE LEO+S
SAFE TOGETHER

Dangerous activities, complex machinery: Sustainable improvement of occupational safety requires not only ongoing awareness raising, but also concrete training and educational opportunities.

Kick-off for the crowning conclusion of a long-lasting investment offensive: (from left) Provincial Councillor for Economic Affairs Markus Achleitner and Erich Frommwald presented the next and final expansion phase at the commissioning of the flash dryer in 2020.

MILLIONS INVESTED IN ENERGY EFFICIENCY

With completion of the Burnout Section 2020-2022 project in March 2022, the the crowning glory of a massive and multi-year expansion programme around the heart of the Kirchdorf cement plant has been achieved: The rotary kiln, and with it the entire thermal system for the production of the cement clinker, is now one of the cleanest and lowest-emission plants in the world, setting new standards in energy efficiency. The commissioning of the new calciner was preceded by a series of investment projects over the past 15 years, which impressively cement the pioneering role of the tradition-rich plant in terms of ecological footprint.

By 2030, the European cement industry has set itself the goal of increasing the use of alternative fuels to 60 %. By 2050, the target is 90 %. At the Kirchdorf cement plant, these goals have already been more or less achieved - thanks to a long-term investment and expansion programme: For more than 10 years, the use of alternative fuels has been promoted through ALFUMA GmbH. With the entry into the Secondary Raw Materials Production company (SRP) in Pöchlarn in 2015, the supply was further developed. In 2016, the world's first DeCONOx installation went into operation in Kirchdorf. In 2020, a flash dryer for moist alternative fuels was installed. And now with the new calciner in 2022, the last possible optimisation for emission reduction from today's process engineering point of view was put into operation.

The new 10 million euro calciner investment in the Kirchdorf cement plant comes comparatively late, but there is a very good reason for it: While many cement plants in Austria already operate modern calciner systems, the operators of the Kirchdorf plant decided to keep the best part for last. And finally did so with a completely new technology that makes the entire system incredibly efficient and saves a lot of steel and refractory material during installation. For this technological masterpiece in CFD computer simulation and clever ideas, they found exactly the right technology partner in PM-Technologies in Gleisdorf in Eastern Styria.

Recirculation chamber saves millions in seconds

While the fuels move through the calciner, a horizontal cyclone" ensures the selective combustion of the materials: Coarse parts stay longer, fine parts only briefly. This is basically a matter of a few seconds with major consequences: A usual dwell time of 4-5 seconds requires correspondingly long pipes (expensive!) and burns carbon monoxide completely. In Kirchdorf, however, a recirculation chamber ensures shorter distances (cheaper!) and also maintains a certain level of CO, which enables autothermal combustion in the downstream DeCONOx-system.

To understand the entire system in its chemical and thermal interplay, one must of course first complete a university degree. But this much is certain: it practically doesn't get any more efficient than this! It's like a Land Rover with the petrol consumption of a light city car plus low emissions. With the completion of the plant in Kirchdorf, the technology is now in all likelihood poised for an international breakthrough - just like the DeCONOx technology realised with an Upper Austrian manufacturer just a few years ago, which is now already successfully spreading internationally.

Alternative fuel supply around the clock: Fuel is fed into the calciner's refractory piping via a trough chain conveyor.

Kiln-ready delivery: In the new EBS 5 loading terminal, SRP deliveries go directly from the Kerschner Umweltservice trailer onto the conveyor.

Conversion work in record time

When the rotary kiln could finally be sent on its new journey on 10 March 2022 after the annual maintenance work and the integration of the new calciner, the relief was great: On the calciner alone, a total of 500 tonnes of steel and an equally large amount of refractory material were installed - and all at a dizzying height: With the help of a 70-metre-high crane, the complex plant was fitted into the existing concrete skeleton of the old calciner with centimetre precision. 70 employees of the cement plant and 100 external workers were able to carry out the challenging work without any accidents - a highly impressive and gratifying achievement.

After the construction work for the new burnout section, including dosing and loading equipment, was completed on schedule by the beginning of the year, the rotary kiln was shut down for the annual repairs and maintenance. Now the new calciner system had to be integrated before the next kiln season could start: "Originally, we had planned a kiln shutdown of 12 weeks. Managing Director Frommwald had expressed the wish to limit the work to 10 weeks if possible. In the end, we were already finished after 9 weeks - an unbelievable achievement by our entire team!" recalls plant manager Christian Breitenbaumer with delight and relief.

It was the crowning conclusion of a conversion project in which a total of 70,000 working-hours had been invested. Now the only open question was whether and how well the innovative calciner system would work in conjunction with the rest of the thermal system. This question was basically answered within only 2 days: "On Thursday we fired up the kiln, on Saturday the first clinker could already be produced. And after only a few days, we reached full capacity of the kiln amazingly fast," the plant manager beams. And there is another reason for this ...

Boom in demand and energy costs

The commissioning of the optimised plant came not a day too soon: 2021 marked the absolute sales record in the 134-year history of the plant. "At the moment, there is not a single kilo of surplus clinker available in the whole of Austria; we are running at the absolute limit," explains Breitenbaumer. Not only is the demand for cement higher than ever before (Corona pandemic, subsidies and opportunity for many a conversion, especially in the tourism sector), but the energy and raw material prices have also become exorbitantly more expensive in recent months.

Fortunately, the many millions invested in emission reduction and energy efficiency also entail, by definition, significant energy savings. With the energy budget of a cement plant, mind you, we are talking millions of Euros per year. Even though the remaining energy costs have risen significantly in the meantime, this price inflation would have been far more problematic without the innovative DeCONOx plant, the flash dryer and the new burnout section. Cement prices will sooner or later have to rise throughout Europe. But the amortisation of the investments and the competitive advantage thus achieved, puts the Kirchdorf cement plant in an excellent market position - not to mention the progress in achieving the environmental goals. Kirchdorf thus remains an absolute pioneer in all these areas.

Kiln patron and district chief Elisabeth Leitner sent the Kirchdorf rotary kiln on its new journey on 10 March 2022, after the conversion work was completed. Thanks to the increased thermal efficiency of the entire system, full operating temperature was reached after only a few days this time.

Official opening of the new plant: (from left) Plant Manager Christian Breitenbaumer, Upper Austrian Economic and Energy Regional Councillor Markus Achleitner and Managing Director Erich Frommwald at the official ceremony on 13 May 2022.

NEW SHAREHOLDING IN TEAM ASCHE GMBH

VALUABLE RAW MATERIAL FOR CEMENT PRODUCTION

Anyone who heats with a stove at home disposes of ash (unfortunately) in the residual waste. In a biomass heating plant, on the other hand, mountains of ash accumulate, which become a valuable raw material in cement production. For this reason, the Kirchdorf cement plant has now also joined "Team Asche".

Even though the agendas of Team Asche GmbH are strictly speaking handled by a single person, the team concept has been the goal of the company from the very beginning: Founded as a consortium of several Lower Austrian companies in 2009, Team Asche has since established itself as an established disposal and recycling company for ash north of the Austrian Alps. After the Kirchdorfer cement plant advanced to become the main customer over the years as a result of the intensively pursued substitute raw materials strategy, the 25 % share of a former co-partner was finally taken over by the cement plant in 2021.

Teamwork for material cycles

As a joint venture with Holz-Rec Recycling und Verwertung GmbH based in Herzogenburg and Kerschner Umweltservice und Logistik GmbH in Pöchlarn, with which the Kirchdorfer Group also jointly operates SRP GmbH, they together ensure optimal disposal, recycling and logistics of the ashes produced in numerous biomass heating plants throughout Austria. And with an average annual turnover of 2 million euros, that's a lot of ash and dust! About two thirds of the 50,000 tonnes of ash disposed of on an annual average can be used for cement production - the rest, which cannot be recycled due to composition or impurities, must be landfilled. However, processes and ways are constantly being sought to reduce the amount of ash that has to be landfilled and to recycle it instead.

