

Explore new paths at KAEFER



WHAT CAN LEAN DO FOR KAEFER?

In an interview with Fritz Gehbauer, manager of the Institute for Technology and Management in Construction, and one of the experts in Lean Management and Construction, he gives K-WERT his views on the benefits of Lean

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SKY-HIGH SCAFFOLDING

Hundreds of workers, exemplary project management, a record height for a scaffold, and no accidents - KAEFER Servicios Industriales, Spain, made a significant contribution to the highest scaffolding tower ever built in Europe at an industrial facility

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KAEFER C&D'S ONE-STOP-SHOP

KAEFER C&D provided its services in the design and manufacturing of the first North Sea platform to be built at a single UK construction yard in around 25 years

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DEAR COLLEAGUES AND FRIENDS OF KAEFER,

In order to ensure the continuous optimisation of services in a cutting-edge business such as ours, the idea that “Best is good. Better is best,” as written by Lisa Grunwald, is an essential aspiration. The relevance of this idea is a defining point for sustainable success. Although KAEFER is not subjected to permanent pressure from financial markets, our company is nevertheless up against strong competition and must continuously defend its position.

In recent years, we have used new and different approaches to improve ourselves. In doing so, we have followed the important theme of sustainability with our vision “to eliminate the energy waste”, a theme which has been highlighted and emphasized clearly many times over.

The global Health & Safety Year in 2012, raised awareness among employees, and informed them and their families about our Duty of Care. This past year, the theme of Quality was in the spotlight and

encompassed the whole process from planning and administration right up to its communication and technical implementation on site. All of these endeavours have contributed to delivering safer and better working practices in a sustainable way.

In future a new topic awaits us: Becoming better at what we already do well. As a result, we are embarking on a journey that will allow us to develop new paths, rethink old habits and discover innovative opportunities. We want to work more conscientiously, act considerately, seize opportunities, optimise the efficiency of our results and strengthen our qualities. Join us on our “Lean Journey” and let us establish the foundations for a stable future. It will certainly be exciting!!

We would like to thank all our employees, customers and partners for their dedication and support and wish you all a successful 2014!

Best regards,

Peter Hoedemaker

Philipp Dalheimer

Steen E. Hansen

BECOMING A SMARTER COMPANY

INTERVIEW We are ready to start the KAEFER Lean Journey – Join us!



The members of the Board of Directors: Peter Hoedemaker (l.), Philipp Dalheimer and Steen E. Hansen (r.)

What is your assessment of the implementation of the KAEFER Strategy so far and consequently of the strengthening of The KAEFER Way?

Peter Hoedemaker: The KAEFER Way evolves from year to year. Our final goal is clear but en route we are constantly learning, which is why we will eventually make some adaptations. The KAEFER Way in itself is not static, but alive. Our strategy revolves around our four core principles related to quality, long-term customer relationships and profitability; health & safety; environmental responsibility, cultural differences and value-based leadership.

Every year we emphasize one of our core principles. In 2012, our main focus was on health & safety while in 2013 it was on quality. Next year we will embark on our Lean Journey with the goal of eliminating all types of waste and continuously improving our processes. This will, in turn, lead to even better customer relationships and increased profitability.

We are very happy about how these initiatives have been received worldwide. People are committed, coming up with their own ideas and really participating, which makes KAEFER more professional every day – this is part of our mission.

Philipp Dalheimer: Today we can say that we really are “one” company when it comes to the clarity of the services we offer both in our core business: Insulation, Scaffolding, Surface Protection and Interior Outfitting and in our support business: Passive Fire Protection and Asbestos Removal. The strategy has worked

fine so far. A good indication of the level of satisfaction within the company is our 2012 employee survey. Although there is room for improvement, which we are working hard on, the overall satisfaction level was very healthy. The survey showed that through the changes that took place, we succeeded in involving our employees, and this is a very positive sign.

Peter Hoedemaker: For many years, the “what” and “where” of our activities were the focus and they have led us to the worldwide scope of activities we do now. Our business portfolio is very clear and straightforward, as Philipp already mentioned. Over the past few years, our focus on “what” and “where” has somewhat moved to “how” we are working. For example: How can we be more sustainable? How can we improve health & safety? How can we work with a stronger focus on quality? Ignoring these questions would ultimately waste time and resources. In order to build upon our previous successes, we are starting to eliminate waste by introducing Lean Management.

As part of this we are now also dedicating more attention to improving the company results; at the moment we are still in the early stages. It would appear that we did not push hard enough in the past. But to begin with we need to know “how” to push. The first indications can be taken from of the lean pilot projects. In short, The KAEFER Way will be a long journey and we will have to overcome many challenges but we are ready for it!

What role has market pressure played in this decision?

Peter Hoedemaker: To begin with, the decision to introduce Lean Management logically stems from our core principles. The market, however, also demands a reaction from the company because in the current climate there are few opportunities for easy growth. We are encountering high pricing pressure which affects margins. This means we need to be very active in finding ways to optimise costs and highlight our competitive advantages, such as our premium quality.

We do not want to rely on external factors for our future success. We want to take the initiative and the future into our own hands. If we rest on our laurels and wait for better times, there is no way to say how long it will take for these external factors to come. Success will not come from the outside; we need to create the conditions for our success ourselves.

Steen Hansen: Success has also been tied to recent developments: KAEFER has experienced a period of high organic growth and numerous acquisitions. Now, partly as a result of the market situation in general, we need to focus less on growth and more on increasing profitability in order to be more sustainable. Lean is an answer to this demand.

Peter Hoedemaker: Health & Safety and Sustainability are now firmly entrenched in the mindset of the company, but we are also aware of the need to continuously improve quality. We need to work on reaching and exceeding the high standards we are setting ourselves to increase our level of professionalism. High-quality work is not just about delivering a technically perfect piece of insulation or scaffolding; our notion of high quality goes beyond that.

Philipp Dalheimer: It is about improving the entire process, including planning, administration and communication.

“We have a very healthy and growing order intake, which provides a good basis for the business’s stability.”

Philipp Dalheimer
Chief Operating Officer, KAEFER

What is the plan for implementing the KAEFER Lean Journey?

Peter Hoedemaker: In 2013, we were preparing

Analysis of work processes and organisation in the pilot project in Poland.



for the Lean Journey and in 2014 we plan to set sail. In 2013, we first had to test different lean principles to discover the right path within the concept of The KAEFER Way. Yet, we relied not only on clever lean consultants to tell us whether lean was right for us; but we also wanted to see the results for ourselves to ensure this approach would yield the desired results. Following extensive testing we can confirm that introducing lean provides us with considerable potential to further strengthen our KAEFER Strategy. The different pilot projects we have performed around the world have demonstrated this fact.

Philipp Dalheimer: For us, lean was a case of “seeing is believing”, and the potential benefits we saw in the pilot projects were very convincing. We could in fact say that KAEFER is an early adopter. So, in 2014, we will start to make lean work for us. In order to do this, we need to train many people, communicate what is happening and, most importantly, we need to get everybody on board. This needs to be completed by the end of 2014 so that in 2015 and 2016 we can start reaping the fruits of these changes. Our aim is to be the most professional and complete insulation company worldwide, and this goal drives us. The goals which are written in our mission are sustainable and quantifiable, as well as part of our Lean Journey. We are also working to make the company’s performance more transparent and measurable.

Peter Hoedemaker: Take sustainability, for

example. We identified several key indicators which we now measure and share in our Sustainability Report. The same applies for health and safety; we have put very clear key performance indicators in place. They are now an integral part of our internal health & safety report, which makes the whole situation very clear and open. Next in line is our quality and business performance. We want to measure and improve these areas in every company, team and process.

How have the organisational structural changes worked so far when it comes to the implementation of regions?

Steen Hansen: We are happy with what has been achieved so far and although this process has just started, many positives are clearly evident.

There is greater regional control and more focussed support for companies which are experiencing difficult times.

Peter Hoedemaker: We have started to build bridges within the regions which at the moment are not yet fully exploited. It’s still early on, but we are moving in the right direction.

Steen Hansen: The reorganisation has only really been underway since the middle of 2013, and we expect to be able to measure the progress in the coming years. So far, the synergy created confirms what we were expecting. We also know thanks to improved communication within the regions that ►

BOARD OF DIRECTORS

► project quality has further increased. In those regions where this is not the case, we know the reason.

Philipp Dalheimer: This also means that we can better address some of the problem zones and weaknesses in our portfolio more specifically and without delay. This achievement is a real highlight of 2013.

What other highlights stand out in 2013?

Peter Hoedemaker: There were many outstanding projects in 2013, including the lean pilot projects many of which you can read about in this K-WERT issue.

Philipp Dalheimer: These pilot projects were particularly successful at revealing that we

have the capacity and capability to improve. More generally, it is very important for us to have a very sound and growing order intake, which provides a good basis for the company's stability.

What are your hopes for 2014?

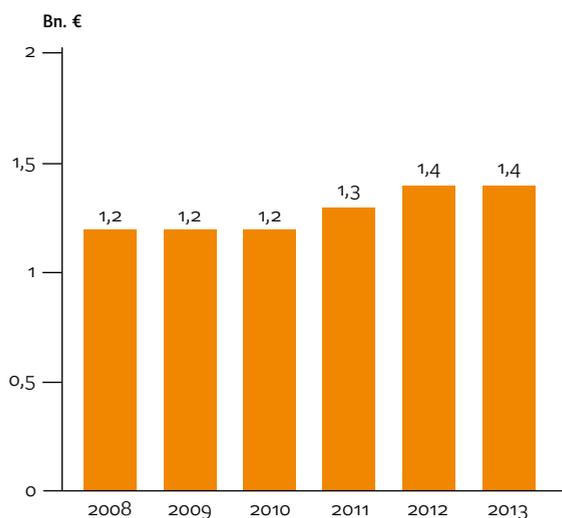
Steen Hansen: We need to keep on strengthening our strategic purchasing and generate synergies across KAEFER. We need to create further initiatives to streamline processes, of which lean is a prime example.

Philipp Dalheimer: I hope we continue to have the same eagerness to learn as we saw exhibited on the lean pilot projects. Such enthusiasm can and should be expanded beyond the

single business unit or project. Then we can benefit from the experience of other parts of the group by sharing best practices. This will move us further down the road towards excellence. Lean is an opportunity for us all to improve our work performance, and we are sure that it will have an overwhelmingly positive outcome. This is all about how we become smarter as a company.

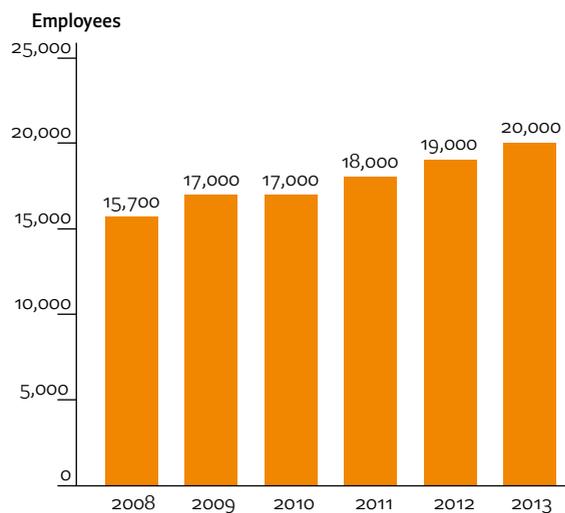
Peter Hoedemaker: My wish for 2014 is very simple. As we embark on this Lean Journey I want everyone to join in and have a positive mindset. Having everyone on board will lead to more secure employment, higher quality and an improved bottom-line result for the company.

Group sales 2013



>> TURNOVER

Despite a difficult situation in the market the turnover remained at the same level as last year.



>> EMPLOYEES

Increase in blue-collar workers due to big contracts.

AWARDS IMM 2013

Best Performing Business 2012
KAEFER NOVACOAT, Australia

Exceptional Performance 2012
KAEFER LLC, Abu Dhabi

Best Turnaround 2012
KAEFER SOUYET, Chile

Best Development 2012
KAEFER WANNER, France

Health & Safety Most Improved 2012
KAEFER Servicios Industriales, Spain

Health & Safety Best Performance 2012
KAEFER LLC, Abu Dhabi

KAEFER companies honoured at International Management Meeting

VIENNA HOSTS IMM Vienna provided the fantastic backdrop for the 85 managers attending the KAEFER International Management Meeting in May 2013. One of the highlights was the evening ceremony at the Gartenpalais Liechtenstein, where various KAEFER companies received awards for great achievements in different disciplines throughout 2012, including KAEFER NOVACOAT, which was named best performing company.



The participants of the IMM 2013 in Vienna, Austria

2014 FAIRS

Meet us at:

24 – 27 March
GASTECH, Seoul, South Korea
Stand: K6o
The world's premier natural gas
conference & exhibition

5 – 9 May
IFAT, Munich, Germany
The world's leading trade fair for water,
sewage, waste and raw materials
management

9 – 12 September
SMM, Hamburg, Germany
The leading international maritime
trade fair

3 – 5 June
POWER-GEN, Cologne, Germany
Stand: 7Z15
The leading event for the
international power industry

21 – 25 October
ORGATEC, Cologne, Germany
The leading international trade fair
for modern office & facility

STRATEGY TURNS INTO REALITY

OUR MISSION “of delivering the most professional complete insulation solutions worldwide“ is becoming increasingly apparent in all areas where KAEFER already has a strong and well-established presence. To further enhance our services and to complement our core insulation business, we successfully completed some mergers and acquisitions. Below, you find the newest members of the KAEFER world.

Good relationship pays off

PROSTAR JOINS KAEFER The exciting news from Asia is that KAEFER has added passive fireproofing expertise to its capabilities by acquiring Singapore-based Prostar Marine Services. This is a much welcomed extension to KAEFER's work in the LNG sector.

Justin Cooper, KAEFER's Regional Director for Asia Pacific, says it is a logical acquisition considering “our main market is LNG and fireproofing is done on the same projects we work on in the same markets.”

And the plan is off to a great start, as Prostar recently secured two big contracts with AP LNG worth €7.4 million and more recently a larger €37 million contract in Thailand. Prostar is also busy with a number of other projects like modular LNG. Many of them are located on Batam Island, Indonesia and turnover is expected to double this year.

The Prostar acquisition was the result of the good relationship the companies have enjoyed over a number of years explains Cooper, “and we realised the benefits of working together given Prostar's expertise and our access to markets. It was a win-win.”

KAEFER C&D purchase strengthens and specialises

OPUS INDUSTRIAL SERVICES LTD Another event which marked its growing strength and success took place on 22 April 2013 when the UK-based KAEFER C&D acquired OPUS Industrial Services Ltd, which is now known as KAEFER OPUS Ltd.

Simon Hudson, KAEFER C&D's Sales and Marketing Manager, explained the reasons for the purchase: “With the acquisition of OPUS we are now able to provide rope access services both in the UK and across the KAEFER business as a whole. There are also a number of other specialist services provided by OPUS which strengthen and complement our existing service portfolio.”

The company describes itself as a “specialist industrial service provider” and was founded in 2004. It has grown impressively and now employs more than 240 people. As a quality-focused company, KAEFER OPUS provides expertise in a range of fields. A particularly interesting area of work is its expertise in rope access services. Rope is an effective alternative access across the oil, gas, petrochemical, power generation and construction industries,

as well as in plenty of other areas where scaffolding is not practicable. Further services include fire protection, general and non-destructive examination (NDE), protective coatings, structural fire protection and thermal insulation.



