

K-WERT

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Editorial

For over 30 years, the K-WERT has kept employees, partners and clients up to date with everything happening at KAEFER. The first edition was published in Germany in December 1982 and soon became a much-loved magazine for KAEFER employees around the world. Past editions, and the hundreds of stories they contain – a wonderful record of our company's history – are archived and available on our website, kaefer.com. Reading through previous editions, two things are immediately clear: how successfully KAEFER has adapted to a changing world throughout the years, and what a vital role the company's founding traditions have played in this success. Over the years, KAEFER has become a truly global company, operating in dozens of countries and speaking more than 30 languages. Therefore we have come to believe that a printed magazine can no longer give full expression to the sheer range of our business activities, achievements and initiatives. It is not without sadness that we bid farewell to the "big" printed edition of the K-WERT – and to help smooth the transition we have produced this shortened, paper edition this year – but to do full justice to your work around the world, in diversifying, becoming leaner, and going the extra mile on behalf of our clients, we have taken the decision to embrace the age of digitalisation!

The new K-WERT digital - featuring further stories, our project highlights and plenty more - is available on the KAEFER website. I hope you enjoy both editions, and find plenty of inspiration to help make 2017 another fantastic year for KAEFER.

It remains for me to say 'Auf Wiedersehen'. After twenty years at the company, and after long and careful thought, I have decided to step Down as Chairman to the Board, to spend more time with my family and pursue personal projects close to my heart. I know that you will extend a warm welcome to my successor, Peter Edelman, and want to say what a privilege it has been to work with so many wonderful people.

I shall continue to follow the KAEFER story with great pride and affection. My very best wishes to you all, and my heartfelt thanks.



Peter Hoedemaker



PETER HOEDEMAKER
Chairman of the Board

K-WERT – the digital edition

To publish and acknowledge all of our projects, personal achievements and highlights from the KAEFER family worldwide, we have created a digital magazine.

It is a new approach and we are excited to invite you to explore the pages and movies, the slide shows and stories.

Since this is the first online magazine, we are eager to know what think.

Please feel free to send us your feedback:
k-wert@kaefer.com

To view to the digital K-WERT, either scan the QR-Code below or visit

<http://kwert-digital.kaefer.com>

Enjoy the read.

Francisca Gorgodian
Janina Wolff von der Sahl
Chief Editors K-WERT



RED Strategy

Sharpening our RED strategy requires everyone to participate

In 2014, we launched our company strategy 'RED' – standing for Recognised, more Efficient and Different. Its purpose was to increase our competitive strength and enable KAEFER to become the best performer in the industry.

Today we are happy to say that we're on the right track, we still have the same goals in mind and respond to our client's needs. But we also have to take the next step and sharpen our strategy to adapt to various new market conditions, including falling oil prices, a reduced global rate of growth and the rapid development of digitalisation. These changes in the market are having a substantial impact on our clients and on our core business worldwide. It is essential to adapt to these circumstances and change is the only constant to continue our success.

Sharpening our RED strategy pinpoints precise and measurable goals, which will enable us to remain competitive.

- We will boost our excellent reputation by building up our professional sales activities
- We will continue with our efficiency programmes and focus on our core businesses and markets with the aim of strengthening our market leadership
- We will create extra value for clients and employees through innovation and consistently digitalising our business, thereby enhancing our differentiation

IT'S YOU WHO COLOURS KAEFER RED!

In a rapidly developing environment, we have to constantly adapt in order to remain the market leader. Thus, we must be prepared to embrace change and we need you to get to know and understand the RED strategy, engage and trust it. We personally expect you and everyone working for KAEFER to

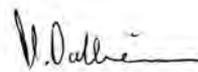
- Be upright and speak up!
- Be part of the team and find solutions together!
- Be innovative and put ideas into action!
- Be better every day and constantly improve!
- Be our ambassador and the decisive factor in our success!

Sharpening our RED strategy requires everyone to participate. With curiosity, passion and flexibility we can achieve our goals. Therefore, in the spirit of RED, we ask you to challenge yourself (and all of us) on a daily basis.

Let us get out of our comfort zones, in the way we work, act and perform. That way we will continually increase our competitive strength by being Recognised, more Efficient and Different. ←



PETER HOEDEMAKER
Chairman of the Board



PHILIPP DALHEIMER
Chief Operating Officer



STEEN E. HANSEN
Chief Financial Officer

KICKING OFF
KAEFER Management at the
IMM 2016 in Lisbon, Portugal



Lean at KAEFER

“The focus is on working smarter.”