Energy transition creates more ash

Christoph Paul, who has been the raw material broker for Team Asche GmbH since 2021, explains: "The thermal utilisation of biomass will probably continue to increase and the CO_2 legislation will also gradually change the business. It is not impossible that ash could then also slowly increase in value financially."

Arranging and designing material flows for the construction industry has also proved to be a coherent career step: The trained chemist was previously not only active in the construction industry, but also in the ARA system (Waste Materials Recycling Austria). And he is also a certified concrete technologist, by the way.

Team Asche Managing Director **Christoph Paul** gets the best out of raw material streams.

MODERNISATION OF THE **STRAKONICE READY-MIX CONCRETE PLANT**

Since 2007, ČR Beton Bohemia has been operating one of its now 8 ready-mixed concrete plants in Strakonice. With a comprehensive modernisation of the site located 50 km northeast of Budweis, another location has now not only been brought up to the state of the art, but also made winter-proof.

Less construction work is normally done over the winter months - yet the ready-mixed concrete business is becoming increasingly important even at low temperatures. In order for the concrete to flow all year round, however, the aggregates must be stored appropriately for winter and must also be heatable. In an important modernisation project, the ready-mixed concrete plant in Strakonice was therefore closed in mid-December 2021 and, in the course of the general modernisation, also equipped with an appropriately heatable five-chamber container. The containers, each holding 30 m^3 , were installed below ground level and can therefore be loaded directly from the truck.

The rapid construction of the new rock tanks was made possible by prefabricated concrete components from sister company MABA Prefa. This left enough time for the subsequent installation of the technological components. For example, a new patented Flexowell Z-conveyor was installed, which transports the weighed aggregate into the hopper above the mixer, where it is immediately prepared for delivery to the mixer. This technology significantly increases the concrete plant's production output. The 1 m^3 capacity mixer was also modernised, as were the three cement silos, each designed for 60 tonnes. In addition to a modernised storage facility for concrete admixtures, the necessary boiler room for heating air and water was also installed.

Thanks to the great commitment of all project and technology partners, who also worked on weekends, the Strakonice ready-mixed concrete plant was able to resume operations on schedule in April 2022.

The proud managers are satisfied with the performance of the renovated plant. From left: Division Manager Armin Richter and ČRBB Managing Director Vlastimil Vrána.

Winter construction site with speed: The comprehensive construction work as well as the technical upgrade of the ready-mixed concrete plant Strakonice could be carried out within only four months.

KIRCHDORFER CONSTRUCTION MINERALS

ARE WE RUNNING OUT OF **MINERAL BUILDING MATERIALS?**

As long as the Cologne Cathedral is being built, as the saying goes, the world will not end. For the sake of a future worth living, it is therefore all the more important that we do not run out of raw materials for the famous medieval building site. Because just like the Cologne Cathedral, our entire civilisation is built on mineral raw materials. Do we have enough available?

We have enormous quantities of sand, gravel and natural stone more or less all over Europe. In purely geological terms, the reserves in Austria, in particular, will literally last for thousands of years! Nevertheless, it is becoming increasingly difficult to cover current demand, especially for the construction industry. On the one hand, this is a good sign - namely that our civilisation is still developing splendidly, at least in terms of infrastructure. On the other hand, however, the increasingly difficult challenge of obtaining the relevant mining permits is causing concern in the commodities sector. For all the enthusiasm for the transition to a green and sustainable civilisation, the extractive sector is unjustly battling headwinds.

Exemplary ecological

The extraction of raw materials is strictly regulated by law and requires a comprehensive nature conservation concept in each case: from species protection and biodiversity to the renaturation of extraction sites after mining, the raw materials industry works in harmony with nature to a large extent. Even the industry's CO2 footprint is exceedingly low, at 2-5 kg per tonne of extracted material on average in the EU. Nevertheless, permits are often not granted even though all requirements are met. By the way, every year 12 tonnes of mineral raw materials are mined per capita in Austria. That sounds like an enormous consumption - but every kilometre of motorway, for example, contains 216,000 tonnes of sand, gravel and chippings. Each kilometre of railway track also requires 35,000 t of ballast. But consumption is actually the wrong term.

Leading the way in the circular economy

The construction raw materials sector in Austria is an international role model when it comes to recycling management: A full 91 % of the raw materials used are reused. In 2019, only 11 % of the total 11.5 million tonnes of mineral construction and demolition waste had to be landfilled. New applications in the construction industry are constantly being created from the rest. However, in general, orders of magnitude are built than are demolished - which is why the vast majority of construction raw materials must first be newly extracted before they can be used in the material cycle for the next decades. After all, stone, sand and gravel are not "consumed", but rest, as it were, in a huge storage of building materials. And in this respect it is a direct "yardstick" for the development of civilisation. Therefore, we must consistently advocate that we do not obstruct our further steps towards a sustainable future by imposing limitations on ourselves.

OUR CIVILISATION IS BUILT ON STONE

Armin Richter **INTERVIEW**

KN: Mr Richter, we are currently seeing some drastic increases in energy and raw material prices. Does that affect building materials as well?
Of course, high electricity and fuel prices have a direct impact on our industry. But that's not all: sooner or later, the dynamics of supply and demand will also tend to cause prices to rise independently. This is a development that has been observed around Vienna and in eastern Austria for several years now.

KN: Are construction raw materials in Austria slowly becoming a scarce resource?
Yes, definitely. But it doesn't have to be that way, because in Austria we are literally blessed with all kinds of construction raw materials. The main ridge of the Alps alone is a gigantic storehouse of raw materials for thousands of years. The scarcity is rather due to the limitation of mining permits. So we don't have a shortage of raw materials, but a shortage of permits, and that throughout Europe. As Vice-President of the UEPG (Union Européenne des Producteurs de Granulats - European Aggregates Association, note), this is also a central strategic issue for me vis-à-vis the EU Commission in Brussels.

Armin Richter has been head of the Kirchdorf raw materials division since 2012. As a representative of the Austrian construction raw materials sector, he is also active on the board of the European Aggregates Association (UEPG) at the level of the European Union.

