

K-WERT 40 2022/23

THE KAEFER MAGAZINE FOR EMPLOYEES, CUSTOMERS AND PARTNERS



COLLABORATION YOU CAN ALWAYS COUNT ON

The power of teamwork, ingenuity and
innovation across the KAEFER world

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Message from the Executive Board

Times change. Our mission doesn't.



In many respects over the last several years, the exception has started to become the norm. We've experienced a global pandemic, have seen war in Europe for the first time in a generation and are combatting high inflation and energy prices. In times like these, it's good to focus on stability, consistency and continuous improvement, which is precisely what we have been doing over the last years.

The situation in the world has affected us all, clients, suppliers, management and employees alike. But we can weather the storms and overcome the challenges we face by staying true to our mission: to be the most reliable and efficient provider of technical industrial services in our industries. And we take this opportunity to thank each and every one of you for working towards our shared goals and making KAEFER so successful.

Growth and development move us

Our cooperation with SMS and Altor is flourishing and starting to bear fruit in 2022. The new capital investment in KAEFER has meant that we can focus on providing even greater value to our clients and building an even more stable bedrock for the future of our company

We've also been able to welcome another member to our family in Australia: G&S Engineering. With more than 500 employees, G&S is based predominantly in Queensland, where it has been operating for 25 years, delivering maintenance and construction services in the resource sector. Purchasing the assets of G&S is a key part of KAEFER's Australian growth strategy to expand capability in mechanical and electrical services all over the country.



Efficiency drives us

LEAN remains a powerful force in our organisation and we're proud of how far we have developed. One of the key elements of LEAN thinking is constantly striving for improvement and we have seen a great deal of that over the last year. In Saudi Arabia, our piping work was made more efficient by using special overhead cranes, in the UK and Ireland, we have seen how 3D modelling and innovative suspended scaffolding improve processes and client satisfaction. In South Africa, we minimised waste by centralising cladding operations. And in the Netherlands, we've witnessed how using good, old-fashioned bicycles in combination with a bit of clever engineering has saved time and effort for the KAEFER colleagues travelling across vast industrial sites.

Then we have tools and initiatives like the first LEAN Virtual Reality training sessions, which took place in November. All in all, we're not resting on our laurels and are committed to getting better every day by doing things the LEAN KAEFER way.

Health, safety, the environment and quality keep us strong

In terms of health, safety, environment and quality (HSEQ), we're continuously improving our results, developing our maturity and adopting tailored approaches ideally suited to the varying circumstances all over the world. We believe that fostering a proactive and generative safety culture is key and will benefit everyone we work with, suppliers, clients and our KAEFER people alike.

Working together as a team motivates us

Cooperation is a key element of our success. Regardless of whether it's on a global or a local level, working together means we can pool our individual strengths and provide our clients with reliable and efficient technical solutions. We're one strong team with common values and goals collaborating across borders. From Brazil to Australia, each of our business units is staffed with experts, our KAEFER colleagues, who are our greatest assets. Again, we would like to thank you for your expertise, hard work and your collaboration

with your colleagues both local and further afield.

This also goes beyond our day-to-day jobs. We were heartened to see the outpouring of sympathy and solidarity with the people of Ukraine and are grateful to every single member of the KAEFER family who donated their time and money to help. We're also proud of everyone who took part in initiatives such as this year's Venuslauf, which started some time ago as a modest run around a park in Bremen and is now a truly global charitable phenomenon – in the truest sense of the word with over 31,100 kilometres covered by about 2,600 participants around the KAEFER world.

It's initiatives like these that show how KAEFER is more than just an industrial service provider, but rather a family of dedicated and special individuals all around the globe.

You can read about all these topics and more in this K-WERT and we hope you will be as inspired as we are by the great work our people are doing across the globe. We'd like to say thank you once again for everything that you do for KAEFER, and we hope that you stay safe and healthy in the years ahead.

When it counts, we count on you!

Message from KAEFER's Administrative Board

All for KAEFER, and KAEFER for all

Learning from the past for the benefit of the future

Going back to Carl Kaefer's pioneering work in insulation, we've always been a company devoted to saving energy and resources and increasing efficiency. Thus, sustainability is firmly rooted in our history and is reflected in everything we do in the present as well.

At the same time, KAEFER's business is a global business. This makes us particularly aware of our responsibility to do as much as we can to contribute towards sustainability and preserve our environment. Our expertise in this area also means we are well placed for the tightening of European reporting legislation as of 2025, a push towards renewable energy as well as the need to conserve resources around the world. Even if we haven't called it ESG (Environment, Social, Governance) in the past, we've been practising good ESG for years with our focus on health & safety, energy efficiency and compliance, for example.

We strongly believe that the focus on ESG is a big chance for KAEFER. It can even become a door opener for new business development in the future. But for sure, it will be a differentiator in our market as KAEFER has a very solid foundation upon which to build and expand our commitments to ESG. Let's keep working on this important aspect of our work together, today and tomorrow.

Sticking together

We're now looking towards the future differently than we were even one year ago. We can take advantage of the synergies provided by our partnership with SMS/Altor, which was finalised this year, and we have also become stronger together thanks to the challenges we collectively faced. KAEFER is in an excellent position to grow and move further, together.

Part of our strategy to develop and grow involves adapting our internal structures. Consequently, we

recently announced changes in our Executive Board from the 1st of January 2023 with Dr. Roland Gärber as CEO, Karsten Wirth as CFO and Sandro Barrach as COO (as from April 2023). All three Board members have been with KAEFER for several years, ensuring continuity and a great deal of experience and expertise. This makes us extremely happy.

At the same time, it is an honour to express our gratefulness to Steen Hansen who has served the company so well for so many years. He has had great impact on streamlining our portfolio, securing our financing and so much more. Thank you, Steen!

Recently, we have also been creating a new structure for what we used to call the Advisory Board, which is now KAEFER Group's Administrative Board. By now, it is made up of eight independent, non-executive members who meet at least five times a year. The Board's core functions include the supervision of the executive management, appointments to the Executive Board and approval of our strategic cornerstones as well as business planning.

We are convinced that this new organisation will not only drive our business forward but also reinforce the benefits of one strong KAEFER brand with a unified team that speaks with one voice. It is just as important to project this outwards as it is when thinking and acting inwards. By collaborating and working together towards our common goals, we can make a real difference and we as shareholders are very grateful for the spirit of cooperation that we see in all aspects of work and life at KAEFER.

None of these developments would have been possible without your continuous efforts and hard work. That's why we would like to thank you for all that you have done this year and look forward to what we can achieve together.

KAEFER in Benelux

Doing things the Dutch way

Sometimes, all it takes to solve a challenge is a bit of collaboration and offering a helping hand.



Individuals going their own way will only get you so far. It's usually better to work collaboratively to find effective solutions to a problem, as KAEFER in Benelux shows. In most of the industrial facilities where insulators work, there are strict rules limiting the use of motorised vehicles. Yet the distances that need to be travelled at these sprawling complexes is significant. For example, at one site in Antwerp, the average employee spends at least 45 minutes per day walking around on site to and from various areas. On top of that, transporting materials back and forth in open vehicles and working on the ground can lead to prefabricated cladding getting scratched or insulation materials becoming dirty and wet. So, how could the teams speed up their travel and protect the materials they used? The answer should come as no surprise to anyone who's spent time in the Netherlands: bicycles.

On the right track

Bicycles are healthy, do not emit CO2 and when it comes to transporting people, efficient and quick. Yet that still doesn't solve the problem of moving insulation and cladding material around an industrial site. Up until recently, insulators used wheelbarrows, which may be stable and easy to

use, but are also slow and unwieldy. Bicycles with trailers attached work better but are limited by the amount of material that can be carried and the fact that they are still exposed to the elements. To work out the ideal solution, KAEFER's team had to look to the past for inspiration.

Back to the future

Up until the 1970s, small Dutch entrepreneurs used so-called 'Bakfiets' to transport and deliver their products. Bakfiets are cargo bicycles or tricycles specifically designed to carry larger volumes of things and were even commonly used to take groups of children to school. Inspired by the versatility and efficiency, the KAEFER team set out to develop what they called 'Bakfiets 2.0'.

The jack of all trades



©Internationaal Instituut voor Sociale Geschiedenis, Amsterdam

The design criteria were relatively simple: Bakfiets 2.0 had to be high quality, completely mechanical with no electric parts and feature a 'box' with a lid that could turn sideways and double as a work bench. The team found a supplier that could tick most of those boxes and all that had to be done in house was fitting the lid. The result is as simple as it is clever: a quick, efficient, non-motorised transport vehicle that doubles up as a surface for insulators to work on. After much tinkering, a working prototype is currently doing the rounds on KAEFER maintenances sites in Benelux, much to the joy of the workers who get to ride them.

From ground-breaking bikes to innocent insulation

Bakfiets 2.0 is just one example of the practical and collaborative approach that guides the team at KAEFER. Another is the partnership with smoothie company innocent . It started with a small job for scaffolding. Innocent were setting up a new factory in the Netherlands and needed access to heights so that they could build their facility from the ground up. Initially the scope was a modest 2-3 months' worth of jobs for 5-10 people. However, this quickly grew to 30-40 people helping innocent out, based on KAEFER's experience and expertise in the food production industry. Innocent were increasingly happy with the work, and they started asking KAEFER for more support. The key was that the

relationship between the two parties was more akin to a partnership than simply purchasing and providing services. Under normal circumstances in these kinds of facilities, it's usual to work with EPC contractors. But in this case, the partnership flourished between the client and KAEFER.

"It may sound overly simple, but 'how can we help?' really is our philosophy," explains Matthijs van der Veen, Commercial Manager at KAEFER in the Netherlands. "We believe that we can add real value to a client's business that goes beyond numbers. A collaborative approach based on mutual benefit and partnership goes much further and actually makes more monetary sense in the long run." From developing new, LEAN mobility solutions and building a relationship with innocent to convincing the operators of the world's largest PET factory at Indorama in Rotterdam to go with KAEFER for their maintenance, asking how KAEFER can help and providing solutions quickly seems to work very well.



KAEFER in Norway

What lies beneath

Countering corrosion with new, innovative robotic and sensor technology.



It's corrosive, damaging and dangerous. It's difficult to prevent and often lurks undetected underneath. Corrosion under insulation (CUI) is a serious problem at industrial facilities all around the world, particularly in the chemical/petrochemical, refining, offshore and maritime industries. If left undetected, CUI can result in leaks, equipment failure, prolonged downtime due to repair or replacement, as well as safety and environmental issues. The root cause of CUI is the penetration of water or condensed moisture into the insulation.

The light at the end of the tunnel is blu

The question for any client for whom CUI is a potential issue is whether they should replace the insulation of plant components on the off chance that there's corrosion and possibly spend money for nothing on suspected CUI. It takes an incredibly long time before CUI becomes noticeable on its own, at which point it is often already too late.

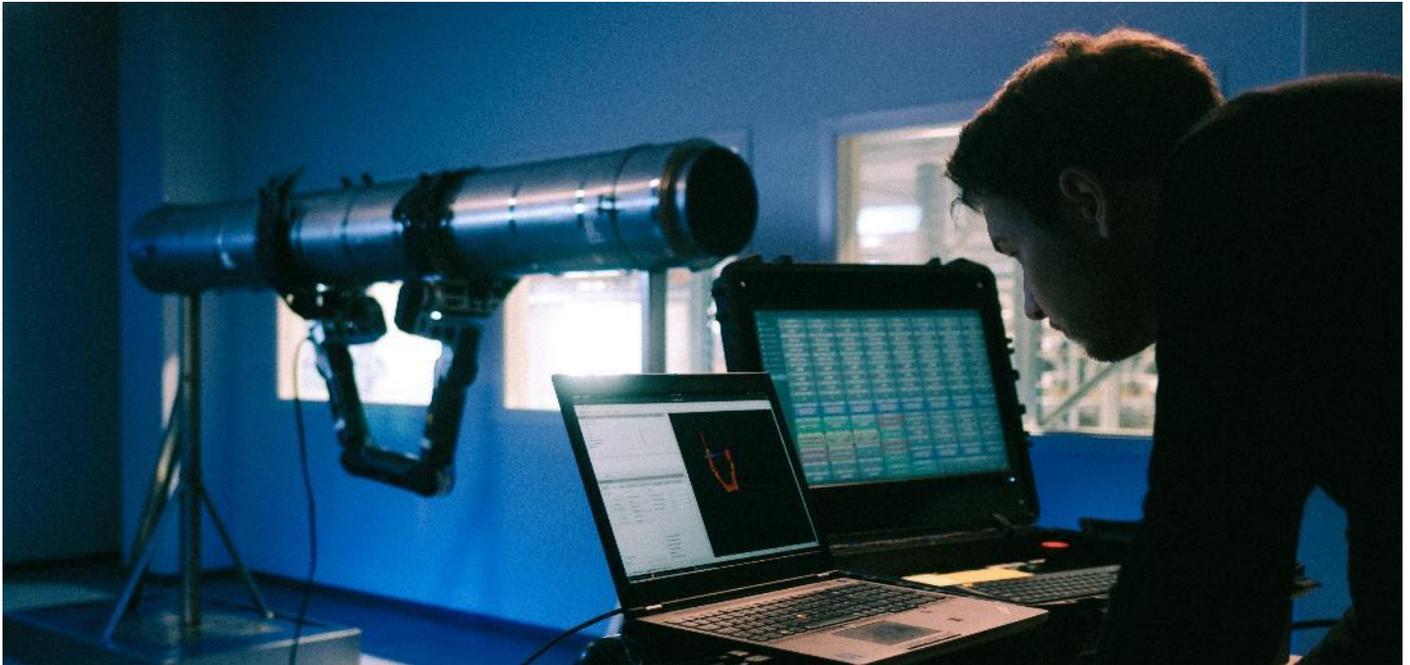
The solution to many of these problems is provided by blu, a new company founded by KAEFER in 2022. As an independent entity, blu's mission is to banish CUI using sensors and smart maintenance to tackle the issue proactively and pre-emptively. In new structures, intelligent sensors can be placed strategically in areas known to be affected by CUI. In both new build and older facilities, sensors can be used to provide regular data for analysis and prediction, as well as continuous monitoring.

blu is firmly focused on the future. The global energy transition provides substantial opportunities to drive real change and blu is committed to supporting contractors, operators and KAEFER companies to achieve sustainability with digitalisation. For blu, it's simply about making good, proactive business decisions. KAEFER's pedigree provides a great deal here, helping blu to strike the balance between the new and innovative and the established and reliable.



MonkeyBot marks the spot

There are two kinds of sensors to detect CUI: spot sensors that measure in one place and surface sensors that measure moisture in a continuous line. In industrial facilities, many thousands of metres of pipework require the installation of hundreds of sensors, which can use up a great deal of manpower, as well as resources such as scaffolding. blu has a different solution: the MonkeyBot.



MonkeyBot

MonkeyBot is a robotic system that installs humidity and temperature measuring sensors on the cladding of pipes. As opposed to other systems that use magnetics, MonkeyBot is effectively an 'arm' that grips the pipe and affixes sensors whilst suspended in the air. MonkeyBot is an innovative solution that saves a great deal of effort when installing CUI sensors on long pipelines.

The right sensor for every surface

KAEFER has an excellent international reputation when it comes to innovation and technical excellence. This can be seen in the development of proprietary surface sensor solutions such as HydLocator®. Usable with temperatures of up to 190 degrees celsius and particularly effective in scenarios with insulation made from different materials, HydLocator® measures moisture directly. This effectively means that real-time data can be used to determine the presence of CUI, rather than tapping in the dark or trying to work out where it potentially might be. However, it's more time-consuming to fit than a spot sensor, requiring an insulator to wrap around a pipe by hand. HydLocator® is thus suitable for extensive maintenance, new builds or for use in sensitive areas and can be easily fitted with a new, proprietary tool. A first pilot project saw the installation of five sensors, then 500 with MonkeyBot working on the tail-end section without any scaffolding. On top of installation, blu is working together with the world's largest spot sensor provider to further develop the technology and make sensors even more accurate and targeted.

Elevating blu above the competition, thanks to a winning combination

blu is unique in the marketplace, thanks to an end-to-end solution for the continuous monitoring of humidity and temperature, technology such as MonkeyBot, spot sensors and HydLocator® and a targeted sensor placing project called "Måssö".



With the spirit of a start-up, blu has taken off by responding to an acute need on the part of clients in the oil and gas sectors. This has already borne fruit, as blu was just awarded its first contract for real-time CUI management from a major exploration and production company, with project execution starting in the UK very soon. For KAEFER, these innovative, collaboratively developed solutions have also led to a change in perception of the company and recognition as a technology provider and leader. Together with blu, KAEFER is aiming to change the game in CUI by offering digital, sensor-driven solutions to an age-old problem.

Focussing on the future

Working as one, KAEFER leverages the expertise found across the organisation in innovation and technical excellence. Solutions such as MonkeyBot and HydLocator® solve problems and pave the way for the kind of innovative thinking required for the issues that will have to be faced in the future. “Some might only see challenges in the global energy transition,” says Arve Martinsen CEO at blu. “We see opportunities. Together with our clients, we have identified the need for supply chain business to drive the coming changes and support end-users, contractors, operators and global KAEFER companies by re-engineering sustainability through digitalisation.”



Arve Martinsen

We don't know what other challenges the future may bring, but the spirit of innovation and a proactive approach to solving even the most complex technical challenges at KAEFER will ensure that the company is ready for anything. Come what may.

Everyone measures up

Taking measurements on industrial projects can be tricky if you're not a specialist. This is usually the work of trained quantity surveyors and takes time and skill. To accelerate the process and make it easier, KAEFER Energy has developed its own app, which is designed so that any employee can make measurements on site. Complicated spaces still require the hand of a specialist, but for simpler areas the application-based approach provides greater data security, transparency and more efficient project management. On top of that, the app always ensures that measurements are made in the correct order, and it even performs plausibility tests. As a guided measurement process, it functions as a supporting instrument to increase accuracy as well. This digital solution can increase efficiency and can also be rolled out worldwide as a tailor-made tool that's usable both offshore and onshore across the globe.

KAEFER Group - ESG

Sustainability meets ESG

Environment, social and governance at KAEFER.



Sustainability, transparency, and a social conscience have always been a part of KAEFER. In an increasingly globalised world, with an increased demand to include the associated socio-cultural aspects, the company has decided to adopt a holistic approach in this regard.

KAEFER's industrial services and business processes have been closely linked to environmental protection, social responsibility, and good governance long before ESG was even a recognised term. ESG stands for Environmental, Social and Governance, which is a strategic approach focusing on the company's impact on the environment, society and how transparent and accountable it is. From the organisation's own roots in insulation to the company values and the KAEFER FOUNDATION, which supports people in need, KAEFER has always seen the importance of putting sustainability and a long-term orientation at the top of the agenda.

Formalisation for acceleration

The issuance of new European regulations to promote sustainability has not just served as impetus for corporations to consider their ESG impacts but has also provides a framework of requirements that give formal guidance on what has to be done in terms of ESG in companies. "Up until now, our commitment to sustainability was broadly guided by what we call 'Bauchgefühl' in German. This translates roughly as "gut feeling", which basically means that we were practising our sustainability approach qualitatively," explains Erhard Dubs, Corporate Strategy Manager at KAEFER. "Now, however, new European regulations mean that we must adopt a quantitative approach as well, since we will have to provide detailed reports about labour practices, emissions, leadership and governance, for example, and that is where the ESG strategy jumps in."



From 2025, all European companies with more than 250 employees will be bound by the EU Corporate Sustainability Reporting Directive (CSRD). It is intended to ensure that companies provide reliable and comparable sustainability information for investors, stakeholders, and regulatory authorities. Companies must report how sustainability affects their business and what their own impact is on people and the environment, as well as social and governance factors. This will apply to the entire KAEFER Group, even outside of the EU, as the company's headquarters are in Europe.