RIP Serviços Industriais – A culture of continuous improvement

In order to work smarter, more effectively and faster, RIP in Brazil has been using a machine known as the Lizardjet for extreme high pressure water blasting. Used to remove paint and prepare surfaces prior to repainting, this specialised equipment has a number of advantages over the previous ‘pistol’ machine.

Anchored in place by three powerful magnets, the Lizardjet is small and lightweight enough to be fixed to any ferrous surface, eliminating the need for scaffolding. It can be operated remotely, improving employee safety, and it significantly reduces the amount of time spent on surface preparation.

On top of this, analysis conducted on a project in early 2016 demonstrated 50% gains in productivity compared with previous solutions. The machine has been a huge hit with operators and managers alike, and the latter would be more than happy to provide more information to KAEFER colleagues in other parts of the world. ←

KAEFER WANNER - heading True North

On 15 June 2016, the first KAEFER WANNER Lean Day took place simultaneously at over 50 work sites, workshops and offices. Managers greeted their staff with a coffee at the beginning of the day before giving presentations designed to spread the basic principles of Lean – and the KAEFER Lean Journey – to as many of our people as possible.

Lean – Le Film

The Lean project run by KAEFER WANNER at the Blayais Nuclear Power Plant was a major success, so much so that the team made a film explaining exactly how they had achieved such substantial improvements in costs, efficiency and client and employee satisfaction. Included as part of the Lean Day presentations, this film made a real impression and is available to view on ONE.



LEAN – LE FILM

The Lean movie from KAEFER WANNER on ONE

Lean Day also saw the launch of a new communication campaign

To promote best practices and ‘reduce the waste’ a series of posters were designed, focussing on different areas of potential improvement. Starting in spring, each month a new poster is prominently displayed in workshops, offices and work sites. Feedback has been overwhelmingly positive so far, with one KAEFER WANNER employee noting that a campaign followed over seven months ensures less ephemeral communication. Another commented:

“The concrete examples applied to our functions allow a better understanding of the ‘families of waste’.”

The campaign has proven to be such a success that initiatives are underway to roll it out to all members of the KAEFER family. ←

Project Hexenberg – Introducing a new digital steering tool for Lean projects

Around the world, a number of forward-thinking KAEFERites are doing everything they can to make digitalisation a present-day reality. Among them is Franz Themann, Head of the Façade Department in Germany, who came up with the idea of linking all the elements in a project schedule to just one Excel spreadsheet. The catalyst, and the opportunity to put the idea into practice, were both provided by the Hexenberg project in Hamburg.

Made up of seven buildings, this residential estate was built in the early seventies. KAEFER was commissioned to perform a complete renovation of the exterior – 450 housing units in total – over a three-year period, with an absolute minimum of disruption to the residents.

Even for KAEFER this was a tall order, involving all 12 discrete trades required for complete façade renovation, including the removal and replacement of roofs, balconies, balcony doors, windows and socket seals as well as the insulation of façades and basement ceilings.

KAEFER was also asked to take responsibility for supervising and co-ordinating sub-contractors. As a result, planning was exhaustively thorough. Each step of each process was analysed for potential efficiencies. Sub-contractors were involved early to ensure that coordination of the various different elements would be as seamless as possible. Finally, the complete schedule for the entire project was agreed together with the customer and subcontractors, and the daily tasks were defined. Franz Themann picks up the story from here:

“We decided to set ourselves an additional goal for the Hexenberg project: real-time, interactive construction planning. Meaning more transparency, better sub-contractor engagement and happier clients. We wanted to make it possible for all stakeholders to see whether we were hitting our targets for the duration of the entire project, instead of just two or three weeks in advance.”

“We built it in Excel – carefully! We were aware this new tool would only be as good as we could make it. It took us a year to fully digitalise the project schedule, but all that hard work began to pay

“Digitalisation will enhance and improve KAEFER’s Lean and project management tools.”