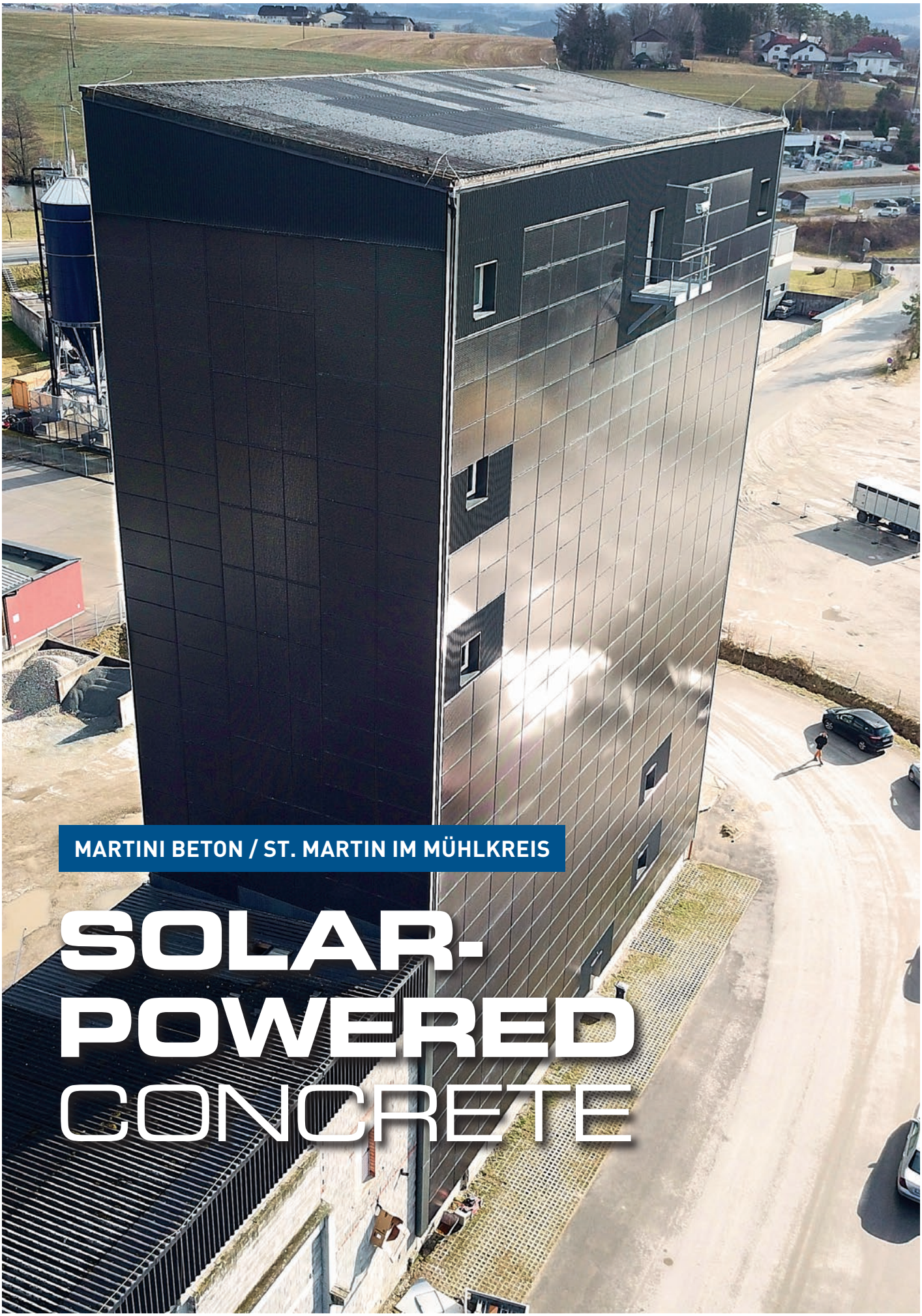
KN: How does this shortage of permits come about?
As a landowner in Austria, for example, you are also the owner of the associated mineral resources. Mining, which is basically regulated by the federal government in the Mineral Resources Act, requires a permit, which in turn is a provincial matter. The mining permit for a specific property naturally concerns spacial planning considerations and is therefore essentially dependent on the approval of the respective municipalities. And there we have a fundamental problem: everyone wants to have roads and buildings, but of course no one wants to have the gravel plant required for this in their locality.

KN: How does this conflict of interest play out in practice?
When we apply for a quarrying permit, we have to provide individual proof in each procedure that the quarrying is "in principle" in the public interest. Although it is of course obvious that the construction of public infrastructure, roads and houses is clearly in the interest of society. It would therefore certainly make more sense if the procedure only concerned specific reasons that are contrary to the public interest. The far bigger problem, however, is spatial planning.

KN: How can spatial planning contribute to a better supply of construction raw materials?
Overall, we as a society naturally want to dedicate as little land as possible to raw material extraction - that is absolutely clear. And as a raw materials industry, we are equally concerned to use available land as efficiently as possible. In this respect, it would of course be extremely sensible to expand existing mining areas in particular, rather than to approve new ones. The problem, however, is that residential areas in many communities typically extend closer and closer to the extraction sites, which means that they can no longer be expanded. The Austrian Ministry of Agriculture, which is responsible for mining, took an important step in 2021 with the "Master Plan Raw Materials 2030" to secure the availability of raw materials, focusing in particular on domestic extraction, regional value creation and support for the circular economy. As part of the expert panel, I was also able to contribute our ideas accordingly.

This initiative was de facto made necessary by the critical situation in the international supply chains in the wake of the pandemic. And in light of the current events in Ukraine, a national raw materials strategy is now even more important than it ever before.

KN: How central are mineral raw materials for society?
If you ask me, this cannot be valued highly enough. Our entire civilisation is built on rock (and stone), so to speak. And that is of enormous importance, especially with regard to a sustainable future: without a sufficient supply of mineral raw materials, there is simply no "Green Deal"! Because without raw material extraction, there are no wind turbines, no PV plants, no transformer stations, no hydropower installations. Mineral raw materials are THE basis for our entire infrastructure. ***That is why it is so critical for our green ambitions that we do not lose sight of the functioning "overall system"!***



MARTINI BETON / ST. MARTIN IM MÜHLKREIS

SOLAR-POWERED CONCRETE

If you drive from the legendary Danube gorges up to the picturesque hilly landscape of the upper Mühlviertel and suddenly catch sight of a mirrored skyscraper that would just as easily fit in Manhattan or Macao, then you are in Sankt Martin - the site of what is probably the first ready-mixed concrete solar power plant far and wide!

High-rise buildings are not necessarily part of the landscape in this idyllic part of Upper Austria. But the massive 33-metre high tower of the ready-mixed concrete plant of Martini Beton is a landmark visible from afar. Originally, the tower, in which the stored aggregates are located at a clear height directly above the concrete mixing plant, was also intended to supply an adjoining precast plant, but this was never built. Three decades later, a completely new use has now opened up for the unusual building, making the concrete plant a pioneer in green energy.

After the tower's aging façade required renovation, Hans Arthofer, who as one of the four partners in the joint venture is responsible for the operational management of the site, obtained an initial offer: 400,000 euros, of course a huge investment for a ready-mixed concrete plant of this size, which is not easily earned with 8 employees. Especially when the general prices for ready-mixed concrete - in contrast to many others - are not exactly soaring. But there is no real alternative to costly refurbishment - unless your name is Arthofer and you are making your first (good) experiences with a solar plant on the roof of your own company ...

An investment that pays off

Johannes Arthofer, who looks after technology, sales and costing in his parents' building materials business, had previously planned a solar installation in cooperation with LINZ Energieservice GmbH, a subsidiary of LINZ AG specialising in consulting and energy contracting, and had gained some helpful initial experience. So the idea of using three sun-facing sides of the façade to produce solar power and thus improve the economic efficiency of the huge building presented itself. And a calculation of the project showed an astonishing bottom line: the additional investment of 50 % ensures that 100 % of the total investment can be recouped over the planned lifetime - with electricity production for their own use as well as feeding into the local grid.

The decision-making among the four shareholders was therefore clear-cut, as Armin Richter, Managing Director of Martini Beton for the Kirchdorf Group, recounts: "The shareholders' meeting was done in a quarter of an hour. The Resch brothers were of course commissioned with the construction work, and the Leube cement works, which already operates solar plants, was also immediately on board." Richter then took over the contract design and Johannes Arthofer the management of the complex project.

In cooperation with LES, not only was the detailed planning of the PV installation carried out, but also the professional disposal of the old façade and the installation of new thermal insulation. The experts from Linz also took over the installation of the 1,200 m2 photovoltaic panels. In mid-March 2022, the time had come: the PV system was put into operation and already produced around 10,000 kilowatt hours in the first three weeks.

The expected output of 150,000 kWh per year generates roughly the equivalent energy demand of 65 average single-family homes. While the efficiency of a vertical façade system is lower in summer than, for example, on a roof surface, the shortcoming is partially compensated for during the months when the sun is low in the sky. In addition, the façade more or less cleans itself, the risk of damage from hail is practically zero and snow cover is also ruled out. The good performance during the cold season is just what the concrete plant needs - because in addition to the offices, the aggregates or the water must of course also be heated when the outside temperature is below 5 degrees.