Sustainability and ESG on site

ESG is much more than just a reporting task, it means that we look at sustainability through an economic lens and that this has an impact on KAEFER's overall business strategy and business conduct. "We must translate these new requirements into day-to-day life on site," says Niels Gogler, Executive Assistant to the Co-CEO. "We provide our services in remote places to tight deadlines and in tough environmental conditions and at the same time we need to obtain flexibility to client requirements. In this context, the ESG focus will further improve the already high standards we deliver in very important areas like safety and quality."

KAEFER operates on more than 3,000 sites around the globe. Given the sheer variety of locations, both on- and offshore, as well as the different services provided, there isn't a one-size-fits-all solution. Sustainability related aspects of our work and consequently ESG measurements need to be implemented from the start and monitored throughout the whole project lifecycle. Those procedures must be brought into day-to-day operations to avoid being perceived as "additional work". For example: waste management is not limited to disposal of materials at the end of an application process, much more we need to consider how waste can be eliminated already in the planning phase by using prefabricated material or appropriate material batches that match actual demands on site.

Sustainability is existential and our ESG strategy helps us to sharpen our focus ESG is existential

"The challenge for us is to change the mindset: ESG requirements are not an additional reporting burden as some may initially consider but an enabler to act more sustainably and establish a future oriented business model," says Julia Kasperek, Global Sustainability Manager at KAEFER.

Stakeholders and investors are interested in the company's ESG track record and banks and rating agencies increasingly use ESG factors for loan decisions and rankings. Many clients already consider these factors in tendering processes. Therefore, it is essential to focus not only on KAEFER but to keep an eye on the entire supply chain. "As a service provider, KAEFER is dependent upon subcontractors, products, and materials," says Talis Zvidrins from Corporate Supply Management. "The supplier has to be seen as a business partner who must be in line with our sustainability targets derived from our ESG strategy. At the Corporate Supply Management department and our entire purchasing organisation our philosophy is that we collaborate with suppliers and develop long term-relationships to achieve a common prosperity."

The advantage for KAEFER is that it already has a firm basis upon which to further build its ESG strategy. On a company-wide level, there is a strong focus on HSEQ (Health, Safety, Environment & Quality) and the safety culture – great headway has been made in the past few years in terms of compliance. On a different level, the KAEFER FOUNDATION provides support to a wide variety of diverse communities.

As the implementation of the ESG strategy involves different functions within the organisation, a structured process as well as sound governance are key. On a corporate level, an ESG Steering Committee has been established with the members of the Executive Board and the Corporate Heads of Sustainability and Supply Management in the lead, supported by the ESG Project Management Office. The committee will monitor measures and facilitate the implementation of projects.



The first initiatives have already started. For example, there is the harmonisation of KAEFER's CO2 footprint calculation, as well as setting new standards for the company's relationship with suppliers. "We are deeply committed to treating all the people we work with respectfully. Therefore, we are setting clear human rights standards with our Human Rights Policy and our Supplier Code of Conduct, and we are carefully assessing potential human rights risks in our supply chain," explains Zvidrins.

"We understand the implementation of our ESG strategy more as a marathon rather than a sprint – it is not important to be the fastest in the beginning but to keep pace over a long distance," says Kasperek. The upcoming KAEFER Sustainability Report for 2022 will already provide much more information than before. In the end, fulfilling ESG criteria is a team accomplishment and KAEFER couldn't achieve its aims without everyone's

contribution.

Stay tuned for the exciting developments in this area and keep an eye out for the sustainability report, due in spring 2023.

A 'man on the moon moment'

CSRD is a part of the EU's Green Deal, which EU Commission President Ursula von der Leyen has called Europe's 'man on the moon moment'. For KAEFER, continuing to pursue a sustainable approach is just as important. The aim is to exceed applicable standards, to offer exceptional service, and to achieve commercial, environmental, social and ethical success at the same time.

Environmental, social and governance is a serious consideration in the EU as it is all over the world. In Brazil, for example, companies are obliged to invest part of their profits in social projects and in Australia, there are supply chain regulations that mandate transparency. However, the EU's Green Deal is unique in its ambition and sheer scale, which will surely influence other markets around the world.

RIP Serviços Industriais in Brazil

Driven by diversity

A new journey involves embracing and fostering diversity.



RIP Serviços Industriais, the Brazilian subsidiary of KAEFER, is already a diverse company. However, in the spirit of continuous improvement, the company has embarked on a new journey they call PLURAL, which involves embracing and fostering diversity in four pillars: generations, genders, disabilities, and ethnicities.

Talking about my generation

Generational diversity might not make as many news headlines as gender or ethnic diversity, but it's a very important factor to consider in a workforce. Generational diversity is the idea of having a wide range of generations in a company. This is especially relevant today as people are retiring later and perhaps for the first time, we have four generations in the workforce: Gen Z, Millennials, Gen X and Baby Boomers. Each generation grew up in a completely different time, which shapes how they see and experience the world. In addition to embracing and fostering the cooperation of many generations at work, generational diversity seeks to combat age discrimination and bias in both directions in terms of being either "too young" or "too old".

Baby Boomers were born in the aftermath of Second World War between 1946 and 1964 when

there was a "boom" in birth rates. They came of age in a time of optimism, economic growth and space exploration.

The children of the Baby Boomers are Generation X, born between 1965 and 1978. With the advent of personal computers and Internet, they became tech-savvy and highly independent.

Millennials were born between 1979 and 2000 during a time of economic growth to optimistic parents. They grew up with technological advances and experienced the breaking of paradigms in the work environment, while adapting to new professions and the automation of processes.

Generation Z are the first so-called 'digital natives' and were born between 2001 and 2014 into a world of technology, with a need for interaction in the online environment. They're value-driven and have a strong sense of social and environmental responsibility.

These are, of course, generalisations and the year a person is born doesn't dictate the way someone will behave or how they will think. But it helps to understand where the various generations present in today's workforce come from.

The leapfrog



Walter Neves is a Baby Boomer and has worked for RIP on and off for 27 years. Guilherme Sá is a Millennial, with 12 years of work experience and is currently Walter Neves' manager. However, when they started working together in 2010, Neves was already an estimator in the company and Sá was a trainee. "When I met Guilherme, it was very interesting," recalls Neves. "I realised that he had potential to develop in the commercial and calculation area."

"I remember it like yesterday," says Sá. "Walter Neves was a calm and serene person, an absolute expert in thermal insulation, painting, scaffolding and fireproofing. The first time we worked together was the beginning of a long learning process, where I was fortunate enough to have him as a teacher and mentor."

Neves left RIP in 2012 to pursue other challenges and to gain a civil engineering degree. In the meantime, as Neves predicted, Sá's career flourished. When Neves returned to RIP in 2017, he found himself working underneath his erstwhile protégé. "I am very pleased to work with Guilherme today. I am also proud to see him as a manager, applying some concepts that I passed on to him and other younger people who have joined RIP," says Neves.

Despite the differences in age and experience, both men have worked together in very different roles. Learning from one another, they have embraced what their respective generations could offer and showed that when it comes to teamwork and mutual success, age is just a number.

The tortoise and the hare

Generation Xers tend to be a bit more conservative than a typical person from Generation Z. As they didn't grow up with digital technology, they also tend to adopt a more relaxed and less immediate approach to life. Generation Z generally prefer to get information quickly and are used to near instantaneous communication, on account of having grown up in a world where technology was always around and always on.

Marcos Pino is part of Generation X and Iris Ferreira is a member of Generation Z. They work together in the Supply department at Head Office. So, you'd think that an immediate approach would clash with a generally slower attitude.



Far from it. In fact, Pino is incredibly proud about Ferreira's professional development, and he is happy about being able to work with her. "Iris is a very polite, helpful, curious and principled person," he says. "The synergy was very easy and pleasant. As I always tell the younger ones, RIP is a great school. I am sure that Iris will still learn a lot here and become a very successful professional." Ferreira is just as positive: "RIP opened the doors to my first professional experience, and I am very happy for that. I joined at the age of 17 as a young trainee and I had a lot of help from Marcos. I learned a lot from him and am very grateful for the advice and patience he had in passing on his experiences and knowledge to a young woman in her first job."

Working together was very rewarding. Even though we are from different generations, our coexistence is harmonious and peaceful, based on respect.” That’s true generational diversity in action and outlines the benefits of people with differing levels of experience working together.

The boomer runner

Another piece of evidence that age is just a number can be found in Manoel Edilberto da Silva, a maintenance mechanic at the Maranhão branch. A member of the Baby Boomer generation, he started running at the age of 60. Whilst some might find that an odd time to begin such an intense sport, da Silva shows just how much energy someone from his generation can have.

“I am a member of a group of street runners, and I participate in races in my city and state,” he says. “I train on Fridays, Saturdays and Sundays and run around 10km a day. Running isn’t just good for me, it’s good for the environment too. My team and I have participated in the ‘Run for the Oceans’ Challenge, which is a race against plastic in the oceans. I completed 5 hours and 7 minutes of running and was able to contribute to a good cause as well: for every 10 minutes of running, 100 plastic bags were collected from the seas.”



Every generation is different, just like each of its members

Some might see a multi-generational workforce as challenging. RIP sees it as an advantage. By fostering intergenerational exchange and creating an environment where people can share experiences and learn from one another, the company doesn’t just become a better place to work but becomes a force to be reckoned with. “Our purpose is that all generations have their space for development in our company and that they can share knowledge and experience,” explains Luciana Muller Ferreira, HR Manager at RIP. “We will continue to ensure that we create an inclusive and respectful environment for all generations.” These stories show that diversity is seen as a strength at RIP. In addition to generations, the PLURAL focus on the other pillars of gender, disabilities and ethnicities will further strengthen RIP’s diversity and make it a company that is truly welcoming and inclusive to all.



The Generations Committee of RIP: Luciana Müller Ferreira, Michele Paiva, Ana Cláudia Garrido, Cynthia Batista and Crithian Schwartzmann (left to right)

KAEFER in Indonesia

A succession of firsts in remote Indonesia

Expanding longstanding cooperation and the challenges of extending a liquefied natural gas (LNG) facility in one of the remotest locations in the world.



The Tangguh project in Bintuni Bay is an expansion of the existing LNG facility, including the construction of two offshore platforms, 13 new production wells, an expanded loading facility, a new LNG jetty and associated infrastructure.

For KAEFER this really was a project of firsts. It was the first in Southeast Asia where CHARTEK 7 was applied over insulated piping, the first-time intumescent fireproofing was used on a KAEFER site in Indonesia and the first KAEFER project in the region where the SMART Choices initiative was rolled out. However, first, the team had to get to the location and that's not easy at all.

Getting somewhere in the middle of nowhere

It takes 12 hours to get to the Tangguh site from Indonesia's capital Jakarta. This involves 2 commercial flights, one bus trip and a ferry ride. It's safe to say that this is a remote area and that was one of the major challenges for the project. Only two ships arrive per month with supplies and lead times are 12 weeks. This means that the team had to plan deliveries of parts, materials and consumables in minute detail. In addition to that, there was the difficult environment, with high humidity and changeable weather, as well as the fact that the remoteness meant that there wasn't very much for the teams to do when they weren't working. And if those factors weren't enough to deal with, then came COVID-19.

Tackling challenges the KAEFER way

Skirts and saddles play a significant structural role as an integral part of offshore structures to secure and protect vessels and pipework. Yet the skirts and saddles themselves need to be protected as well. KAEFER's team at Tangguh applied Chartek 7, which is a high performance, epoxy intumescent fire protection coating that expands when exposed to heat to form a stable, carbonaceous char. Chartek 7 is a versatile solution and is easy to apply in the tight nooks and crannies and small joints the team had to contend with on site. Chartek 7 was also applied to insulated piping, which was never done before in Indonesia. The approach worked well and over the course of over 1-million-man hours, performed by over 400 individuals, KAEFER increased the scope of fire protection on site from 16,667 m² to 25,923 m².

Playing it smart and taking it lean

The Tangguh expansion is a major project for KAEFER in Southeast Asia. This means it serves as a showcase not just for the company's technical expertise and problem-solving skills, but also for the safe and efficient way in which the company operates. With the help of KAEFER in Australia, the Tangguh project was the launch of KAEFER's SMART Choices initiative, which involves making safe, proud, green, healthy and efficient choices in all aspects of working on site. Guided by LEAN thinking, the idea is to encourage employees to make the best possible choices for their own wellbeing as well as smooth and efficient execution through world-class planning and continuous review. In such a challenging environment, it's key to have a set of guiding principles to follow and SMART Choices gives everyone on board a compass to navigate even the most difficult conditions in one of the most remote parts of the world.



SMART CHOICES



SAFE CHOICES



PROUD CHOICES



GREEN CHOICES



HEALTHY CHOICES



EFFICIENT CHOICES

KAEFER's management, culture and HSEQ Program (SMART Choices) is centered around five key business pillars:

- > **SAFE Choice:** Ensuring our employees stay as safe as possible when at work or home.
- > **PROUD Choices:** A quality-focused pillar. We want our employees to be proud of the work they do, the skills they contribute and the company at large.
- > **GREEN Choices:** The environmental pillar's focus is to minimise the impact of our work on the environment.
- > **HEALTHY Choices:** KAEFER is a people-focused business. As such, we want all of our employees to be as fit and healthy as possible, physically and mentally.
- > **EFFICIENT Choices:** KAEFER's Lean journey is the foundation of this pillar. We strive to conduct all business activities in the most efficient manner possible.

KAEFER in UK & Ireland

Engineering and protection that's on point

From radiation-proof, perfectly painted concrete rooms to self-supporting scaffolding and steel liners that weigh more than a jumbo jet, KAEFER rises to the challenges at Hinkley Point C.



There are more than 10,000 rooms that need to be painted at the largest construction project in Europe, the Hinkley Point C (HPC) nuclear power plant in Somerset, England. That's just one challenge for KAEFER in the UK & Ireland, who were contracted to provide surface protection, specialist access and temperature-controlled environmental encapsulation within the scope of works on site. There are also the enormous containment liners that are 57 metres tall and 47 metres in diameter. There is in excess of 20,000 m² of steel that require abrasive blast cleaning and protective coating application with little margin for error, as these liners will surround and protect the nuclear reactors.

10,000

rooms to be painted

20,000

square metres of
steel to be blasted

2,500

tonnes of scaffold materials
to provide access

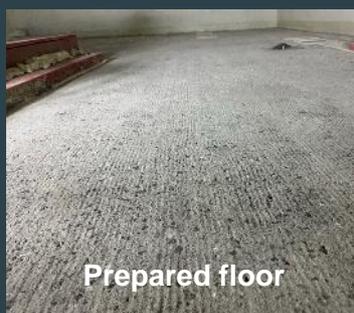
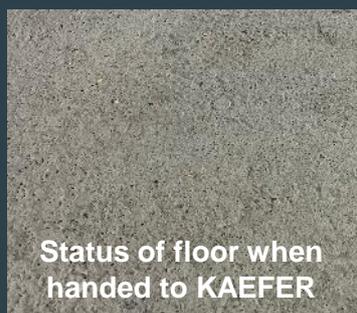
Where performance meets aesthetics

Whilst one could say that this is basically a high-quality paint job, the level of skill and the perfection required is on a completely different level. The concrete rooms need to be prepared in accordance with an international standard for surface profile and then protected with up to seven layers of specialist coatings (self-levelling, decontaminating, dust sealing, stratification, linings, etc.). The application process can take between four to six weeks to complete, with the result of a mirror-like finish, rather than the wall or floor of an industrial facility. “The finishing is like glass, that’s the quality that we produce,” explains Paul Ferrand, Operational Delivery Lead – HPC. “We don’t often have time to step back and take pride in our work as we’re so busy and it’s so intense. But when people finally do walk into one of these rooms and see how things are done, they are astounded.”

To achieve this standard, KAEFER operatives have to be trained and have the correct qualifications before they are allowed to apply the products to the surface on site.

There are also two areas with concrete blocks that can be practised on and KAEFER also ensures that applicators in the team achieve the required specialist nuclear coatings qualifications.

“Hands-on experience is vital,” explains Ferrand. “The theory provides a good foundation, but as the saying goes, practice makes perfect.” To share knowledge and best practise in application techniques, the teams also visited KAEFER WANNER in France, who have a great deal of experience working on nuclear power plants and applying the same products. The team has made very good progress so far, having finished 86 rooms with many more still to come.



Doing what some say can't be done

If painting subterranean concrete rooms to a mirror finish doesn't sound tough enough, working with the liners presented its own, unique challenges. The round, tall structures aren't able to support scaffolding in the traditional way with bracing or tying, as the steel needs to be free from defects at the end of the coating process. So, KAEFER had to develop a self-supporting, curved scaffolding system to provide access. The design process involved creating digital animations and models to test whether the structure would fit and cope with the stresses it would be subjected to. “We were able to develop the design to millimetre accuracy and instantly share the 3D models with the client to ensure that the solution satisfied both KAEFER and Bylor's operational requirements,” outlines Thomas Hurst, KAEFER's Temporary Works Coordinator and Designer for the Hinkley Point C site.

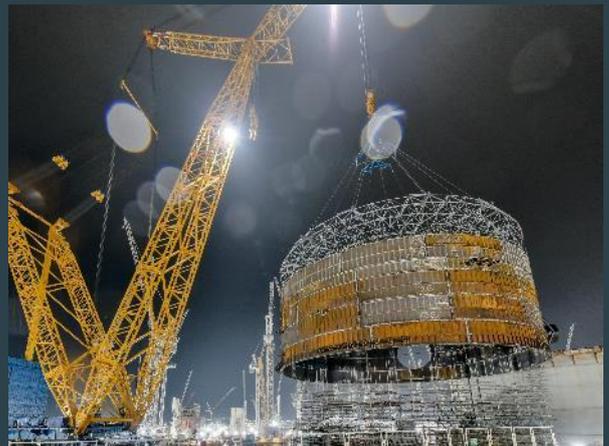
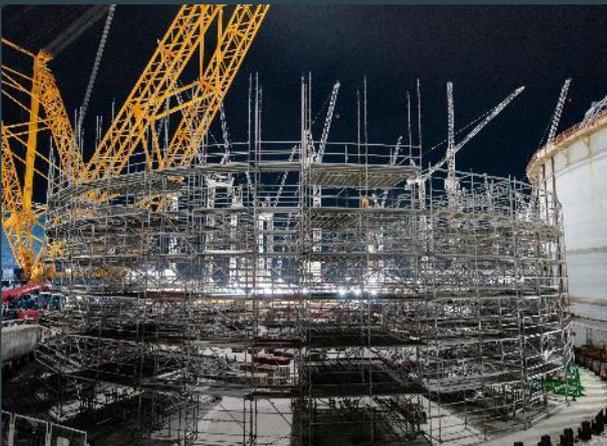
In addition to 3D modelling, KAEFER brought another significant innovation to the project: movable suspended scaffolding. Using a bespoke design focusing on buildability and minimising the need to work at height, the scaffolding was erected at ground level and then lifted into position, 35 metres high by 'Big Carl', the world's largest construction crane. “We proposed a suspended scaffold design to allow the project to continue on schedule,” Hurst explains. “Other contractors had said it couldn't be done but we were confident we could design and build a safe access system to meet the clients' requirements.” Making the impossible possible is all in a day's work for KAEFER at Hinkley Point C.

Atomic opportunities

In addition to the massive liners and other superlative feats of engineering at Hinkley Point C, there are also much smaller elements, such as steel ductwork. Yet when you consider that there are tens of thousands of pieces needed at the nuclear island, the job is similar in scope to the other, large-scale projects on site. KAEFER produces high grade, precision manufactured steel ductwork at its specialist facility in Jarrow, with the first delivery arriving at Hinkley Point C in October. The contract led to the expansion of the team and has secured the future of the fabrication facility.