FRANZ THEMANN
Head of the Façade Department in Germany

dividends immediately. During weekly construction meetings, the new interactive construction plan was projected on the wall. Everyone involved in the project could see their own tasks right away and when they needed to be carried out. One key feature is the use of colour and design to show discrepancies between actual execution times and planned execution times. When we had to make changes, the implications for the whole project were immediately visible to everyone, which encouraged open communication and a much greater sense of individual responsibility.”

“The last sentence, at the end of every meeting, was always: Does anyone still have questions? When there were no more questions, the plan was saved and printed. On a good project, the various stakeholders all work together as a team. Real confidence comes not only from knowing what I have to do, but from knowing that everyone on site knows what they have to do, and that’s what this tool gave us.” ←

The KAEFER Lean Journey at the Medupi Power Station

“To ensure we establish ourselves as the leading provider of scaffolding services in South Africa (and especially Medupi) it’s crucial that we eliminate waste and maximise value for our clients. Lean will help us improve efficiency by reducing man-hours on site, optimising work methods and encouraging open and transparent communication among project leaders and site managers. I know the Medupi scaffolding team is ready for the challenge!”
Contracts Manager Kobus Horn.

For KAEFER scaffolders working at Medupi Power Station the Lean Journey began with a Waste Walk in October 2015. The teams were already working well, but the walk revealed areas of potential improvement and led to several changes following a period of analysis and consultation.

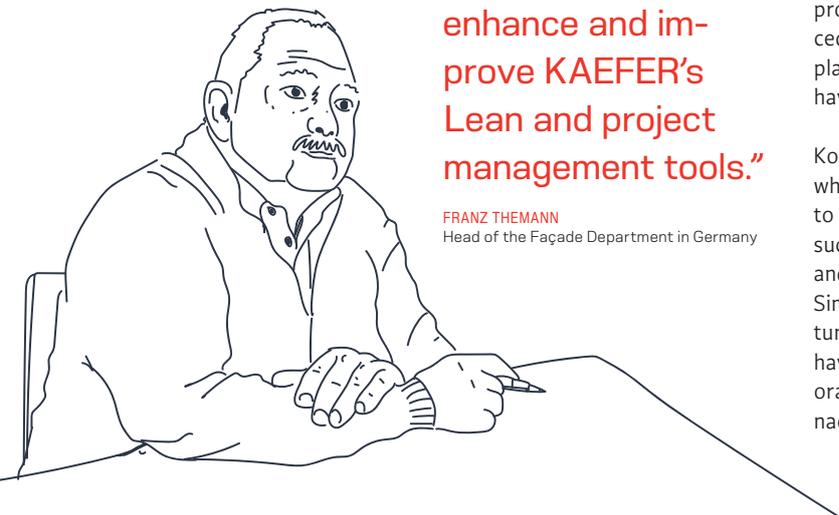
Teams were added and restructured. Job descriptions were amended, new templates for scoping designed, and supervisors and managers given additional training. New tools were developed and access areas repositioned.

Taken together, these improvements not only led to increased efficiency, but also improved safety and higher levels of job satisfaction.

Lean is a continuous process, and the team took great care to keep listening and learning throughout the implementation process. “Management has learned as much as anyone,” concedes Kobus Horn. “Despite challenges such as scope creep, planning for delays and discipline, the teams have proved they have the tenacity and resolve to stay the course.”

Kobus Horn would like to take this opportunity to thank the whole scaffolding team for their enthusiasm and commitment to making the implementation of Lean on this project such a success. A special mention goes to the following individuals and their teams:

Sim Sakwe (SLL), Aaron Sibiyi (BM), Godfrey, Ngwane, Fortune, Msibi, David, Jali, Ally and Vincent (Supervisors). They have been nothing short of amazing in their teamwork, collaboration, willingness to challenge conventional beliefs and tenacious effort. ←



WE COLOUR KAEFER RED

KAEFER's future – In safe hands!

At KAEFER, we are committed to long-term employment and career development. We take huge pride in the fact that nearly half of all employees in Germany began as apprentices, including four of the company's most senior executives. All over the world, there are hundreds of young men and women learning how to do things the KAEFER Way, while helping to keep the company flexible and dynamic in a changing world. Two in particular have come to our attention in the past year: Kylie Thorn and Kieran McCabe may live on opposite sides of the world, but both colour KAEFER RED.