Photovoltaic system opens up a range of possibilities

Beyond covering the operating electricity demand, about half of the output is currently fed into the electricity grid and thus contributes directly to the amortisation of the façade. In a further step, consideration is being given to replacing the existing oil heating system with a heat pump. Furthermore, a charging infrastructure for electric vehicles might be operated at the connected filling station in the future. A blackout-resistant power supply could also be made available to the neighbouring road maintenance depot.

Whoever uses the electricity: with CO_2 savings of 30 t per year, Martini Beton's eco-balance is a model for the industry. And the upper Mühlviertel is one attraction richer.

KÁMEN A PÍSEK

LIVING SOCIAL RESPONSIBILITY

With the help of Kámen a písek, the old primary school has now been given a newly insulated and plastered façade!

In Ševětín, a town of 1,400 inhabitants, Kámen a písek operates not only its largest quarry, but also one of the most productive in the entire Czech Republic. This is due not only to the excellent employees, but also to the good understanding with the community and its residents. And that is well deserved ...

A large quarry on the outskirts of a town, from which trucks swarm practically non-stop during the day, naturally also entails a great responsibility on the part of the operators - not only in terms of protecting the environment, but above all towards the local population. A responsibility that the raw materials division of the Kirchdorf Group is particularly aware of: for example, after many years of planning and preparation, the last section of a 2 km-long local bypass was opened in 2019, which was realised by the quarry operator on its own initiative and at its own expense in order to eliminate truck traffic through the local area. But this is only one of many measures with which Kámen a písek actively participates in local development.

As a reliable sponsor of the local football club, for example, KAP also participates directly - and with great pride - in the social life of the South Bohemian market town. The voluntary fire brigade as well as the Ševětín folklore ensemble are also regularly supported.

In addition, KAP annually finances significant expenses that the municipality can use for cultural, educational, fire protection, youth welfare, social, medical, ecological, humanitarian, charitable and sporting purposes. This cooperation agreement has already made it possible to renovate a number of public buildings that have had a significant impact on the development of the village.

Ševětín Football Club

Volunteer fire brigade

Folklore Ensemble „Blaťácký ensemble Ševětín“

Sports club building before renovation.

The renovated cinema now also houses a modern information centre.

Opening of the Ševětín ring road: Financing of the 2 km bypass was the largest single investment to date by Kámen a písek in the further development of the quality of life in the traditional South Bohemian quarry community.

„Kraftwerk Lärmschutzwand“: One of the many future-oriented and sustainable products of MABA Fertigteilindustrie GmbH.

ECOVADIS AWARD: FROM ZERO TO SILVER

In its very first participation in an independent "eco-rating", the lead company of Kirchdorf Concrete Solutions was able to achieve an excellent result right from the start. This boosts motivation to take the next step towards rating gold with even more vigour. After all, the KCS sustainability strategy has only just begun!

2021 was the year in which KCS launched a comprehensive sustainability strategy (we reported). Before the measures that had just been worked out were implemented, the first submission to the "EcoVadis® Sustainability Rating", in which more than 80,000 companies worldwide have already been put through their paces, was made at the same time. And the result speaks for itself: with 59 out of 100 possible points, **MABA Fertigteilindustrie GmbH** positioned itself right from the start in the 80th percentile of all the companies evaluated. And measured against all companies involved in the manufacture of products made of concrete, cement and gypsum, MABA is already in the top 13 percent!

Motivation turbo for the KCS sustainability strategy

The excellent result is of course no reason to rest on our laurels, as division manager Michael Wardian explains: "The idea of such a rating is that we review our performance regularly. And in line with our comprehensive sustainability strategy, we naturally want to make the positive development visible year after year".

Important criterion in bidding procedures

An impeccable sustainability record is not only desirable for us as a company and for our stakeholders, but is also becoming increasingly important as a decision criterion in public tenders," Wardian explains. As the market leader in various segments of the Austrian railway and road infrastructure, the sustainability concept has not only defined the entire company organisation at MABA for several years, but is also an important benchmark for all investment projects and product developments. And as a technology leader, KCS is naturally committed to setting the best possible example throughout the industry.

RAUTER FERTIGTEILBAU

FUNCTIONAL JEWELS **IN WHITE CEMENT**

It is not self-evident that spectacular architecture also meets the functional requirements of the users. In the Aron Menczer educational campus in Vienna, however, this has been achieved magnificently. With artistic balustrades from Rauter.

Who needs so many balconies, the casual observer may ask at the sight of the new education campus in Vienna's 3rd district? The answer is, of course, "children"! Because the vertical nesting that architect Martin Kohlbauer has realised here with lavish use of complexly shaped concrete balustrades not only give the 14 kindergarten groups, 17 primary school classes and 11 special education classes sufficient fresh air and meeting areas, but also save one hectare of green space on the site of the former Aspang railway station.

Together with the outdoor facilities designed by "3:0 Landschaftsarchitekten", optimal implementation of the "campus" concept of the Vienna City Government has been achieved here, which aims to promote inter-class and inter-group encounters and also ensures a seamless transition from one school level to another. All that remained was to find the right manufacturer to implement the balcony parapets, which are inclined outwards by 10°: As so often, a clear point victory for RAUTER Fertigteilbau GmbH in Upper Styria, which specialises in complex geometries and beautiful execution. The devil is truly in the detail when it comes to architectural masterpieces like this one, which is why sandblasted sample elements made of white cement had to be submitted at the time of submission before the contract for 1,200 linear metres of these gems was awarded.

Educational Campus Aron Menczer © Daniel Hawelka

MABA FERTIGTEILINDUSTRIE

SAFE CONCRETE — CONCRETE(LY) SAFE!

Kirchdorfer Concrete Solutions has a comprehensive portfolio of products that play a particularly important role in the area of road safety: With safety barriers, system crossings, escape doors and integrated noise, stone impact and also protection of workers on site, safety infrastructure plays off the advantages of solutions made of mineral building materials to perfection. Or in other words: concrete is concrete(ly) safe. Especially on the road ...

August 2020, Wöllersdorf-Steinabrückl: A completely new type of roadside protection with integrated noise protection solution has just been handed over to the public along 1.2 km of the B21 federal road. The mayor of Wöllersdorf, Gustav Glöckler, and the Lower Austrian Transport Provincial Councillor Ludwig Schleritzko are delighted - because the need for a noise protection solution along the built-up area of Wöllersdorf north of the B21 starting from the Fischaberg junction has been an issue since the 1990s.

But due to the high costs of conventional noise protection facilities, financing was simply not feasible. However, a new product development by the neighbouring MABA Fertigteilindustrie GmbH fundamentally changed the cost situation: thanks to the compact combination of safety barriers and noise protection in a single element directly at the side of the road, a total construction height of only two metres is already sufficient to significantly reduce traffic noise for local residents.

Under the registered product name Sile&Safe® MABA Fertigteilindustrie was able to realise a vehicle restraint system with a noise protection function directly integrated into the concrete crash barrier for the first time: Sile&Safe® is basically a slightly higher DELTABLOC® element equipped with a noise-absorbing impact surface close to the ground and integrating noise protection panels made of wood concrete from a height of 125 cm. This extremely space-saving and cost-effective integration of noise and impact protection achieves its high shielding effect through its immediate proximity to the sound source.

The solution, verified by in-situ sound level measurements and tested in impact tests, also guarantees the safety requirements defined in ÖNORM EN 1317. And the design and colouring of the wood concrete absorbers blend in beautifully with the landscape.

Tailor-made compact solution

Initially available in two different construction heights (with and without wood concrete panels), Sile&Safe® is the most compact combination of noise and impact protection possible to date. And the dimensions, effective ranges and impact properties achieved and crash-tested are precisely tailored to the entire road network below the motorway.

The product is patent-protected and unique in its characteristics, as R&D manager Alexander Barnaš explains: "Since the MABA precast industry has been one of the absolute pioneers in Austria since the 1990s with the development of DELTABLOC® concrete crash barriers, it was naturally our ambition to initiate further developments in this area in particular. The great backlog demand for concrete crash barriers, especially in the low-ranking road network, was a particular concern for us, as was the compact integration of noise protection functionality".