KAEFER OPUS

KAEFER OPUS is headquartered in Billingham, a northeast coastal town in England on Teesside that has worked alongside various big industrial names such as Total, Esso, Exxon Mobil, ConocoPhillips and DuPont.

“Rebranding is ongoing and we are delighted to bring them into the KAEFER family,” says Simon Hudson. “Without a doubt, KAEFER OPUS is an exceptional company that brings further strengths and expertise to our business.”

Scaffolding company has bright future

MAJORITY SHARE OF ESG For years, ESG (Europäischer-Sonder-Gerüstbau) has been a well-known, highly regarded scaffolding firm working alongside numerous well-known companies on various projects in Germany. The opportunity to work more closely with the company made perfect sense, which is why KAEFER was delighted to confirm in December 2012 that it had taken a majority share in ESG.

“ESG is well established in the German market and has years of experience,” says Managing Director of KAEFER Industrie GmbH,

Uwe Westmark. “It has 45 employees and its core business is scaffolding erection at power stations and industrial plants as well as non-standard and façade scaffolding.”

KAEFER has plans to develop ESG in the near future says Westmark: “We want to expand ESG's services for its industrial customers and to grow the company over the next few years.”

Scaffolding for the crane of the Nobiskrug Yard, Rendsburg, Germany



Ambitious painting strategy



DWS ANTICO With its specialisation in industrial painting, it is easy to figure out why France's KAEFER WANNER was eager to get hold of DWS Antico. "We had been looking at entering the painting market for some time," says the President's assistant, Alexandre Marconnet, "and so we bought the company as the first step in this strategy."

With a long track record and strong expertise in the field, DWS Antico is a high-quality, industrial painting company which operated in eastern France. It is a familiar name on the Carling Petrochemical Platform, alongside TOTAL and ARKEMA.

DWS Antico is now up to speed with the KAEFER work method and "has been integrated as a fully owned subsidiary of KAEFER WANNER, although it will keep its name for the moment," says Marconnet.

The DWS Antico management team will be play a key role in supporting KAEFER WANNER in its ambitious painting development strategy which entails spearheading the expansion of the company's industrial painting services.

On show in Macaé

OFFSHORE TRADE FAIR IN BRAZIL KAEFER ISOBRASIL was a proud attendee at the 2013 offshore trade fair in Macaé, one of Brazil's two most important offshore market events.

KAEFER was there to showcase its insulation and interior outfitting capabilities and its growing product range in the region. The company demonstrated its solutions for interior outfitting including the Turnbed, Sprefix and HT-Film insulation technologies as well as its passive fire protection product Firebox explains Sávio Swaby Fernandes, Offshore Project Co-ordinator for Marine & Offshore at KAEFER ISOBRASIL. The trade fair also offered a chance to demonstrate KAEFER's know-how in refurbishing platforms with new techniques and materials for outfitting, insulation and surface protection. "We have been providing services in outfitting in this new market very successfully. It was important to demonstrate how we are expanding our services in the Brazilian offshore market," explains Swaby.

SAFETY FIRST

Scaffold in soaring temperatures and dust storms

2,000,000

hours without any LTIs (Lost-Time Injury)

SHAH GAS DEVELOPMENT Searing heat close to 52°C and dust storms were just some of the challenges KAEFER Abu Dhabi faced while working at the remote €7.4 billion Shah Gas Development (SGD). KAEFER provided insulation, painting, fire proofing and one of the largest scaffolding contracts it has ever been awarded, involving 262,000 m² of suspended and cantilever scaffolding and 50,000 m² of tower scaffolding. With as many as 850 workers and complicated work at height, the project reached two million man-hours without an LTI.

3.5 million man hours without LTI

3,500,000

hours without any LTIs (Lost-Time Injury)

NETHERLANDS AND BELGIUM While coming in on budget and on time is always welcome news for any KAEFER project, the best news is always that safety milestones have been surpassed. So, there was much satisfaction for Head of Corporate Health & Safety, Phillipa Recchia, when she heard that the Netherlands and Belgium had achieved one of its best joint safety records. In 2013, the two countries combined reached a grand total of 3.5 million working hours without a single LTI. "Congratulations on this great safety milestone," says Recchia.

Five years LTI free

Five years

without any LTIs (Lost-Time Injury)

DOLPHIN SAFE IN QATAR The vast €5.2 billion Dolphin Gas Plant has posed various hazardous working conditions for KAEFER Qatar in its insulation, painting and scaffolding work at on- and offshore plants over the last five years. Yet, in all this time no LTI has been registered. KAEFER Qatar's flawless safety record was noted, and Dolphin Energy was received official recognition for its safety track record. Dolphin's General Manager, Mr. Adel Ahmed Albuainain, said KAEFER played "a vital role by contributing innovative ideas to further enhance HSE performance and strengthen the safety culture across Dolphin Energy".

SAFETY FIRST

More safety
increases work quality

18,500,000

hours without any LTIs (Lost-Time Injury)

KAEFER IN QATAR KAEFER Qatar is celebrating a landmark achievement of more than 18.5 million man-hours without an LTI. Since the company's last LTI in 2008, it has redoubled its safety efforts and is targeting 25 million man-hours.

Measures such as making safety part of the daily list of tasks together with on-going safety training have all contributed. Before any employee is transferred to a new site they are trained in how to behave and conduct themselves before going to the site. Then they receive specific work-related safety training, as well. "By involving every employee and making them feel responsible for their own safety and that of their colleagues, we've managed to avoid LTIs," explains Regional Operating Officer Afzal Khan. "We realised it was so important for blue collar workers to support us. We encourage them to identify different risks in their activities regardless of the work they are doing so that they are aware of the risks and take personal responsibility."

This exemplary record ends up paying off in other areas beyond worker safety. "Even with a small accident work stops for a day and there's a loss of productivity. If workers feel unsafe then it might also impact the quality of their work," says Khan.

Attracting new apprentices through sport

KAEFER TROPHY The theme of apprenticeships and training took centre stage at the KAEFER Trophy at Bremen's Sportgarten. It can be difficult to convince young people of the benefits of opting for a career in industry, even via a first-class apprenticeship. With this in mind, the aim of the Sportgarten and KAEFER gathering at the beginning of September 2013 was to entice German school students through football to look at the advantages of KAEFER apprenticeships.

As an organisation dedicated to training young people, Hanns Ulrich Barde of the Sportgarten was very pleased with KAEFER's commitment to the event, "because we experience every day how little many young people know about the possibilities offered by apprenticeships."

Students from 10 schools in the greater Bremen region took part in the day's events,

which in addition to the football tournament also included a beach soccer tournament and trampoline activities. Alongside the sporting highlights, the 200 students had the opportunity to take a look at KAEFER's apprenticeship opportunities, such as in insulation and drywall construction. KAEFER trainees and training leaders provided expert support, showed off their practical skills and were on hand to answer numerous questions.

Skills of another form were showcased on the football field for the first KAEFER Trophy, most evidently when the Oberschule Lehmhorster Straße triumphed 3-2 in a hard-won game against the Albert Einstein Oberschule.

More important than winning and losing, however, was the chance to learn about the fantastic opportunities offered by a KAEFER apprenticeship.



The KAEFER Excellence in Estimating Programme

KEEP GETTING UPDATED After successfully introducing the Project Management Qualification (PMQ) six years ago, KAEFER Corporate Human Resources introduced another qualification programme for a core KAEFER process: Estimation in 2013. The KAEFER Excellence in Estimating Programme (KEEP) will help estimators excel at their jobs.

Like PMQ, KEEP was developed in response to a key KAEFER strategic goal which is to provide high-quality, cost-effective and cutting-edge solutions with a clear focus on customer needs. KAEFER aims to achieve this by reducing risks and maximizing project efficiencies

through project excellence. Accurate estimation is essential for the efficiency of a project. It provides a solid foundation for making good decisions, forecasting productivity, controlling costs, meeting delivery dates and creating trust among all those involved. Most importantly, a skilled estimator can identify potential risks and take steps to avoid these before the project starts. The six-month KEEP training course will broaden the expertise of estimators across the company and develop a common KAEFER estimation process and language. "This will help companies within KAEFER get closer, improve best-practice sharing and maximize the chances

of accurate estimates," says PMQ and KEEP Global Manager, Alexandre Rezende. KEEP runs parallel to PMQ at the KAEFER Academy and is a five-module course that combines e-learning and workshops. It focuses on project management, estimation and risk management. The first course kicked off in March 2013 with nine estimators from the UK, Poland, France, Germany and Norway, leaving Rezende happy with the results: "The participants all agreed there was a need for a common process and saw the importance of developing estimations in a structured way. Even those highly experienced participants learned new techniques."



Alexandre Rezende

is KAEFER's Project Management Qualifications and KEEP (KAEFER Excellence in Estimating Program) Global Manager. In this interview, he explains why the Project Management Qualifications are so important to KAEFER's success and how the Project Life Cycle is the perfect tool, no matter where you work.

The importance of expertly managing projects

What is the connection between the Project Management Qualification (PMQ) and the Project Life Cycle (PLC)?

The PMQ is a qualification programme at KAEFER that has been in existence for six years with great success. More than 400 people have participated in this programme across the world in more than 30 countries, and it continues to help participants improve the way they work on KAEFER projects. In the programme, participants learn about the PLC, which is a standard set of processes and procedures on how KAEFER manages projects, plus a collection of best practices worldwide.

What does the PLC do?

The PLC is a set of basic steps describing how to manage a KAEFER project no matter where you are in the world. Regardless of your location, you follow the basic steps of starting, planning, executing and closing a project. A closer look reveals a series of formal processes used to manage projects in a similar and professional way. The programme comes with suggested tools and procedures to support the delivery of the projects with high quality, low risks and overall success.

Can you give some examples of where the PLC is important?

At the start of a project it is very important to have a project handover. This step helps to ensure that all of the information from the sales team is passed on and everything is clear to start developing the project at an operational level. For example, I have collected several templates of handover documents and agendas for kick-off meetings worldwide, and we have created one standard that has already been implemented in South America, Asia Pacific and Europe.

Another example is to ensure proper project closure. Hold a meeting about lessons learned. If a project was very successful, we want to know why. If it wasn't, we need to know how to avoid the same mistakes in the future. We can circulate the information from the project closure meeting internally at KAEFER. We can then provide feedback to the sales departments worldwide for future proposals, with the aim to further improve the quality of our work.

A training master class from Mexico to Norway via Australia

The face of the KAEFER ENERGY poster "Gain more lifetime" – Elias Granados



ELIAS GRANADOS' JOURNEY If Elias Granados was searching for a life of discovery, a life where he could learn languages and experience different cultures, choosing to do a traineeship at KAEFER was the right decision.

Granados' journey started in Mexico City, where he was born in 1980, took him to Australia and delivered him to Norway. His KAEFER story began in 2005. After he finished university in Mexico City, he decided that a traineeship would provide him with the tools to fulfil his career ambitions. He was accepted on a two-year KAEFER programme in 2005 and started in his home country in October of that same year. However, the international

opportunities offered by the programme were key for Granados because he knew they would allow him to travel and meet new people while receiving top-level training as an operations manager. "The day I joined KAEFER," says Granados, "I was promised I would be sent abroad to different subsidiaries."

The first of his two deployments began in November, barely a month after his training had started. "Initially, he says, Australia was a big challenge. Even the language was not easy as it was difficult to understand their English. But I realised that there is not a huge difference between Australians and Mexicans. Yes, we have different histories and cultures, but I fit in

well. And the weather, obviously, did help." After a year of Australian sunshine, his next deployment was quite a contrast: Norway. "I really had to adapt. I didn't speak the language, it was September and dark and cold and not even winter." Undaunted, and supported by his girlfriend, now wife, who was studying in Germany, he continued to learn. And by the end of his training, he made such an impression that he was offered a permanent job. Now fluent in Norwegian and manager of the KAEFER ENERGY planning department, he has even been chosen to be the face of a recent KAEFER ENERGY poster.

Elias Granados' self-motivation and cultural curiosity underpin his successful career and a KAEFER training programme was the vehicle that enabled him to follow his personal dreams. "Of course," he says, "there was a lot to learn in a short period of time. But the training programme was fantastic, and I never doubted for a minute that I made the right decision."

Think, do, improve!



Quality effort receives boost

KAEFER SAUDI ARABIA The huge effort to raise quality in all KAEFER businesses across the world is exemplified in the great strides made in recent years in Saudi Arabia. The ongoing 2013-2014 Quality Campaign will further boost their initiatives.

KAEFER Saudi Arabia Managing Director, Rajan Nair, is fully aware of this: "While KAEFER has been quality conscious since the inception of operations in Saudi Arabia in 2008, the 2013-14 Quality Campaign will encourage us to focus more on the mantra 'Think-Do-Improve!'"

To facilitate this, KAEFER Saudi Arabia has launched a comprehensive programme,

which includes an email signature with 'Think Quality' for all email users, a 'Think Quality' stamp, banners on ten project sites, and a survey to invite suggestions on the 'Quest for Quality'.

For Nair, the natural outcome of raising quality is "improved operational efficiency and higher levels of competitiveness", which should ensure that KAEFER Saudi Arabia is the go-to service provider in the areas of insulation and associated services.



Doing things right the first time – THINK QUALITY

RAISING QUALITY KAEFER's 2013-2014 Quality Campaign has been energetic in its quest to raise quality standards across the company.

In 2013, the primary focus of all KAEFER companies turned to quality. KAEFER quality starts with the very first notion of a project, continues through the process of producing a winning bid and goes right up to contract completion and includes feedback and reflection on the finished project. Marin Schouten, Head of Corporate Quality: "We need to look at quality in all phases of our work which means quality in our estimation and offers, our project planning, our execution and our knowledge sharing, rather than simply thinking of quality in terms of the physical work done on site."

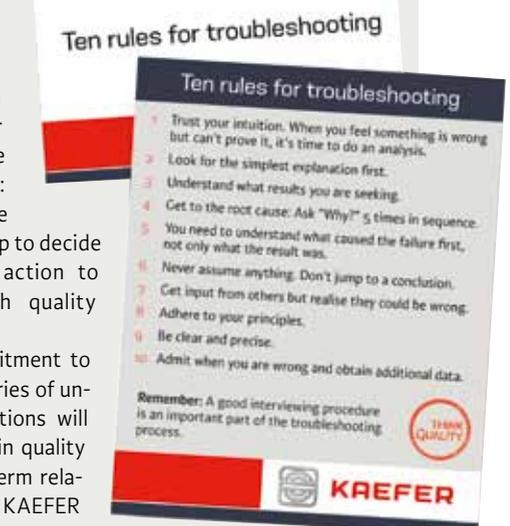
For KAEFER, quality has been at the core of business behaviour for decades, and it is at the heart of its relationship with its customers. This can be traced back to the KAEFER mission, which states that the company is "fully committed to delivering the most professional complete insulation solutions worldwide".