Kylie Thorn in Australia – Winner of the JKC¹ High Achiever of the Year Award 2015/2016



Born and raised in Darwin, Australia, Kylie is from the Bininj People of the West Arnhem Region of the Northern Territory and the Noongar People of Bunbury, southwest Western Australia. Kylie originally joined the Ichthys LNG Onshore project via the JKC Aboriginal and Torres Strait Islander White Collar

Traineeship Programme. She graduated in May with a Certificate IV in Human Resources and has since become a key member of the KAEFER team on site.

“Networking, supporting and developing people is my passion,” she says. “I love the people I work with and enjoy hearing about how they got to where they are now.”

The JKC Awards committee made no mistake when they identified Kylie as a high achiever. Not only does she still act as spokesperson for the traineeship programme, she has also attended a United Nations Advance Global Health conference as an Aboriginal representative, and spoke about the disadvantages of Indigenous people of Australia at the Oxfam International Youth Partnership Programme.

¹ JKC stands for JGC/KBR/Chiyoda. These three firms are behind the Joint Venture responsible for the Ichthys LNG Onshore Project.

² ACAD is a UK-based trade association, which support and represents companies working throughout the asbestos industry, as well as providing training.



Kieran McCabe in the UK – winner of the ACAD² Apprentice of the Year Award 2016

Identified as one to watch by ACAD, Kieran has worked for KAEFER as an asbestos removal operative for the last two years. Currently based in North Wales, United Kingdom, he loves the job, though admits he could do without having to shave every day!

On being told of the nomination, Kieran said he was delighted and surprised.

“I’ve never been nominated or received any awards before. It’s a privilege and something to be proud of.”

General Manager Mike Woods was particularly pleased that Kieran’s willingness to learn was recognised by ACAD.

“From an employer’s perspective, we feel he’s got the ability to really progress. We’ve started the process for him to do just that; he’s currently assisting in the office two days each week, becoming familiar with the administrative side of things.”

Meet Elza in Brazil

RIP Serviços Industriais in Brazil celebrated its 30th anniversary on 1 July at the Fazenda Vassoural, a 223-year-old farm with significant historical and cultural importance in Brazil.

Among the 200 invitees enjoying music, dancing and feijoada (one of the true highlights of Brazilian cuisine) was Elza Benhossi. Now 80, Elza is one of RIP’s longest-serving staff members, having joined in 1991. At head office, she is the good soul making coffee for staff and playing a vital role in making sure everything runs smoothly. Asked if she had any plans to retire, she shook her head happily.



“I’ve watched the company grow and grow over the years. The people here are my family. How can you leave a family?” ←

Working across borders

KAEFER in Poland – Contributing to Europe’s largest conventional energy project, OPOLE 5 & 6

Once operational, Opole will be Poland’s largest and most efficient coal-fired facility, with the capacity to supply electricity to the equivalent of two million homes.

KAEFER first became involved with the project in 2014 with a contract from General Electric (formerly Alstom Boiler) to prepare basic engineering for the façades of Boiler Houses 5 & 6. Following the successful completion of this work – which included the preliminary static calculation of walls, roofs for the boiler houses and a concrete staircase – KAEFER SA was approached again, this time to prepare detailed engineering for the boiler façade. The team completed the work on time in June 2016.

Simultaneously, KAEFER SA won a contract from Mostostal Power Development (one of the largest construction companies in Poland and General Electric’s partner on the Opole project) to deliver and assemble the façade for Boiler Houses 5 & 6. These works have recently got under way and are due to finish in the middle of 2017.

Neither Alstom Boiler nor Mostostal are new clients, but all three contracts represent expanded scope and a great opportunity for KAEFER SA to demonstrate its deep and growing expertise in this area. Managing the installation of 88,000 m² of boiler house façade in just one year is no small challenge. The team has grown in experience and expertise and looks forward with confidence to bidding for upcoming boiler unit projects in Poland.

Improving KAEFER cross-border cooperation

Valmet, one of the biggest names in the pulp, paper and energy industries, is currently renovating and expanding a major paper mill in Sweden. KAEFER in Sweden tendered to provide the necessary 400,000 m³ of scaffolding and 70,000 m² of insulation. Thanks in part to the company’s great reputation for resource management, Valmet had little hesitation in awarding us the contract.



The project was too big for the KAEFER team in Sweden to manage alone. With the support from KAEFER in Poland, who sent as many as 72 specialists to help insulate boilers, flue gas ducts, filters and pipelines, the project could be managed successfully.