At any given point, there are in excess of 8,500 people at the Hinkley Point C site. This gives just an idea of the size of the project, with the corresponding opportunities for companies such as KAEFER that supply specialist industrial services. “All we can do and continue to do is deliver professionally,” says Ferrand. “For us, it’s simply about providing the highest levels of workmanship and skill under challenging site conditions.”

What started with several layers of perfectly applied paint has now developed into a working relationship involving innovative access and even more complex surface protection, as well as precision ductwork. Given that the UK government is planning to develop a nearly identical version of Hinkley Point C at Sizewell, this is a sizeable opportunity for KAEFER and one which will continue to showcase the company’s competence in challenging industrial projects. Down to the last layer of paint.



KAEFER Group - HSEQ

We take action 4 our HSEQ

Health, safety, the environment and quality are the basis of everything that KAEFER does.

KAEFER is well-known for its excellent track record in safety. But as a company that is driven by the spirit of continuous improvement, it's not enough to rest on its laurels and be happy with the status quo. KAEFER is a learning organisation, which means constantly trying to work out how to improve, adapt and change to make the company's HSEQ culture even more all-encompassing.

Getting to the heart of what HSEQ really means

HSEQ stands for health, safety, environment and quality. However, these terms, as well as the concept of a safety 'culture', can mean many different things to many different people. The challenge for the HSEQ team was to develop a way to universally implement HSEQ and clearly communicate how it's relevant to people's daily working lives in different countries and cultures. The key is to emphasise action, transparency, and proactivity and this is expressed in a new, centrally developed slogan: "We take action 4 our HSEQ".

**WE TAKE
ACTION 4** 
OUR HSEQ

The idea is to encourage active participation, the proactive communication of problems and solutions, and cultural aspects formulated and defined in principles. We depicted these visually with two posters, which express these principles from the point of view of both KAEFER line management and

KAEFER teams. According to Michael Sturm, Head of Corporate Health, Safety, Environment & Quality at KAEFER: "In addition to an emphasis on individual action and responsibility, the HSEQ principles highlight how being proactive and transparent are key success factors in fostering and further developing a HSEQ culture at KAEFER." They were developed by the HSEQ Excellence Network, and the aim is cross-fertilisation, with a culture that allows all members of the organisation to benefit from one another as much as possible.



Michael Sturm

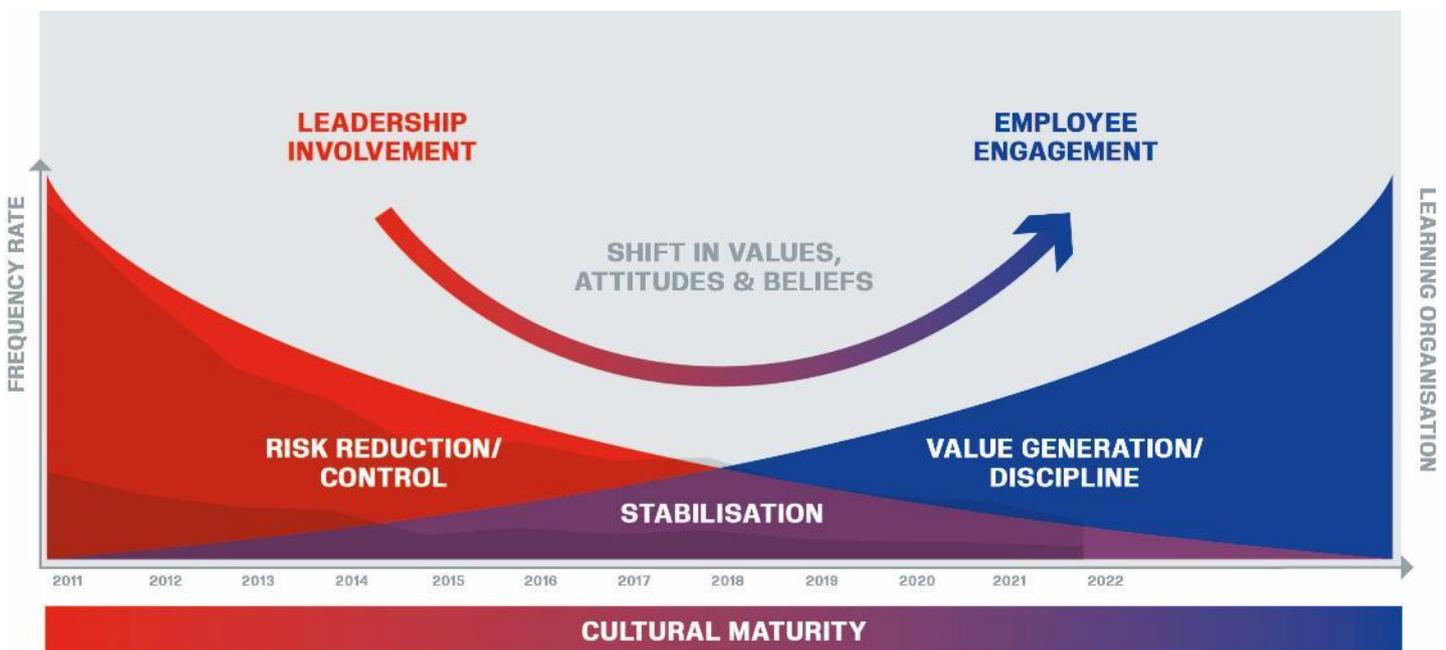
Taking action means taking the initiative

Being proactive is a different mindset than simply reacting to incident statistics, for example. "When I look at an accident rate, there's nothing I can do about it at that point," comments Sturm. "Adopting a forward-looking approach before anything has happened as well as analysing the near misses requires a shift in thinking and is a key part of developing a culture that works for everyone."

In terms of HSEQ, various markets can be benchmarked in terms of their place on what is called the Bradley Curve. This is an evolutionary scale, which shows how an organisation's culture develops. Each level has distinct characteristics and is a progression from the previous level. The range runs from reactive, through to calculative on to proactive and then the final stage, which is generative. "We have varying levels on this scale," Sturm explains. "But as a dynamic and learning organisation, we are constantly improving where we stand and are actively working towards developing our HSEQ maturity. We can achieve this by introducing proactive indicators in market, such as how to measure manager and employee engagement in HSEQ, for example."

Holding ourselves to the highest standards

The reality of the situation is that safety standards can vary almost as much as the industrial facilities in which KAEFER works. "We have to take action for our own safety," Sturm says. "This can involve questioning decisions and actively engaging with our clients to see where standards can be set, which may even exceed those that existed before. We have to trust our own judgement and live up to our own, high benchmarks."



KAEFER Schiffsausbau in Germany

A new face on Old Man River

Building a brand-new cruise ship for the mighty Mississippi



From the steamboats and showboats of the early 19th century to the barges of the early 20th and the modern cruise liners we see today, for centuries ships have been a part of the great Mississippi river. 6,210 km long, it passes through ten states and drains an area of around 3.2 million km² – about 40% of the continental United States of America.

Yet until very recently there were no new ships built to cruise what many call Old Man River. In fact, the Viking Mississippi was the first major vessel to be built in the USA to cruise the river for over 20 years. To ensure that the ship was safe and ready for its maiden voyage, KAEFER Schiffsausbau in Germany provided fire safety rolling shutters and sliding doors as well as cold room doors.

An intercontinental effort

Viking had established a new line and in order to be able to cruise the Mississippi, the ships had to be built in the United States. The Viking Mississippi was constructed at the Edison Chouest Wharf and can host 386 guests in 193 staterooms, featuring cutting-edge design, expansive windows and comfortable amenities to make it the first truly modern cruise ship in the region. KAEFER supplied fire roller shutters, including the new A-60 series, cold storage doors and A-60 sliding doors, one of which measured a whopping 6 metres wide.



© Viking Cruises, River Café

The sliding doors were manufactured in Bremen with the rolling shutters coming from KAEFER's partner in Monchengladbach and the cold storage doors were supplied by KAEFER in Bremerhaven. They then had to be sent over to the site near New Orleans where the Viking Mississippi was being constructed. This was a major collaborative effort on the part of KAEFER and was also the first project of its kind for the company in the USA, as well as for the local shipyard.

However, things did not go entirely smoothly. Ultimately, there were electrical challenges to overcome as the local shipyard had difficulty installing the parts to KAEFER specifications. Thanks to the efforts of the KAEFER team, who came over to assist with the installation, they put in the time and effort to ensure that everything worked to the full satisfaction of the client. Project Manager at the Wharf, Whit Carter was particularly grateful: "I wanted to thank the team, especially André Matthes and Timo Bischof for the great support you both gave us to get the doors and shutters working on the Viking Mississippi. Your willingness to think outside of the box and work extended hours to help us meet our goals is greatly appreciated. That is the type of service we expect, but not every vendor provides. You guys did, and I will remember that. Again, thanks for your help, and I have zero reservation about using KAEFER on future projects again."

A glowing recommendation indeed and KAEFER Schiffsausbau hopes that this experience will pave the way for further projects in the US market.



© Viking Cruises

KAEFER Group - Energy audits

More silver linings than clouds

Energy Audits save money and the environment.

As the saying goes, every cloud has a silver lining. This couldn't be truer when talking about the current spike in energy prices from an environmental point of view. In fact, you could even say that the silver linings greatly outnumber the clouds. Because now, investing in energy saving measures means that they pay for themselves in next to no time. Energy Audits are an easy way for clients to gain an overview of all the energy savings potential in their facilities and also allow them to take action quickly and efficiently.

Energy savings speak for themselves

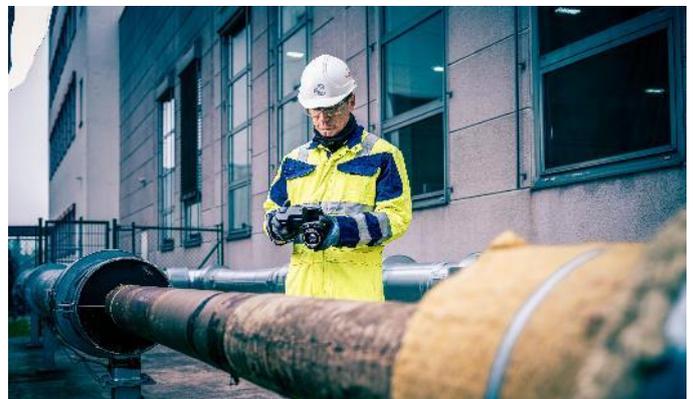
Let's look at a few examples: In one industrial facility, insulating one manual DN150 shutoff valve that is warmed up to temperatures of over 200 degrees saves at least 2,000 Euros in energy costs per year. If you consider the cost of the insulation material and the price of fitting, it can pay for itself in around a month. The annual energy saving of 15,630 kWh is roughly the same as the consumption of a typical German household and there are often hundreds of such valves in any one industrial facility.

In another facility, insulating the roof of a 70°C storage tank with mineral wool would save 110 MWh of energy and 22 tonnes of CO₂ per year. Energy cost savings of 15,600 Euros at an insulation cost of just 3,900 Euros means that it would be paid for in just four months. Over ten years, that works out to savings of 130,000 Euros – for only one tank roof.

These are just a few, relatively small components in facilities that can have thousands of uninsulated pipes, valves, roofs, walls, tanks and containers. The larger the facility gets, the greater the savings.

Turbocharging the need to change

There has always been potential for energy savings at large industrial facilities, especially those that were built many years ago, when energy costs and environmental concerns weren't as much of an issue. However, the current spike in energy prices has particularly focussed minds. "I have some clients that spend 4,000 Euros on energy per hour," explains Heino Gustävel, Technical Support Engineer and energy audit Guru at KAEFER Corporate Innovation and Technical Excellence (CIE). "For them and many others, saving simply makes sense, especially if you also count the costs of CO₂ certificates, which have increased from around 10 Euros per tonne to over 85." Large companies will be obligated to publish their carbon footprint, which puts them under even more pressure to reduce emissions wherever possible. However, the primary driver at the moment is the cost of energy, which has increased by several multiples in many sectors. "Statistics exist about how much efficiency potential there is in industry," Gustävel adds. "If industrial insulation is done to a certain standard everywhere insulation is possible, there is gigantic potential for savings. According to EiiF studies, we could save up to 80% on plant components. There are so many pipes and containers that were insulated decades ago to a different standard, and we can now do it much better."



Finding the energy

If you consider the scale and complexity of some industrial facilities, it can be a challenge to identify all of the places where efficiencies can be found. Fortunately, the specialists that perform KAEFER Energy Audits are trained in taking thermographic images, measuring temperatures and compiling complete documentation. This is then calculated with bespoke KAEFER WTB software that shows exactly how many watts per metre are lost, for example. The really clever part of this proprietary tool is the ability to suggest a specific insulation measure and its associated cost, so that the client can immediately see not just what can be done, but how long it will take until the investment has paid off. Clients can pick and choose which measures to implement immediately and which to perform later, giving them a complete overview and transparency of all the associated costs. KAEFER's own Thermo Technical Calculation software (WTB) can check specified properties of insulation structures and calculate insulation thicknesses to meet customer requirements. This concerns both occupational safety (protection against contact) and technical and economic requirements, such as condensation prevention and limitation of heat losses. The data then comes together with calculations for energy and CO₂ savings, as well as operating costs. CIE support engineers can help with on-site thermographic inspections, as well as calculations end reports.

"Regardless of where we work, there's always potential," says Mike Schulz, Project Manager at KAEFER Industrie in Hamburg, Germany. "There's actually almost nowhere we cannot save energy, but it also needs to be understood that it's not as simple as just replacing an incandescent lightbulb with an LED. KAEFER Energy Auditors perform a very specialised service."

Having your cake and eating it, too.

Believe it or not, one of the biggest challenges for one of KAEFER's clients, who is Energy & Environmental Manager at a large industrial company in the food sector in Germany, is credibility. "It's almost as if it's too good to be true," he says. "An insulator makes an offer where many thousands of Euros in costs can be recouped after just six months. And every day after that it's pure profit. Many colleagues and people I work with ask themselves why they never did this before." In this client's opinion, insulation is chronically underestimated as an energy saving measure. "Quite honestly, it's low hanging fruit," he explains. "A few years ago, CO₂ didn't cost much, and energy was comparatively cheap as well. On top of that, insulation isn't necessarily mission critical – a facility will still keep going even if the insulation isn't there. But I've seen how much of a difference insulation can make in terms of costs and emissions and I'm totally sold on the idea. Many people simply don't see how much money is disappearing in front of their eyes." KAEFER's Energy Audits help clients like these to raise awareness of the role of insulation. "If I have a thermal picture of a valve that's red hot and an associated figure for the money that's literally being wasted and the way it can be saved, it's much easier to sell to management. It's a win-win scenario," he says. These Energy Audits make insulation and energy use tangible and also highlight how simple the savings can be made. "Insulating three tanks needs one contractor for scaffolding and one for insulation," the client says. "KAEFER can provide me with that, and it makes my life a whole lot easier."

Saving money with insulation is about as close to a no-brainer as you can get in the current energy climate. The fact that it also contributes greatly towards sustainability and helps the environment is the icing on the cake.

KAEFER in Finland

To build a dream you need the right team

Bringing together talent from across the spectrum of shipbuilding at KAEFER in Finland.



Building ships is a collaborative process. In Finland, the key to KAEFER's success is a close-knit team, with each individual building upon one another's strengths. "Our shipbuilding team works on everything you can see on a ship as well as anything you cannot," says Sampsa Järveläinen, Managing Director at KAEFER in Finland. "From insulation, piping and electric work in the background to floors you can walk on, furniture you can sit on and walls and ceilings that keep you dry and safe. The key to our success over the years has been the knowhow of each individual, working with the best partners, solving problems together and last but not least, the absolutely great team spirit."

It's clear that the people make it all possible, so we wanted to find out what the team are made of.

Kai Malin, Project Director – "The Sailor"

Kai Malin loves to sail in his free time and is currently working on building a 37-foot racing sailboat. So, his career path really should come as no surprise, since he has been involved in over 100 projects involving the widest variety of seafaring vessels. He has travelled the world, from Canada to South Korea all the way down to Australia and has overcome his fair share of challenges all around the world. The greatest was the Carnival project in Italy, where he and his team had to endure horizontal wet snow for a month while trying to build the huge new spa and gym. "It was a fight against the nature," he recounts. "But we won, thanks to the creativity and determination of our team."

Riina Kuivalainen, Project Secretary – “The Someday Cruiser”

Riina Kuivalainen has never been on a cruise before, despite working on several cruise ship projects over the years. She has been with KAEFER for eight years and has seen several vessels depart the shipyard in that time. “It’s one after the other sometimes,” she says. “We tend to move on straight to the next project when one is finished, but I still like to take the time to admire the areas we’ve worked on together with the team.” Someday, Riina will take her first cruise as she is quite keen and would “definitely go” given the opportunity.



From left to right: Kai Malin, Riina Kuivalainen, Janne Savolainen, Jyrki Nurmi

Janne Savolainen, Foreman – “The Electrician”

Janne Savolainen graduated from vocation school in 2002 as an electrician. However, he’s never been content with being able to do just one thing and has devoted his career to continuous improvement. Now, after 18 years, he has a great deal of experience gained from working on over 20 different projects. He’s particularly proud of completing the Carnival Mardi Gras and cooperating with his colleagues to ensure that every project is as good as it possibly can be.

Jyrki Nurmi, Foreman – “The Special Forces Operative”

Jyrki Nurmi, who has been with KAEFER for 25 years, likes to keep things simple: “The Finnish Special Forces have a slogan: First in. Get adapted. WIN. I like to take that philosophy to heart when it comes to our job. Not least because we’re just like the Special Forces ourselves.” In a business where many projects have a great deal of challenges to overcome, he tries to look for the lighter side. “You’ve got to find something funny in every moment simply to keep your spirits high,” he says.

How does the dream go on?

Kasimir Kovasin, Head of Shipbuilding gives us an idea of how things are going for KAEFER: “We’re finalising areas for Carnival Celebration, which was a contract for 7,000 m² of sundecks, as well as a 2,000 m² spa and gym. But we’re not stopping there. We’ll be working on Royal Caribbean’s Icon of the Seas, which is the biggest cruise ship in the world. KAEFER in Finland will build a 2,400 m² entertainment area before moving on to constructing 3,000 m² of sun decks and 1,000 m² of luxurious suites on the new TUI Cruises Mein Schiff 7. So, as you can see, it never really stops for us, but our team wouldn’t have it any other way.”

World map of KAEFER projects

All around the world, we work on projects that matter to our clients as much as they do to us and our colleagues. We take pride in our work and the fact that we're known for being the company you can rely on when a project really counts.



Australia

Olympic Dam Cathode Stripping Machine Project

Owner: BHP Billiton Olympic Dam Corp Pty Ltd

Executing Company: KAEFER Integrated Services Ltd.

Services Executed: Mechanical Services, Electrical & Instrumentation Services, Civil Services

Man-hours: 193,000



Brazil

Sol do Cerrado Solar Power Project

Owner: Vale

Executing Company: RIP Serviços Industriais Ltda

Services Executed: Substation Assembly, Assembly of Equipment, Cable Launching, Grounding, Cable Infrastructure, Electrical Connections

Man-hours: 151,100



Canada

LNG Canada Loadout Line Trestle

Owner: Clough Pacific JV

Executing Company: KAEFER Industrial Services Ltd.