The 2013-14 Quality Campaign focuses on planning, administration, communication and technical aspects. Max, KAEFER's quality ambassador, spread the message of "Doing things right the first time" in a two-minute movie as well as in a poster series on mindset & behaviour, organization & procedures, training & recruiting, as well as on feedback & follow-up. Additionally, KAEFER employees talked about what quality means to them in a video which was published on the KAEFER Intranet and webpage and shown on TV screens across

the company. To further support project and site managers, supervisors, estimators and quality inspectors, the hands-on card called Ten rules for Troubleshooting and the booklet Quality at KAEFER: What Can Go Wrong were distributed. Both tools help to decide on the best course of action to constantly keep-up with quality standards.

The long-term commitment to quality as opposed to a series of unsustainable quick-fix solutions will show that an investment in quality is an investment in long-term relationships, whether with KAEFER employees, KAEFER customers or KAEFER suppliers.

"In everything we do," says Schouten, "our professional attitude is that quality improvements are always possible."



RAISING STANDARDS

QUALITY MANAGEMENT In 2013, KAEFER's worldwide campaign focussed on quality.



The huge efforts devoted to raising the quality standards of all KAEFER businesses are an inherent part of the way the company functions. Official certifications according to international and local standards in the field of quality, safety and environment are the visible proof of our quality commitment towards all stakeholders, including customers.

The quality management system standards acknowledged internationally and deemed to be most important by KAEFER are ISO 9001, ISO 14001 and OHSAS 18001. ISO 9001 targets a company's overall quality management system. ISO 14001 complements this idea with environmental quality management whereas OHSAS is a British quality system which stands for Occupational Health and Safety Management System. Other renowned national health certifications used within the KAEFER Group are SCC and MASE, just to name a few. Usually recertification takes place every three years with annual audits in between.

Those certifications help the company improve its quality reputation and strengthen customer relationships. In addition, certifications are increasingly becoming one of the conditions to pre-qualify with customers. As a result of all the work KAEFER has done in recent years, the company has won international quality recognition from its clients: Best Supplier 2013 by AREVA in France or Best Supplier of the Meyer Werft in Germany, to name just a few.

By the end of 2013, KAEFER aims to have all of its full-fledged companies ISO 9001 accredited. The great news is that by mid-2013, 75 percent had already passed the necessary ISO 9001 quality standards, some of them even for the first time like KAEFER Kazakhstan and KAEFER China. This fact is a credit to the best efforts made by a number of countries

Around two-thirds of all KAEFER affiliates have full certification in the above mentioned areas.

The other accreditations in the field of Environment and Health and Safety are an integral part of quality-driven processes at KAEFER as well. Most full-fledged KAEFER companies have already obtained such accreditations and others are in the process of doing so.

These stamps of approval are a validation of KAEFER's great skill and hard work across the globe. More importantly, however, is that the motivation to raise standards comes from within the company and is a core belief. The mindset of the business is always to work to the highest international quality standards as sustainably and as professionally as possible.

Number of KAEFER companies per certification

Overall 101 certificates

ISO 9001:	42 companies
ISO 14001:	25 companies
OHSAS 18001:	34 companies



After a thorough assessment by the SABS, KAEFER, once again, received its; ISO 9001:2008 and ISO 14001 (Environmental) and OHSAS 18001 (Occupational Health and Safety) quality certifications.

AN INVITATION TO JOIN A SMARTER LEANER KAEFER

KAEFER'S LEAN JOURNEY It is no great secret that any high-performing company is always looking to find methods to continuously improve its efficiency, to increase its margins, and, at the same time, to secure the future of its employees.

“For that reason,” says Head of Corporate Strategy & Business Development, Alexander Faber, “KAEFER has started its own Lean Journey with the overall objective being to strengthen the competitive advantage of KAEFER in a challenging market environment.” In short, KAEFER wants to “increase the efficiency of its projects and gain more business on the basis of improved operational productivity,” explains Faber. With the introduction of the Lean Journey, KAEFER seems to have hit on a formula that is in the best interests of the whole company.

Faber explains that lean “initially evolved in the automobile industry at Toyota in the 1950s as a method of increasing efficiency and help to ensure continuous improvement, while at the same time focusing on customer value.” Over subsequent years and decades, many

Based on these positive experiences, Peter Hoedemaker and Philipp Dalheimer from KAEFER's Board of Directors decided that KAEFER would start a Lean Journey of its own.

“With the apparent success of lean being abundantly clear,” says Faber, “we hired an external lean consultant at the start of 2013 in order to run six pilot projects in Germany, Norway, Saudi Arabia, Poland, Australia and Brazil. With such wide coverage, KAEFER is ensuring that all KAEFER regions have first-hand, expert experience of lean.”

The results of the six pilots have been very satisfactory. By applying lean methods, such as better work planning, daily visual performance management and improved material logistics and processes, KAEFER has been able to increase productivity significantly while maintaining high quality and safety standards.

“Further good news is that lean is not about working faster, but about working smarter.”

Alexander Faber Head of Corporate Strategy & Business Development

other industries and companies have discovered the potential of lean and developed and adapted its principles, and continuously optimised their own processes. As Faber pointed out, the lean concept soon gained momentum and its advantages were recognised across the world to the extent that the first Lean Construction Institute (LCI) was founded in the USA in 1997.” (Look for an interview with Fritz Gehbauer, an expert on LeanManagement and Lean Construction on page 16/17).

More recently, notes Faber, “KAEFER customers also began to adopt the lean concept and invited KAEFER to participate. There were three projects which saw KAEFER involvement that were all based on lean principles: Eon (UK), SAPREF (South Africa) and STX (France). And the result? “In all three projects,” says Faber, “we significantly increased our productivity and customer satisfaction and the company was able to maintain its high quality and safety standards.

“Further good news is that lean is not about working faster, but about working smarter,” says Faber. The key is to look at the details of all work processes and organise the work in such a way that everybody on site can be productive in value-adding activities. This is done by eliminating waiting times, reducing distances and improving material supply and tooling.

What were the main challenges? “Questioning the status quo of work organisation and processes is not always easy,” explains Faber. “Project management and teams are getting emotionally involved, and for lean to succeed we need to create a positive environment for change.”

In parallel with the pilots, KAEFER is currently preparing the 2014 rollout of the Lean Journey. As with any new initiative, however, it is vitally important to place KAEFER employees at the heart of lean and that means having them fully trained and in a positive



frame of mind. "In each region and in the biggest countries we are going to nominate and train regional and local Lean Leaders," says Faber. These Lean Leaders will support lean projects in their countries and train local project managers, site managers and supervisors on lean methods.

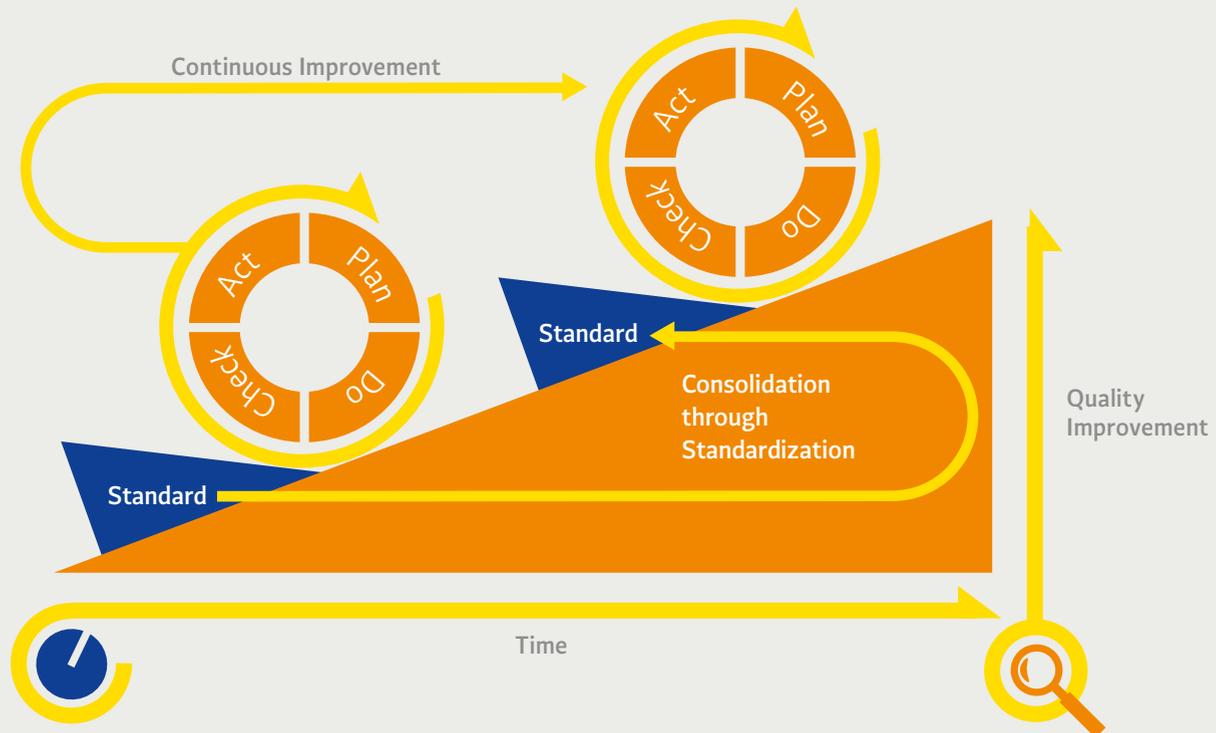
In this way, KAEFER plans to complete more than 50 lean projects in 2014. In all of these projects the local teams will receive on-the-job training. This will qualify them to apply lean methods on their next projects without the full-time support of their local Lean Leader.

Moreover, all training will take place under the umbrella of the KAEFER Academy. "Using a snowball effect we are going to apply lean methods to more and more projects every year," Faber says. "In the mid-term, all our project managers, site managers and supervisors will be qualified to run their projects according to lean principles and applying lean methods.

In addition, a Lean Management Council will collect best practices from lean projects around the world and establish new operating standards. Regional Operating Officers and Lean Leaders will use these best practices and see to the implementation of new standards in their countries.

"We call it a Lean Journey because just as with professional sports we are seeking perfection on a journey of continuous improvement," says Faber. "Lean requires the desire to continuously improve. It requires openness for new ideas and change. Lean will involve everybody in the organisation, including management and every single one of the workers. "If you want to work better than the competition, if you want to develop yourself, if you like to improve things," says Alexander Faber, "then you are invited to join KAEFER's Lean Journey."

WHAT CAN LEAN DO FOR KAEFER?



Interview with Fritz Gehbauer,
Manager of the Institute
for Technology and Management
in Construction.
He is an expert for Lean Management
and Construction and shares his views
on its benefits with K-WERT.

In 2013, KAEFER started its Lean Journey. What does Lean Management mean for you and what are the lean benefits in construction?
After 15 years of managing construction and another 15 years of teaching and worldwide consulting, I came across Lean Management and Lean Construction. It changed my life, my thinking and how I act.

Lean Construction thinking and methods have the potential to enable any team to strive for perfection. In other words, it can do wonders. Lean means giving the client the best product, avoiding waste in the process, creating a steady workflow and striving for perfection. In comparison to manufacturing, lean is more difficult to apply in construction due to its high level of uncertainty, though the potentials of creating a higher level of efficiency are greater than in any other industry.

What makes lean work in construction?

The construction world is a complex environment. The attempts to master this complexity have led to many regulations. They fail when it comes to projects with inherent uncertainty. Regulations are based

on the wrong assumption that a complex project can be described fully at the time of tender. This fact leads to claims and counterclaims and to conflicts without winners. Ultimately the projects suffer. Lean Construction has a different paradigm: 'Let's master the future together'. There are contractors outside that world who also have collaborative relationships with their clients, usually based on quality and reliability. Lean has great potential here. It helps to stabilise relationships and helps people continually strive for the best solution based on a win-win philosophy. Lean works in construction when the partners are determined to apply it.

KAEFER's services are driven by project management. What is the difference between conventional construction and Lean Construction project management?

There is no doubt that conventional project management has similar objectives to lean such as sticking to the time schedule, staying within the budget, delivering quality and refraining from wasting resources. Lean offers additional ways of meeting these objectives. Lean planning tools, such as the Last Planner System™ or Takt Planning, are tools to introduce discipline in the collaborative process of meeting objectives. And this reliability is a measure to stabilise the processes, while non-reliability is analysed to foster a learning process. Lean project management does not wait to learn from project to project; it creates a system of learning from week to week within a project. In addition, making the processes of client and contractor more transparent helps consolidation and cooperation. Aligning interests is a major concern of lean. Cooperation among all trades and stakeholders makes the process more transparent and, therefore,

better manageable. Another feature of lean is the focus on what the client receives. As a result, the stability of the workflow is of utmost importance.

KAEFER has 20,000 employees in 50 countries all over the world. How can KAEFER successfully move towards lean ideals?

Operating in so many countries means that KAEFER has to deal with many cultures. This is both a challenge and a benefit when it comes to lean. Whereas pure transformation contracts often fail to align the interests of contractors and clients, the lean approach supports learning from each other from day one. Once transparency has been established and its benefits recognised, lean can be applied in any culture. This is my experience.

Another aspect of this is establishing an in-house lean culture. Value Stream Mapping and the Last Planner System can streamline the processes. In-house deficiencies can be detected, collaboration fostered, effectiveness and efficiency increased all in an effort to deliver best customer value.

Why would you recommend that KAEFER continues its Lean Journey and what do you think will be the most critical success factors?

When I look at the history of KAEFER, there must have always been a certain degree of 'lean'. In my experience, most of the companies that open themselves to lean have already reached a certain level of excellence. This includes looking for something better all the time. Lean offers an additional opportunity. I encourage you to follow this path. Guidelines for that path are offered by lean methods. Absolute determination on the part of the managers will be indispensable. Nothing is easier than falling back into old habits. Lean is not easy. Management will have to provide steady and constant support. Deming's PDCA (plan-do-check-act) cycle helps structure and control the process of continuous improvement.

Data reporting about to get easier

MANAGEMENT INFORMATION SYSTEM "It's about efficiency, it's about data quality and it's about integrity," reveals Oliver Schumacher when discussing the new changes KAEFER is introducing to its Management Information System (MIS).

In the position as MIS Project Manager since April 2012, Schumacher is charged with "making sure that data reporting functions correctly" when the whole system comes on stream. In short, Schumacher's considerable task is to ensure that all of the company's financial information goes to the correct databases, in real time, from across the KAEFER world. The current set-up uses two systems, "one for management accounts and the other for consolidated financial statements, which go to banks, shareholders and other stakeholders." The systems are currently relatively independent from one another, which made a more efficient method of keeping up-to-date with such complex financial information imperative.

"Collecting all the information manually," says Schumacher, "was a very time-consuming process, particularly as some of the data was nearly impossible to reconcile."

The new MIS is far more flexible and requires the processing of one set of monthly data, a far simpler way of operating that adheres to the KAEFER Reporting Guidelines. Now, all the required information can be delivered via a web browser, allowing for the decentralised uploading through an import file or a SAP interface. Moreover, reporting on data and data analysis is now also possible at regional and local levels. By December 2013, the testing will have been completed, pilot studies will have been carried out, training will be in full swing and the rollout of the system will have started. KAEFER's new high-quality Management Information System is ready to improve the efficiency of the finance and controlling departments worldwide.