However, before we take a foray into the extensive KCS safety portfolio for Austria's road infrastructure, we still have to clarify the most important question of all: Why concrete and not something else?

Safe and durable: concrete advantage

While guardrails made of metal are still the predominant safety technology at the side of rural roads, things are slowly changing: metal shines mainly due to its small space requirement and, due to the lightness of the materials used, also somewhat easier installation, not to mention the material requirement or material costs.

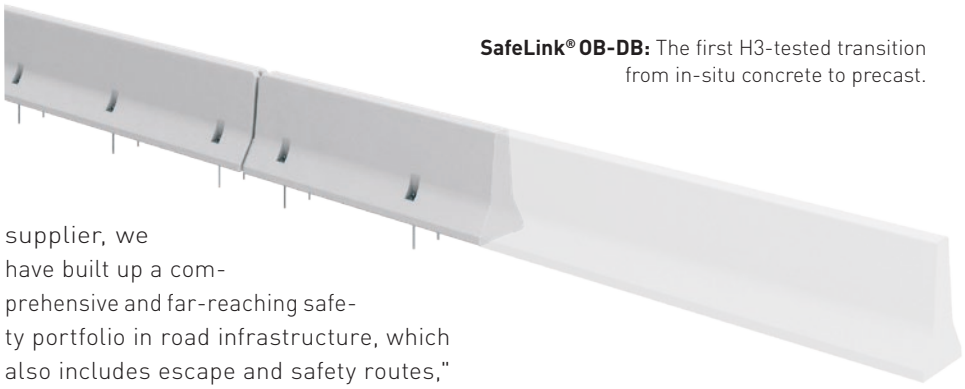
But this is changing, and for many different reasons: Steel is no longer cheap. And measured against the comparatively short service life of conventional guard rails, it is actually already relatively expensive. If you also factor in the costs of installation, maintenance and ultimately renewal, the cost advantage shifts significantly in the direction of concrete! For these and other reasons, concrete solutions have become inexorably established on motorways and motorways over the past years and decades. Because the breakthrough safety of concrete crash barriers is without a doubt in a class of its own.

And last but not least, DELTABLOC® has made foundationless installation (whether permanent or even temporary) a breeze by using interlinked precast elements.

With a lifespan of at least several decades, concrete is without a doubt the ideal material for securing our traffic infrastructure. For historical reasons, however, and because certain trends simply take time while they take hold at all levels, our country roads and the entire low-ranking road network in Austria are still mainly secured with metal crash barriers, which will have to be gradually renewed or replaced in the coming years.

Not to mention countless dangerous road sections that are still not secured. This is where Kirchdorfer Concrete Solutions is now focusing on road safety ...

Impact testing for Pass&Safe®: The moment of truth at the test site in Allhaming shows that the safety for workers behind the impact, visual and splash protection exists on paper, but also can be tested and documented in practice.



SafeLink® OB-DB: The first H3-tested transition from in-situ concrete to precast.

Defusing danger zones

On Austria's motorways, where the percentage of concrete crash barriers used is already very high in international comparison thanks to the pioneering work with the DELTABLOC® system, still many mprovements need to be made: Kirchdorfer Concrete Solutions, for example, has set itself the goal of using only highly safe concrete crash barriers to secure the central reservation on motorways.

In addition, there are still many neuralgic points where unsafe system transitions - from steel guard rails to concrete or from in-situ concrete to precast concrete elements as well as from paved roads to bridges - represent a risk. The company's portfolio includes a whole range of tested system transitions - solutions whose reliability has been proven and documented in impact tests. And apart from that, there are of course a lot of unsecured gaps that will have to be closed visibly over the coming years.

Safety for all situations

However, passive road safety is not just a question of concrete crash barriers at the roadside and on the central reservation of motorways and motorways: "As a full-range supplier, we have built up a comprehensive and far-reaching safety portfolio in road infrastructure, which also includes escape and safety routes," explains Klaus Aicholzer, who has been in charge of the Road business segment, which has been regrouped within KCS since 2020.

"With SafeGate®, for example, a very special guide element is available that enables emergency forces to quickly open the concrete guide wall on the central reservation for emergency vehicles without the use of special tools. This is an important issue on motorway sections with a succession of tunnels, among other things", describes Aichholzer.

KCS also wants to introduce a new safety optimisation in the tunnel itself with the development of fireproof escape doors in the coming years - the corresponding product development is already in full swing.

Already available, but only at the beginning of their application possibilities, are various extensions of the DELTABLOC® concept, especially for the temporary protection of construction sites.

Here, with Pass&Safe®, a separate variant with installed visual, glare and splash protection is available. As well as a specially developed integration of robust rockfall nets (Rock&Safe®).

This is a common thread running through the KCS road portfolio, which also makes Austria's roads a lot safer!

Precast concrete parts with a mission: Whether rockfall protection (image), occupational safety or passive traffic safety for motorways, rural roads and urban traffic infrastructure - Kirchdorfer Concrete Solutions has set itself the goal of increasing road safety with a comprehensive portfolio. A mission for which concrete is precisely the optimal material.

MABA MONTAGEBAU IS READY TO ROLL

The new MABA Montagebau GmbH bundles the extensive installation services of the MABA precast industry in one powerful company. This complements the manufacturer's comprehensive product portfolio with an optimised range of services.

MABA's own assembly team has probably been around almost as long as the traditional manufacturer's prefabricated parts. But the requirements have of course changed over the decades - and so have the products. And of course there are hundreds of them. And with them, of course, also a lot of special competences that are necessary for the professional installation of the precast elements at each construction site. Over 30 employees work at MABA, both in the office and on the front line in terms of installation. Since the beginning of 2022, the company has also been operating under the umbrella of its own subsidiary. This is not only to separate the assembly work legally from the agendas of pure concrete product production, but also makes sense for customers.

Now, with its own managing director, MABA Montagebau GmbH can align itself even better to the requirements of the diverse customers in (almost) all of Austria. Klaus Piribauer, who in 2015 took over the responsibilities of assembly manager at MABA from his former position as construction manager in the construction industry, is the new managing director: "Essentially, not much changes in terms of work, but the scope for creativity, as well as the responsibility, is of course all the greater now as managing director," explains Piribauer.

The scope of services of the new company concerns almost all precast products of the entire KCS. At present, the company mainly installs vehicle restraint systems, noise protection equipment and transformer stations and advertising masts.

In the area of complete solutions, MABA Montagebau GmbH even repeatedly takes on the complete shell construction from the floor slab to the walls, ceilings and stairs. In other words, there are many areas that ensure that MABA assembly teams are on the job practically day and night at various construction sites.

MABA Montagebau managing director Klaus Piribauer is in charge of the assembly services of the new subsidiary company with approximately 30 employees.

MABA HUNGARIA Kft.

TO A GOOD PARTNERSHIP

The KCS subsidiary in Várpalota, Hungary, which specialises in the production of railway sleepers, has entered into a promising partnership with a Hungarian railway construction company. It is not the first partnership - but after 20 successful years, they have now presumably found the right partner.

On November 29th, 2021, the managing director of Kirchdorfer Concrete Solutions and the majority owner of the Hungarian Vasút-vill Kft. met in Szombathely to sign the contract for a 49 % share in MABA Hungaria. The strategy of developing the railway market together with a construction company close to the industry is not a new one: With exactly this intention, MABA was considering a number of sleeper plants in Eastern and South-Eastern Europe as well as Turkey some 20 years ago. Everywhere with partners, and not everywhere with success. The Turkish joint venture as well as MABA Hungaria eventually established themselves successfully and developed into significant players in the emerging market. And in the case of Hungary, this probably has less to do with the original partner and more to do with the very first employee ....