Services Executed: Blasting, Painting

Man-hours: 10,000



Finland

Icon of the Seas – Surfside

Owner: Royal Caribbean Cruise Line

Executing Company: KAEFER Oy

Services Executed: Steel-to-Steel Turnkey Delivery of Entertainment Area



France

VERSALIS

Owner: ENI

Executing Company: KAEFER WANNER SAS

Services Executed: Insulation, Polyurethane Injection Insulation, Scaffolding, Asbestos Removal, Cryogenic Removal Work, Prefabrication

Man-hours: 140,000



Germany - Construction

TUM Campus at Olympia Park

Owner: The Free State of Bavaria

Executing Company: KAEFER Construction GmbH

Services Executed: Interior Outfitting

Man-hours: 8,500



Germany - Industry

Südzucker, Sugar production

Owner: Südzucker AG

Executing Company: KAEFER Industrie GmbH

Services Executed: Removal of Thermal Insulation Composite System, Surface Preparation, Concrete Repare, Facades, Scaffolding

Man-hours: 6,600



Germany - Shipbuilding

Viking Mississippi

Owner: Viking Cruises

Executing Company: KAEFER Schiffsausbau GmbH

Services Executed: Fire Safety Roller Shutters (A-0, A-60), Cold Storage Doors (A-60), Fire Safety Sliding Doors (A-60)



Indonesia

Tangguh LNG Expansion Project

Owner: BP

Executing Company: PT KAEFER

Services Executed: Passive Fire Protection, Surface Protection, Refractory

Man-hours: 1,000,000



Ireland

EP Kilroot & EP Ballylumford

Owner: EP Kilroot Ltd., EP Ballylumford Ltd.

Executing Company: KAEFER Ltd.

Services Executed: Access Solutions, Electrical Installation, Electrical Maintenance, Fault Finding and Engineering Services

Employees on site: 20



Kuwait

Elevated Electric Submersible Pump Area Substations 1-5

Owner: Kuwait Oil Company

Executing Company: KAEFER Kuwait General Trading & Contracting Co. WLL

Services Executed: Passive Fire Protection, Insulation

Man-hours: 100,000



Malaysia

Nutmeg Project

Owner: Pengerang Deepwater Terminal

Executing Company: KAEFER (Malaysia) Sdn Bhd.

Services Executed: Cold Insulation

Man-hours: 57,000



Netherlands

innocent

Owner: innocent drinks

Executing Company: KAEFER Nederland B.V.

Services Executed: Scaffolding

Employees on site: 25



Norway

Johan Sverdrup RP Modification & P2 Hook-Up

Owner: Equinor

Executing Company: KAEFER Energy

Services Executed: Onshore activities: Engineering, Production of Insulation Systems and

Logistics Offshore activities: Insulation, Scaffolding, Passive Fire Protection, Support Services to Commissioning

Employees offshore: 280



Oman

Kyla Shipping

Owner: Oman Dry Dock

Executing Company: KAEFER Insulation LLC

Services Executed: Painting

Employees on site: 10



Poland

Baltic Pipe

Owner: GAZ-SYSTEM S.A.

Executing Company: KAEFER S.A.

Services Executed: Acoustic and Thermal Insulation

Man-hours: 10,900



Qatar

QATARGAS 5-Year Frame Contract

Owner: Qatargas Operating Company Ltd.

Executing Company: KAEFER LLC

Services Executed: Scaffolding, Painting, Insulation, Refractory



Saudi Arabia

Marjan Field

Owner: Saudi Arabian Oil Co.

Executing Company: KAEFER Saudi Arabia

Services Executed: Surface Protection

Employees on site: up to 400



Singapore

CRISP Project Hook-up

Owner: Exxon Mobil Corporation

Executing Company: KAEFER PROSTAR

Services Executed: Insulation, Cladding

Man-hours: 35,000 (estimated)



Spain

DOW Tarragona

Owner: DOW Chemical

Executing Company: KAEFER Servicios Industriales SAU

Services Executed: Insulation, Access Solutions, Surface Protection, Passive Fire Protection, Confined Spaces

Man-hours: 350,000



South Africa

SASOL AIP Maintenance

Owner: Sasol

Executing Company: KAEFER Thermal Contracting Services (PTY) LTD.

Services Executed: Access Solutions, Insulation, Painting

Man-hours: 210,000



Sweden

Preem Synsat

Owner: Preem AB

Executing Company: KAEFER AB

Services Executed: Scaffolding

Man-hours: 170,000



Thailand

CRISP (Chemical and Refining Integrated Singapore Project)

Owner: Exxon Mobil Corporation

Executing Company: KAEFER Engineering (Thailand) Ltd.

Services Executed: Insulation

Employees on site: 49



United Arab Emirates

United Arab Emirates

Owner: Hitachi Zosen Inova AG (HZI)

Executing Company: KAEFER LLC

Services Executed: Insulation

Man-hours: 380,000



United Kingdom

Hinkley Point C

Owner: EDF

Executing Company: KAEFER Ltd

Services Executed: Ductwork Fabrication & Installation, Protective Coatings, Access Solutions

Employees on site: 172



Vietnam

Sarawak Methanol

Owner: Sarawak Petchem Sdn. Bhd.

Executing Company: KAEFER Engineering (Vietnam) Ltd

Services Executed: Thermal Insulation

Employees on site: 58

KAEFER Group - LEAN

Relentlessly pursuing perfection

How KAEFER's LEAN journey is going

A LEAN Journey is a commitment to continuous improvement. Effectively, this means that standing still is not an option and the pursuit of perfection is constant. KAEFER has made a great deal of progress on its LEAN Journey, thanks to sharing ideas and best practice throughout the company, as well as continuous training, certification, and development. While LEAN is often talked about on an organisational level, it's important to hear about the experiences of individuals on their LEAN Journey, such as Senior Operations Manager from the UK, Mark McKenna. "I have been involved with LEAN since 2015. At first with anything new I was apprehensive and saw this practice as an additional burden on my time and something that was preventing progress. However, throughout the journey I began to realise that it is not a burden at all, but rather a systematic approach to work. The journey is far from over. There are never two identical projects and so the approach is always to look for solutions with your LEAN glasses on. That's why I enjoy being on the LEAN Journey."

Knowledge is best when it's shared

One of the best things about an international, multi-skilled and professionally diverse company such as KAEFER is that team members all around the world can profit from everyone else. Sharing experiences of what works and what doesn't is a practical way to continuously improve processes on real, live projects. Based on this idea of collective talent and intelligence, KAEFER has set up a searchable platform to exchange best practice in LEAN Site Management, including different types of visual management boards, leader standard work templates, daily meeting structures and much more.

This is supported by images and explanations of how various measures were implemented. There have been 76 cases posted so far from 12 countries: Canada, Germany, Qatar, Saudi Arabia, Kuwait, UAE, Norway, Poland, Malaysia, South Africa, Spain and the UK & Ireland.

Sharing examples of LEAN best practice makes a concept that can seem abstract at times very tangible and provides a straightforward way to show how things can be done. "It's a one-stop shop," Local LEAN Leader in the UAE Sanjay Manoharan says. "I can find best practice easily and have instant access to good examples of LEAN being implemented."

One example of LEAN in action in the Middle East is in the centralisation of site information in a standardised 'LEAN container', which is identically constructed and used throughout the region, allowing for easy orientation and even higher efficiency. For Ranesan Puthiyadath, Site Manager in Qatar, "the LEAN container is a data and action centre where we can visualise the project in real time and brainstorm solutions across all disciplines on site. Everyone involved gets a real sense of the improvements that can be made, and we all work together to eliminate waste."



A little LEAN learning goes a long way

Continuous improvement involves constant learning. That's why KAEFER has also invested in LEAN on-site and classroom training. This was the first year post-pandemic where lessons could take place face-to-face and many team members were happy to be able to meet with their colleagues once again. This didn't mean that the virtual approach was dropped, however. This year also saw change management and coaching take place using a virtual reality platform for the first time. This is in addition to further online training sessions as well. As of the 30th of September, 31 local LEAN training sessions took place across KAEFER locations, with more planned until the end of the year. The books are already starting to fill up for 2023, which shows how LEAN is beginning to permeate the organisation and how the company is on the right track.



Doing it right with DPMS

Unlocking the power of digitalisation and data with KAEFER's Order-to-Invoice Solution

DPMS is making waves on KAEFER construction sites around the world. What is DPMS? Simply put, it's a digital order-to-invoice solution covering all KAEFER services. From the very first step when a request is received, through scoping and cost estimates and then authorisation, planning and performance monitoring, DPMS streamlines the process and makes it fully transparent at every step of the way. This is not just good for the client, who can see exactly what is happening at any point, but it also provides for greater efficiency on KAEFER's part, as it makes all the resources required for a project or process visible and optimisable.

Putting productivity first

Live data enables fact-based decision making and greater control, whilst the automation of repetitive functions provides time for other, more productive tasks, to name just a few ways DPMS can improve the process. On top of that, resources can be allocated more effectively and working hours can be used in a more targeted way, tackling the jobs that need to be done on a prioritised basis. The key is eliminating unnecessary steps on the road to completing a project by giving stakeholders a detailed overview of all the project elements in one place. DPMS also makes daily work on site safer, easier and more efficient. According to Saurabh Deshmukh, Global LEAN Manager at KAEFER, "information is entered once instead of several times, like would sometimes be the case with Excel and paper spreadsheets."

This makes the process easier to follow. Work allocation and execution can be managed by the supervisor and foreman, allowing them to focus on their team instead of administration. We developed DPMS together with our colleagues for use on the sites they work on every day, and we did it in a very agile way. That makes work safer and more productive.”



Saurabh Deshmukh

Managing sites more effectively

DPMS is a key element in the implementation of LEAN Site Management in projects around the world. “DPMS allows us to collect precise data in a more efficient way and also to improve how data is distributed within the team,” comments Afzal Khan, Managing Director KAEFER in Southeast Asia. “We can deploy and apply standard practices, improve know-how transfers within our site team and generate effective and reliable visual controls and detailed follow up reports to make data-driven continuous improvement”.

The proof is in the pudding

Put simply, DPMS works for the benefit of KAEFER employees. It is currently used on over 90 sites with 48 of those taking advantage of the planning and performance module. Since it was introduced in several markets, the number of unnecessary steps eliminated in the administrative order to invoice process has been 29% in Brazil, 26% in UK & Ireland, 37% in Sweden and 24% in South Africa, to name just a few cases. For clients in the regions where DPMS is used, it has become a unique selling proposition. “In Brazil, for example, DPMS offers clients real innovation. The fact that the system is also customisable offers further benefits and allows our teams to take a bespoke approach

to the widest variety of projects,” Sandro Barrach, Managing Director Brazil, adds. Additionally, Stuart Gray, Senior Operations Manager from UK&I highlights “the implementation of LEAN at our UK Onshore Gas Plants has seen a real step change in the focus and language our teams, and clients, use in the approach to work. Together we look at how we can remove blockers and keep our teams productive at the workplace. Presenting that data, which is extremely valuable as part of the ongoing development journey, is hard and labour intensive to produce and display but through the implementation of DPMS alongside LEAN has allowed us to show and tell clients the impact LEAN is making”.

KAEFER Industrie in Germany

A little learning goes a long way

Opening the door to further development and qualification for operative staff in Germany.



Standing still doesn't get you anywhere. This is as true in the journey of life as it is in any career, which is why KAEFER Industrie in Germany has created a personnel development programme for its operative staff. There has never been a programme like this before. It was initiated by Gregor Bochynek, Managing Director at KAEFER Industrie and supported by the German Human Resources and Communication Department to give operative staff new opportunities and incentives.

Vertical, horizontal or diagonal – choosing the right path

Professional development can go in many different ways and isn't always about moving upwards or being promoted. It's just as much about gaining new skills and qualifications to do an existing job even better. This is extremely important for KAEFER to guarantee consistently high quality and fits well within the 'We take action 4' HSEQ campaign, specifically in relation to quality. But it also profits employees as they are confronted with new developments in technology, machine control and digitalisation on construction sites every day. Gaining a detailed understanding of these developments and obtaining further qualification makes them more effective at work and gives them opportunities to become better. Furthermore, a highly skilled and well-trained workforce effectively ensures higher client satisfaction and brings quality standards in house.

"Many of our employees have a very long service record, which has enabled them to grow into a strong team with their colleagues, Bochynek says. "With our programme for further development, we want to continue to retain our employees for the long term and promote lifelong learning at work."

The programme is accessible to all employees through KAEFER Industrie's employee app. Everyone can see all of the training sessions, seminars and courses that are available and there are no restrictions in terms of what they can sign up for.

They're divided into competence areas, such as insulation, surface protection, fire protection etc. and then broken down according to functions (from unskilled to project manager). "It is not only about personal development in the sense of a steep career ladder to the top," he adds. "You can also train vertically and experience from everyday work is just as important as new skills."



Gregor Bochynek

Long term benefits outweigh short term challenges

A key element of the scheme is that a manager has to have a solid reason for an employee not taking part in further development. This ensures that training can happen, even if an employee is indispensable on a construction site. Whilst this may present managers with challenges on a short-term basis, especially given the shortage of skilled workers throughout the industry, the long-term prospects and skills of the employee and KAEFER's associated benefits are worth it.

Real incentives with real results

Taking part in training and development isn't mandatory, but the aim of the programme is to make it self-evident to most of the operative employees that it's in their best interest and provides real benefits to all. "The desire to learn has to come from within," Bochynek says. "Regardless of whether it's to expand one's skills in their current position or to take the next steps within the company, the motivation comes from the individual. We do not want to stand in the way of that, which is why we established this comprehensive programme. I am confident that this investment won't just give our staff real incentives to stay with us but that it will also set us apart from the competition by having well-trained, experienced and motivated people working for us."

RIP Serviços Industriais in Brazil

The path to solar self-sufficiency

Taking advantage of renewable energy and paving the way for sustainability in Brazil.

Running a mine uses a great deal of electricity. Fortunately, in Brazil there is a form of renewable energy that's quite plentiful given the country's climate: the sun. To make the most of this, Brazilian mining company Vale is developing a huge 766 megawatt photovoltaic (PV) solar power plant in Minas Gerais. The Sol do Cerrado project will supply electricity to Vale's mines in the Jaíba area and provide 13% of the company's total electricity needs in Brazil by 2025. It is part of the company's commitment to generate 100% of its energy requirements for its Brazilian mining operations itself by 2025 and achieve carbon neutrality in its global activity by 2050.

At full capacity, Sol do Cerrado will produce around 1.7 Gigawatt-hours (GWh) of electricity and offset 136,407 tonnes of carbon dioxide (CO₂) emissions a year.

RIP Serviços Industriais, KAEFER's subsidiary in Brazil, was contracted to provide the 34.5/230kV lift substations for the facility, which is something that the team had not done before. It meant bringing new people on board with expertise in substation assembly, as well as developing plans without internal references.

Working with everything under the sun

The job list for RIP was considerable: there was the assembly of 597 pieces of equipment, such as 230 kV as circuit breakers, switch disconnectors and transformers. Then there were 51 protection/control panels, metering systems, battery banks, connectors and lighting assemblies as well as no

less than 165,763 metres of cables. The overhead transmission line between the Sol do Cerrado and Jaíba substations will include a total of 39 towers, 14 of which will be self-supporting structures and the remaining 25 cable-stayed.

That's no mean feat for the team on the ground, especially since the new members of the RIP team only had a short amount of time to integrate into the company culture. On top of that, the materials and equipment needed were very specific and the timing was tight. The team persisted and managed to mobilise 50 people, reconfigure all the planning and reach every milestone in just 15 days' time. "The team integration was exceptional," recalls Fabiana Ruivo, General Manager at RIP. "They remained motivated and engaged throughout the whole project, adhering to health and safety requirements, which resulted in 312 days without lost time accidents."



Fabiana Ruivo

Looking to LEAN

In addition to the motivation and integration of a new team, LEAN principles also played a part in getting this project over the line. KAEFER's DPMS , the Order-to-Invoice Solution, was implemented by Guilherme Medina to monitor execution in the field and to provide weekly reports to the client. The whole team also benefitted from training carried out by LEAN Leader Gabriel Tavares to evaluate construction methods and improve productivity.

This all led to recognition by the client for performance, quality and execution and also showed that the RIP team was able to provide, successfully and efficiently, a service they had never offered before. It was also the first RIP project that was led by two women: Fabiana Ruivo and Luiza Mascarenhas, Works Coordinator. "This project is innovative in many respects," Fabiana comments. "Particularly in terms of what we have achieved for future generations with the environmental benefits, but also in terms of diversity and inclusion. The fact that I was able to contribute towards this is extremely gratifying."



Luiza Mascarenhas and team

Corporate Innovation & Technical Excellence

Always pushing innovation

Using technical excellence to solve problems and develop new solutions in robotic systems, electricity generation and communication.

What do robots, an 'Iron Hog' and digital portals have in common? They're all innovative projects that KAEFER's Corporate Innovation and Technical Excellence department (CIE) is working on. CIE is an established market leader in insulation and surface protection consulting, providing professional solutions for even the most complex technical challenges. Always aiming to push the bar higher, the team works independently and together with clients to develop new solutions and better ways of working with resources and materials.

Augmenting our expertise with the help of robots

Robotic systems work safely, provide high quality, and can also go some way in alleviating shortages of skilled workers in insulation and surface protection. In many cases, they don't have to rely on conventional access technology, such as scaffolding and can be used continuously with high accuracy. CIE has gained initial experience in projects such as the Navantia Shipyard in Spain, using robots for surface protection applications that would have been challenging and potentially hazardous for staff. Whilst robots will never completely replace humans, they are a valuable tool that can be deployed in a wide variety of applications and can often simply be left to get on with the job.

"New technologies implemented into existing workflows and the optimisation that's possible is a game changer," says Thomas Rehberg, Head of Asset Integrity Management and Product Excellence at KAEFER. "Problems that were

previously difficult to solve or could only be tackled using a large number of people, often with special protective equipment, are now conceivable in a completely new way. This technological freedom and the implementation of new solutions into existing projects with the associated positive feedback from the construction site are a special motivation for me."

Robotic systems are ultimately new solutions that can drive productivity and increase the quality that KAEFER provides. They perform their tasks in different environments and can do things quicker and more efficiently. Combined with the complex problem-solving skills of KAEFER's experts and engineers, this makes for an unbeatable combination.

In it for the long haul with the Iron Hog

PICC stands for Power Induced Catalytic Combustor and is a KAEFER-developed and patent-pending technology for using waste gases as fuel. Developed at KAEFER's Corporate Competence Center Renewable Energies in Bremen, PICC is a decentralised energy generation plant which can convert residual and non-flammable lean gases in addition to standard gases and generates electricity and process heat. This avoids the damaging venting of residual methane, for example. In addition to the PICC reactor, a micro heavy-duty gas turbine with an associated electrical system and control technology was developed. This device was nicknamed "Iron Hog" and can achieve significantly improved exhaust values, thanks to the catalytic conversion of fuel gases.

This innovative PICC technology provides new solutions in environmental protection and contributes to a decentralised energy supply. As the developer of this technology, KAEFER is underlining its claim to be a provider of solutions and technical excellence.

“The PICC project is a showcase for our engineering expertise,” explains Andreas Pöppinghaus, Head of Corporate Competence Center Renewable Energies at KAEFER. “The quality KAEFER can provide in tackling environmental and energy challenges is clear to see and helps both existing and potential clients understand how we can be a partner rather than simply a provider.”

For the engineers working on the project, it's a rare occasion and a lucky break to be able to design, develop, build, and test such a complex piece of interdisciplinary technology. “This is only possible because we have experienced engineers, even in management, who accompany us, nurture us and help us achieve the seemingly unachievable,” Pöppinghaus adds. “As a long-term project that can make a lasting impact on our climate and our environment by avoiding the burning of fossil fuels, we think it's worth being in it for the long haul.”

Let's talk – digitally

On just about any project, effective communication is a key driver of success. It enhances transparency, speeds delivery, and expedites problem solving. For KAEFER in Benelux, developing a communication platform for the whole life cycle of a scaffolding job on site also responds to a need from clients and gives the company a differentiator in the marketplace.

Supported by CIE, KAEFER in Benelux developed a completely digital portal for secure, stable and reliable communication between the client and KAEFER. This software-based solution works by providing complete transparency and the centralised sharing of all data. Both KAEFER and the client can see what has been done on a project and what there still is to do, as well as order and material quantities, approve documents, work on timesheets and much more.