Investing to increase competitiveness and quality

CHANGES AT KAEFER WANNER "It is essential that everyone inside KAEFER WANNER understands that things are changing, and that we as a company need to evolve in order to sustain the business," says assistant to the President, Alexandre Marconnet.

This very important concept means that the focus for KAEFER WANNER has to "shift from that of a profitable company to that of a high-performing company" now and in the future. This change in focus is evident in many new initiatives currently in operation, for example, in a major project called KWaizen, which aims to implement lean processes in operations.

Many other KAEFER businesses are discovering that lean is a major alteration to the company's thinking, philosophy and way of working. "It will change our culture," says Marconnet. With increasing economic pressures affecting much of the market, reasons Marconnet, "competitiveness is a clear priority and KAEFER WANNER must improve its productivity, its safety record and its quality."

The slogan for 2014 is "one team in action towards performance" and it is a way of communicating the imminent changes to the KAEFER WANNER way of operating. As well as investing in Lean Management, there are many other examples of high-profile investments, such as a brand new and ultra-modern nuclear workshop that is being built in Lille for reflective metal insulation (RMI), which will produce the best performing insulation solutions and

give quality levels an even greater boost.

Similarly, there will be new KAEFER WANNER premises in Bordeaux, which will enhance industrial performance and support the company's focus on expanding its nuclear business. "The new premises in Bordeaux," explains Marconnet, "are being built to support nuclear growth and to increase our production capacity. The current workshop is too small and the new premises will help deliver better quality products across the French nuclear market."

In addition, there is the merger of three branch offices into one agency in Mondragon, which is located in southern France near Avignon and aims to improve organisational performance. "A large nuclear maintenance contract called CIVAR will be under negotiation in 2015," says Marconnet, "and our organisation there was not performing so well because there were three small 'branch offices'. The objective is to merge the three centres into one large branch office with support services, organisation and management. This will create a better chance to compete for the nuclear contracts," he says.

It has become an absolute necessity to increase competitiveness to win contracts and this necessity is the driving force behind the multiple changes at KAEFER WANNER. With numerous investments, such as in Lean Management, in new workshops and offices, quality will rise, and the company will be better prepared to face the current and future economic challenges.

A lean project starts with a process analysis



Interview with Lean Maritime, Pedro Leao

Lean Maritime was KAEFER's management consulting partner in 2013 and had a special task during the implementation of lean pilot projects worldwide. In 2013, six pilot projects were conducted on different KAEFER construction sites in Germany, Norway, Saudi Arabia, Poland, Australia and Brazil. We spoke with Pedro Leao, Managing Director of Lean Maritime about his recent lean project experience at KAEFER:

You have been accompanying KAEFER on its Lean Journey for several months now. What are your experiences so far?

How did the lean pilots go at KAEFER?

Six pilots, six countries, different competences and many different experiences, but one common denominator, namely, the commitment of KAEFER'S management to make it happen. It has been a fantastic journey, with each pilot building on the results of the previous one. Together we were able to organize work more intelligently, improve tooling and material logistics. All of these points lead to productivity and quality increases while keeping high safety standards.

“We define waste as any activity that doesn't add value for the customer.”

Pedro Leao | Lean Maritime

Please describe what a lean project looks like?

A lean project starts with a process analysis. This analysis is conducted with the main protagonists, project manager, site manager, foremen, planner, etc. and also involves the field operators. The analysis focuses on identifying waste during the installation process that can be reduced or eliminated. We define waste as any activity that doesn't add value for the customer. Identified waste may include operator waiting times due to organisational aspects, waiting for materials, moving, searching or sorting of materials, re-work, excess inventory, etc.. The process analysis covers therefore the identification of all activities and always measures times, output units and quality.

After the process analysis, the team prioritizes the identified areas for improvement. Based on this prioritization we define what we call a Lean Workshop.

A Lean Workshop is basically a group of people on site who work on one or more issues for 1 to 2 weeks. This team is faced with a single question: What can we change in the current process to improve productivity? Can we eliminate or reduce identified waste? A new improved process is then tested, further optimized and documented to support its implementation. The results of the improvement are then measured.

With the improved process we usually achieve higher productivity. This should impact how the project is managed in the future. To this end, we are helping the Site Manager and the Supervisor establish a visual daily planning and performance management board, which allows them to steer the project productivity in a very transparent and sustainable way.

What is the role of the KAEFER project team and your role during a lean project?

While our focus is the reduction of waste, our priority is the assurance of customer satisfaction. The KAEFER project team is the expert on customer side. They know the customer, their needs and expectations. My team drives and moderates the analysis and workshops. At the same time, we bring methods and experience from other sites and industries to the table.

Did you identify best practices and optimization potential for KAEFER during the implementation of the different pilot projects?

We sure did. Through process improvements we were able to significantly increase productivity and reduce lead time, while ensuring a very high level of quality for the service provided to KAEFER'S customer. New standard ways of working were defined and implemented, daily routines were simplified and focused on value adding activities, on-the-job training took place and new tools were successfully tested. After five lean pilot projects I saw the tremendous benefit for KAEFER that saw the sharing of best practices on a global base and implementing operating standards.

What will be the critical success factors for KAEFER during our Lean Journey from your point of view?

Ironically or not, the strength of KAEFER will also be the biggest challenge for this cultural change journey. It is difficult to find a company people like to work for and KAEFER is one of them. The number of long-serving employees really reflects the high values of the company. We find these employees in mid-level management positions. They are very committed to their jobs and are confident that they are doing the best for their company. All the innovations and prizes won by the company support that feeling. When we challenge the way processes are run, we don't always encounter happy faces. There are natural human emotions.

I am very convinced that none of the competitors will be able to stop KAEFER if mid-level management opens up and starts driving the Lean Journey, questioning status quo and continuously seeking perfection in their areas of responsibility.

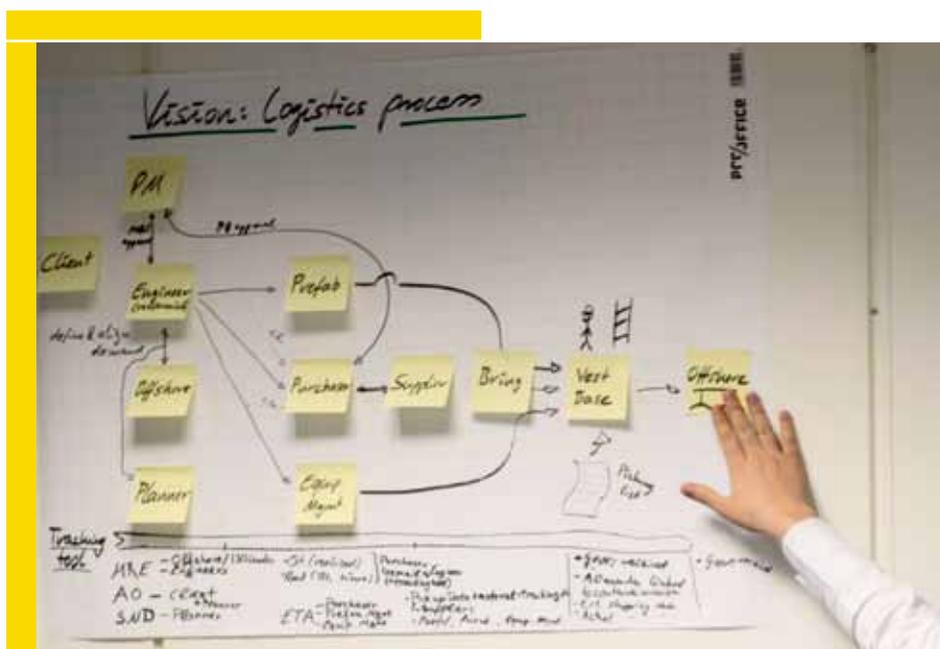
Leading the management organization on that Lean Journey is probably the biggest responsibility for KAEFER'S Group Management Committee in the next five years.

What are your recommendations to KAEFER for our Lean Journey?

There is great potential for KAEFER and its customers when adopting lean. It is by no means a quick and easy task to change the culture of such a big and successful company. Change can only be achieved with perseverance, focus and determination. But never lose sight of the fact that it is absolutely worth the effort. It is about the competitive strength and future of KAEFER.

START OF OUR LEAN JOURNEY: THE PILOT PROJECTS

LEAN PILOT PROJECTS Bård Bjørshol, Helmut Hecht, Rajan Nair and Zbigniew Zoń may work in contrasting locations and have different responsibilities, but if there is one thing they absolutely agree upon explains Hecht: “It is that the market is under pressure and that becoming leaner has always been on our minds.”



presented to regional and global management, with experts making various recommendations that would help improve efficiency. “We started implementing corrective actions in June and July 2013,” says Bjørshol. “And it was clear that new ways of thinking, organising and structuring work processes would pay off.”

Clearly, it will take more than one pilot project for KAEFER ENERGY to secure the benefits promised by lean in any meaningful way, and a number of key changes need to be made to fully incorporate the concept into everyday working processes. One of these changes is the appointment of local Lean Leaders, something that Bård Bjørshol, Helmut Hecht and Rajan Nair all consider indispensable to make lean a success.

That is why Helmut Hecht, Regional Director of Central Europe, sees considerable potential after his lean pilot projects in Germany. It took place in spring 2013; two weeks at the DOW chemical plant and one week at the workshop in Scheeßel. Hecht recognises that success can only be attained if KAEFER no longer needs to depend on outside lean consultants. “We need Lean Management training where local leaders are trained in lean right across Germany,” he says. “We plan to have a meeting with these Lean Leaders, together with those from Belgium, the Netherlands and Germany. We will appoint country Lean Leaders, with whom we can work together to find the best practices.”

Given that only a few people were up to speed at that time on the intricacies of lean, outside consultants had to do the assessments.

Once the aforementioned leaders are in place, Hecht would like to organise KAEFER businesses across Central Europe into lean clusters (chemical sites, refinery sites and power stations, for example), from which best-practice processes will be defined by experts.

In order to become more efficient, several lean pilot projects were initiated in 2013, with Bård Bjørshol’s KAEFER ENERGY in Norway, Helmut Hecht’s KAEFER Industrie Germany, Rajan Nair’s KAEFER Saudi Arabia and Zbigniew Zoń’s KAEFER Poland being presented with the opportunity to gain first-hand experience with the concept.

The Lean Journey started at KAEFER in April 2013 with a pilot project on the Åsgard B Gas Platform, where the company performs maintenance work. “The reason why we selected this particular platform,” explains President of KAEFER ENERGY Bård Bjørshol, “was because of its weak performance and commercial results. We wanted to improve both, and by placing extra focus on the platform, we thought we could increase its performance.”

The first step was to provide a positive mindset about the lean pilot among KAEFER ENERGY employees on the Norwegian platform. Once the benefits of lean were explained, the employees, trade union representatives and management were very eager to start. The next stage was a kick-off meeting which outlined the ins and outs of lean and how it works. This was

followed by an informative email about the project to all KAEFER ENERGY employees who would be on the platform during the pilot.

“And it was clear that new ways of thinking, organising and structuring work processes would pay off.”

Bård Bjørshol
Managing Director, KAEFER ENERGY

By early April, everything was in place and lean experts flew to the platform to carry out their lean analysis, researching how and where improvements to work processes could be carried out. In fact, a positive result was discovered immediately says Bjørshol: “Even before the pilot got fully underway, lean experts identified poor communication between the offshore and onshore organisation. As a result, we needed to rethink how to communicate better, something we could successfully analyse during the pilot.”

By the end of May 2013, this short, ground-breaking KAEFER lean pilot was

► “For example,” explains Hecht, “take a refinery in Bavaria, two in eastern Germany and two others in western Germany. We can analyse best-practice processes on each site, compare them with each other and finally decide which work best.”

The lean pilot project, overseen by KAEFER Saudi Arabia Managing Director, Rajan Nair, took place at the Rabigh Power Plant 2, which is about 180 km from Jeddah, on the west coast of Saudi Arabia. It is one of the biggest power projects KAEFER has executed in the Middle East, with an average of 650 people working there. The estimated total project is worth €1.6 billion. “The main reason for using this important project as a lean pilot was the volume and number of men working on the site,” explains Nair. “With various tough conditions on the site, the project team was struggling to achieve the target margin.” Similar to Bjørshol and the under-performing Åsgard B Gas Platform, Nair was delighted to use lean methods to discover improvements in processes that would make a real difference to KAEFER’s on-site performance. Nair also recognises full well how vital it was to have his team in a positive frame of mind about the lean pilot before it began: “To be honest, we did not expect any major changes in the operational performance, but the team was open to any good suggestions given by the experts, and finally implemented several major improvements on site.”

“No matter where you are in the KAEFER world, lean simply means people working in a smarter and more efficient way,”

Helmut Hecht
Managing Director, KAEFER Industrie Germany

In July, experts from Lean Maritime looked at the work on the pipeline and boiler at our site in Połaniec, Poland. Together with local management they soon learned that a recently implemented motivational system in Poland lends itself well to the philosophy of lean, based on its results. And Zbigniew Zoń confirmed that for the construction industry and other industries where there is usually no repetitive production, but where complex individual projects are executed, the principles of Lean Construction offer great potential for process improvements on KAEFER sites by focussing on improving areas such as design, planning, procurement, logistics and execution. The foreman working on the pipeline, Mr. Władysław Duda, who has over 36 years of experience at KAEFER, spoke positively about the project, and says that employee motivation has certainly increased.

After analysing the lean pilots in Norway, Germany, Saudi Arabia and Poland, it became clear that it was a good decision to carry out the projects in different regions and on different types of sites as Nair points out: “Lean needs to be altered to suit local conditions and local cultures, even if the overall concept is absolutely fine and does not have to be changed.” In addition to these four lean pilots, two more pilots were conducted in Australia and Brazil after the magazine’s

editorial closing date. As KAEFER prepares to launch its Lean Journey across the whole company in 2014, all four managers are now convinced that it will bring significant benefits. “No matter where you are in the KAEFER world, lean simply means people working in a smarter and more efficient way,” explains Hecht. “And that is exactly what will secure the success of the company in the long term.”



The lean pilot projects are well supported by the Board of Directors – Peter Hoedemaker in Poland.

Brigades, lean & welding push efficiency

QUALITY IN POLAND “We have a new motivational system that has been introduced to improve quality,” says Sylwia Krzesiak, Head of Communications for KAEFER SA, Poland.

Although the focus is geared to the whole company, Krzesiak knows it is very important to focus on the individual level and on individual attitudes. To do this, ‘brigades’ were created which are self-contained units of trained employees with complementary skills.

Each brigade consists of around eight people, who form a constant and stable team. Ideally the brigade should have one person who can drive a bus and one person trained in first aid. Of course, illnesses and holidays mean some changes, but the idea is that the core eight travel from job to job, working together. The idea is to create a feeling of camaraderie and a sense of pride in completing a job on time to the very highest standards. And before employees depart for sites, certificates in vocational training, courses of employment and language knowledge are checked.

In order to further gauge the company’s performance, Poland hosted a lean pilot project in July 2013 that focused on the Siarkopol pipeline and the Phoenix project at the Połaniec Power Plant where the boiler was worked on. By highlighting this quest for efficiency, the company has also created a dedicated welding department which organises welders and oversees documentation and certificates.

KAEFER Poland’s focus on quality is evident and it is leaving no stone unturned in its quest to take performance levels to new heights.