2002: Kick-off in Hungary

In a joint-venture with the Austrian construction company Swietelsky and its Hungarian subsidiary Mavepcell, Kirchdorfer Group opened a brand new production facility in Hungary. The Hungarian market had already been supplied with railway sleepers exported from Austria's Sollenau. So when Swietelsky wanted to set up production in Hungary, Kirchdorfer Group was immediately on board. Around 170 km from the Austrian border, a modern factory was built on a greenfield site with an investment of 5 million euros. The site was initially designed for the production of 100,000 pre-stressed, concrete mainline sleepers. It produced from the start what was essentially a copy of the Austrian L2 sleeper. This worked quite well at first, but for the goal of becoming the market leader in Hungary, this sleeper was simply too much of a high-end product. Therefore, the sleeper type L4 was subsequently developed in cooperation with the University of Győr, which was tailor-made with the same dimensions and identical 25t axle load, but for a lower maximum speed of 200 km/h, which optimally met the requirements of the Hungarian railway network.

2007: Growing market share with L4 sleeper

However, the founding partner was no longer able to reap the fruits of the groundbreaking development (the L4 is still the company's most important product today). In 2006, Kirchdorfer Group took over all shares and transferred the management to Dipl.-Ing. Béla Steinhauer (initially alongside Mathias Redlberger, then from 2008 together with Franz Buschmüller). Béla Steinhauer, who has de-grees in both mechanical engineering and economics, was already on board when MABA Hungaria was founded - as plant manager and the very first employee of the company. Despite all the changes in shareholder relationships and in the supervisory board, he has been the constant operational force driving the development of the company for 20 years.

In the following years, the company developed an even less ex-pensive product line: the L5 sleeper, which has now been in use since 2014, is targeted especially for all sections off the main tracks, such as at railway stations as well as on numerous branch lines. A Hungarian speciality, these sleepers are also available in a shortened version, which is used wherever there is an overlap with the turnout sleepers.

2022: New partner, same mission

Since the foundation of MABA Hungaria, the declared goal has always been to strive for market leadership. Which was not quite so easy, because on the 7,000 km route network of the Hungarian state railway MÁV (Magyar Államvasutak) one single provider had been in a dominant position for decades, with the international RAILONE Group in the background. It is all the more astonishing

that MABA Hungaria has nevertheless been able to acquire a considerable market share over the years. In addition, with an export share of 5-10 %, MABA Hungaria has also been successful on the Austrian market and recently even as far as Switzerland.

Future market potential

The potential for further railway renewal and expansion in Hungary is very good: large sections of track date back to the socialist era before 1989/90 and are in urgent need of renewal. In addition to the large investment backlog, some Hungarian lines are also located right on the major rail corridors defined by the European Union and are therefore already being financed or renewed accordingly from EU funds. In addition, a connection to the Chinese "Belt & Road" infrastructure is imminent. A corresponding railway line has already been started from the port of Piraeus.

In order to get the most out of the upcoming railway projects in the future, MABA Hungaria started a new partner search last year. After months of negotiations, Vasútvill Kft. was finally taken on board as a new partner. The company, which belongs to the Homlok Group, has specialised in the construction and maintenance of overhead lines for 70 years and is well established in the Hungarian railway segment - a perfect match for the Kirchdorf Group.

With a sister company, Zsolt and Tibor Homlok have also been active in laying the tracks for several years with state-of-the-art railway construction machinery. A directly interlocking portfolio and the same ambitions, the new partnership is looking forward to a great future together.

Together with our new partner, we want to take advantage of the market opportunities arising from the many future railway construction projects in Hungary.

Béla Steinhauer
Managing Director Maba Hungaria Kft.

Zsolt András Homlok, majority owner of Vasútvill Kft., and **Michael Wardian**, managing director of KCS, at the joint signing of the contract in November 2021.

Modern plant with expansion capacity: The generously designed plant was planned for future capacity expansion right from the start. Currently, up to 160,000 prestressed concrete sleepers are produced per year in Várpalota near Székesfehérvár (north-east of Lake Balaton).

The three outstanding accountants of the KAMMEL SAP project team: (from left to right) Agnes Spörk, Nataliya Saurer, Tanja Hollensteiner.

FROM CLERKS TO SAP-EXPERTS

The implementation of cross-company accounting and cost accounting software is now an absolute must. But the notorious and dreaded "SAP integration", which has been around for a long time, is a challenge for every company. In Grafendorf near Hartberg, they have now taken a big step ahead.

Implementing SAP is like open-heart surgery for any accounting department. It was no different at KAMMEL where, under the leadership of KCS, SAP implementation by the central specialist departments and the IT department of the group was on the agenda at the beginning of the year.

In retrospect, the analysis and preparation phase could have been a little more generous, and the fact that the entire implementation had to take place with only online meetings of the team members was additionally challenging. Nevertheless, there was a happy end - mainly thanks to the great initiative of the KAMMEL accountants, who overcame many stumbling blocks and mastered the system with bravura and commitment.

SAP plus Corona plus annual financial statement

Seven months of lead and preparation time may sound sufficient to go live with SAP in accounting and cost accounting - but if you subtract the summer holiday months and take into account the contact restrictions of the third wave of the pandemic, it did get a bit complicated in the end. Because as in every ambitious large-scale project, the devil is always in countless details - when various KAMMEL-specific business cases, undiscovered errors and stumbling blocks arose.

At the same time, the closing of the previous business year was pending. The department, which is comparatively young in terms of years as an accountant, did not expect such complications, as Manfred Slechta, commercial manager at KAMMEL, explains: "For our three employees, who were trained as clerks in a well-established accounting system, such an implementation project is of course something completely new. It was a huge challenge, but in the end they mastered it with great personal commitment".

The head of department is accordingly proud of his colleagues' initiative. Jens Schmidt, who as commercial manager of KCS managed the project in the Kirchdorf subgroup, has a similar view: "What is completely natural for us is initially like a foreign language for SAP newcomers. Due to the Corona contact restrictions, this basic learning process was of course all the more challenging", Schmidt recounts.

The group also faced additional challenges due to the accounting complexity of the end customer business at the Styrian manufacturer. But the IT department under the leadership of Christian Rosenbichler also showed its flexibility: in order to automate the new compulsory payment of cash contributions for defaulting construction service providers, for example, a new tool was integrated at once, from which the entire group now benefits.

After the last ambiguities were resolved in spring and the KIG accounting team around Stefan Bock was also able to provide on-site training, KAMMEL now benefits not only from the uniform accounting and cost accounting, but also from the new ENAIO ECM system: among other things, the workflow for incoming invoices and delivery notes is now 95 % automated. This means that the initial extra work ultimately pays off for the colleagues at KAMMEL.

GREEN MINDSET FOR THE 'GREEN DEAL'

The 27 EU countries plan to create a climate-neutral Europe by 2050. A clear mandate for DELTABLOC® to make a corresponding contribution to this monumental effort.

When it comes to path-breaking directions for the future, the Kirchdorfer Group's Road & Traffic division is always all ears: after all, finding "new pathways" is at the core of its business and a pioneering spirit deep in its DNA. In other words: minimum CO_2 emissions and maximum exemplary effect are the declared goals. So the Green Deal is a deal for DELTABLOC®! A big deal even, you could say. Because in order to achieve its ambitious goals, the innovation-driven company is now leaving no stone unturned ...