Developing the portal involved clearly defining the scope and use case, as well as outlining all the types of communication that happens between KAEFER and the client on a project. Selecting and configuring the right software with the help of CIE came next and a working system was set up in the space of just three weeks. There are many benefits of having a centralised and structured communication portal: all parties can see the same things, everything is stored and always accessible and there is no need for any other kinds of media, such as paper, e-mail, fax, etc. “KAEFER Benelux has paved the way,” says Dr Patrick Barthold, Head of Technology & Smart Insulation Systems at KAEFER. “They are the first to use an interactive client portal with communication in both directions, KAEFER to client and client to KAEFER, but I am certain that this will be rolled out to many other markets and make a major difference to the way we run projects all around the world. It's about improving the way we work and designing an elegant solution that reduces waste, not just in processes but in terms of resources and material as well.” He couldn't have communicated it any more clearly than that.



KAEFER in Australia

A journey to unity

Taking the necessary steps towards reconciliation with Aboriginal and Torres Strait Islander peoples in Australia.

Australia has a colonial history of land dispossession, violence and racism towards Aboriginal and Torres Strait Islander peoples. However, a process of reconciliation that started over 50 years ago has begun to address this and to strengthen relationships between Aboriginal and Torres Strait Islander peoples and non-Indigenous peoples in Australia.

Yet regardless of the overwhelming desire to redress what has happened in the past, reconciliation isn't something that can happen overnight. It's an ongoing journey that requires concerted action from people, organisations, institutions and companies like KAEFER as well.

Mapping out the path

Since 2006, Reconciliation Action Plans (RAPs) have provided a framework for companies and organisations to make meaningful and measurable progress towards reconciliation in Australia. Based on the key pillars of relationships, respect and opportunities, RAPs provide real benefits for Aboriginal and Torres Strait Islander peoples, increasing social and economic equality and supporting First Nations self-determination.

Globally, KAEFER has a longstanding history of working closely with the communities and people that host its business activities. The idea is to create mutually beneficial relationships by engaging closely with all stakeholders in the projects the company works on. From establishing a joint venture with the Kitsumkalum First Nation in western Canada to offering vocational and educational training and employment opportunities for Aboriginal and Torres Strait Islander peoples in Australia, KAEFER is committed to fostering respect and working together with First Nations peoples wherever the company is active. KAEFER and its people are on this journey together and RAPs can show the way forward to drive and implement positive change.



Artwork by proud Whadjuk-Yuet Ballardong man and talented artist Kevin Bynder, Kevin was commissioned by KAEFER to capture his interpretation of our values

Taking steps in the right direction

In Australia, KAEFER launched its inaugural [Reconciliation Action Plan](#) this year which has been officially endorsed by Reconciliation Australia for June 2022 – June 2024. The company has been active in reconciliation since 2014, when it partnered with clients to host the first Aboriginal and Torres Strait Islander white collar traineeship on the Ichthys LNG Project in Darwin, Northern Territory. Many of the lessons learned in subsequent initiatives and actions fed into the development of KAEFER Integrated Services' RAP, which provides a framework and pathway to implement its commitment to actively encourage Aboriginal and Torres Strait Islander participation in the company's activities.



Left to right: Reece Schulte, Yuwibara Elder Uncle Phillip Kemp and Kylie Thorn in Mackay, Queensland

As a business, KAEFER in Australia aims to promote and build meaningful and respectful relationships with local Aboriginal and Torres Strait Islander communities and create opportunities for supplier diversity, Aboriginal and Torres Strait Islander recruitment and cultural learning. According to Kylie Thorn, Aboriginal Engagement Officer at KAEFER Integrated Services and a member of a First Nations community herself: "It's all about having open and truthful discussions and creating genuine meaningful conversations. The first step is to create a dialogue and then to take the commitments we have written down on paper and turn these into accountable actions that ultimately lead to a better way of living together." KAEFER Integrated Services' actions involve bringing people together by providing cultural awareness training and integrating Aboriginal and Torres Strait Islander traditions into its business. For example, in Whadjuk Country in Western Australia, the opening of a new KAEFER branch in the south of Perth included a Welcome to Country and Smoking Ceremony by Biboolmirn Noongar Joe Collard from Djoona, followed by the Midn Marr Dancers led by Goren Noongar Neil Coyne, who shared stories through dancing and singing.

Importantly, the RAP details several initiatives related to employment. Currently 2% of the workforce in Australia identify as Aboriginal and Torres Strait Islander peoples, with targeted programs in place for this number to reach 4% by 2024. The past year has also seen a significant increase in engagement with Aboriginal and Torres Strait Islander businesses through supply chain opportunities.

The present situation is not the final destination

A great deal of progress has been made, but there's still quite a way to go. KAEFER in Australia has identified various targets to work towards, including increasing the number of Aboriginal and Torres Strait Islander staff as well as working towards employing Aboriginal and/or Torres Strait Islanders in graduate and trainee programmes over the next 3 years. In addition to this, the company will continue to engage with the community to foster cultural understanding and togetherness. Unity is the destination and the actions taken certainly make it feel less further away.

KAEFER Construction in Germany

Like the best plane journeys, a project that's just in time

Working on expanding Frankfurt Airport and building for the future.

Frankfurt Airport is one of Europe's biggest traffic hubs and is constantly growing. To make space for an additional 25 million passengers per year, the airport is expanding with a brand-new terminal being built to the south of the existing site. Terminal 3 will cover an area that's larger than 25 football fields and will secure the airport's future.

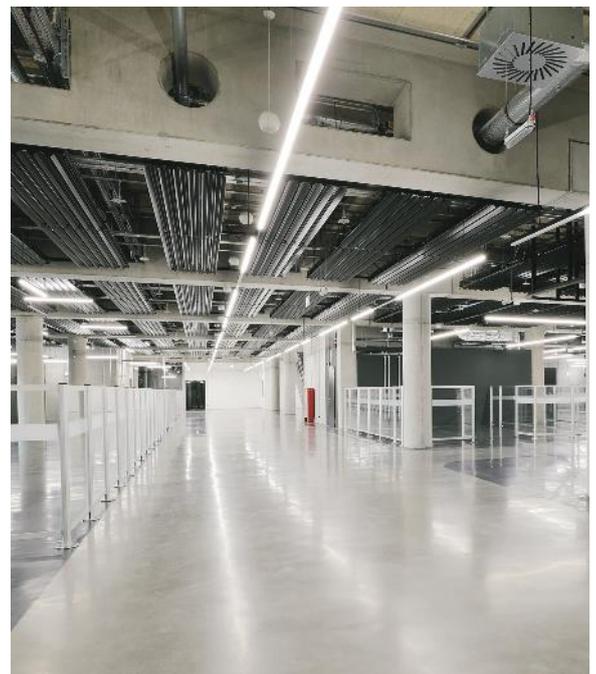
KAEFER Construction has won the contract for drywall installation, exterior and interior ceilings as well as passive fire protection. The company has experience in large-scale projects like this, having previously worked at the airport two years ago on a complex outfitting job for Europe's largest fire protection station as well as further extension work of other facilities.

Taking off on the ground

The scale of the job at Frankfurt Airport takes on some seriously stellar dimensions. There will be more than 15,000 m² of specially constructed exterior ceilings with KAEFER's own structural designs made with a structural engineer. On top of that, 8,000 m² of F30 walls, 4,000 m² of F90 walls and 4,000 m² of interior ceilings as well will be installed by the KAEFER team. These are tremendous quantities, and everything needs to not just fit snugly in place, but be planned down to the last detail, including getting a wind assessment report.

The sky's the limit for the logistics

Take a guess: how big is the KAEFER crew on the project? Chances are you didn't think it was just three people. There's one Construction Manager responsible for two piers, one Project Manager and one Junior Project Manager that handle everything together. Logistics is the biggest challenge for this project for KAEFER, as the huge quantities of material need to arrive just in time, since there is very little storage capacity on site. This is a truly modular and modern construction project that takes advantage of the efficiency of flexible and fast supply chains. KAEFER also has a good relationship with Knauf, one of the main suppliers, which makes the logistical challenge easier. But it's still hard to believe that several hundred thousand square metres are handled by just three specialists.



© Fraport AG

A LEAN Journey – in the truest sense of the term

To prepare this mammoth structure for the millions of people who will start or continue their travels from Frankfurt, the construction site needed to undergo its own LEAN journey. On a site that measures more than 176,000 m², which is the equivalent of 25 football fields, it helps if you can do things digitally. PPM-Boards were set up on a computer, all preparation and pre-visualisation was done digitally and even the plans on site were only available on digital tablets, accessed through the cloud. This was necessary, as it would have been nearly impossible to manage the number of blueprints and diagrams on paper. The KAEFER team was even able to engage subcontractors, who saw how much easier it was to work digitally on elements of this project where each terminal level alone has hundreds of plans.

The expansion of Frankfurt Airport is a truly monumental piece of engineering and presents several, unique challenges. All of which will be overcome by KAEFER to secure the future of the airport for years to come.



KAEFER in South Africa

Stepping things up after a headlining performance

The evolution and reinvigoration of KAEFER in South Africa following the curtain call for the Medupi project.

Building the Medupi power station in South Africa was one of the largest infrastructure projects in the region for years. Over the course of 18-million-man hours, KAEFER in South Africa provided insulation and scaffolding for the six boiler units on site. After completing such a monumental project, which came fully online in 2020, the question for the company was as simple as it was challenging: “How can we transition back to normality and still be sustainable?”



Medupi power station

KAEFER in South Africa embarked on a sales offensive to secure its order book while diversifying its revenue stream at the same time. Following the large-scale, multiyear contract with ESKOM for insulation and scaffolding services early in 2022, the company secured a 4-year maintenance contract at SASOL’s synthetic fuels manufacturing facility in Secunda. Soon thereafter, KAEFER won a contract for scaffolding and insulation at ASTRON’s refinery in Cape Town. KAEFER was clearly on a roll, thanks to great teamwork and the right strategy.

New stars are born

“We’ve always talked and thought about life after Medupi,” explains Jayson Cleaver Managing Director of KAEFER in South Africa. “We were pressed to reinvigorate our core IASP (insulation, access solutions, surface protection, passive fire protection) business and we delivered. What it needed was a new approach, a different mindset, teamwork and simple belief.” For SASOL and ASTRON, it was about challenging the classic insulation process and taking inspiration from KAEFER’s InPact approach.

INPACT, which stands for **I**nsulation **P**roductivity **P**erformance **A**ction, is an inhouse industrialised process methodology built on LEAN principles that uses a centralised approach to realise cost improvements. Insulation cladding is prefabricated at KAEFER’s own facilities under controlled conditions and then transported to the SASOL facility for installation, where the entire value stream, from scoping through installation is managed using smart simple processes and digital tools. It’s early days, but all indications point towards the collective approach being a success. The fabrication shop has gone from processing a few coils per year to more than a coil a week at times, fully on target.

Developed by KAEFER’s International Project Team and tested on several insulation projects, South Africa welcomed the approach. “Our main aim is to target waste by centralising cladding operations to deliver value more efficiently and safely,” Cleaver adds. “INPACT goes a long way in helping to deliver this. Together with our other operational excellence and digital initiatives we have seen substantial development in our insulation business. Sure, we have a long way to go, but this has helped give us a new lease of life.”

Chapter two: safety is number one

SASOL's facility is a lot larger than a normal refinery. According to Chris Van Vuuren who leads the project for KAEFER at SASOL: "At any given time during the annual peak turnaround periods there can be more than 40,000 people on site with more than 500 of those from KAEFER". Safety is obviously a huge priority, given the sheer number of people and complexity of the industrial operation. This year, SASOL decided to ask each individual contractor to develop their own safety campaign, as opposed to the central approach they used before.

This was a prime opportunity for KAEFER to highlight its commitment to safety and the team developed an initiative with a Zulu name: "Siphephile". This means "we are safe". The measurable results are impressive. Since the contract started more than 270 000 hours have been worked with zero recordable incidents. Using an IsiZulu word engaged many of the people working on site in a discussion about safety as well as inclusion and diversity. In a country that boasts 11 official languages, some people did not necessarily know what "Siphephile" meant, which in itself led to questions and conversations, ultimately raising awareness.

While maintenance activities will continue, SASOL's annual turnaround for 2022 has come to an end with KAEFER receiving recognition from the client for safety and performance. "This is a proud moment for all of us, a new project and a new site, we pledged to deliver and to going home safely, and that's exactly what we did", Cleaver says.

Keeping the show on the road

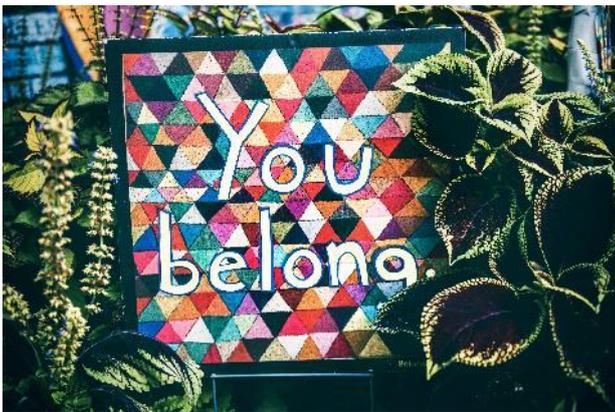
ASTRON's facility in Cape Town isn't quite as big as SASOL's in Secunda, but it still represented an opportunity for KAEFER in South Africa to show what it can do. The company has reinvented itself by making the transition to hard cash contracting after a blockbuster like Medupi. In a cost-sensitive challenging market, being able to perform on unit rate contracts and uphold a reputation for quality and safety can only pay big dividends. In that respect, KAEFER in South Africa is well on its way to becoming even more of a recognised name in the region and beyond.



KAEFER in the United Kingdom & Ireland

Trailblazing diversity and inclusion

From inclusive employment working with the Down's Syndrome Association (DSA) to being proactive about the company's mental health – a look at KAEFER UK & Ireland's pioneering initiatives.



KAEFER people come in all shapes and sizes. Every single person who works at the company is unique and that is something that KAEFER in the UK and Ireland not only respects but celebrates. This is clearly evident in the trailblazing diversity, inclusion and safety initiatives, such as mental health first aiders and a cooperation with three Down's syndrome charities in Scotland, Ireland and in England. "WorkFit" is the DSA's employment programme, which brings together employers and jobseekers who have Down's syndrome. The programme aims to train employers about the learning profile of people who have Down's syndrome so that they can be supported in the workplace and be provided with unique opportunities to gain work experience in a variety of roles. KAEFER in the UK and Ireland has proudly taken on two employees via WorkFit.

Sarah, Administrator

Sarah has been with KAEFER since June 2021. She started in the HR team, worked as an administrator in Supply Chain and then moved to Marketing and Communications. Sarah has

performed a variety of roles, including putting together PowerPoint presentation and Excel spreadsheets. She has been working with the reception team to do the mail, filling out COVID-19 forms and greeting visitors, as well as helping the team in Marketing and Communications to develop safety guidance posters. She loves the social side of working at KAEFER and enjoys chatting with her colleagues about everything from food and music to what's on TV.

"Sarah is incredible," says Gem Trainor, Head of Marketing and Communications. "She will tell you things about how to do shortcuts on your computer that you never knew existed. Not to mention the fact that she brings so much joy to the building. She's such an enthusiastic and welcoming person."

Gary – Scaffold Yard Assistant

Gary works at the scaffold yard in Gateshead. His job is to paint the scaffolding with the distinctive orange and blue KAEFER security colours, so that they can easily be recognised on site. He also hammers the anti-slip mats, which are used in the back of vehicles to prevent things from sliding around. Gary loves drinking coffee with his colleagues and chatting together. "He's a great lad," said Jonny Ward, Gary's initial Line Manager. "He gets stuck into the tasks straight away and has a laugh with the lads as well."

Empowering employees

In October 2021, KAEFER UK & Ireland identified a gap in Mental Health First Aiders (MHFA) in the company. With a workforce of 3,000 employees and only a small number of MHFA, an action plan was implemented by the CEO Chris Foulkes and a target of training 5% of the workforce by the 2nd quarter of 2022 was set.

The two-day training sessions were carried out by MHFA England and were held between January and July 2022 at 11 locations in the UK and Ireland. Mental health training has given participants a better understanding of mental health and wellbeing as well as providing them with tools to recognise common triggers and signs that people need support.

The training also focussed on non-judgemental listening skills along with the confidence to reassure and support a person who may be experiencing mental ill health and guide them to source of further support for recovery.



Mental Health First Aiders - North East

“It was really empowering,” recalls Ciaran Clifford, Business & Strategy Graduate. “You came away feeling equipped that you could actually help and genuinely make a difference to people’s lives. It was eye-opening.”

Leading by example

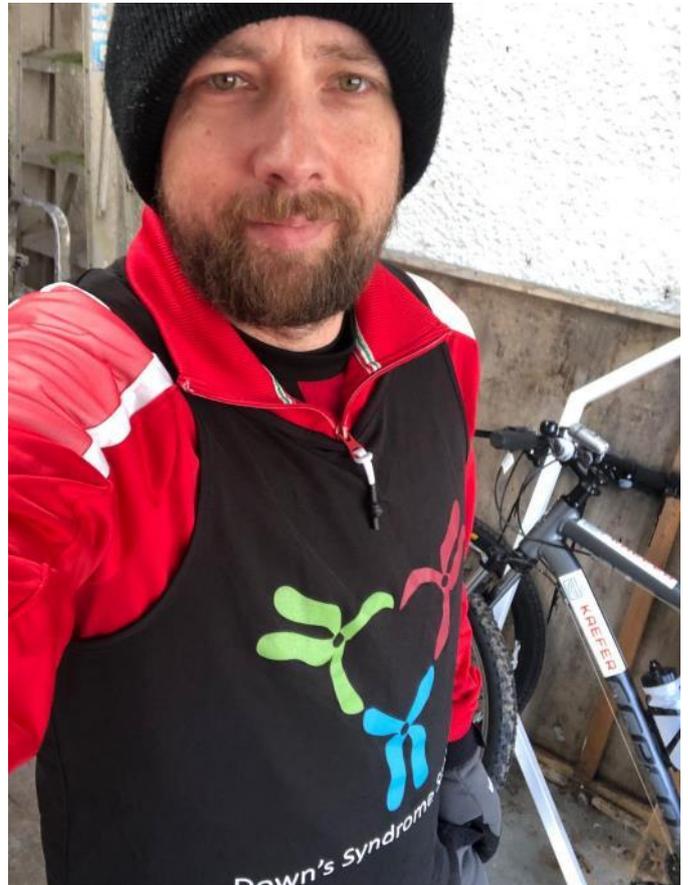
For Chris Foulkes, the goal is to “grow sustainably and become industry leaders in equality, diversity and inclusion.” Initiatives such as WorkFit and MHFA are key steps on the path to achieve this aim. But it cannot be done without the support of the KAEFER team. One exceptionally enthusiastic example can be found in Billy Gauld.

He works as Operations Manager at the Shell site in St Fergus and has been championing many of the charitable and fundraising efforts at KAEFER, such as the 21-in-21 challenge, where he and his team went out every day either cycling, walking, or running for 21 consecutive days.

They managed to raise over £7,000 for Down Syndrome Scotland in the process. He also arranged a sell-out charity quiz night and set up his own “Down’s Syndrome KAEFER Champions” team in Scotland, with five site specific champions in place. The team is focused on raising money, awareness and generating interest for group activities. Billy has helped to raise over £28,000 in donations, which is a fantastic achievement, even leading to him being selected as a finalist for

“Diversity & Inclusion Champion of the year” in the 2022 Shell UK Upstream Role Model Awards.

With people like Billy Gauld and Chris Foulkes paving the way, the path to achieving leadership in equality, diversity and inclusion will surely be shorter.



Billy Gauld

KAEFER in Spain

Working up to the biggest shutdown in Spain

Supporting DOW in Tarragona and working on one of the European chemical industry's most substantial challenges in 2021.