KAEFER EMPLOYEES ACT WITH THEIR HEARTS

AIDING GOOD CAUSES A key part of KAEFER's sustainable approach to business is creating events to raise awareness for worthwhile causes. In this vein, 2013 was no different, as thousands of KAEFER employees across the globe made important contributions to upholding the company's badge of social responsibility.



To raise money for microschoools in Ghana, the participating cars of the Go4School Rally were auctioned.

Successful KAEFER runners



In the United Arab Emirates, employees had initiated one-off campaigns for raising money in the past. But the topic of raising money for good causes on a more regular basis was specifically brought up in the 2012 KAEFER Employee Survey. Employees in the Mussafah office, the Ruwais Camp and other sites in the UAE can now find donation boxes where they can show their generosity at any time. By the beginning of 2013, employees had already donated thousands of euros to different causes, which are defined by a local committee. In Germany, a particularly captivating idea was an exhibition entitled Faces of Sustainability, which went on show at Wilhelm Wagenfeld Haus, a design museum in Bremen. Visitors gathered to see owners, managers and employees from 20 companies display their views of Sustainability, with one of KAEFER's contributions being pictures from its 2010 and 2012 photo competitions to highlight the company's multicultural workforce.

In South Africa, KAEFER supports another ongoing project, the Saving Grace organisation. Saving Grace runs a preschool and care centre which evolved from a nutritional scheme that started in 2005. With nutrition still at its core,

the centre provides 250 children with a least two meals every day. Principal and Manager Bongi Sibeko runs the organisation along with a team of female support staff. In 2013, KAEFER handed over three fridges, a playhouse and three stoves to Saving Grace.

Another African-based project was supported by KAEFER in the beginning of this year. Nils Ritterhoff, Regional Manager of the Mediterranean & South America, took part in the Go4School Rally which raises money for building microschoools in Ghana. During the two-week rally, the teams drove 3500 km from Senegal to Ghana via Guinea and the Ivory Coast. An auction at the end of the rally, where all cars were sold, was the main fundraising event.

The project was initiated by the Opportunity International Deutschland charity and any money raised is donated to 'edupreneurs' who build the schools as an alternative to public institutions. As the children are often unable to attend the latter, they benefit enormously from this new education opportunity.

A KAEFER-sponsored team of runners founded a particularly energetic method of raising money for the Saving Grace organisation: In

May 2013, 22 people took part in Bremen's first night run. KAEFER teams completed 5 km and 10 km races respectively, with the proceeds going to the Rainbow Fish Foundation in Bremen and through the KAEFER Foundation to Saving Grace. Similar efforts by employees in another company include a run in Bremen and a bike race by Norway's KAEFER ENERGY which also made major contributions to charities.

The KAEFER family extends far and wide, across all the continents. And from each one of them in 2013, KAEFER employees once again demonstrated how raising the profile of a good cause is at the heart of how they act.

KAEFER apprentices helping in the Valley of a Thousand Hills

DESTINATION SOUTH AFRICA With much anticipation, Marvin Cassens and Konstantin Rosenthal boarded a flight to South Africa in February 2013. Their final destination was the Valley of a Thousand Hills, just outside the eastern coastal city of Durban, located in the province of KwaZulu-Natal. The second-year apprentice insulation fitters spent four weeks here helping out at the iSithumba sportgarten, a special project initiated in 2008 by the Bremen sports club Sportgarten e.V. in Germany.

Cassens and Rosenthal, or “the Germans”, as they were affectionately called in South Africa, were the second pair of KAEFER apprentices to make the trip from Germany to the Valley of a Thousand Hills. It was the first long-distance trip abroad for both. Once there, their main task was to build metal tables for several nearby schools; and although the work preparation improved a lot with their expert help, the assistance provided by various KAEFER colleagues in Durban proved very important to finish the work in the allocated time. In addition, Cassens and Rosenthal helped organise numerous sporting events while also taking time to learn as much as they could about

local life during their stay with host families. With daily electricity and running water not guaranteed, it was a big leap from life in Bremen and Hamburg, but the two still look back fondly on the local Zulu food and recall the hospitality of everyone they met.

Marvin and Konstantin describe the trip as a life-changing experience. “They may live in poorer conditions, but it was humbling to see how happy and satisfied they are with their lives,” the two agreed. “It’s a mindset we’ve certainly learned from.”



A lot of work was finished while Marvin and Konstantin were at the iSithumba sportgarten near Durban thanks to the assistance provided by local KAEFER colleagues.

Adding greenery to a desert

UAE ENVIRONMENT DAY KAEFER LLC in the United Arab Emirates went green on World Environment Day on 5 June 2013. Under the motto “Plant Trees, Save Our Lives”, staff at KAEFER UAE’s facility in Mirfa turned a piece of sandy ground into a bed for 35 trees. Sanjay Kumar, Managing Director, ceremonially planted the first tree at the facility’s entrance. At the same time at head office in Abu Dhabi, staff was given indoor plants to make their homes greener. The desert state has some of the hottest summers in the world, with temperatures reaching 50 degrees Celsius. “Much of our workforce is out in the sun most days,” says Jinto Thomas, HR manager for the United Arab Emirates, “We wanted to provide shelter and contribute to a cooler, more sustainable UAE.”

Born in an Indian region called God’s Own Country which is known for its wide rivers and green valleys, Thomas sees sustainability as a personal responsibility. “Actions speak louder than words, and I thank everyone for instilling a ‘green heart’ in our younger generation.”

Recycling cork & cardboard

FRANCE & CHILE There is no country more appropriate than France, the traditional home of great wines and wine connoisseurs, to recycle corks from bottles of wine

KAEFER WANNER launched the initiative in 2011 alongside the not-for-profit organisation, The Chain of Cork, which collects and recycles corks, rather ingeniously using the material as insulation. The profits from the sale of the material go to the Assistance Association for Disabled, which uses the money for wheelchairs and other equipment.

Chile’s KAEFER SOUYET has a valuable recycling scheme of its own which involves boxes filled with paper and cardboard. The recycling scheme has raised money for the not-for-profit Fundación San José, which has aided more than 5,000 pregnant women, 1,700 children under the age of five who are waiting for adoption and delivered more than 1,000 babies.

THE MOVIEE SUCCESS

END OF MOVIEE Since its inception in 2009, MovIEE has been an important part of KAEFER's Corporate Responsibility & Sustainability in India. In September 2013, MovIEE was concluded with its success being a testament to cooperation between many organisations and individuals.

MovIEE, Moving India's SMEs towards Energy Efficiency, was a public-private partnership between KAEFER and GIZ (a German development organisation) and supported by India's Bureau of Energy Efficiency. The aim was to provide Industrial SMEs in selected regions of India with access to advisory services, training and financial products that enable them to implement energy efficient (EE) insulation measures. At the same time, the project aimed to use the success from EE interventions to raise the awareness of the SMEs for the competitive advantages of integrating sustainability measures into their operations.

Numerous pilot projects took the idea of energy efficiency around the country while more than 2,000 people received hands-on training on how a more economic and environmentally sound business can be forged with the aid of professional insulation.

Over the years, there has been a series of university lectures about the benefits of insulation, publications, presentations at conferences and many technical training and audit events. In



The KAEFER project manager explains energy efficiency by using the Energy Bus.

addition, a co-called Energy Bus travelled to numerous locations, including industrial sites, workshops and universities around India to pass on the MovIEE message. Organisers even pulled many of India's local bankers on side, with training on energy efficiency leaving them better prepared to advise SMEs in this field. With a

host of people across India now more knowledgeable about the benefits of good insulation, MovIEE has helped put Indian businesses on a more sustainable footing.

Renewed sustainability drive

ELECTRIC CARS Since June 2013, visitors to Bremen, Germany may have seen a few great-looking cars purring through the streets. They are not, however, petrol-guzzling jeeps or sleek sports cars, which typically leave a cloud of pollution in their wake. These cars are eco-friendly electric cars.

The cars, adorned with the KAEFER logo, are Renault Kangoos and they are used by KAEFER's Construction Division in Bremen and the Headquarter Services. They are part of the Electromobility Company Initiative which involves a test of electric vehicles in the Bremen/Oldenburg region and includes around 80 companies. Once the tests are complete, results will be analysed and help in the future optimisation of electric vehicle use across the region.

This has been explained as follows: "The Federal Government is promoting the demonstration of the extensive advantages of electric mobility networks in Germany. Promoted by the National Ministry for Traffic, Building and

City Development, Bremen and Oldenburg have been model test regions for this type of travel as part of the Electric Mobility Network in Model Regions since 2009. NOW GmbH (National Organisation for Hydrogen- and Fuel Technology) is coordinating the initiative. The leader of the Corporate Initiative Electromobility (UI EIMo) is Bremen's Nehlsen AG."

With France's KAEFER WANNER also starting a similar though separate initiative with the purchase of two electric cars; hopefully this will be the start of a renewed sustainability drive.

Both KAEFER's Construction Division and Headquarter Services are helping to eliminate the energy waste by driving eco-friendly electric cars.



First for fire protection

KAEFER'S CCCN Most clients historically have not associated KAEFER with fire protection systems despite its strong competence in passive fire protection, and so they have not generally turned to KAEFER for these solutions. This is changing, however, according to Hans Joachim Riekenberg, Senior Project Manager at KAEFER's Corporate Competence Centre Nuclear (CCCN).

Riekenberg explains that "Clients are now asking us for fire protection assistance and we want to offer the best available quality on the market." In order to facilitate this, CCCN has teamed up with KAEFER's Corporate Technology & Research department (CTR) to develop the company's own passive fire protection systems as well as approved systems from other suppliers. The systems meet pressure tightness and radiological shielding requirements, both of which are important requirements in nuclear power plants says Riekenberg.

The new services include passive fire protection measures covering cable penetration, pipe penetration, special mortar, joint sealing as well as electrical cable and cable tray protection. Next year, KAEFER will supply Finland's Olkiluoto 3 Nuclear Power Plant with systems that include fire protection worth several million euros.

Riekenberg sees plenty of scope for further extensive global opportunities, explaining that it is "a really big market, particularly in the Far East and Europe". The target, therefore, is for KAEFER to be viewed as being just as strong in fire protection as it is in the insulation field. "We want customers to think about KAEFER first when they think of fire protection."



Designing the future

Deutsche CSP

Deutsches Industriennetzwerk Concentrated Solar Power

German companies and R&D institutions have been at the forefront of developments in the concentrated solar power industry for decades, but until now there has never been an umbrella association to promote the interests of the business and the Made in Germany technologies as a whole.

The German Industrial Association for Concentrated Solar Power, "Deutsche CSP", which was originally launched as an Industrial Network in June 2012 and officially founded as an Association in September 2013, represents more than 35 member companies and institutions, such as Schott Solar, E.ON, DLR and indeed KAEFER as a

founding and steering committee member.

Serge Yammine, Manager of the Corporate Competence Center Renewable Energies, points out that the need for such a body was pressing, because "though a significant part of the technology is developed by German companies and partly financed by Germany, the market is in the hands of non-German EPC & Technology Provider companies."

With the help of positive publicity, lobbying and inter-institutional alliances, the Deutsche CSP is aiming to promote the "Made in Germany" CSP technologies and increase the market share across the world, "whether in India, Australia, the Middle East, North and South Africa, South America or across the US," says Serge Yammine.



CHANGING THE CSP MARKET

THEMIS TOWER, PYRENEES The figures speak for themselves: €1.7 million invested by Germany's Federal Environment Ministry and at least 50 percent of the final total came from the Brazilian National Development Bank.

Clearly, the research and development of cutting-edge technology in the form of high-temperature concentrated solar-power towers is one of the most important future renewable energy markets.

"Market trends in concentrated solar power (CSP)," says Serge Yammine, KAEFER's Manager for the Corporate Competence Centre Renewable Energies, "are nowadays geared predominantly to solar towers, including the decentralised power and heat production which can be additionally used for the desalination of seawater or refrigeration by absorption coolers." It is in exactly this field that KAEFER has been developing technology and testing various models of high-temperature insulation solutions in cooperation with the Deutsche Gesellschaft für Luft- und Raumfahrttechnik (DLR). An extraordinary test took place in February 2013 at the Themis Tower, in Font Romeu-Odeillo, in the majestic setting of the French Pyrenees. Alongside colleagues from France's National Centre for Scientific Research (CNRS), the challenge was to conduct several tests on the high-temperature insulation solutions on a high-temperature receiver provided by the CNRS and a micro-turbine set-up provided by KAEFER.

On top of the 92 metre Themis Tower, these set-ups were installed and tested by

concentrating the sun rays via heliostat mirrors – with temperatures reaching up to 1200°C – and by accumulating a high density of concentrated sun light. "Commercial high-temperature solar receivers are rare for these kinds of CSP Gas Turbine Solutions," says Yammine, "and the future of concentrated solar-power technologies depends on the increase of power plant efficiency and the decrease in energy costs." This means KAEFER and its partners have a head start in terms of R&D and a higher market potential. Moreover, says Yammine, "KAEFER, is also heavily involved in the construction of the accompanying power plants in Brazil." Yammine adds that "with an estimated 1.6 billion people across the world mostly living in sun belt regions without any access to electricity and proper energy, this project is not just about markets and business, but also about providing the opportunity to deliver renewable and sustainable energy for a better chance to fight poverty."

Grounded in a cutting-edge, decentralized CSP R&D project, funded by Germany and Brazil, the multinational SMILE project has come up with an advanced, high-temperature, concentrated solar-power receiver and turbine system that are ready to change the market and the future of CSP.



Mattress insulation has extra spring

CCCM FACILITY HUNGARY Clients all over the world have been choosing KAEFER's tailor-made mattress insulation for their turbines for more than two decades now because of their high performance and the fact they are easy to remove, reuse and replace.

To maintain its lead in the market, KAEFER is pursuing ever-higher technical, quality and production standards together with even shorter lead times. In order to continuously realise these improvements, the Corporate Competence Center for Mattresses (CCCM) decided to open a new facility in Hungary which is run according to western European standards and controlled by KAEFER's Bremen-based engineering and design departments.

Having an EU-based manufacturing workshop gives KAEFER a competitive position in Western Europe and beyond thanks to the speed at which the centre processes and

dispatches orders for rapid daily deliveries. At the facility each insulation mattress is designed individually and supplied pre-cut to eliminate manufacturing errors and to meet national and international quality standards. As well as turbine insulation, the facility supplies mattresses for products including elbows, flanges, valves and armatures.

The CCCM offers extensive consulting, engineering and maintenance support with dedicated experts who are able to help clients at any stage in any project worldwide. This ensures high and consistent quality standards plus project management that meets European standards.

Leading original equipment manufacturers such as Siemens have already audited the workshop and given it "preferred supplier" status, adding an extra spring to the efforts of winning new mattress customers.



New CCCM facility based in Hungary helps maintain KAEFER's lead in the mattress insulation market.

Remote-control equipment is good for your health

NORWAY OIL & GAS For the last few years, KAEFER ENERGY has used remote-controlled Brokk 50 machines to demolish old bathroom floors in offshore living quarters for the energy group Statoil. Developed in the 1970s, the Swedish machines look like tiny excavators and are operated electro-hydraulically.

The oil and gas industry has lagged behind other industries in the use of such remote-controlled machines. "The main focus has been on safety rather than health," says Per Steinkopf, KAEFER ENERGY's Vice President of HSEQ and Risk, who is also the Project Manager of remote-controlled work.