KAEFER SA was just one of several KAEFER entities involved. In total, 280 scaffolders, 180 insulators and 25 managers worked on the project, which came to a successful conclusion in October. Cooperation between the different teams was excellent and all parties are now actively looking for new projects to collaborate on in the future.

All in all, this was a great example of how KAEFER can optimise the use of resources at an international level and a wonderful demonstration of our strength as a group. ←

Meeting clients’ needs in the Middle East

A new joint venture with Walker Technical

It’s an ongoing trend – more and more clients (and potential clients) in the Middle East are giving work to suppliers who can provide the widest range of services. This is particularly the case when it comes to maintenance and shut-Down contracts. As a result, the KAEFER teams are permanently on the lookout for ways in which they can diversify and grow their service offering, while always ensuring these remain of the highest available quality.

With this in mind, we would like to take the opportunity to announce a new ‘exclusive agency’ joint venture with Walker Technical (WTR), a composite repair company with a worldwide reputation for technical innovation. WTR’s patented Technowrap Composite can be used to re-instate or even in-

crease the original design integrity of piping systems, tanks and vessels. It is resistant to corrosion and can be applied in confined spaces, in any geometry, and while pipelines are still in operation. Industry analysis shows that composite repairs cost on average 25% less than welded steel sleeve repairs, and 70% less than completely replacing a damaged section of steel pipe.

WTR products have already been approved for use by Saudi Aramco and SABIC. This joint venture represents a new relationship with an important composite manufacturer, a new string to KAEFER’s bow in the region and, most importantly, will lead directly to savings for our clients! ←

Safety culture for a safe company

Celebrating 6,000,000 hours worked without Lost Time Incidents (LTI)

Congratulations to everyone at KAEFER in the Netherlands and Belgium, who reached six million hours without LTIs on 23 June 2016. The team immediately set to work designing a flyer to mark the achievement, share the good news with our clients and pose an unusual artistic challenge to local bakers! Six million hours is a cause for celebration, and any celebration worthy of the name deserves a cake. One was duly produced, featuring on its surface a perfect (and perfectly edible) image of the team's flyer.



KAEFER staff to the rescue

Four members of the UK KAEFER team have received a Responder Award at the prestigious Pride of Sellafield Awards. While travelling home from work in August, David Whiteside, Michael Pritchard, Stephen Neate and William Maitchell responded to a head-on collision, by managing the situation and administering first aid until the arrival of the emergency services, then aiding in the extraction of a trapped individual. Paramedics made it clear that their rapid response had lessened the severity of the outcome considerably.

The event has also had an impact on-site; when the men returned to work the following day (and demonstrating an admirably proactive attitude!) they made a number of recommendations based on their experience, including the introduction of first aid kits in all site vehicles and the roll-out of more first aid training to KAEFER staff.

Excellence in safety – Recognised by Dow in the Netherlands and Germany

The Interactive Safety Street at Dow Terneuzen

Safety on site is a matter of following established procedures. Every worker on any given project should be able to identify abnormalities and potentially dangerous situations and know exactly what measures should be taken to neutralise these threats.

This is the ideal, and KAEFER in the Netherlands has hit on a great way of helping make the ideal a reality. Safety expert Nick Orlando and Business Unit Manager Jan Buys constructed an Interactive Safety Street at the Dow chemical plant in Terneuzen, where KAEFER has a maintenance contract for over 40 years. The Safety Street is a simulation, designed to resemble an actual work site as closely as possible. So far more than 150 staff members have taken part, and feedback has been great.

“The trainers encouraged us to really look at our surroundings,” said one participant, “to identify the ‘out of place’ elements and think about what we can do to make the environment safer.”

In July, the Street was given a Recognised Award by client Dow. More importantly, it has proven a fantastic way to raise awareness, help workers learn specific safety procedures quickly and effectively and encourage everyone on site to feel involved in and responsible for workplace safety.

KAEFER Hamburg awarded the Dow Stade Safety Prize for 24 years and 670,000 hours of accident-free work on the Stade site

Since 1992, an average 15 to 35 KAEFER fitters have been working continuously on the site; executing heat, cold, sound and fire protection work in the maintenance and project areas without a single accident. Presenting the award, representatives of Dow lauded KAEFER's work as a partner in major works, with direct involvement in the production facilities. The KAEFER team has built up an excellent working relationship with Dow over the years, submitting to and passing three annual business audits as well as participating in Contractor Safety Board Meetings and playing a role on the Occupational Health and Safety Committee.