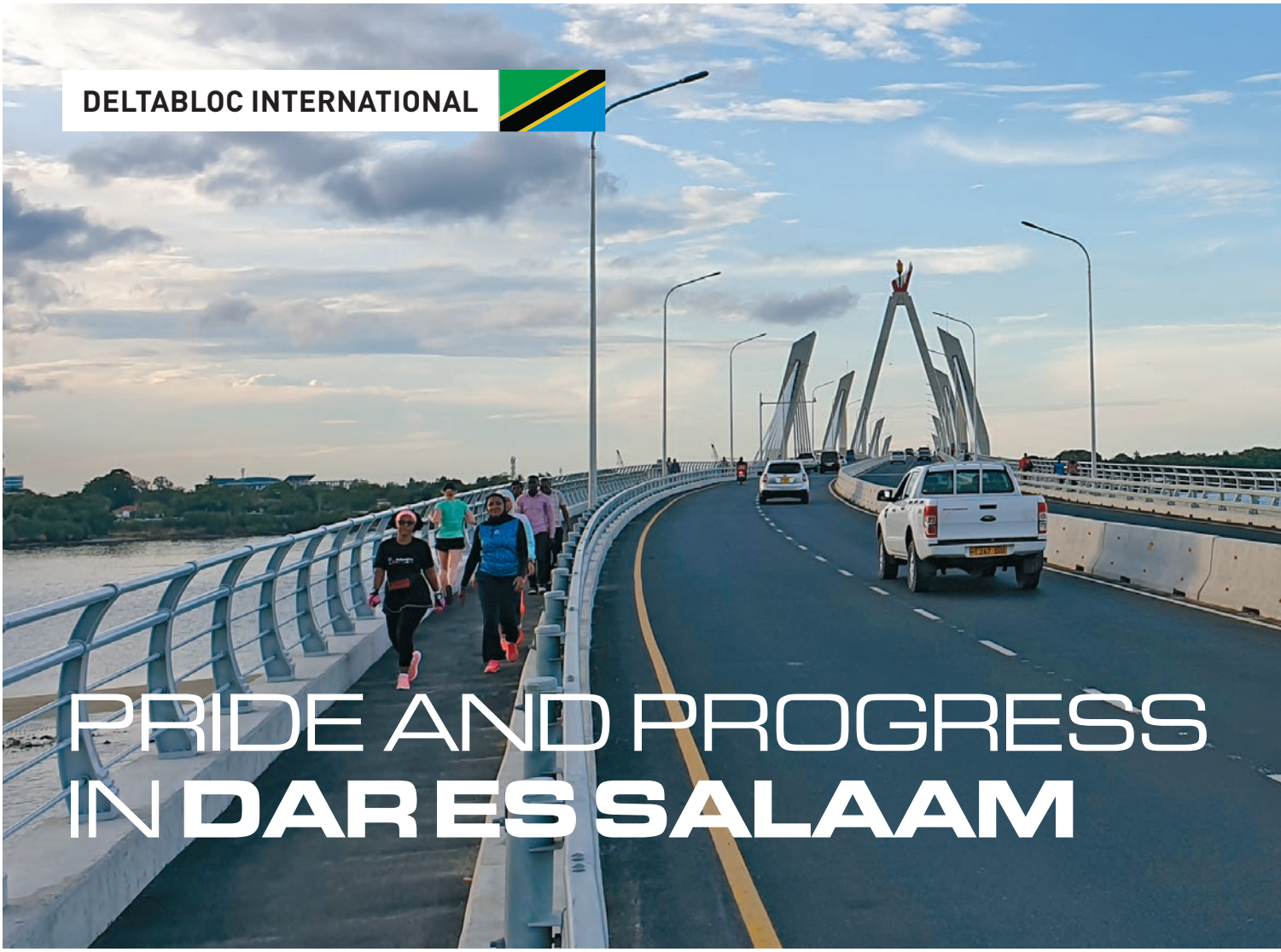
Rethinking everything

Where do you start when there are still 28 years to go and you already have hundreds of products in your portfolio? Ideally everywhere and all at once, seems to be the motto: "I assume that our largely public end users will prefer the CO_2-friendlier solution in the very near future. This scenario is already very clear in some of the countries in which we are active - an additional reason for us to complete the first phase of our all-encompassing sustainability strategy already this year!", explains Division Manager Thomas Edl.

And by "all-encompassing" he essentially means three areas: all products, all processes and everything else. "For me, it is essentially about creating a green mindset that accompanies and questions every single activity in our company", that's how Edl sums up the strategy. This is why heads are already spinning in the new Wöllersdorf headquarters as well as in the laboratories of various cooperation partners: Ambitious research projects have been underway for some time with the Vienna University of Technology and the CEST Centre of Excellence, which focus on new concrete formulations with a lower carbon footprint on the one hand, but also increased recyclability. The applied development should be completed by the end of 2022, lead directly to a corresponding follow-up project and at the same time find a quick way to the market.

Another critical area is, of course, further savings in raw materials and resources: Less material, lower weight and associated new production methods are therefore also part of the research and development activities. Of course, safety performance must be guaranteed from day 1 to the end of the product cycle. And this could well increase product lifespan from the usual 50 years to as much as 100 years - an advantage that has already been achieved with some of the noise protection products. Which makes the math very simple: what lasts twice as long has already cut its footprint in half.

An important thrust continues to be the Optimized Serial Fabrication (OSF) method with its focus on regional production without the need for high-tech facilities. Because DELTABLOC® concrete safety barriers are made in a modern European precast production facility basically in the same way as they are produced in the African bush: with minimal effort, guaranteed quality and local added value. A concept that already fully meets Environmental, Social and Governance (ESG) criteria!



DELTABLOC INTERNATIONAL

PRIDE AND PROGRESS IN **DAR ES SALAAM**

The "Tanzanite Bridge" across the bay of the largest economic metropolis in East Africa, Tanzania, is a visible sign for the aspiring development of an entire region. An elegant protection of the central reserve now also adds safety and aesthetic perfection to the bridge. Yet a safety barrier was never even planned.

With over six million inhabitants and a perfectly located natural harbour, Dar es Salaam is the economic and financial hub for the East African economic boom. The traffic between the individual districts around the huge bay is correspondingly up-and-coming. But when John Magafuli, a chemistry and mathematics professor from the distant shores of Lake Victoria, took over as president, ironclad austerity was initially the order of the day. However, this soon gave way to an extremely ambitious and costly infrastructure programme, which earned the feisty president the nickname "The Bulldozer". Above all, road construction was expanded all over the country.

As the crowning achievement of the billion-dollar investment strategy, a 1 kilometre bridge over Dar es Salaam Bay was built, co-financed by South Korea, which was also awarded with the main contract for the ambitious building project. In 2018, construction work began on an iconic and aesthetically impressive bridge structure by the South Korean contractor, Chinese subcontractors and predominantly local labour. The huge construction site also caught the attention of Olivier Keutgen. The Belgian DELTABLOC® consultant was just making his first contacts in East Africa.

What about this bridge?

Olivier Keutgen had already been working as a freelancer for the French subsidiary for some time. International project acquisition is his great strength. But just three days after he signed a new contract for DELTABLOC International in mid-March 2020 to kick off projects in Asia, the whole world suddenly went into lockdown.

The whole world? No, the "bulldozer" in Tanzania wanted nothing to do with Covid. And for this reason, it was possible for the foreign trade organisation of the Austrian Chamber of Commerce to organise another event in Tanzania. So without further ado, the consultant did not fly to Asia, but to Dar es Salaam instead. On the way to the event, he caught a glimpse of the bridge construction site. And through the contacts established via the foreign trade organisation, he was able to get to speak to the Korean contractors.

After having a brief glance at the construction plans for the bridge, he immediately revealed a major flaw in the otherwise so immaculately planned structure: only a simple, painted white line adorned the central reservation of the 4-lane road surface. And this in Dar es Salaam, of all places, where no one would respect the "imaginary" lane separation anyway. So Keutgen immediately demonstrated the

Delicate operation unloading the moulds: Without a forklift, unloading proved to be very delicate work. But the employees of the local construction company had everything under control.

Curious employees, involved with heart and soul: There was no shortage of dedicated workers for the concreting. After the successful demoulding of the first elements, there was even dancing and singing!