DOW is the world's second biggest chemical company and its facility in Tarragona, Spain is one of the largest of its kind. This is where the company runs low and high-density polyethylene, polyol, polyglycol and octene plants as well as an ethylene cracker. To keep the large-scale facility running at its best and to ensure efficiency and safety for years to come, it was shut down for major maintenance work and to replace over 11,000 m² of insulation. This was the largest shutdown of a chemical processing facility in Spain for decades and was a project that took on a huge scale. With its special skills in access and insulation, KAEFER was on hand to support DOW and ensure the project was a success.

Scaling new heights

Whenever there's a major project with industrial maintenance and insulation, scaffolding isn't usually far away. For the DOW project in Tarragona, there was a great deal of it: 3,500 tonnes of scaffolding arrived in a total of 150 truckloads to cover more than 170,000 m³. On top of the volume needed, the client's requirements were exacting. All the scaffolding had to be particularly clean to avoid contamination and there could be no gaps larger than 2.5 cm to prevent the risk of anything falling down.

"The mega shutdown was one of DOW's most important projects in 2021," explains Alberto Valles, Business Development Manager for Chemicals, Oil & Gas at KAEFER in Spain. "Workers from around the world were mobilised to Tarragona, which fostered professional relationships in all aspects: from site supervision to the highest management level; including "Sponsor Meetings" with Asier Calonge, Managing Director of KAEFER in Spain and Dr. Roland Gärber, Co-CEO of the KAEFER Group. KAEFER and DOW worked well together on this project, and we managed to deliver the high levels of safety and quality that we're known for."

Escalation to the Big League

The team working on the DOW shutdown likened it to taking part in the Champion's League football final. It was one of the largest shutdowns in Europe and arguably one of the most comprehensive that KAEFER had a part in. Yet the team remained calm under pressure and brought forward LEAN thinking to set out clear objectives from the start and identify any sources of potential waste. This certainly paid off, as the client actually increased the contracted volume of work and KAEFER ended up reaching a final amount of 150% of the initial order. Proof that team could perform at its best when working together, even if they were playing in one of the toughest tournaments in the chemical industry.



KAEFER Group - Digital Roadmap

It's all black and white

Simplification through digitalisation

People are good at solving complex problems, innovating and analysing – especially where there are grey areas. Computers on the other hand, are good at routine and repetitive tasks – what's black and white. The ultimate goal of digitalisation is to free up people to do what they do best by letting computers take care of the tasks that people aren't as good at.

The touch of a button

KAEFER Energy in Norway is making headway to become a data-driven organisation. Their vision is to have all the relevant information at hand and accessible with just one keystroke. To achieve this, they are using KAEFER's Analytics Platform, which is a uniform solution to establish connections with various data sources. The company has been working on connecting important data sources, such as SAP and iCORE to the platform, which helps to generate regular, automatic Power BI reports that used to take hours to put together manually.

Having information available at the touch of a button not only saves time, but also makes decision making easier and more effective. When the data is solid and reliable, decisions tend to be as well. KAEFER Energy is still learning and constantly getting better when it comes to reducing the number of keystrokes and evaluating information to determine what is most relevant. That's the nature of the digital journey: refining, changing and optimising until all the insight is available with just one touch of a button.

Trading hardware for software

Fixed-line telephone systems are quickly becoming a thing of the past. Across the KAEFER world, countries such as Belgium, the Netherlands, Luxembourg, France, Germany, Saudi Arabia, the UAE and the UK are all able to receive their landline calls on all devices, no matter where they are, using MS Teams based telephony. The benefits are clear: more flexibility, mobility and usability.

Robotic repetition

Repetitive tasks are boring and menial for a human. But robots love them. Not to mention that they tend to be better at them, too. That's why KAEFER is launching an automation platform pilot project in 2023. The idea is to learn as much as possible in pre-pilot programmes about robotic process automation (RPA) to determine which tasks would be better handled by robots.

For example, KAEFER Schiffsausbau in Germany is looking to automate project review meeting report extracts with cost updates. This would increase transparency and save project managers time and effort. KAEFER in the Middle East is aiming to automate the upload of timesheets for their payroll, which is both more secure and more accurate.

Automation of these kinds of tasks frees up personnel to do more valuable work and it also reduces errors and increases the quality of data. We will be seeing more of this in the future and the possibilities that come with technological development will ensure that KAEFER becomes a more digitally driven, efficient organisation.



Bringing the back office into harmony

The KAEFER Business Template (BT) is an initiative to harmonise back-office processes and systems across the KAEFER world. By creating a standard that considers global and local requirements, the BT increases transparency, enables more efficient processes, and provides a common basis for identifying and sharing best practice. BT has already been implemented in South Africa, Norway, Germany, Belgium, the Netherlands and Luxembourg as well as the APAC region and in the Middle East.

This year, 35 employees at KAEFER WANNER in France worked on the implementation in their market. To begin with, it was necessary to analyse the deviations between local and global processes and which special legal requirements existed in France. Starting in September, 180 users were trained by the local project staff, which was followed by a full, successful launch in November.



Our French-German team responsible for data migration and validation during the GoLive weekend, supported by three other colleagues working remotely

The BT brings many new functionalities for KAEFER in France, which can improve a wide variety of processes, particularly in the areas of finance and controlling. Furthermore, the goCART interface can be used with the BT, to simplify monthly group reporting. The goal of the BT programme is for it to be used by as many companies as possible, representing 80% of the Group's turnover. The rollout in France will increase coverage to 65%. 80% coverage will be achieved with the planned rollout in the UK & Ireland in 2024.

Where we're headed

KAEFER's digital journey is progressing at speed. Further development of platforms and the decentralisation of IT services is accelerating the process even further. We will also see an increasing role for data in decision making as well as a part of a drive towards even more efficient business processes. The future is bright and we're heading in the right direction faster than ever before.

KAEFER in Poland

Embracing the winds of constant change

75 years at the forefront of insulation, access and industrial services in Poland.

Perhaps more than most, the company that is now KAEFER in Poland has seen a great deal of change over the last 75 years. In 1947, by order of the Polish Ministry of Industry and Trade, a branch of the Industrial Construction Company was established in Zabrze. This was the beginning of what would become Termoizolacja S.A., which would eventually merge with Izokor Płock S.A. in 2009 to become KAEFER S.A. in Poland. During that time, Poland went from being a communist country to the current Third Polish Republic, which saw its first free parliamentary elections in 1991. In addition to the wide-ranging social and political changes, the company and its employees also saw tremendous developments in technology and education.



The old school

Even if there aren't now any employees that were there from the beginning, there are many at KAEFER in Poland that have spent several decades at the company. Kazimierz Golec, Production and Training Director has been at KAEFER for 40 years, Tadeusz Siedlik, a Sheet Metal Worker has 26 years under his belt and Łukasz Woroń, Instructor of Practical Vocational Education at the Tarnów School has been with the company for 18 years.

“When I graduated from the Mechanical Technical School in Poland there was martial law, Solidarity and Germany was divided by the Berlin Wall,” Golec recounts. “The school director at the time knew the dreams of young people were to go and work in Western Europe. Yet he suggested that we postponed our studies to take a job in thermal insulation first. In 1989, the Berlin Wall fell. I lived to see freedom without going abroad. It came to us by itself.”



Kazimierz Golec

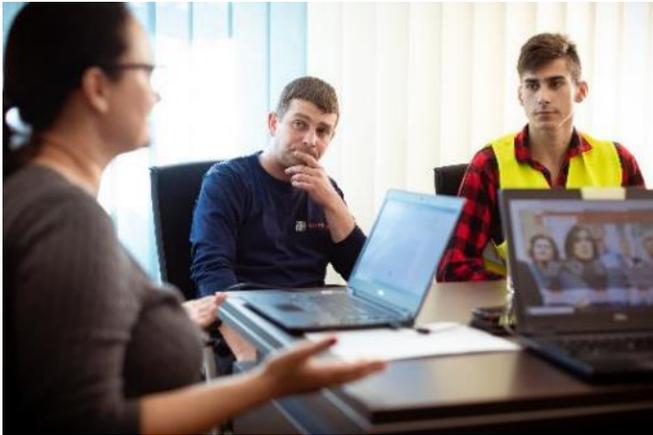
“I was originally supposed to become a sheet metal worker, but became a workshop thermal insulation fitter,” Tadeusz Siedlik says. “At first it was manual and analogue work. Now we have great tools at our disposal, machines that punch sheet metal according to set dimensions, computers, etc.”



Kamil Kwaśniak, Tadeusz Siedlik

“My first work tools were a bicycle, a landline phone, which I picked up in the morning, at noon and at the end of the shift, a notebook and a pencil,” Golec says.

“All the measurements were done by hand; it was a different world. Today, we have great employee equipment, access to knowledge, capabilities, especially in a company like KAEFER, where we are up to date and at the forefront in terms of access to tools, software, certification.”



Łukasz Woróń, Kamil Kwaśniak

“18 years ago, there was a high demand in the market for work in this profession and the opportunity to earn decent money,” Łukasz Woróń comments. “I started my journey with KAEFER by graduating from our own school, where I now teach as well. It was a coincidence, however. A colleague asked me to teach a class at a school for a month. And now I've been teaching there for more than 10 years.” The school in Tarnów is still running to this day and plays a significant role in educating the next generation talent at the company.

The next generation

“Despite some of the crises in recent Polish history, our school in Tarnów managed to maintain itself,” Golec explains. “That makes us the only company in Poland that has been accepting applicants and offering jobs to every graduate for 54 years.”

From the point of view of a young student, Kamil Kwaśniak: “The idea to go to KAEFER school in Tarnów came directly from the career prospects that lay ahead after graduation. I would like to work for KAEFER later and develop further professionally locally or go abroad.”

Katarzyna Prokop is a Junior Education Specialist at the School and Central Workshop in Tarnów. She

sees the possibilities offered by digitalisation and adapting to the changing marketplace in the future. “With remote working, we can be in constant contact with the customer, find new employees, encourage candidates to study at our school through social media and much more,” she says. “Furthermore, success is seeing the need for change. That's why an informal, ten-member KAEFER group was created at KAEFER S.A. The group brings together colleagues from throughout the company to develop solutions that will benefit our workplace. We routinely ask ourselves what kind of KAEFER would I like to work for and what kind of employer should KAEFER be.”



Katarzyna Prokop

“Employees are the capital of a company,” says Golec. “Using their skills and qualifications them is the best strategy. This helps us to achieve the best quantitative and qualitative results and above all, the employee has the greatest levels job satisfaction. Collaboration is also essential, especially when it comes to the other KAEFER entities throughout Europe. I would like to thank the KAEFER companies we've worked together with successfully, in particular KAEFER in Norway, Germany and France.”

KAEFER in Poland has seen its fair share of change over the last 75 years. But what has stayed the same was its focus on the benefits of education and a commitment to the growth of its employees. The market will continue to move and KAEFER will embrace and aim to remain at the forefront of new developments, whatever they may be.

Education never gets old

The Basic Vocational School at KAEFER S.A. is over 54 years old. Yet that doesn't mean it's slowing down in any way. 125 students were enrolled in the 2020/2021 school year, receiving training in how to be an industrial insulation fitter, insulation sheet metal worker or an industrial furnace mason. Over 1,600 students have graduated from the Tarnów school, which has lived through the political transformation of the state, numerous educational reforms, and restructurings within the company. This has been possible thanks to the commitment of those who have been able to anticipate the needs of the market and adapt the training programme accordingly.

2022 saw the establishment of a technical school, where industrial insulation technicians are trained extramural. The 23 students currently taking part in the course are all graduates of the vocational school and KAEFER S.A. sees this as an opportunity to attract candidates from among the graduates.

KAEFER in Australia

Hands on safety

Highlighting hand and finger safety in Australia while making a difference for amputees around the world.

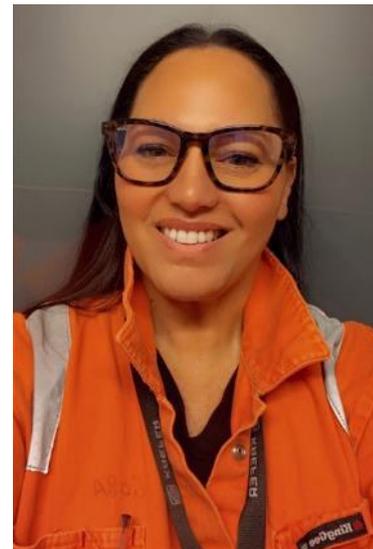
It's hard not to take our hands for granted. Whether we're texting on our phone, driving or working, we often don't give them a second thought. Yet the instant our ability to use our hands and fingers is taken from us, we become acutely aware of how much we need them. That's exactly what KAEFER team members in Australia experienced first-hand. As part of the Safe Hands Campaign that took place in April 2022, KAEFER employees worked in small teams to construct a prosthetic hand for people in need around the world. The challenge: doing it with their dominant hand immobilised. The idea was to experience just how difficult it can be to work without the use of your left or right hand and to highlight the plight of disadvantaged people, who have to overcome this challenge every day. It also served as an effective reminder to take care of hands and fingers in the context of daily work.



Lending a hand

The sessions involved both team coordination and problem solving, as the groups of three had to use clear communication and discussion to construct a prosthetic hand from a set of parts using detailed instructions, whilst their dominant hands were immobilised. "Building the prosthetics was an idea that came from Melissa Vainu, HSE Superintendent – Access Contract at Olympic Dam (a remote BHP site in South Australia) who had heard about the

concept and sent me a note about it," Roy Abraham, HSEQ Manager - Eastern Australia, explains. "The idea to promote the Helping Hands Campaign came from a desire to implement learning that is engaging and genuine," Vainu says. "Not only does it promote a practical element that literally forces the participants to recognise what life could be like if they were to sustain a serious hand injury, but it also allows them to be a part of something very special, as the prosthetic hands built in this activity are donated to those impacted by the loss of their hand." Abraham adds that there was a great deal of engagement from the participants: "as we worked our way through the sessions, energy levels began to rise and there was much discussion and interaction. They were so excited to talk about their own experiences and reflect upon what they had done, and ultimately it resonated with them just how important it was to always look after their hands, as life without them was devastating."



Melissa Vainu

The finished products were donated to people in developing countries who had lost hands or limbs to accidents, illness or landmines, for example. Participants were also able to decorate the carrying cases and write a message on a greeting card for the recipient. For participant Gareth Calder, Senior Supervisor at KAEFER, "the Safe Hands Campaign has been the highlight of the year for me, knowing that the hands we built were going to assist others in developing countries, which made me proud of getting involved. You never know when a helping hand will change another person's entire life."

Hand on heart

Hand and finger injuries are widespread across industries around the world. As part of KAEFER's safety culture, it is essential to tackle this head on and develop an initiative to highlight hand safety and reduce injury. "We had two main activities for the Safe Hands Campaign," Abraham outlines. "One was building the prosthetics and the other involved employees painting their hands in the colours of our SMART Choice programme and placing them on a banner with their name and the reason why they want to take care of their hands." This single-minded campaign, which also included posters, quizzes, fact sheets, presentations, and hand exercises, was executed across all project sites in Australia with over 300 KAEFER employees at 12 sites taking part in the prosthetic hand build. Clients were also encouraged to join in. This initiative ties in to KAEFER Australia's exceptional performance in health and safety. "Our colleagues Down Under have shown exceptional commitment to protecting employees," says Head of Corporate Health, Safety & Environment, Michael Sturm. "Successful implementation of the team-based SMART Choices cultural programme has further improved line management as well as employee engagement and continuing high performance in health and safety has led to the region being awarded the Best Safety Cultural Programme 2021 at the KAEFER International Management Meeting."

Enthusiasm was high for all elements of the Safe Hands campaign, which led to an increased appreciation for hand and finger safety. But what had the most impact upon the participants was not just the challenges involved with being limited to using just one hand, but also the stories of the amputees whose lives were changed by the Helping Hands Programme. From young children in India who had suffered accidents to adults who had waited their whole lives for support in overcoming their challenges, these prosthetics brought help, hope and a new sense of self-worth, all while raising awareness on the other side of the world of how important our hands truly are in all aspects of our lives.

KAEFER in Saudi Arabia

Piping up in Saudi Arabia

Securing a large-scale coating project and being guided by LEAN and KAEFER's safety culture in the Middle East.

The Marjan oil and gas field can be found off the eastern coast of Saudi Arabia and is operated by Saudi Aramco. The offshore field is being expanded as part of the Marjan Crude Increment Programme, which aims to increase its production capacity by 300,000 barrels per day (bpd) and produce 360,000 bpd of ethane and natural gas liquids.

KAEFER in the Middle East has just secured a multi-million Euro contract for the coating of more than 516,000 m² of pipe at the site, making this one of the largest projects of its kind undertaken by the company in the region. Over the course of just 24 months, 350 to 400 specialists will work at the Saudi Aramco approved KAEFER painting and coating shop in the Marjan laydown area. During the most intensive periods of the project, the team will coat up to 1,500 m² of piping per day in 20 dedicated coating and painting booths on site. This is a seriously large-scale undertaking and will provide the client with additional capacity and efficiency.

The message is loud and clear: LEAN works

Being able to achieve these ambitious targets comes from incorporating a LEAN approach to the project, which involves reducing waste and increasing efficiency by using special overhead cranes to handle the pipes and move them around safely and quickly, for example.

The team's commitment to LEAN is clear and was further reinforced during a LEAN Module 4 / KATA training session in July 2022. With the support of Tilo Schwartz and Mohaideen Abdul Kathar, 15 participants covered areas such as continuous improvement, scientific thinking as well as acting in an agile way. By practising LEAN in projects such as Marjan and engaging with it on a theoretical level

as well, the team in the Middle East aims to become a pioneer in the region and develop a clear differentiating factor.

A shout out for health and safety

On large-scale industrial projects like Marjan where people from all over the world give it their all in hot, dusty and dry conditions, safety matters more than ever. That also includes the mental health of people who face immense physical challenges every day. From employee welfare programmes, cinema evenings and fitness initiatives to convivial dinners with management and colleagues, health is considered from a holistic point of view.

This has contributed to an excellent track record for KAEFER in the Middle East, with 60 million Lost Time Incident Frequency-free working hours at KAEFER in Saudi Arabia for 2022 and well as several safety awards from clients. The safety culture in the region and at KAEFER has seen substantial improvements in the last few years. As a learning organisation, KAEFER has taken steps to be much more proactive in handling health and safety. According to the [Bradley Curve](#), an organisation's safety culture runs from reactive through to calculative on to proactive and, finally, generative. Using a holistic approach that's firmly integrated into the company's actions means that reaching the final level is more achievable than ever before. And that's certainly worth shouting about.



KAEFER in France

Deconstructing a phoenix

Safely removing hazardous materials at one of France's largest legacy power plants.

The Creys-Malville power plant in France was a "Superphenix" 1240 MWe fast neutron reactor. First commissioned in 1986, it was shut down permanently in 1997. It's the largest nuclear reactor that is currently being dismantled, with a vessel that is six times larger than any other Electricité de France (EDF) reactor currently in operation.

Part of the job includes the removal of asbestos. Its unique fibrous structure provides high levels of fire resistance and adds to tensile strength when mixed with cement and other products. However, asbestos is also now known to be hugely damaging to human health and a cause of illness.

KAEFER WANNER was one of the two companies chosen to treat two of the 4 buildings housing the steam generators. It was KAEFER WANNER's first major asbestos removal job as part of an EDF nuclear site decommissioning project. The scale and complexity of a large nuclear reactor as well as the unique design makes for a difficult environment to carry out this kind of work. A collaborative and well-planned approach was critical for the project, as many challenges were identified, such as the sheer size of the enclosures and the steam generators.

Setting up camp in a nuclear power plant

Although the nuclear plant was shut down, it was still a nuclear plant, with all of the associated constraints and rules. Despite the fact that dismantling had already begun, the remaining equipment was not to be damaged. Furthermore, the job was very multifaceted, sometimes involving the removal of a simple seal and sometimes treating the whole of a large structure such as a sodium vessel.