KAEFER's constant efforts to improve safety, which also include regular toolbox meetings, on-site training and presentations, were a decisive factor in the recent extension of the framework contract with Dow in Stade until August 2019. ←

Congratulations and stay safe!





VALHALL FIELD
Foto and copyright by BP Norge

On the water

An automatic ejection device for life belts and rescue lights on yachts

Holger Simon of KAEFER Schiffsausbau admits to being surprised when the shipyard Lürssen-Kröger Werft GmbH & Co. KG asked him for ideas on how to integrate a Man Over Board System into the superstructure of one of their yachts.

"It's not what we usually do, but the request presented a really interesting challenge, both technically and aesthetically. We spent two weeks in the workshop, at the end of which we were able to deliver a wholly unique 'lifebuoy release station' for use on motor yachts; innovative, patentable and fit for purpose."

In accordance with the Passenger Yacht Code (PYC), lifebuoys with a day-night signal are required on yachts which carry a minimum of 12 and maximum of 36 passengers. Now, with the new KAEFER system, if someone falls overboard, the person at the helm simply pulls a lever, automatically releasing the system on either the port or starboard, as required.

Holger and his team designed a flap in the yacht's exterior ceiling. When this opens, the lifebuoy system – nestled in a construction resembling a drawer – slides on rails towards the outer edge of the ship then down into the water. A lanyard measuring 4 m streams out between the lifebuoy and the attached rescue light, which triggers as the lanyard reaches full extension. Simultaneously, a smoke signal is released to mark the search area for 'man over board' manoeuvres. The combination of these two signals makes the system equally effective by day and night, and the bright orange smoke can also provide important information about wind direction.

The new system has already been approved by the classification society Germanischer Lloyd, while shipbuilders Lürssen-Kröger have commissioned a second device.

KAEFER Energy – Awarded a major new contract from BP Norway

Employees at KAEFER Energy cheered wildly when they heard the news – They'd been awarded a major new offshore maintenance contract to carry out insulation, scaffolding and surface protection maintenance on behalf of BP Norway.

The contract covers all 14 BP installations on the Norwegian continental shelf on the Valhall, Ula and Skarv fields and will run for three years, with options for another six years. The annual turnover is expected to be more than 180 MNOK (approximately €20 million).

"This is a huge contract," says KAEFER Energy CEO Bård Bjørshol, "and we're humbled by the confidence BP has shown in our company. The contract comes at a time when the oil and gas industry faces major challenges, so it means increased security for our employees. The contract is likely to involve 200 people and will provide jobs for years to come."

Staff at KAEFER Energy have worked hard to improve operations and project execution through a range of initiatives, not least the implementation of an extensive Lean programme over the past three years. Bård is convinced this progressive and dynamic approach played a vital role in winning this new contract. ←

In the air

UP IN THE AIR -
Working with ropes

Lean Best Practice – A new lease of life for the scaffolders sign language

Sometimes an idea is so simple – and so perfect – you wonder how it can possibly fall out of use.

Take scaffolding. Depending on project location and scope, scaffolding teams are often put together on short notice and are made up of workers from different countries and cultures. In addition, people have to communicate with one another over distance on noisy, outdoor worksites.

Miscommunication is a common problem, with workers fetching a collar when a coupler is required, leading to frustrating delays. Worse, efforts to communicate from the top of a scaffolding tower can involve the kind of exaggerated gestures which lead to accidents.

To mitigate against these dangers, there used to be a common language among scaffolders, a series of hand signs to help the fetcher at ground level understand at once whether a toe-board or double wedge head was required, and in what quantity. Sadly, this has fallen out of use in recent years, or morphed into sign ‘dialects’ only comprehensible to a small number of scaffolders.

Now, the KAEFER team in the Netherlands and Belgium are driving an initiative to re-introduce this scaffolding sign language and make it standard across KAEFER. What could be leaner? A simple way to improve safety and efficiency, and help KAEFER optimise the use of resources across the world. This is an example of ‘best practice’ that deserves to succeed. Posters showing the signs have already begun appearing at sites in the Netherlands and Belgium, where they have become a popular Toolbox topic. As we incorporate the sign language into our Lean Best Practice Handbook during the course of 2017, we hope to see these posters and easy to carry flipbooks for every scaffolder, appearing on KAEFER sites throughout the world.