He is on a mission to promote the health and economic advantages of remote-controlled operations. Chiselling, grinding, sawing, water jetting and grit blasting can all be remotely controlled. This means weight, torque and vibrations are not transferred to the human body, and exposure to noise and harmful substances is limited. Remote machinery was used in the tsunami-devastated Fukushima nuclear plant, for example, with operators located in a container located two kilometres away. There are also cost savings as the machines work continuously.

When the Norwegian Oil and Gas Association announced its "Noise Project" in 2012 to promote noise reduction in oil and gas facilities, KAEFER ENERGY joined. The association is the professional body for companies engaged in exploration and oil production on the Norwegian Continental Shelf. The project allowed KAEFER

ENERGY to demonstrate remote-controlled operations. "The Norwegian Labour Inspection Authority and the Petroleum Safety Authority Norway embraced the strategy and are also putting pressure on oil firms," says Steinkopf. To further strengthen its case, KAEFER ENERGY also invited its two biggest competitors to join in. In an event held in February 2013, KAEFER ENERGY demonstrated the use of Brokk 50 machines to prepare surfaces with ultra-high pressure water. This led to invitations to meet important people in the industry for further discussions. Next, KAEFER ENERGY applied for

a long-term test period in the North Sea in order to verify the capabilities of the system under extreme conditions.

KAEFER ENERGY promotes remote-controlled operations as part of the "Noise Project" which was launched by the Norwegian Oil and Gas Association.



SPRAY FOAM AND RUNNING REPAIRS

CRYOGENIC SPRAY FOAM SYSTEMS As an expert in the field, KAEFER's Corporate Competence Center Liquid Gases (CCCL) continues to expand its research into spray foam insulation for use in cryogenic tanks.

There is a growing demand from shipyards and other customers for cryogenic use of spray foam systems. In order to meet this demand, a KAEFER team at CCCL has recently been testing a polyurethane spray foam insulation on a scale mock-up tank. Alexander Boguhn, who led the project, explains how it arose from marketplace requests: "Spray foam systems are said to be faster to build and have better insulation and lower heat conductivity. Customers asked us if we could offer these to them as well as our panel-based systems. So, we started to develop this product together with the spray foam manufacturer, BASF." The team completed the testing in late 2012 with a small mock-up tank in Bremen, which now serves as the reference project. Boguhn says, "We can show we have the experience, the machines and can produce these systems." It is now ready to offer to customers and will be able to serve a global market, especially in LPG, LEG and LNG.

Spray foam, however, will not replace panel-based systems, says Boguhn, but rather offer a complementary alternative: "The spray foam system needs less prefabrication, with only the machines and spray materials needed to produce insulation on site. With the panel system, you have to design, prefabricate and assemble the panels and then install them. "Although we have worked hard to optimise our panel system so that production times are minimised, in some cases a spray foam system could be a little faster in terms of the entire production and installation process. In contrast, the panel system is a little bit cheaper and its quality performance can be a bit better."

Now, Boguhn's team at CCCL is working on further advancing the spray foam system. "Together with BASF, we are developing a new foam



material so we can further optimise it. It's a process of continuous improvement."

In a separate project, another team at CCCL is working on a method to repair and exchange the insulation on cryogenic tanks under operational conditions. The project came about because ageing cryogenic spray foam systems show distinct defects and the plants in question exhibit reduced performance. In order to avoid expensive performance losses or shutdown costs, CCCL is developing a service to repair damaged areas or even exchange entire tank surfaces while plants stay

in operation.

Additionally, KAEFER is currently working on developing new solutions to running repairs for a client's gas plant whose storage tanks have been in operation for about 26 years. "A CCCL team studied the tanks and found some defects to the double-hull tanks," said Bernd Glißmann, who led the project. "We found that water was collecting at the bottom of the double hull, owing to defects in the insulation and its overall performance was decreasing over time." Challenges include trying to overcome the limited access to the tanks and working out the best methods to exchange the insulation while allowing the tanks to continue to be used.

The team and the client are currently exploring the best way to repair the damaged areas and restore the performance of the tanks. "We are seeking ways to help the client avoid an expensive shut down by keeping the tanks in operation throughout the insulation exchange process," says Glißmann. With such expertise and determination, the team has high hopes: The ultimate aim is for KAEFER to go on and develop comparable solutions for a range of other clients.

Corrosion under insulation

DURBAN FIGHTING RUST SAPREF in Durban is the largest crude oil refinery in South Africa, and it has the statistics to match: It produces enough fuel to take 800,000 cars around the world and its 160,000 km of pipes could wrap around the globe four times. This has kept KAEFER Thermal Contracting Services non-stop busy; it has been carrying out corrosion under insulation (CUI) projects since its first contract with SAPREF in 2001.

The fight against CUI has been fought for many years in the petrochemical industry and the processes of corrosion are well understood. However, CUI often goes undetected until the damage is significant, leading to catastrophic failures, such as to equipment operating under high pressure.

"KAEFER's years of international experience with clients like SAPREF in the process industry shows that only a consistent CUI prevention strategy provides long-term, reliable safety," says Thomas Rehberg, Head of Surface Protection at KAEFER Isoliertechnik in Bremen.

Moisture can be prevented from entering the insulation material and steel surface through the correct selection and design of insulation material, installing a cover above the insulated item and making sure difficult areas, such as flanges and taps, are well insulated. However, water-free insulation is not practical in aging facilities.

KAEFER offers a choice of solutions: stainless steel plus TSA or Al foil wrapping; TSA on carbon steel, which provide 25–30 years of no maintenance and inspections; or organic coatings on carbon steel, which provide protection for 5–13 years. KAEFER has its own standard for CUI coating systems based on best practice in the field and it also suggests non-destructive examinations to predict remaining life.

Prevention, however, is better than cure. KAEFER recommends the following: Don't walk on insulation covers, create access roads during repair work to minimize damage to the insulation and make sure on-site coating repair complies with international standards. And most importantly, if the insulation cover is damaged, repair it immediately.



Total access company

ROPES SPECIALISTS Knowing that Dow Chemical is always looking to its partners for innovative, safe and cost-effective solutions, KAEFER Netherlands started looking at possibilities to improve the ways it offers access for maintenance work.

Take cooling towers, for example. Costs are high to build scaffolding simply to carry out inspections explains Business Unit Manager for the southwest of the Netherlands, Jan Buys, so KAEFER's team at Dow tested rope access as a possible solution for pre-shutdown inspections.

KAEFER successfully completed the first jobs at lower cost and with fewer man-hours. "We saved a lot of money for the client and demonstrated our philosophy that access problems are not 'your problem' (the client), but 'our problem'," Buys says.

"Scaffolding is often the first answer but it's not necessarily the best or cheapest. We are working towards becoming a total access company. Whatever the job, we will find the best access solution."

KAEFER's new expertise in rope access makes it a much more flexible and competitive partner for clients that need their contractors to work at heights. Its unique advantage is that it has trained insulation specialists in rope access work, unlike most rope-work companies that are not insulation specialists.

SKY-HIGH SCAFFOLDING

DOW CHEMICAL IBÉRICA No accidents, hundreds of workers and exemplary project management, not to mention a record scaffold height. KAEFER Servicios Industriales in Spain has plenty to be pleased about when reflecting on the performance of its team in northern Tarragona.

In June and July of 2012, Dow Chemical Ibérica carried out the technical shutdown of its site in Tarragona. The project included maintenance works, inspections and cleaning operations across the site for the 45-day shutdown, which involved 65 service companies and a total of 2,200 people working 880,000 hours.

KAEFER Servicios Industriales made a significant contribution in scaffolding assembly and disassembly, in surface protection and insulation works. Asier Calonge, KAEFER Servicios Industriales' Deputy Managing Director, commented that, "The shutdown required the intense dedication of our engineers and technicians, from the preparation of the project to the bid submission and adjudication right up to implementation. Such dedication enabled us to successfully take on the huge amount of work, which extended far beyond initial technical and HR expectations as well as beyond the volume of the work to be performed."

"At 116 m, it was the highest scaffolding tower ever built in Europe at an industrial facility."

Asier Calonge

Deputy Managing Director KAEFER Servicios Industriales

KAEFER employees worked 190,000 hours and with as many as 220 workers spread over the three activities. The whole event was topped off by zero accidents.

Calonge says that quality was of paramount importance to the team, and says, "We delivered the complete insulation solutions of insulation, scaffolding and painting in a professional manner. In addition, we contributed to our client's success by improving the project's management, coordination and planning."

One of the most impressive milestones of an already exceptional project, however, was "the scaffolding, painting and insulation of column C-5602," explains Calonge. "At 116 m, it was the highest scaffolding tower ever built in Europe at an industrial facility."

Straighter scaffold surfaces

DOW CHEMICAL INNOVATION In an industrial environment like a chemical plant, with complex structures, obstacles are an unavoidable reality when building scaffold flooring, which can sometimes lead to trip hazards.

"On many industrial sites there are pipes, instruments and lots of other obstacles, which means it's not always possible to build flat, straight scaffold surfaces," says Jan Buys of KAEFER Netherlands.

One client, Dow Chemical, was eager to find solutions that would make scaffold flooring safer. The system that KAEFER helped develop uses small metal plates to cover gaps and edges around obstacles, rather than building up uneven layers of longer iron scaffold boarding.

"It's like working with a mosaic," says Buys. "The system is much more flexible, there's not

fire risk you would have with wooden boards and the trip hazard has been removed. It took some time to get used to it at first. The scaffolders have to think more carefully about how to put the sections together; it's a bit more like a puzzle, but they are used to working with it now and they are convinced it's a better system."

Now that the system is tried and tested, KAEFER is offering it to other clients and it is already in use in other contracts says Buys.

Introducing the system also earned KAEFER a safety award from Dow and a perfect 100% in its innovation rating. "It's a good feeling to work with a client when they have an issue, to talk to the safety people and the scaffolders and come up with a solution that everyone is happy with."

116 m





KAEFER WANNER is part of the largest maintenance project carried out in the French nuclear industry at the George Bess II Plant.

Big contracts, high quality

NUCLEAR FRANCE Due to its technical know-how and HR management, KAEFER WANNER has become a key partner in the French nuclear market. Based on key projects that built its reputation, such as steam generator replacements and primary circuit high-pressure tests, KAEFER WANNER is taking on other large projects, such as the passive fire protection project at the George Besse II (GBII) facility.

Based on the initial success in 2004 that involved an equivalent scope of work, EDF renewed its trust in the consortium of AREVA NP (authorised representative of the consortium), EIFFAGE Construction Metallique, ORYS and KAEFER WANNER to carry out the largest maintenance project to date in the French nuclear industry.

This turnkey operation replaces nuclear power plant steam generators whose performance has decreased over time. Activities entrusted to KAEFER WANNER include insulation replacement, scaffolding and radiation shielding of equipment.

A first contract worth €32 million was signed in 2010 for works planned for the period between 2012 and 2016. Led by the Large Projects department based in Paris, the work requires interventions involving in excess of 150 highly qualified personnel for engineering, manufacturing and on-site assembly.

A second contract worth €60 million was signed in August 2012 to perform the same kind of operation on six 1300 MW reactors. This first-of-a-kind operation will begin on PALUEL Unit 2 in 2015.

Additionally, an €8.5 million primary circuit high-pressure test contract was signed in 2012 between EDF and KAEFER WANNER to perform insulation work on the primary circuit of about 15 nuclear power plant units between 2013 and 2018. Every 10 years, these plants are shut down to perform a full maintenance review or periodic safety review.

One major step in this programme is the performance of the high-pressure test of the primary circuit. Before the pressure test, KAEFER has to dismantle the insulation of mechanical equipment and pipes of the primary circuit and install scaffolding for the insulation work and the Nuclear Safety Authorities inspections.

In early 2010, KAEFER WANNER Southeast Region developed and implemented its own technical solution in this area as part of its contract for passive fire protection on the construction of the North Unit of the GBII plant. GBII is located on the Tricastin site (Drôme) and is a uranium enrichment plant (dedicated to civil purposes) The construction is financed entirely by AREVA and the total cost of the project is €3 billion.

Operations Coordinator, Matthieu Blanquet says “KAEFER WANNER can be proud of its exceptional performance on such high-profile projects. Nevertheless, we must not rest on our laurels: Bigger challenges are expected in the French nuclear market in the upcoming months.”



Rare safety recognition

3,350,000

hours without any LTIs (Lost-Time Injury)

CHIHUAHUA, NORTHERN MEXICO The importance KAEFER places on safety can be gauged from the amount of missives sent out by the safety team, the number of initiatives undertaken and the great safety performances on numerous KAEFER sites across the world. A prime example of many good performances in recent years is the 3.35 million man-hours recorded at the Thermoelectric CCC Norte II power plant in Chihuahua, northern Mexico, in 2012 where work involved hot insulation, scaffolding and painting. For its great safety record, KAEFER Aislamientos received important recognition from the client, Samsung, and the customer, the Federal Electricity Commission. “Few companies participating in the power plant project received this recognition, and KAEFER Aislamientos can be proud of this great achievement,” explains a proud KAEFER Head of Corporate Health & Safety, Phillipa Recchia.

SHARING EXPERTISE

COMBINED EXPERTS' MEETING Participants benefit from interdisciplinary knowledge exchange during two meetings that were held in South Africa and France.

The end of 2012 saw a novelty for KAEFER. On 28 October, around 40 employees from around the world gathered in South Africa for the company's first Combined Experts Meeting, a week-long forum for sharing valuable information and experience among different entities in KAEFER. Another meeting followed in September 2013, this time in France, in Étretat, Normandy.

"Expert meetings at KAEFER are nothing new," explains Marin Schouten, Head of Corporate Technology & Research, who chaired the meetings. "Until now, however, these were confined to individual areas of expertise. In South Africa we brought together representatives from surface protection, scaffolding, health, safety, environment and quality to exchange know-how among different sectors."

A number of technical discussions were on the agenda as well as presentations by suppliers. There were also visits to the MEDUPI Power Station and SAPREF Refinery where KAEFER South Africa has a site maintenance contract for all insulation, scaffolding and painting requirements. "KAEFER is a unique organisation and as we continue to grow, it's vital that we learn from experiences across the world," says Schouten.

"Feedback was positive, with attendees able to share technical knowledge, see and test new equipment and discuss challenges and solutions." The second meeting had a different agenda and saw HSEQ experts attending a course of investigation training that lasted two full days. Then scaffold experts joined for another two days and took part in combined and separate technical meetings. There was also an afternoon visit to the nearby KAEFER WANNER site, Lubrizol, where KAEFER operated a successful lean project called KWaizen, which improved the efficiency of scaffolding operations.

As with the first meeting says Schouten, who was planning a similar event in Abu Dhabi over subsequent months, "When participants leave, they are then able to take the acquired knowledge back to their own sectors and regions, which can then bring additional advantages to our customers around the world."



Participants of the Combined Experts Meeting 2013 in Étretat, France

Goals & incentives push safety

1,500,000

hours without any LTIs (Lost-Time Injury)

ESKOM'S 1.5 MILLION It seems like a long road to get to 1.5 million man-hours without an LTI, but by building their safety track record year by year, Elliot Mhlongo, Site Manager, and Johann Torre, Eskom Maintenance Manager, steered KAEFER workers in South Africa to this achievement.