To tackle this unique challenge KAEFER WANNER had to set up a functional base on site to be able to coordinate the logistics: 200 tonnes of scaffolding, compactors and skips, as well as a 50-metre-high lift. With 12 specialists working on asbestos removal, 10 working on scaffolding and 4 on rope access, the team was substantial as well. Given the scale of the work that had to be done, the crew set up regular preparatory meetings with the client to plan the installation of all the handling infrastructure necessary for horizontal and vertical circulation, such as trolleys and lifts, for example. This helped all sides gain an awareness of the type of work that would be done, where, when and how.



Building up a relationship by taking a structure down

For KAEFER WANNER, this was the first in what is hoped to be a long line of such projects. “We haven’t done such a large volume of asbestos removal in the context of a nuclear plant decommissioning before, but we succeeded in transposing our thermal power plant dismantling experience” says Bruno Bigot , Project Manager in the Asbestos Removal Department at KAEFER WANNER. “It’s a reference for us and we are hoping that it will open the doors for further projects like this in the future. We worked well together with our client, EDF, on what is really an extraordinary site. The experience we’ve gained here will be as valuable as the relationship we have built.”



KAEFER Group - Compliance

Compliance is everybody's business

Fair play is an essential factor in setting the highest standards and raising awareness of ethical and honest conduct.

Put simply, compliance means nothing more than complying with rules. But in a company like KAEFER, that works in all corners of the globe in dozens of different industries, compliance goes much further. KAEFER is incredibly diverse, welcoming people from the widest variety of countries and backgrounds. Yet despite differing cultures and ways of doing things, each individual working at KAEFER should follow a set of common values and norms. Compliance involves defining frameworks and rules that are designed to prevent, monitor and resolve conducts or practices that go against legal, ethical and/or business standards.

To spread the word of good compliance practice throughout the organisation and beyond, KAEFER has invested in training and awareness, a compliance survey among employees as well as a whistleblowing system (the KAEFER Compliance Helpline) and associated communication.

Learning the rules to live them

KAEFER's Code of Business Conduct clearly outlines the company's corporate goals and values and KAEFER's expectation of compliant behaviour from all employees regardless of their position. As such, it's an essential document that sets out what is meant by compliance and how it affects the work and conduct of each member of the KAEFER team. KAEFER's worldwide Compliance Organisation regularly invests a great deal of resources to make compliance and the KAEFER Code of Business Conduct accessible to all employees across every hierarchy. The goal is to raise awareness and provide a variety of different training sessions to make it easier and more effective to understand and live the company values and the expected conduct.

KAEFER Compliance Training was set up back in

2018 and has led to a coverage of 97% among white collar employees and 95% among blue collar employees. In many regions, participation rates were 100%, which goes to show how seriously compliance is taken.

In 2022, a novel Fraud Prevention and Detection Programme, which includes a new employee training session has just been rolled out, which will even further increase awareness and provide employees with added value.

Measuring awareness to raise it

Last year, KAEFER conducted its first global survey to measure how compliance is perceived throughout the company. One of the main aims was to find out whether employees were aware of the KAEFER Code of Business Conduct and the group wide KAEFER Compliance Helpline. The results painted a positive picture: out of 2,700 respondents, more than 95% knew about the KAEFER Code of Business Conduct and more than 90% agreed that integrity and compliance were very important and that they were able to talk openly with their management about compliance-related issues and make suggestions for improvement. 80% of the respondents confirmed that compliance-relevant topics were discussed in their teams or departments and knew who their local compliance officer was. Around 75% were aware of the KAEFER Compliance Helpline. This showed that there was room for improvement in this area and consequently a new campaign has already been launched to encourage employees to stand up for one another and to further outline how each individual can make a difference when it comes to compliance.



Empowering employees

KAEFER fosters a culture of openness and trust, which encourages people to come forward and discuss any issues they may have at work and empower them to stand up for the KAEFER values, the environment, human rights, or ethical behaviour, for example. This can either be done in person or by using the KAEFER Compliance Helpline (<https://www.bkms-system.com/kaefer> plus QR Code), a secure, web-based reporting system that is hosted by an external provider and can be used by employees, suppliers and clients as well. The idea is to ensure that everyone knows it's OK to talk about business conduct and to report anything that they think isn't right. Of course, the possibility of doing this anonymously is guaranteed. This has been highlighted in a global poster campaign aimed at employees to bring compliance into the spotlight and give them the means to take action.

At the end, good compliance practice is a positive force for KAEFER's business and the lives of employees, as it contributes to mutual beneficial relationships and trust, which in turn is good for us all.

KAEFER in Sweden

The up and down approach

Replacing diesel production with a sustainable alternative and the scaffolding that makes it happen.



Renewable diesel goes a long way in bringing down carbon emissions. That's exactly why Swedish petroleum and biofuels company Preem AB is investing in its Synsat plant in Lysekil to replace part of its fossil fuel production. KAEFER has a longstanding relationship with the company and is active on site to help redevelop the plant and increase its renewable diesel production by 650,000 to 950,000 cubic metres per year. The conversion will reduce emissions by approximately 1.2-1.7 million tons of carbon dioxide each year.

It all comes down to the scaffolding, which is instrumental in providing specialists access to the various parts that need replacing and reworking. But given that the plant will continue its operation throughout the process, the KAEFER team had to work out a solution to ensure minimal disruption and maximum flexibility. It means having to erect scaffolding for a particular job and then take it down again and move it to a different location. To facilitate this up and down approach, the team uses 3D models to map out the scaffolding and be able to know exactly what is needed at each individual station. This also ensures that the 105,000 m³ of scaffolding needed for the project is used in a targeted and efficient way.

State-of-the-art safety

When working with such quantities of specialist equipment in such challenging circumstances, safety is paramount. In that respect, KAEFER in Sweden has worked in close cooperation with the client to develop and foster an inclusive safety culture. All working steps are clearly documented, with task risk assessments prepared for all jobs as well as pre-task talks conducted beforehand, with the signoff of all employees. At a minimum, the safety team conducts 3 inspections per week as well as one monthly audit.



Weekly statistics must also be compiled and checked, which document the number of hours worked as well as the number and outcome of inspections, meetings, and inductions. By adopting a transparent approach and including all stakeholders in safety-critical processes, KAEFER can get the operative staff to feel completely comfortable and, most importantly, work safely.

LEAN and green

The Synsat project is a major step forward not just for KAEFER's relationship with the client, but also in terms of fulfilling its commitment to support environmental sustainability. When the job is complete in 2024, the facility will be able to process up to 40% renewable raw materials. As a result, the same amount of fossil fuels will be phased out and effectively taken out of the atmosphere. Preem aims to become the world's first carbon-neutral petroleum and biofuels company by 2045 and KAEFER hopes to provide the services necessary to achieve this ambition.

One of the ways KAEFER can help is by deploying LEAN strategies on site. It's a challenging environment where there are long distances between the yard and assembly locations as well as tricky access to the tight stops that are typical in a refinery. LEAN site management is essential here, as are frequent executive Gemba walks. Having to cover distances also means that preparation is key, as is creating a flow and aiming to achieve perfection a walk, to keep the operation running efficiently with as little wasted time and effort as possible. through continuous and incremental improvement.

With its focus on efficiency, improvement and the elimination of waste, LEAN is, in fact, a very "green" mindset as well. The fact that it will also contribute to a substantial and measurable reduction in emissions at Synsat further underscores the point and goes to show that KAEFER is well on its way to upscale its environmental credentials in Sweden.

KAEFER FOUNDATION

Lending a helping hand

Supporting people and making a real difference all over the world with the KAEFER FOUNDATION

As the world keeps turning, there's no shortage of the widest variety of urgent challenges to confront. There's war in Ukraine, polluted oceans, rubbish-strewn beaches and biodiversity that's at risk, to name just a few acute problems. The KAEFER FOUNDATION is a charitable organisation that helps our employees in times of hardship and supports people in need, as well as working on addressing some of the biggest challenges we face around the world.



Being there where it counts the most

In 2022, the KAEFER FOUNDATION reacted very quickly when Russia started attacking the Ukraine. A global fundraising campaign was launched to support displaced people across Ukraine and the region through the UNHCR (UN Refugee Agency). Thanks to the amazing contribution of KAEFER colleagues from around the world, the KAEFER FOUNDATION was able to donate 45,000 € to the UNHCR. Another 5,000 € were directed to the NGO SOS Children's Villages, which provides assistance to children in need in Ukraine.

The KAEFER FOUNDATION would like to thank all the colleagues, shareholders and entities worldwide who supported this fundraising campaign.

Great cooperation with three good causes

Back in 2021, the KAEFER FOUNDATION

consulted KAEFER's employees to find out which specific environmental challenges they wanted to focus on and settled on supporting three non-governmental organisations (NGOs) in the areas of biodiversity, recycling and waste collection, and cleaning. The idea was to support the work of these NGOs over the course of one year.

The three NGOs chosen were S.O.S. Mata Atlantica in Brazil, Clean Shores in Norway and DK Clean Up in France.

Oceans make up more than 70% of the surface of the Earth. They're rich in marine life and make a substantial impact upon our own lives based on how they regulate our climate. Yet the world's oceans are full of waste that wreak havoc on these sensitive ecosystems. Amongst others, the KAEFER FOUNDATION is proud to support NGOs that work towards cleaning our waters and also aims to raise awareness of the issue. Together with Clean Shores Norway, for example, dozens of volunteers from KAEFER Energy and their families worked together in Stavanger and Store Lungegårdsvann to collect several hundred kilos of waste. The "catch" consisted mostly of tyres, plastic packaging, rope, fishing nets, Styrofoam and metal and the team was really happy that they were able to remove the rubbish from the environment.



Clean Shores and KAEFER Energy in Norway

Nevertheless, the problem of pollution isn't limited to oceans, seas and rivers. Much of the garbage ends up on land and on our beaches. To help with the problem, the KAEFER FOUNDATION has teamed up with DK Clean Up – whose mission is to clean the area around Dunkerque in Northern France. The organisation collects waste at various locations including streets, ports and beaches.

Over the course of the last year, they have organised more than 50 clean-ups. With the help of over 890 volunteers, they have collected more than 17,470 kg of waste.

The third chosen NGO was S.O.S Mata Atlantica, which is dedicated to the conservation of the Atlantic Forest in South America. A UNESCO World Heritage Site, it runs along the eastern coast of Brazil, stretching inland into Argentina and Paraguay. The Atlantic Forest has extraordinary amounts of biodiversity and endemic species, many of which are threatened with extinction and exist nowhere else in the world. S.O.S. Mata Atlantica runs a wide variety of initiatives, such as forest restoration, river and beach clean ups, increasing access to clean water and the establishment of new conservation zones, for example.

The KAEFER FOUNDATION is honoured to have worked with these organisations who are making a real difference in our world. If you're inspired by what they do and you would like to contribute, you can make a donation. Recently, we have added the option of a [PayPal](#) account, which is very easy to use. All the money donated will be used for KAEFER FOUNDATION projects without any deductions. Additionally, in many cases, the FOUNDATION will be able to top up the funds raised.

The start of a global movement

Before the COVID-19 pandemic, a handful of dedicated KAEFER employees would get together at the Bürgerpark in Bremen once a year to participate at the so-called 'Venuslauf' with many other runners from around the city. For each lap of the park, money was for the Cancer Society in Bremen. When COVID-19 hit, the runners couldn't get together anymore. But that wouldn't stop people from running individually. In 2020, and following this initial spirit, the KAEFER FOUNDATION called upon all KAEFER employees around the world to put on their running shoes and for every kilometre completed, money towards different cancer supports was donated.

Over the few last years, the Venuslauf has developed into a truly global phenomenon and just

about any kind of sporty movement is allowed: from swimming and hiking to cycling, running, and even canoeing. A donation sum per kilometre and type of activity has been determined by the KAEFER FOUNDATION. With more than 2,600 participants from 28 countries, the KAEFER team achieved an amazing 31,101 km in 2022. The Venuslauf is also an excellent way to get together with colleagues, friends and family and to do something good for the world while doing something good for yourself at the same time.

The KAEFER FOUNDATION never sleeps

Regrettably, there will always be times of hardship and challenges to face. Fortunately, the KAEFER FOUNDATION will lend a helping hand, supported by the goodwill, generosity and spirit of KAEFER employees around the world. From supporting people affected by acute crises, such as the war in Ukraine and floods in Germany and Brazil to working on longer-term projects with local and international NGOs, the KAEFER FOUNDATION is there for the people who need it. We'd like to invite you to support the [KAEFER FOUNDATION](#) to help others and make a donation as every single contribution makes a difference.

KAEFER Gebäudetechnik in Germany

Warming up to the heart of Hamburg

Renovating a landmark by breathing new life into an old building.



In Hamburg's Veddel, there's an iconic red brick housing estate that has stood there since the late 1920s. The so-called "Warmwasserblock" (Warm Water Block) is said to have been the first building in the district to provide residents with hot running water. As one of Hamburg's first housing projects providing affordable rents for workers, it has now become part of the city's heritage and characterises the cityscape. When social housing company SAGA took over the "Warmwasserblock" in the summer of 2015, it was presented with a substantial challenge to modernise the buildings in line with city conservation requirements, while also continuing to provide affordable rents for its residents. Discussions and deliberations lasted until 2020, when SAGA, the city of Hamburg and the Cultural Institute finally agreed on a plan to renovate the structure.

Everything's exceptional

The KAEFER Gebäudetechnik (GT) team was tasked with installing new heating, ventilation and plumbing pipes as well as the final fitting of bathrooms. To make the complete renovation possible on such a scale, residents had to leave for the duration of the works.

So, the KAEFER team was presented with a completely empty housing block with no less than 157 gutted residential units to be completed in five construction phases. This was a project where the exception became the rule.

Necessity is the mother of invention

As this was an old, historic building, the plans that existed didn't always correspond with reality. Measurements often had to be taken on site for a true representation of the space. On top of that, the KAEFER team had to coordinate with other companies that were taking care of other aspects of the job. "We had to improvise a few times," explains André Osterman, Project Manager. "Individual pipes or certain bathroom elements could not always be installed according to the client's brief. During and after the demolition work, we discovered that the locations were not always as shown on the planning documents. We were able to solve these problems with our specialist staff on site and in close coordination with the city planners, but it was certainly far from straightforward and took a fair bit of creativity on our part."

The uncertainty that lay behind the door of many of the empty apartments also meant that it was difficult to order the right fixtures and fittings ahead of time. This required a great deal of flexibility on the part of the team, as well as the suppliers, but close coordination and collaboration with all parties meant that efficiencies were made, and resources were conserved.

Every brick is a part of history – just like the team

It takes a certain amount of confidence to entrust a company with the work on such an iconic landmark. KAEFER Gebäudetechnik had already completed several projects for SAGA, but this one was something different. "This isn't an opportunity you get every day," Osterman says. "It's such a special building with so much history and the whole team was honoured to be able to work in such a special place." The client was more than satisfied with KAEFER's performance, not least thanks to the application of LEAN, such as PPM board meetings and detailed material planning. But it's bringing the buildings back to life that warms the heart – even of those who don't know how much work went into restoring an exemplary historic landmark.



© Kristina Sassenscheidt



Historic brick façade, © Kristina Sassenscheidt

KAEFER in Qatar

Aiming higher in the oil and gas fields of Qatar

Working leaner and navigating tough terrain at the Dukhan field.



Qatar may be known for natural gas, but there is also oil on the peninsula in the Persian Gulf. The Dukhan field exported its first barrel in 1949 and has been producing up to 335,000 barrels of crude per day ever since. Following the discovery of oil, a settlement grew around the Dukhan field, which progressively developed into the Dukhan City we know today. In fact, the city is administered by Qatar's state oil agency and even requires an entry pass from QatarEnergy.

KAEFER has been working at the site since 2019, providing maintenance and access services in this very challenging environment. The Dukhan field is around 80 kilometres long and 6 kilometres wide, with the wells scattered across nearly 1,075 different locations. The terrain is rough, access is difficult, and the temperatures can be punishing. Then there's the dust and sand to contend with. However, the KAEFER team used LEAN thinking to break down the challenges into manageable tasks and divided the area into four parts, with one group responsible for each. They set up small material yards at key locations, which meant that scaffolding can be applied at any time for the widest variety of maintenance tasks. Given that the facilities are always on and always running, the KAEFER team can respond within just two hours to attend to maintenance requests. That's no mean feat given the difficulty of the terrain and the sheer number of wells.

Getting to the upper levels of access

Rope access allows workers to perform maintenance and carry out other tasks in difficult locations, often up high and out of the reach of scaffolding. Given the scale of industrial operations in Qatar, there are many facilities where rope access can make a real difference. After a great deal of hard work and effort KAEFER in Qatar has become a member of the Industrial Rope Access Trade Association (IRATA) and now has a special team dedicated to providing rope access in Qatar.

It wasn't an easy task, however, as rope access was relatively new to KAEFER in Qatar. Initially, there were few members of the team who had experience in this area but as rope access is increasingly in demand, it was clear that IRATA certification would benefit KAEFER in Qatar greatly. They sought the expertise of a level 3 IRATA specialist, who helped not just with the practicalities of rope access, but also with the documentation required to achieve certification and membership.

KAEFER in Qatar is now the first business in the Middle East to boast IRATA membership and it didn't take long from the company to find its first mission: a painting job for Qatar's QAFCO fertiliser plant.

By applying LEAN thinking at the Dukhan field and gaining certification to aim higher, KAEFER Qatar has created very favourable conditions in an often-unfavourable climate to expand its business and build expertise for the future.

Our 40th anniversaries 2022

We would like to congratulate our employees on their 40th anniversary at KAEFER.

Thank you for your many years of commitment and your contribution to KAEFER's success! We wish you all the best on this outstanding anniversary, which also fills us as a company with great pride. We wish you continued success in your work, all the best and good health!

KAEFER Construction GmbH, Germany



Bernd Artelt

– Sunshine of the Düsseldorf branch office.

Starting on 1 September 1982 as an apprentice in the interior outfitting department, Bernd Artelt celebrates his 40th anniversary in the KAEFER CON family this year. After completing his apprenticeship, he acquired sound knowledge in the field of special finishing work.

He was then taken on as a craftsman and was able to prove his expertise on his first project at the

University Hospital in Düsseldorf. Bernd Artelt pursued his career as a foreman with full enthusiasm. In 2007, he left his job on the construction site for the first time and exchanged his screwdriver for a computer.

From then on, Bernd Artelt acted as an all-rounder in construction management. The former carnival prince is considered a cheerful person and knows how to handle exciting and diverse projects. He is very popular among his colleagues, not only because of his singing, but above all because of his helpfulness and expertise. Bernd Artelt inspires people with his openness and is always happy to meet new people in the KAEFER world. For Bernd Artelt, his job at KAEFER is not just a job, but rather a passion with varied and different impressions.

Fun fact: Bernd met the love of his life on one of KAEFER's construction sites.

We are delighted that Bernd Artelt is part of the KAEFER family and are optimistic about the future together.

KAEFER Industrie GmbH, Germany



Ralf-Hagen Asch

has been working for KAEFER Industrie at the Hamburg location since 11 January 1982. In the 1980s and 1990s Ralf-Hagen Asch was on assignment for KAEFER in the Netherlands, Norway, Denmark, Slovakia, Poland and the Czech Republic, among other places. On 15 March 1991 he successfully passed the examination to become a foreman. The ammonia tanks (cold insulation) on the YARA Rostock were one of the major projects which Ralf-Hagen Asch successfully supervised. After completing the cold insulation, he worked on various construction sites in the food industry.

Since 2013, Ralf-Hagen Asch has been in charge of the works at the H.B. Fuller construction site in Lüneburg. He also spent just over two years working for KAEFER in Denmark.