For more information, please contact Ben Lodde.

KAEFER in South-East Asia – Hard at work on Vietnam’s second oil refinery

KAEFER can take justifiable pride in being the only international company awarded scaffolding work on the Nghi Son Refinery, located about 200 km south of Hanoi.

Usually, the client, JGC Consortium, might have been expected to award the contract to a local firm, or a firm in its home country of Korea. The fact that KAEFER was chosen ahead of fierce competition is testament to the quality of the company’s work for the same client in Malaysia. It’s also the result of KAEFER’s growing reputation for making best practice standard practice on every site and in every office, while maintaining proper awareness of place and cultural nuances.

KAEFER began work on the refinery in March 2015. Since then, an average of 200 scaffolders have built well over 100,000 m² of pipe rack scaffolding and nearly 2,500 m³ of system

scaffolding, with the project expected to continue until March 2017. The refinery – which includes a petrochemical complex, pipelines and storage facilities, and has been designed to handle ten million tonnes of crude oil per year – will become operational shortly afterwards.

KAEFER – Initiating Rope Access activities in Spain

KAEFER in Spain has been actively expanding their range of services, partly in order to offer clients a ‘one-stop-shop’ and partly to offer more efficient alternatives to conventional methods, and therefore cost-savings!

One area which ticks both boxes is Rope Access. Not traditionally a part of KAEFER’s offering in Spain, there are many instances where it can provide a faster, safer and more cost-effective alternative to conventional scaffolding. The team spoke to several clients and found them extremely receptive to the idea.

Workers from Spain flew north to train with colleagues in the UK. Rope access is a highly specialised skill, and KAEFER in the UK is internationally recognised as among the very best in the business. Initially working together with the UK team and then increasingly on their own, 2016 proved to be a busy year for the access team in Spain. They were in action painting tanks, repairing fire systems, installing anchors and lifelines, conducting inspections, and carrying out painting work on cruise ships. These are just a sample of the jobs carried out for a variety of clients, and KAEFER in Spain looks forward to growing the service still further in 2017.

For more information, take a look at the Total Access brochure developed by KAEFER in the UK. ←



KAEFER TOTAL ACCESS
Brochures can be ordered from Tegan Owsnett,
KAEFER Ltd.

KAEFER Innovations

The KAE 140 Spray Insulation System – Improving efficiency in steam turbines, worldwide!

Some years ago, KAEFER engineers based in Bremen developed the KAE 140 Spray Insulation System. Project Leader Béla Vajda is clear. *“Short- or long-term, this system meets the needs of clients better than any other currently available anywhere in the world. Technically it’s the best, and it’s the most cost-effective.”*

Energy prices rise and fall, but the cost in euros for every minute that a power station is out of operation can be reckoned in the tens of thousands. The KAE 140 system keeps these outages to an absolute minimum:

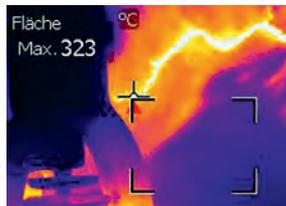
The KAE 140 system is suitable for all types of steam turbine in use around the world. Sales Manager Leif Dollenberg (Dipl. Ing. Energy Technology) and Project Leader Béla Vajda feel certain there is more they could be doing for KAEFER clients internationally, and would be delighted to answer any queries from colleagues overseas. Feel free to contact Leif Dollenberg.

Advantages

1. It is far less prone to cracking and therefore less likely to lose efficiency or need major repairs.
2. It takes less time to apply. Whereas other insulation systems require a ‘drying out’ period of up to 20 hours, turbines using KAE 140 can be put back into operation immediately.
3. When maintenance is necessary, it is only necessary to dismantle the upper section of the turbine. This reduces the time required before the plant is back in operation by between 30 and 50%!



THERMAL IMAGING
Detecting where the leak is



Standardising energy audits throughout Germany

For several years, KAEFER Industrie GmbH has been conducting energy audits in industrial plants in Germany. KAEFER’s engineers use thermal imaging cameras and thermometers to check for energy loss through damaged insulation or bare surfaces. They calculate potential financial savings and help develop a total insulation concept.