Success was achieved says Mhlongo by "having a safety first focus, by setting achievable safety goals and by offering incentives to the workers".

Team effort behind 1 million

1,000,000

hours without any LTIs (Lost-Time Injury)

SAPREF LTI FREE Even with exacting deadlines and working at heights, by mid-2013 KAEFER employees at Durban's SAPREF crude oil refinery had completed 1 million man-hours without an LTI.

At the height of the maintenance turnaround, KAEFER had 450 people working at the SAPREF Refinery in South Africa. "This achievement was possible only through a team that is committed to safety and making a joint effort," said Operations Director Rob Ross.

THE MIDDLE EAST'S BIGGEST REFINERY

KAEFER SAUDI ARABIA Managing Director Rajan Nair on a 400,000-barrel-a-day refinery in Jubail, eastern Saudi Arabia.



SAUDI ARABIA



Official name: Kingdom of Saudi Arabia

Size: 2,400,000 km²

Population: 29 million (2012)

Official language: Arabic

Capital and largest city: Riyadh

Currency: Saudi riyal (SR)

Country calling code: +966

KAEFER in Saudi Arabia

Company name: KAEFER Saudi Arabia Ltd.

Established: 1993

Location: Al Khobar

Division/Area: Middle East (ME) & India (IN)

Fields of activity: Insulation, scaffolding, painting, fire protection and refractory

What does SATORP mean?

Saudi Aramco TOTAL Refining and Petrochemical Company (SATORP) is a joint venture between Saudi Aramco and TOTAL SA. Capacity-wise, it is second only to the Ras Tanura refinery in the country. The Jubail Refinery will produce a high proportion of white products, such as diesel, gasoline, LPG, petrochemicals and jet fuels from low-cost, heavy crude. It will be the first refinery in Saudi Arabia and the Middle East's biggest to produce coke.

KAEFER's task was a €26 million project to insulate 312,000 m² of piping, to insulate equipment, coker drums and tanks as well to provide scaffolding, painting and fireproofing services. A highlight was the six coker drums, the first ever installed in Saudi Arabia. KAEFER had technical experts from Germany to assist the local team finalise the required specification and installation method.

The overall project was segregated into 13 packages, seven of which were managed by KAEFER, with most completed in about 30 months and employing about 1,600 men.

Why did KAEFER win the contract?

Coker drum work is not easy, and there was no other company in the region with the experience and skills we have. KAEFER had executed similar jobs in the past, and we were the best company to take it on.

KAEFER worked on this project with Nesma, which is also the general contractor on the project under Chiyoda-Samsung JV, the EPC contractor. The relationship with Nesma Electric goes back some time as we have already worked well together on many projects.

What were the main challenges?

There were frequent extensions in release schedules, which disturbed our overall resource planning on many occasions. Frequent interaction with the client and inclusion of an additional cost component for idle resources made the client realise the adverse impact and take effective measures in reducing such instances. In the end it worked, and the project was a great success.

Huge demand for KAEFER services

EXPANSION IN ALGERIA The economy in Algeria has been growing steadily and some industries are booming, including automotive, manufacturing, pharmaceutical, electronics and food processing. On the back of this, KAEFER's services are much in demand.

In fact, meeting demand is becoming a challenge as Romain Douchet, Managing Director of KAEFER Eurl, Algeria explains: "Growth is exponential. Oil revenues are allowing big investments in infrastructure. The country is developing in so many different areas and companies need fast execution of our services. They are also increasingly requiring us to have regional branches to improve responsiveness."

KAEFER Algeria has carried out extensive, large-scale maintenance projects for several big multinationals, such as Lafarge, Heineken and GE. The work included insulation, scaffolding and rope access. Linde Gas, meanwhile, recently commissioned KAEFER to take on the insulation and scaffolding work on pipes and storage tanks at its Reghaia site.

KAEFER won the contract thanks to its ability to respond quickly and to use materials its competitors do not specialise in says Douchet. "We had to respond immediately and provide our customer with a complete solution for cold, heat and acoustic insulation. We used several types of material, such as foam glass, PIR, Armasound, perlite and mineral wool."

Algerian clients chose KAEFER as we can meet the high-security, operational and quality standards said Douchet. "Our customers need a reliable partner that can help them in their maintenance and new build projects." Consequently, KAEFER Algeria constantly seeks to identify innovative ways to complete work in order to meet the clients' high expectations.

"Our customers appreciate our quick response times and our almost immediate availability. We do our best to meet their technical and commercial requirements. The quality and safety of our work makes us stand out from our competitors. Nevertheless, we have to remain alert and vigilant every day to improve and advance our business."

Looking ahead with enthusiasm

KAEFER IN MOROCCO A milestone in KAEFER's expansion was celebrated at the end of 2012 as the company officially started business activity in Morocco. Overseen by KAEFER Servicios Industriales Spain, the first project was the supply and installation of scaffolding at the chemical complex in Jorf Lasfar OCP.

Since the launch, "activity has developed satisfactorily", says Asier Calonge, Deputy Managing Director at KAEFER Servicios Industriales. "We are carrying out high-quality, professional work with a focus on ensuring that safety is an absolute priority."

Following the successful start, demand for KAEFER services started to multiply. As a result

there were 10 more new construction projects on the books by the middle of 2013. Clients include TEKFEN, INTECSA, ALSTOM, EMMSA and DAEWOO. Furthermore, a major increase in scaffolding activities and the start of two new activities, namely, thermal insulation and surface protection were the highlights in 2013.

Calonge is very pleased with the progress of KAEFER in Morocco, and says that "without a doubt, the completed work and the prospect of new projects indicate that we can look to the future here with great enthusiasm."

SHORT NEWS

Potable water for Saudi Arabia

RAS AL KHAIR "It will be the largest desalination plant of its kind in the world, capable of serving about 3.5 million people," says KAEFER Saudi Arabia General Manager, Divakaran Kollon, about the Saline Water Conversion Corporation's (SWCC) Ras Al Khair desalination facility.

"KAEFER Saudi Arabia's role was to provide insulation and scaffolding for the whole plant," says Kollon. And after three years of hard work, the desalination plant, located in the Ras Al Khair industrial city about 75km northwest Jubail, in Eastern Saudi Arabia, due to be opened in early 2014. "It will have a capacity to produce 728 million litres per day," he explains. This is enough to supply 3.2 million households with water.

Removing asbestos according to European standards

TECHNIP'S ALGIERS REFINERY In the autumn of 2013, KAEFER Algeria began asbestos securing work for TECHNIP's Algiers refinery to ensure that its workers are not exposed to asbestos. In preparation KAEFER performed core drilling on asbestos insulated pipes to assess its thickness. The asbestos removal then took place during the refinery shutdown in October. "Asbestos operations are very new in Algeria, and KAEFER performs the removal work in accordance with all European standards," said Romain Douchet, Managing Director of KAEFER Algeria.

JOINT APPROACH PAYS OFF

SOUTH AMERICAN GATHERING Each year KAEFER's South American subsidiaries convene to learn from each other and most importantly to work together to find ways to serve customers better and identify new regional work opportunities and synergies.

This year senior managers from KAEFER SOUYET, KAEFER ISOBRAZIL and KAEFER KOSTEC, as well as colleagues from KAEFER Servicios Industriales from Spain gathered in Rio de Janeiro. They held workshops on quality, safety, project management, finance, technology and sales and used the resulting action plans to improve quality and efficiency and share best practices.

"Taking a joint approach like this will help us serve customers operating in several countries and can create more value than if countries operate independently," said Regional Operating Officer for KAEFER in South America, Pedro Vazquez.

A series of regional initiatives focusing on quality are underway as well. All companies in the region are pursuing the KAEFER quality campaign, which includes the KAEFER Excellence in Estimation Program (KEEP), due to launch in 2014. Health & Safety has been another focus: KAEFER's Corporate Health & Safety department now assesses all countries in the region annually, while a HSE forum brings together HS officers to increase normalisation and share best practices. Technical quality is also an important means of improving customer satisfaction, increasing productivity and cutting costs. With complete insulation solutions in mind, KAEFER is developing a network of disciplinary experts. It includes training by and regular contact with experts in Spain, France and at the Corporate Technology and Research department (CTR) in Germany.

For two years, KAEFER's companies in South American region have also been working together to improve their processes and staff skills. Their aim is to improve the service they give to their customers and to promote safer and better working practices. Pursuing excellence in project management is an important part of this drive and KAEFER employees from Chile, Brazil and Peru are aiming to gain project management qualifications. Two employees in the region have earned Project Management Professional (PMP) accreditation so far and the objective is to have at least two colleagues PMP certified in each country by 2015.

At the same time, they began working to improve their project lifecycle processes, which they will further develop in 2014 with a focus on estimation and planning skills. Introducing these initiatives is already having positive benefits said Vazquez. "We have seen our efficiency, productivity and overall quality increase. Some customers have seen this development and felt satisfied and confident enough to award us larger scopes under very challenging schedules."

The drive to improve project management is also bearing fruit added Vazquez. "Project management can seem like quite an intangible discipline at times, so it is very encouraging to see improvements in soft and hard indicators, including achieving the objectives our customers set for their projects."

Great prospects in a new market

FROM MEXICO TO CUBA Building on recent successes at home, KAEFER Mexico is now delivering its first contract in Cuba. This major contract is set to supply injected polyurethane, equipment and supervision for the first 7 km of 42 km of an underground piping insulation project in Matanzas located around 100 km from La Havana.

Michael Woloszyn, Managing Director of KAEFER Aislamientos (Mexico), says getting approved insulation provider status with CUPET (Cuban Petroleum) took time but leaves KAEFER in a good position to gain further work. "The prospects are great," he says. "KAEFER Mexico seems to be a front-runner for the remaining scope at Matanzas. Since we have now established personal contact with CUPET, we expect to see this challenging but most certainly interesting market grow for KAEFER Mexico."

Additionally, KAEFER Mexico is well situated to win work with other clients because it is now an approved service provider in Cuba for material supply and installation says Woloszyn. "We have recently submitted a number of other offers for work in Cuba since being authorised to carry out our business activities. We expect to grow our market share considerably in the years to come."



KAEFER Mexico delivers its first contract in Cuba supplying injected polyurethane, equipment and supervision for an underground insulation project.

Bavaria celebrates from Penzburg to Ingolstadt

KAEFER IN BAVARIA There has been much to celebrate of late at KAEFER in southern Germany. The KAEFER presence in Bavaria stretches back 50 years, a milestone which was marked in 2013. This same year also saw the completion of a major project with the pharmaceutical company, Roche.

KAEFER Industrie, based in Ingolstadt, took on an unusual project of insulating an enormous pharmaceutical and medicine storage building for Roche, based in Penzburg in the German lake district at the foot of the Bavarian Alps. KAEFER Industrie's regional manager for Bavaria, Friedrich Hofmann, explains that, "due to its size, it was not the work we normally do, even though it was for a long-standing and trusted customer."

He adds that the big difference to the usual projects KAEFER does for Roche was the scale of the work. "We had quite a short time frame to do a lot of work, and the potential for risks was high. We had to take several steps to prepare our workers and ensure that there would be no accidents because they were working at heights up to 45 m inside a building."

In addition to the good news about successfully completing the Roche project on time, KAEFER in Bavaria was eager to arrange a fitting party to mark its half a century in the region. Instead of holding the party in the state capital of Munich, organizers decided to hold it in Ingolstadt, "where KAEFER's Bavaria story started 50 years ago". In total there were around 130 guests who showed up at Bavaria's traditional meeting spot, the beer garden. "The sun was shining and everyone had a marvellous time," says Hofmann.

Scaffolding in London's underground



LONDON'S CROSSRAIL Located in central London and with a total project value of a staggering €17.5 billion, the British Crossrail project aims to ease traffic congestion in one of the world's most notorious transport hotspots.

With nine new stations and 21 km of new tunnels, Crossrail is said to be Europe's largest construction project. KAEFER C&D's role is to supply scaffolding services expertise as Simon Hudson, Sales and Marketing Manager explains. "This is a challenging working environment for KAEFER C&D's access team but our contribution perfectly highlights the range of expertise and skills we have at our disposal," he says.

Fortunately, the job is fully supported by the in-house SHEQ team and has been made easier by utilising KAEFER C&D's dedicated design scaffolding team, who provides the calculations and drawings for scaffolding in any given situation.

"We are working at the heart of one of the busiest and most populated cities in the world," explains Hudson, "amidst all sorts of associated challenges and dangers like ongoing tunnelling operations. The logistics of delivering scaffolding and related equipment to congested locations presents our team with a complex and demanding programme of works."

The project has been a real test of KAEFER C&D's capabilities, "but its success is a testament to how well we manage contracts in unusual and challenging environments," says Hudson.

TIPCHECK

KAEFER is a pioneer in the use of TIPCHECK (Technical Insulation Performance Check), which was developed by the European Industrial Insulation Foundation (Eiif) and other leading insulation companies. Leif Dollenberg, Sales Manager and Energy Consultant from KAEFER Industrie in Bremen and certified TIPCHECK engineer, Gerd Gollenstede from Technical Services explain how this energy auditing tool increases industrial energy efficiency.



Gerd Gollenstede (l.), technical services, Dipl. Eng., certified TIPCHECK engineer, KAEFER Industrie GmbH, Germany, Bremen

Leif Dollenberg (r.), Sales Manager, Dipl. Eng. Energy, Energy Consultant, KAEFER Industrie GmbH, Germany, Bremen

Pioneering work

How does TIPCHECK work?

Leif Dollenberg: TIPCHECK engineers use thermal imaging cameras and thermometers to check for energy losses through damaged insulation or bare surfaces. They calculate the energy loss, the potential financial savings and help develop a total insulation concept.

With so much potential, why isn't it used more?

Leif Dollenberg: In some countries, homeowners must increase energy efficiency by law. The industrial sector, however, is not as strictly regulated. The International Energy Agency in its last World Energy Outlook report predicted that two-thirds of the economic potential in improved industrial energy efficiency will remain untapped until 2035. Thermal insulation is one of these overlooked measures.

Gerd Gollenstede: German energy savings regulations (EnEV), for example, regulate heat convection for new buildings in construction, allowing 3 W/m² (watts per m²) for outer walls. But this does not apply to industries which use the AGI Q 101. This allows a convection of 150 W/m² on outer walls. So there's a lot of room for improvement.

And what about the status of existing plants?

Leif Dollenberg: I don't believe there are any fully insulated plants. A 2012 study from the Eiif and the Ecofys shows that 10 percent or more of all equipment in industrial plants is either not insulated or

covered with damaged insulation. Typically, the insulation is based on a minimum investment decision.

What is a typical TIPCHECK result?

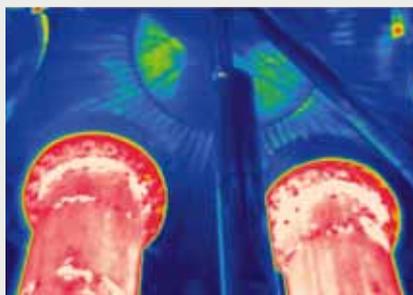
Gerd Gollenstede: TIPCHECK provides solutions with quick payback times. For example, if 50 mm pipe insulation is replaced by 100 mm insulation, the payback period is five years. Insulating a valve that was not previously insulated pays for itself in four months.