Quality by any means and tricks: Instead of mould oil, commercially available deep-frying grease had to be used. Due to the high heat, the fresh concrete barriers had to be cooled with damp sheets in order to slow down the hardening process.

international standard in concrete safety barriers to the Korean contractors, met with interest and was smoothly passed on to the Chinese subcontractors for the construction of the bridge. For them, the production of concrete safety barriers was merely an unwelcome distraction, however. And understandably so: by this time, the complex construction site was already in full swing. But if the safety barriers were to be delivered and installed ready-made, they said, then why not!

So for Keutgen, the search was on for a local production partner who would produce DELTABLOC® safety barriers. Eventually, he was able to find a partner, negotiated the project and signed the deal. Three months later and out of the blue, the deal was cancelled by the local partner, shortly before it was time to get ready in August 2021.

Now, of course, there was fire on the roof (or on the bridge), because Keutgen had to go back to the beginning, i.e. to the Chinese construction company. This time, however, the finished calculations were at hand, as well as the full support of the Ministry of Works, Transport and Communications - so the Chinese agreed to take over the production quickly and the moulds were shipped from Europe. After 14 weeks of transport (seven had been planned ...) the time had finally come: moulds, tension bars and the necessary turning devices had arrived in the port of Dar es Salaam. In addition, Michael Kirner from the Wöllersdorf headquarters arrived by plane - the experienced technician was to accompany the start of production.

Everyone was ready, but the containers were stuck in customs! Kirner, who has been travelling around the world as an Equipment&Production Engineer for DELTABLOC International for several years recalls the long wait: "The young Chinese engineers and the workers from Tanzania and even the Korean general contractors were extremely interested and eager to learn - I think we went through the production manual about five times!"

After a week of dry training, the containers with the components and the two moulds finally arrived in mid-December 2021. Due to a lack of forklifts, the moulds had to be lifted out of the container centimetre by centimetre with a crane. But on the next day, nothing stood in the way of starting the open-air production near the bridge ramp and all workers enthusiastically began with the concreting work. And when the first two DELTABLOC® DB 80E elements were finally demoulded, there was not only great jubilation, but also dancing and singing!

Clever engineers, enthusiastic workers

"The young Chinese and Tanzanian engineers and workers were all extremely professional", Olivier Keutgen recalls, enthusiastic about the quick handling of the project: "Only a few weeks passed from the delayed production start to the completion of the 1 km long concrete safety barriers. Because on February 1st, the proud bridge was already opened to traffic". Michael Kirner was also thrilled by the passion and enthusiasm of the local colleagues. And by their flexibility in problem solving: instead of unavailable formwork oil, frying oil was procured.

"That actually worked wonderfully, except that it smelled like french fries, especially in the high heat," the technician recalls. Due to the high temperatures, the newly produced barriers had to be covered with damp sheets during curing. And after the first batch of concrete was poured, a few dedicated workers immediately made a funnel out of wood to prevent any concrete from going astray. The latter, by the way, was excellently prepared by a female master mixer from Tanzania under the supervision of a young Chinese woman.

Proud of the work accomplished

When the bridge was completed - together with its elegant safety barriers - a project engineer involved in the construction work proudly posed with his wife and child on the beautiful structure to express his gratitude in a social media post: In doing so, the young family stood directly next to the DB 80 elements, equipped with sparkling reflectors. What a beautiful gesture!

Of course, it will take some time until a possible follow-up project in Tanzania is found. Which is why the moulds were supposed to be shipped back to Europe - under great protest from all involved. Fortunately, a potential partner was found in neighbouring Kenya. So for the time being, the moulds will remain in the area. Even the last remaining tension bars were bought back from the Chinese: East Africa obviously wants more DELTABLOC®! And when the pandemic is over, the Asian engineers will probably get another visit. Since they would have forgotten about planning concrete safety barriers in the first place!

Before installation of the DB 80E elements: **Michael Kirner** (3rd from left) and **Olivier Keutgen** (5th from left) with some of the engineers responsible for the construction of the bridge.

Efficient component production: In Dekanovec, Kirchdorfer Group's Road & Traffic division produces not only tension bars fully automatically, but also moulds and reinforcement cages. The site is gradually being expanded into an international logistics hub.

STEEL COMPONENTS **FROM CROATIA TO THE WORLD**

For 10 years, the majority of DELTABLOC® steel components have been manufactured in Croatia. Since taking over the company and founding DELTABLOC® Components in 2021, the highly specialised team is part of the DELTABLOC® family and is gradually becoming the steel construction component manufacturer as well as logistics hub for the entire division.

In times of fragile logistics chains and rising steel prices, it is all the more crucial for the Kirchdorfer Road & Traffic division to have its own supply chain well under control: From moulds to mesh reinforcement cages to the central tension bars of the DELTABLOC® concrete safety barriers, the company employs a number of external suppliers. Over the past 10 years, one partner has proven to be particularly reliable: Robert Treska with his steel construction company in Dekanovec in north-eastern Croatia.

The native Croatian and trained Swabian grew up in Germany, where he studied mechanical engineering and gained his first professional experience. When he moved back to his native country some 15 years ago and set up his own business, he admittedly had to overcome certain cultural bridges. "In the meantime, my employees are already half Swabians in mentality," the enterprising and inventive engineer tells us with a big smile.

"It all started with formwork construction. In the second year we started adding tension bars", he explains. In the meantime, some 60,000 tension bars per year are produced fully automatically with robotic welding systems. Plus a number of smaller special series are manufactured by hand - since there are already about a hundred different variants in use in the vast DELTABLOC® portfolio.

After some economic turbulence in a completely different branch of the company, the opportunity finally arose for the Kirchdorfer Group to take over the company and its 36 employees. With Wolfgang Ganster and Werner Fink on the management board, Robert Treska can now focus entirely on optimising component production. Together with a bundled purchasing policy and the expansion of the Croatian location into an international logistics hub, the division now has its own rock-solid supply chain.

OTAKAR VESELÝ ON HIS 75TH BIRTHDAY

CELEBRATING A LIVING LEGEND

Otakar Veselý was born on 8 April 1947 in Krumlov under the sign of Aries - the best constellation for a determined and passionate managerial and entrepreneurial career. The fact that Otakar Veselý was first to succeed as a manager and only in later years as an entrepreneur was, however, politically conditioned: under the communist system, the trained mining engineer could only climb the career ladder within the state monopoly companies.

And that is exactly what he did with astonishing consistency: as production manager of 45 quarries and 8 huge sand pits and as general director, the time was finally ripe for a major change at the end of the 1980s. When the iron curtain dividing Europe fell, he was invited to advise the government on the reorganisation of the industry. Finally, he succeeded in taking over one of the successor companies created in this way at great financial risk in 1992: Thus began his second life as an entrepreneur with Kámen a písek and five selected quarries around his home in Krumlov. But the company, oversized in the course of the construction of the Temelin nuclear power plant, needed a long-term and reliable partner, which Veselý found that same year in Max Machanek (also Aries!) and the Kirchdorf Group. The rest is history: since the mid-2000s, not only has KAP been on a continuing expansion course, but Otakar Vesely also laid the foundation for today's Kirchdorf raw materials division with acquisitions in South-Eastern Europe. At 75 years of age, the young-at-heart hobby pilot (his love for aeroplanes is even older than his love for rocks and minerals) is still a central pillar of the successful joint flagship company and continues to keep in top form on the hunt, on the golf course and on the (company-owned) tennis court. We wish Otakar Veselý all the best on his 75th birthday and many more productive and happy years of life!

Otakar Veselý, founder and co-owner of Kámen a písek, celebrated his 75th birthday in April 2022 at dinner with the shareholders of the Kirchdorfer Group.

WE LOOK FORWARD TO **RECEIVING YOUR FEEDBACK** ON THIS ISSUE OF KN:

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