Ralf-Hagen Asch is a reliable, flexible employee who is appreciated by his colleagues and customers alike.

KAEFER Industrie GmbH, Germany



Jürgen Bunjes

learned the trade of sheet metal worker in Oldenburg and found his way to KAEFER on 16

August 1982, where he started as an insulator at our former location in Oldenburg.

This was a small site where various works were carried out. Jürgen Bunjes managed to develop into a specialist and top performer in all these fields in a short time. In 1993, Jürgen Bunjes moved to KAEFER Industrie in Bremen. Here he worked on various construction sites as a supervisor and site manager. After an assignment in Denmark in 1999, Jürgen Bunjes successfully completed the foreman course in 2001.

In autumn 2001, Jürgen Bunjes was sent to the ELFATO refinery in Saint Avold, France, and was able to complete the project with great success. He was held in high esteem by his colleagues at KAEFER WANNER due to his expertise and tireless commitment. In 2004, he was deployed on MY "Phoenix" in Southampton, Great Britain.

Jürgen Bunjes' passion has always been cold insulation. He trained as a PUR foamer and a small mobile PUR foaming unit was purchased especially for him, which is still in use today with great success. He also trains the apprentices in Bremen in the assembly of PUR foam insulation.

For years, Jürgen Bunjes has been working on the construction site "The Family Butcher" in Nortrup as a site manager. Jürgen Bunjes is a KAEFER employee with heart and blood!

In his scarce free time Jürgen Bunjes is an enthusiastic motorcyclist who also always takes part in the KAEFER motorbike tours. In addition, he also enjoys wrenching on an old eight-cylinder with his son.



KAEFER SE & Co. KG, Germany



Frank Christ

“When I went to the job interview for the industrial clerk apprenticeship at the beginning of 1982, my mother still accompanied me. After successful training, I was taken on as an employee at the Bremen branch in 1985. Until 1994 I worked there in various commercial jobs, such as warehouse planning, truck scheduling, purchasing, cost accounting and order processing, also for new KAEFER locations in Zwenkau, Neugersdorf and Dresden.

In 1995, I then moved to the central human resources department and became an SAP system administrator for HR. The next move was to the Bremerhaven location in 1996. There, I started as a group leader of the commercial office staff. In 1998, I took over the commercial support of the Shipbuilding and Industry Bremerhaven departments, and in 2001, I became assistant to the commercial division manager for Construction Bremerhaven, and later for Construction Bremerhaven/Bremen.

A special project from 2007 to 2009 was the Antarctic research station Neumayer-III in a consortium with J.H. Kramer.

During the pre-assembly in Bremerhaven, I had the opportunity to see parts of the interior.

What I like about the job of fleet management, which I have been doing since 2010, is the variety of activities and the opportunity to contribute to direction of the KAEFER fleet.

Since 2017, I have also been working as an external assessor for the DEKRA Academy. There I take final exams for the 'Certified Fleet Manager' in cooperation with the Federal Association for Fleet Management.

In my private life I am a happy husband, father and already a grandfather. I spend a lot of time with my house, garden and dog and enjoy riding my motorbike.”

KAEFER Schiffsausbau GmbH, Germany



Michael Chrobok

moved from the CCCN department to KAEFER Schiffsausbau GmbH in Bremen in 2021.

Since then, he has been an important new addition to the team in the field of metal construction.



KAEFER Industrie GmbH, Germany



Jörg Dettmer

began his apprenticeship as an insulator at the Hanover location on 1 August 1982. With the start of his working life he also set the milestone for his 40-year association with KAEFER. After completing his apprenticeship, Jörg Dettmer was taken on at the Hanover location, first as a fitter and later as a site manager. He worked on various construction projects of different sizes in and around Hanover, but also throughout Germany and Europe.

Of particular note are the site management for the framework contract work at the Grohnde NPP from 2012 to 2014, the contract management of silos 8 and 9 at the Uelzen sugar factory in 2013 and 2014, and the silo roofs at the Schladen sugar factory in 2015 and 2016. Foreign assignments took Jörg Dettmer to the Netherlands, Sweden and Poland, among others. Since 2016, Jörg Dettmer has been working as a project manager; the independent handling of the Oldenburg sewage treatment plant project in the years 2019 to 2021 presented a great and exciting challenge for him. Today, Jörg Dettmer supervises KAEFER work at the Nordzucker plants in Nordstemmen, Schladen and Uelzen.

Jörg Dettmer has also been working for the

interests of the workforce since 2006 as a member and since 2016 as Chairman of the Hanover Works Council. We hold Jörg Dettmer in high esteem, not only professionally but also as a person, especially his calm, level-headed and collegial manner.

Jörg Dettmer is a big fan of the handball club "Die Recken" from Burgdorf; he attends every home game. He appreciates music from the 80s and so you can find him at every good concert. Going on bike tours in the countryside with his e-bike is a lot of fun for him.

KAEFER SE & Co. KG, Germany



Werner Dierksen

Our rock in the Technical Support laboratory

Werner Dierksen began his time at KAEFER in September 1982 in what was then the workshop for insulation cassette construction in Bremen, having previously completed an apprenticeship as a car body builder. In the years that followed, he completed many further training courses (REFA, TIG welding, environmental consultant) and made a name for himself in the workshop by tackling many welding and assembly jobs in the most impossible positions.

This skilled craftsmanship didn't go unnoticed, leading the head of central technical services to offer Werner Dierksen a salaried position in the KAEFER laboratory, where he has worked from 1 July 1993 until today.

In those days KAEFER developed, tested and finally qualified the insulation system for the European Transonic Windtunnel (ETW). Material tests in all variations were the daily task. This was followed by development work on the KAEFER LNG gas tanker system as well as system and building material tests for the KAEFER Lolamat system, which is still used today in KAEFER Fire Safety Products.

In recent years, the KAEFER laboratory has made a name for itself by taking on external testing tasks for customers from the aerospace and insulation industries. Here, KAEFER has repeatedly set its own standard in the fields. This is largely due to Werner Dierksen's dedication in setting up and supervising a wide variety of test set-ups.

We wish Werner Dierksen a lot of fun in the future with his various hobbies such as cycling, hiking on the Way of St. James, carpentry or canoeing and motorcycling. Stay healthy and cheerful!

KAEFER Schiffsausbau GmbH, Germany



Torsten Dunkhase

“What I have always enjoyed in ship outfitting is the variety of work. We were always working on different types of ships – whether it was freighters, naval vessels, gas tankers, refrigerated ships, yachts or fishing trawlers. Today, we tend to specialise in one type of ship or product area. This is not necessarily worse, but it may make the fitters less flexible. Working abroad was also always a highlight and an adventure, even if it was anything but a holiday!”

Today, though, I'm glad that I can do my bit in the office rather than on the building sites.”

KAEFER Industrie GmbH, Germany



Jörg-Dietrich Funke

began his apprenticeship as an insulator on 1 August 1982 at KAEFER Isoliertechnik GmbH & Co. KG at the Hamburg location. After successful completion, he worked on various construction sites in and around Hamburg. In the 80s and 90s he worked abroad in France, Spain and the Netherlands.

Jörg-Dietrich Funke is a reliable, flexible employee who is appreciated by his colleagues and customers alike.

KAEFER Industrie GmbH, Germany



Thomas Gebhardt

started his 3-year apprenticeship as an insulator on 1 August 1982 at KAEFER Isoliertechnik GmbH & Co. KG at the Hamburg location. For Industrie Hamburg he was on many foreign assignments in Denmark, the Netherlands, Yugoslavia, France and the Czech Republic, among others.

On 22 February 1990, Thomas Gebhardt passed the examination to become a polyurethane (PU) on-site foamer. Since then, he has been working as a PU on-site foamer on various construction sites in Germany and abroad.

Thomas Gebhardt is a reliable and flexible employee who is appreciated by his colleagues and customers alike.

KAEFER Schiffsausbau GmbH, Germany



Glenn George

“They've all worked for the Vulkan shipyard in Bremen before” – including Glenn George. After his apprenticeship as an industrial insulator, he was mainly entrusted with the measurement and installation of exhaust systems. From 1994 to 2013, he then supported our team at the Meyer Werft shipyard in Papenburg on gas tankers and 21 different cruise ships: insulation was installed, floors were laid and galleys, ceilings and walls were fitted.

After seven years in the field of exterior ceiling installation on mega yachts with some assignments abroad, he now works in our metal construction workshop in Bremen and is happy to forego further travel to be more with his family. In his free time, motorbikes are his great passion – with everything that goes with it: touring, meetings, wrenching.

KAEFER Industrie GmbH, Germany



Andreas Hartmann

began his three-year apprenticeship as an insulator on 1 August 1982 at KAEFER Isoliertechnik GmbH, Germany & Co. KG at the Hamburg location.

After successful completion, he worked on various construction sites in Hamburg and the surrounding area and was also employed in the Netherlands and Norway between 1985 and 1988. From 1991 to 1993, he was deployed in the Schwedt region. At the end of 1993, Andreas Hartmann started at the DOW in Stade – where he still works today. He has been a senior fitter since 1 April 2008.

Andreas Hartmann is a reliable, flexible employee who is appreciated by his colleagues and customers alike.

KAEFER Montage GmbH, Germany



Peter Heinicke

TERMOKOR KAEFER Sp. z o.o., Poland



Wiesław Herod

started in 1982 as a construction carpenter's helper and from May 1983 as a pipe scaffolder. In the 1990s he worked on numerous foreign contracts (Iran, Germany) as an insulation fitter and sheet metal worker.



Upon his return to Poland, he was promoted to the position of foreman, which he still holds today. In later years, he worked in Belgium and France as a foreman and pipe scaffolder.

In Poland, he contributed to such projects as PGE Power Plant Bełchatów, Koźienice Power Plant, Gdańsk and Rybnik. He is passionate about sports.

KAEFER S.A., Poland



Bożena Kilińska

“I started work on 1 December 1982 as an intern in the Financial Accounting Department at the then Przedsiębiorstwo Robót Termoizolacyjnych i Antykorzyjnych “Izokor-Instal” in Plock. After completing my internship, I was hired as an accountant. I worked in the Accounting Department in Plock until the end of October 2013.

As a result of changes in my personal and business life, I moved to Toruń, where I still work today. I deal with issues related to the day-to-day operation of the construction site, mainly financial matters. Working in accounting gave me a lot of experience and facilitated my introduction to work in the Toruń branch. I like to spend my free time with my family. I have a husband and seven grandchildren.”

KAEFER S.A., Poland



Krzysztof Kiliński

“I started work on 1 December 1977 as a trainee construction technician at a construction site in Swiecie. I was employed as a senior foreman from 1 April 1977 and was promoted to site manager on 1 January 1985. I worked on export construction sites in Germany and became a construction team manager after returning to Poland.

In September 2007, I became the director of the branch. Together with our employees we carry out anti-corrosion, insulation and scaffolding works all over Poland. The largest projects include the construction of the Causticizing Department at the Pulp and Paper Mill in Swiecie and the construction of a soda boiler at the Pulp and Paper Mill in Swiecie. Together with AUSTRIAN ENERGY ENVIRONMENT we there carried out insulation, anti-corrosion and scaffolding work on the construction of a biomass boiler. In 2001, we performed the renovation of a bridge over the Vistula River in Fordon (150,000 m² of anti-corrosion protection including scaffolding). For LOTOS Gdańsk, we performed insulation and anti-corrosion work on the 10+ project.

In my free time, I'm interested in history and speedway sports, and I enjoy hiking in the mountains during my holidays. I have a wife and seven grandchildren."

KAEFER S.A., Poland



Gabriela Kolaska

KAEFER S.A., Poland



Zbigniew Kosik

works at KAEFER S.A. in the position of industrial

insulation fitter/scaffolding fitter. He started at KAEFER S.A. (then Termoizolacja) on 23 November 1982 working on a construction site of the power plant in Połaniec. Through all the 40 years that Zbigniew Kosik has been with us, he has become known as a reliable and qualified worker. For many years he has served as a foreman, supporting junior staff with his skills. He has worked on many sites in Poland, Germany, Norway, and Sweden.

In his private life, he is a happy husband of Mrs. Iwona and a father. He has a son Damian and a daughter Milena. Interestingly, Mr. Zbigniew Kosik's son has followed in his footsteps and has been developing professionally at KAEFER SA for over 11 years.

Mr. Zbigniew Kosik's passions are his home garden and a beautiful plot of land. In his free time, he takes care of the plants growing there and relaxes.

KAEFER Industrie GmbH, Germany



Stefan Lindner

“In 1982, I started my three-year apprenticeship at the Gelsenkirchen site. From the second year of my apprenticeship until 1986, I worked on the permanent construction site at ‘Chemische Werke Marl Hüls’. Afterwards I changed to the Gelsenkirchen workshop as a foreman. I also returned there after a 15-month interruption for military service.

During my time at KAEFER I was on the road a lot in Germany on assembly projects and permanent construction sites – as a foreman, surveyor and field construction manager. In 2004, I was involved in the re-insulation of the POX Methanol Leuna refrigeration columns. As a result, the Leipzig branch was awarded the contract. Other important projects for me included the new power plant buildings in Grevenbroich and Hamm, the MIRO Coker conversion in Karlsruhe in 2018 and work for BP in Lingen in 2016. Between 1990 and 2013, I also worked for KAEFER in the UK, Switzerland, Austria and the Netherlands. I hope for more exciting tasks until my 50th anniversary!

In my spare time I have enjoyed playing darts since the 1980s; starting with e-darts and moving on to steel-darts, where I also played in various leagues and was also active in the Bundesliga. Today I am only a hobby darter.”

KAEFER WANNER S.A.S., France



Rémy Lourais

“I joined the Group in 1982, so I celebrated my 40th anniversary this year, to be precise on 15 November. During these 40 wonderful years, I had the chance to work with great people, whether they be Directors, Managers, secretaries, etc. They have all shown great professionalism and a lot of kindness, not only towards me, but also towards my colleagues.

Finally, KAEFER WANNER is like a second family. My retirement is scheduled for 2024 and when I look back on all these years, I think that I have been very lucky to work with all these people. The team I'm working with now is extremely professional. I feel happy, lucky and fulfilled.

I would like to thank all the people I have met, who have taught me a lot and allowed me to develop. Thank you to them and thank you to all my colleagues!”

KAEFER Schiffsausbau GmbH, Germany



Jörg Lüssen

started his training as an industrial insulator in 1982 in the former Shipbuilding Division.

After completing his military service, he returned to KAEFER and subsequently worked on the Vulkan shipyard in Bremen, among other projects. In the early years he also supported the industrial construction department in Rotterdam. At the Fr. Lürssen shipyard he was involved in the construction of corvettes and mega yachts. At the Schweers ship and boatyard in Bardenfleth, he and his colleagues assembled our own exterior ceiling system for yachts for the first time.

Working on yachts often involves assignments abroad – for KAEFER, Jörg Lüssen has been to Antibes, Barcelona, Genoa and Sint Maarten, among other places. After a short time in the office, Jörg Lüssen is now working on naval vessels again as a site manager and enjoying it. With his wisecracks, he is appreciated by colleagues and clients alike.

KAEFER Construction GmbH, Germany



Ingo Meyer

– reliable pillar of the interior construction department and the works council at the Bremen location. Starting on 6 August 1982 as a second-year apprentice in the former acoustics department in Bremen, Ingo Meyer is now celebrating his 40th anniversary in the KAEFER CON family. Before that

he completed a basic training year in the field of wood technology. After completing his apprenticeship, Ingo Meyer was initially mainly involved in the renovation work of the many savings bank branches in Bremen and in 1984 in the work at the Grundkreditbank in West Berlin. Between 1986 and 1987 was active for KAEFER at the Gloria cinema in West Berlin. Ingo Meyer then worked on a wide variety of construction sites throughout Germany – since the mid-2000s mainly at Airbus in Bremen, where his expertise shone through.

For more than 20 years, Ingo Meyer has been an integral part or member of the works council in Bremen. He is currently in his 6th term of office, which ends in 2026. Ingo Meyer's work on the works council is characterised by his optimism and humour. As a devoted and passionate Werder Bremen fan, Ingo Meyer has been a regular visitor to the Weser Stadium in Bremen in his spare time for 40 years. In May, he and his Werder friends celebrated the club's return to the Bundesliga.

He is held in high esteem by his work colleagues because of his reliable, calm and level-headed manner: "He's simply a great guy!"

We are delighted that Ingo Meyer is part of the Construction family and look forward to our future together.



KAEFER S.A., Poland



Zbigniew Mielniczek

gained his skills and knowledge as a construction insulation fitter at the Basic Vocational School in Zielona Gora. After completing his education, he started his first job at Termoizolacja former branch KGR-5. Zbigniew Mielniczek acquired rich professional experience while working on various construction sites in Poland, including Poznan, Glogow, Lodz, Wroclaw, Gdansk, Walcz, Kostrzyn as well as in Germany and in the Netherlands.

During his employment, Zbigniew Mielniczek has become known as a competent person, easily adapting to new circumstances, who can always overcome unexpected difficulties. He is a responsible, meticulous, person and a great team player.

Currently, he is active as a construction worker in the workshop in Głogów. In his free time he leads an active lifestyle and has a number of interests.

His new hobby is photography, he is also a treasure hunter and likes to relax by the water with a fishing rod in his hand. He is married to Anna and is the happy father of Izabela.

KAEFER Technik & Service GmbH, Germany



Detlef Naber

began his apprenticeship as an industrial insulator at KAEFER Isoliertechnik on 1 August 1982 and successfully completed it after three years. He then worked on various construction sites in the Bremen area. From 1986 Detlef Naber was sent to Rotterdam for projects at the ESSO and Shell refineries. After his military service in 1987/1988, he was deployed as a foreman on construction sites in Bremen and successfully completed further training as a foreman at the Construction Training Centre in Essen in 1990.

From 1990 onwards Detlef Naber was active as a site manager on various construction sites in Bremen. In 1994, he successfully completed his training as a master craftsman in heat, cold and fire protection and took over the management of the sheet metal prefabrication workshop in Bremen in 1999. Since April 2004, he has been production manager of the newly founded workshop in Scheeßel.

In 2017, Detlef Naber trained part-time to become a technical business economist.

To this day, he manages the production at the KAEFER workshop in the Bremen area with great care and success. Detlef Naber is appreciated by his colleagues and customers for his competence and collegiality. He accepts every challenge and in his work the interests of KAEFER always come first.

In his free time Detlef Naber enjoys hiking in the Harz mountains or other beautiful areas and has fun on city trips.

KAEFER Schiffsausbau GmbH, Germany



Detlef Thielbar

joined KAEFER in 1982 as an apprentice. Based in Bremen North, he remained with the shipbuilding division at the Vulkan shipyard in Bremen until 1987 and then worked for us at the Fr. Lürssen shipyard with the focus on sheet metal cladding.

In addition to assignments in Italy, Montenegro, Greece and Turkey, a stay of several weeks in the United Arab Emirates stood out as a particular challenge: Detlef Thielbar was independently involved in the conversion of naval vessels with a group of local workers. Since 2013, he has now been active at the Fr. Lürssen shipyard in Bremen-Aumund (formerly Bremer Vulkan).

As a reliable foreman, he primarily supervises our orders on new yachts at Lürssen with regard to the insulation of air conditioning and cold water pipes for the customer Heinen & Hopman.

KAEFER Industrie GmbH, Germany



Jürgen Wennrich

started on 26 July 1982 at KAEFER Isoliertechnik GmbH & Co. KG at the Hamburg location as an insulator. From 1982 to 1989, several assignments abroad followed in Denmark, Norway and the Netherlands. Jürgen Wennrich has been a senior fitter since 1986.

In 1991, he began working on our permanent construction site DOW in Stade, where he is still active today – since 1 January 2011 as an industrial foreman.

Jürgen Wennrich is a reliable, flexible employee who is appreciated by his colleagues and customers alike.

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