The team has grown rapidly and now comprises 20 trained thermographers and 8 TIPCHECK engineers (who are trained according to EiiF* standards).

“Standardisation has been a big part of our success,” explains Leif Dollenberg, responsible for the program, *“particularly when you’re talking about the really big concerns, with a dozen different plants located across Germany.”*

“Our auditors are highly trained. They all use the same software, cameras and contact thermometers, and prepare their reports according to the same template. Clients can be audited by one of our TIPCHECKERS in Bremen, a different TIPCHECKER in Munich, another again in Bremen the following year, and feel completely confident all the results will be drawn against identical benchmarks.”

Steam turbines have been one area of recent growth. By their nature, these turbines develop leaks. KAEFER thermographers are able to identify the exact source of the leak while the turbine is still in operation. At the same time, they can audit the turbine’s insulation, and calculate the potential cost-savings of repair or replacement.

“We can help our clients save energy and money,” concludes Leif. *“And if they choose to re-insulate their turbines with the KAE 140 Spray Insulation System, then so much the better for everyone involved!”*

*EiiF - European Industrial Insulation Foundation

A day in the life of Daniel Birmem, Site Manager, Turbine Projects Worldwide

Based in Bremen, Daniel has been a member of the Turbine Insulation department for 15 years, and in his current position certainly racks up the air-miles! Already planned for 2017 are trips to Thailand, Turkey and Slovenia, each one likely to last 30 days or more.

“It’s not always easy to spend so much time away from home. It’s something we all feel from time to time, which is partly why the spirit in the team is so strong. We work hard, in hot and challenging conditions, but we have fun and take pride in what we do. Wherever we are in the world, we’re always at the heart of a power station – meeting deadlines, working weekends, holidays and nights – whatever it takes to get the job done.” ←



DANIEL BIRLEM
Site Manager, Turbine Projects Worldwide



KAE 140 IN ACTION
Use and result of the spray insulation system

Sporting achievements in every way

KAEFER Construction –
Working with Sportgarten e.V. to provide
new facilities for young people in Bremen

In the heart of Bremen there's an old post office building known as Postamt 5. During 2015, the non-profit organisation Sportgarten e.V. approached the city council with a view to converting parts of this huge – over 10,000 m² – covered space into a 1350 m² park for skateboarders, inline skaters, BMX and scooter riders. Pursuing an innovative “body/brain” concept, they were also determined to incorporate a digital workshop where teenagers could learn coding and game development and experiment with 3D printers and laser cutters.

The city said yes. Soon afterwards, KAEFER Construction project leader Carlos Perdigao received a call from the Managing Director of Sportgarten e.V, Ulli Barde.

“KAEFER and Sportgarten e.V. know each other well,” Carlos explains. “For the last four years we’ve jointly organised an annual football tournament, and taken the opportunity to introduce hundreds of young people to the career opportunities available at KAEFER. As well as managing construction sites, I’m also the training supervisor for drywall installers at KAEFER, so I’d met Ulli several times and really admire what he does.”

It was an interesting challenge – a skate park and a digital centre have very different requirements, so the contract included various different disciplines, from drywall construction to fire protection padding and the erection of a steel structure to divide the rooms.

“I created the time schedule according to CON Lean procedures (CON Lean Projekt Vorgehen),” adds Carlos, “coordinated and ‘clocked’ the different work teams. Everyone was really committed. Six weeks of continuous work and everything went without a hitch.”

The centre opened in October. Since then, it's hardly known a quiet moment, with Bremen's teenagers flocking to practice their skills, tricks and stunts both in the skate park and in the virtual world.

And Carlos Perdigao can look back on a job well done with great satisfaction. As Ulli Barde put it: *“We found an empty warehouse and turned it into a sports and education centre. Thanks to KAEFER's help in planning the interior outfitting, we were able to save a lot on expenses costs!”* ←

We are precise



Schweißnähte, wenn nicht anders angegeben, umlaufende Y-förmig & Krone, einseitig DIN.		Schweißart	Stitch
Charakteristiken	in Schweißanlageng	Stitch	Stitch
Bezugssystem	nach DIN EN ISO 883	Stitch	Stitch
Schweißnähte	nach DIN EN ISO 883	Stitch	Stitch
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