Leif Dollenberg: One TIPCHECK engineer, who spent two weeks working in a large chemical plant in France, took over 400 thermal images. He found a total loss of 12,600,000 kWh/a (kilowatts per year), which, when dealt with, amounted to a savings of €505,000 annually.

How valuable is TIPCHECK for KAEFER?

Leif Dollenberg: We have a great tool in our hands – TIPCHECKs offer us the opportunity to actively address our customers with a service that is going to show them possibilities to save energy and money. The benefit for us will be that hopefully they will ask us to carry out the identified insulation work.

Gerd Gollenstede: Additionally, facility owners in Germany have the opportunity to exempt themselves from EEG taxes, provided they can show improvements in the energy efficiency of their plants according to ISO 50001. One way of doing this is a TIPCHECK audit.



An example of an industrial facility.

Two-man team expands

SCAFFOLDING IN SWEDEN Securing scaffolding maintenance contracts with just a two-man team is no easy business, says Eddy Ström, Managing Director at KAEFER in Sweden. That was the situation Ström found himself in when he established the new scaffolding sector for KAEFER in Sweden. "When we started at the beginning of 2012, it was just Micael Wetterberg, the new Sector Manager, and myself. It was a challenging period, but thanks to support from colleagues in Eastern Europe and Germany, we secured our first maintenance contract with Preem in October 2012."

Sweden's largest oil company runs two sites, one in Gothenburg and one around 100 km further north in the town of Lysekil, where the bulk of KAEFER's new scaffolding team is currently working. The contract runs for five

years and ensures workers at both sites can easily access what they need when they need it. "Once we'd actually signed the contract, we hired a workforce and set about purchasing the materials via our colleagues in Bremen," Ström explains.

Today, Ström's scaffolding department numbers 30 people with roughly 800 tonnes of scaffolding. With an increased focus on the sector within the group and a number of promising projects on the Swedish horizon, he is optimistic about growth.

The days of fighting for contracts with just a two-man team has been firmly consigned to the past.

Getting to the heart of the matter

KAEFER MONTAGE BERLIN In 2013, the PCK Raffinerie in Schwedt, one of Germany's largest oil refineries, underwent its biggest modernisation to date to help secure its position in the competitive European mineral oil market.

Berlin's KAEFER Montage was one of 70 contractors working on the €160 million project, which included maintenance work, overhauling and cleaning of 19 of the 36 processing plants. It also included a tricky operation to replace the 'heart' of the refinery, its 425.5 tonne reactor.

The work took part during the refinery's regular shutdown required by law every three years to control and upgrade safety and environmental standards. The 2013 shutdown,

named OPTIMIX 13, took place between 8 April and 3 May. About 3,000 employees from contracting companies worked on the projects, including 220 from KAEFER.

KAEFER insulated the reactor using a special microporous insulation for the first layer. It also applied thermal insulation to piping, tanks and appliances and fire protection measures to the refinery's crude oil distillation columns, crude oil distillation piping systems in the TOP3 facility and the fluid catalytic cracking plant. "It was a big challenge, but a great success, without lost time injuries and quality defects," says Manfred Mahlke, Site Manager for Berlin.

Targeting growth in Brazil

KAEFER ISOBRASIL'S GREATER POTENTIAL The Brazilian market is large, diverse and diluted, and it is not easy to gain a foothold says Cláudio Curtes, Technical Manager for KAEFER ISOBRASIL.

In addition to Eletrobras and its subsidiaries, which is one massive, government-owned utility company, Brazil is also home to a large number of federally-run operators, each with their own investment and maintenance policies. Nevertheless, the insulation sector holds much potential.

"There are few specialised companies that are able to offer quality technical solutions," Curtes says. Electrical substations is one such

area where KAEFER ISOBRASIL, with the support from Corporate Technology & Research (CTR), is currently presenting industry solutions to a number of prospective clients.

"At the moment, regulations surrounding fire protection vary, meaning bricks and mortar firewalls are common that are unable to achieve international certification," says Curtes. "Furthermore, there is usually no solution regarding suitable acoustic transformers so this is another area we are targeting." Now with a secure footing in the market, KAEFER ISOBRASIL is looking forward to increasing its presence in the insulation and fire-protection sectors in Brazil.

SHORT NEWS

Strategy sales

WINNING IN HAMBURG With no new energy plants or refineries being built in Hamburg, competition for maintenance contracts is stiff. "You have to be very strategic about winning the few going around," says KAEFER Hamburg's Head of Sales, Matthias Schnater.

In June 2013, H & R Ölwerke Schindler GmbH tendered a three-year insulation maintenance contract, which is worth €1 million a year. "To win this very important contract," says Schnater, our strategy was "to form small brainstorming groups and everyone was given tasks according to their personal skills." Just as important, he explains, is that "we won over the customer with our integrity and authenticity."

High-voltage contract

NORTHERN POWERGRID "Working in a high-voltage area with limited space to manoeuvre requires a high level of skill and specialist training," says Simon Hudson from KAEFER C&D. The company won a contract to provide integrated services to Northern Powergrid, an electricity distribution business in northern England that has 3.9 million customers, more than 61,000 substations and around 93,000 km of overhead line and underground cables.

"The danger presented by electricity is always there, but our team of specially trained. Diligent workers operate within a tightly controlled working environment and have a healthy respect for the challenges of electricity substation work."

SHORT NEWS

Saipem's new module fabrication yard

EDMONTON, AB Saipem Construction Canada is building 126 modules for the Horizon facility near Fort McMurray, Alberta for Canadian Natural Resources Ltd. (CNRL). ALBRICO KAEFER Services is contracted with Saipem to insulate all piping and equipment on 104 modules for CNRL.

The modules will form part of the Horizon Hydrotreater - Phase 2B and are being constructed in Saipem's brand new module fabrication yard in northeast Edmonton, Alberta. "Saipem Construction Canada is getting established in Western Canada," says KAEFER Western Canada President Ray Brown, "and KAEFER is in the process of showing the quality of our work which will hopefully open up opportunities for future projects."

Prostar supports KAEFER land contract in APAC North Region

KAEFER ENGINEERING THAILAND Building on KAEFER PROSTAR expertise and good reputation, coupled with KAEFER Engineering's (Thailand) past successes and successful working partnerships, STP&I has awarded KAEFER new contracts for the ICHTHYS onshore LNG facilities module fabrication in Thailand. The contracts are for the supply and application of fireproofing and cryogenic proofing on Package 1 and 3 for this gas facility, which will be located in Darwin, Australia. The works will be performed in three locations in Thailand, with Laemchabang as the main assembly yard for the steel structure. Both contracts have a combined value of US\$ 45 million, will run for around two years and started in September 2013.

KAEFER Thailand Operations Director, Krittanan Auamkul, was keen to highlight the work done by "KAEFER PROSTAR in winning and executing the contracts". And on signing it was announced they were the single largest ones awarded to a single contractor by STP&I, and it is KAEFER's biggest project to date in the APAC North Region.

Big contract good news for youth

NUCLEAR DECOMMISSIONING With a contract worth a potential €440 million, KAEFER C&D has every reason to be particularly happy with recent developments at the company. The framework contracts are for access and insulation services across 16 sites for the British Nuclear Decommissioning Authority.

Commenting on the contract success, Paul Hoyle, KAEFER C&D's Operations Director, noted that it was deserved recognition for "the quality of our work, our proposals for

innovative working and the professionalism and experience of our people".

In the wake of such positive news, Hoyle was also happy to note that not only would the company use the extensive skills of its existing employees, but it would also be looking to nurture employment opportunities for "young people residing in local areas".

Safer, high-performance nuclear insulation

PCI JOINT VENTURE Nuclear power plant operators in the US can now choose safer, high-performance, KAEFER-developed reflective metal insulation (RMI) thanks to a new joint venture (JV) between KAEFER and the US company PCI.

The major objectives of the JV are to give KAEFER contacts, insights and access to US market and to make KAEFER's reflective metal insulation available to US clients, who now have a choice in an industry that was previously dominated by one supplier. The JV KAEFER PCI is now manufacturing KAEFER's reflective metal insulation (RMI) in the US.

In 2012, the JV successfully delivered its first project at Unit Two of the CENG-owned Calvert Cliffs Nuclear Power Plant in Maryland, ahead of time despite tight deadlines. The scope of the project was approximately 150 m of 2 and 12 inch regenerative heat exchanger, safety injection line and blowdown piping. In total, the JV team fabricated 550 RMI cassettes.

Pressure on the project team was high not simply because it was the first project for the JV, but also because of the extremely demanding deadlines said Torsten Drieling, Projects Manager at KAEFER's Corporate Competence Center Nuclear.

"We should have been awarded the work in spring 2012 but due to delays we only received the contract at the end of October. There is always a fixed schedule for maintenance and refuelling outages and the time scale was very tight."

Owing to the short deadlines, KAEFER's teams could not take on-site measurements and had to ensure they could accurately fabricate with limited 3D laser and client-supplied measurements. Despite this, they delivered the project early and earned praise from the client. "It was more or less a reference project," said Drieling. "We had 13 percent fewer modifications than the client expected and we were six days ahead of schedule."

Flexibility and a focus on quality and accuracy were decisive factors said Drieling. "The engineering teams in Germany and the fabrication teams in the US did everything to satisfy the client. We sent the parts on time and we sent over an experienced worker to the US to support the teams there. We did some fabrication on a just-in-time basis and carried out modifications on site."

The JV is now working on a project for a Japanese plant and as part of that KAEFER is developing a lighter, safer RMI product for earthquake zones.

Paint and blast yard

KWINANA, AUSTRALIA Australia's KAEFER NOVACOAT picked up the 2012 KAEFER International Management Meeting award for Best Performing Business. Now the company has picked up a new business with the acquisition of Cape Painting and Blasting Yard Kwinana.

The facility at Kwinana, in Western Australia not far from the city of Perth and just a few kilometres from the coast, covers around 100,000 m² and is around two-and-a-half times the size of the existing Novacoat yard. It

includes a 13,000 m² workshop, a 60,000 m² hard stand, nine 10 tonne gantry cranes and two 25 tonne mobile cranes.

The new yard can carry out 100,000 m² of steelwork coating every year. With very little alteration to the current management structure, KAEFER sees the Kwinana yard as a welcome and practical addition to its successful KAEFER NOVACOAT business.

BRAZILIAN JOINT VENTURE OFF TO A GOOD START

M&O BRAZIL LAUNCH KAEFER's Marine & Offshore (M&O) Division has successfully launched its Brazil business in a joint venture (JV) with KAEFER ISOBRASIL that will help KAEFER serve customers in the fast-developing offshore sector there.



KAEFER ISOBRASIL is part of a two-year maintenance and renovation project on 17 Petrobras offshore platforms.

The JV kicked off with a direct contract with Petrobras to carry out maintenance work at LOTE II. The two-year project focuses on the maintenance and renovation of living quarters for 17 offshore platforms in the Campos Basin off the coast of the state of Rio de Janeiro. "This is a complex project with several challenging aspects," explains Ary Fialho, General Manager at KAEFER ISOBRASIL. "Different platforms require different materials and logistics, but the work has to run on a precise schedule."

Because of the range of materials required, KAEFER needs to have a number of suppliers throughout the country, some as far as 2,000 km away from the work area. "This means that we must operate flexibly and efficiently," says Fialho.

In order to ensure that risks are reduced in this complex logistical operation, stringent qualification criteria have been introduced for the suppliers involved in order to guarantee quality and punctuality when it comes to delivering materials. The logistics processes have been analysed and optimised, and all the while there are constant process monitoring and regular team meetings involving all parties.

"Ultimately, we are trying to anticipate tasks onshore to reduce and optimise the tasks to be performed offshore," explains Fialho. "It's a lot easier to solve issues on land than hundreds of miles out at sea," he adds.

Three other JV projects are also running: the conversion of the ship MT Welsh Venture, which will be converted into P-58, a Floating Production Storage and Offloading unit (FPSO); a similar project, P-62, in Suape in the state of Pernambuco and P-40, which consists of 11 offshore accommodation containers for Petrobras.

There is good potential among Brazil's many busy shipyards for more work on vessels, rigs and production units. "With the help of international experts from KAEFER, we can provide our Brazilian customers with the most innovative and reliable solutions," explains Heiko Habedank, Business Unit Director at the Marine & Offshore Division.

"There is immense potential to advance development, but only if we can execute the work the proper way. That's why we have to continue working hard to improve processes, innovate and motivate our employees."

Cruising from Hawaii to Bergensfjord



Refurbished suite of the Norway Cruise Liner Pride of America



Refurbished outside deck of the Carnival Sunshine in Italy

HIGH END REFURBISHMENTS Refurbishing a ship in Pearl Harbour, Hawaii might sound like a dream posting, but for the finish KAEFER OY teams tasked with doing it, there was little time to enjoy the exotic location.

Converting the conference deck of the Norway Cruise Liner Pride of America into 32 suites and installing 45 tonnes of new steel was “an ambitious project,” says Janne Sirvio, Managing Director of Finland’s KAEFER OY. “We had to organise the labour from the US, supply 80 containers of materials from Europe and had more than 100 technicians working in the dry dock. We completed the work in around three months while the ship was back in service, but it was a challenge to work without disturbing the passengers.”

Similarly, in Singapore KAEFER OY refurbished the secondary lounge area for the Royal Caribbean Legend of the Seas as well as the spa and outside decks of the Carnival Sunshine in Italy. Current and future projects include a major refurbishment of the restaurant, spa and retail areas aboard the Disney Magic, starting in Cadiz, followed by KAEFER OY’s largest job to date which is to convert 4,800 m² of cabins aboard the Bergensfjord ferry by May 2014.

Such projects have helped KAEFER OY flourish despite a slump in Finnish shipbuilding. There is more potential on the horizon as many ships that were built in the 1990s now require modernization.

“Our clients know we can handle big projects and do big structural conversions,” Sirvio says. “Many competitors are focused on interiors only, but we can do complete turnkey, including piping, electrics and ventilation. We have a busy year ahead, which is unusual when many Finnish companies are restructuring. Being able to grow and hire people at a time like this is strengthening our company.”



KAEFER C&D'S ONE-STOP-SHOP

NORTH SEA PLATFORM It is the first North Sea platform to be built at a single UK construction yard in around 25 years, and British-based KAEFER C&D were at the heart of it.

When KAEFER C&D signed off on the project in mid-2013, the company had completed the heating, ventilation and air conditioning (HVAC) design and installation plus the architectural and insulation fit out on the Apache Forties Alpha Replacement Platform (FAST) project for the Tyneside OGN group.

A short trip across the river from here is KAEFER C&D's Jarrow facility, which is where the HVAC systems were fabricated in addition to a multitude of insulated boxes for valves and flanges and personnel protection guards.

More than three million man-hours of work were recorded for the whole Apache project, which provided up to 7,000 jobs across numerous workshops and yards. KAEFER C&D worked approximately 40,000 man-hours during installation of the outfitting phase. Now completed, the platform is headed for the Forties Field situated around 110 miles off the coast of Aberdeen. Sales and Marketing Manager Simon Hudson commented that KAEFER C&D offered a full range of services on the new platform, "from service to design to manufacturing". Such skills are integral, he says, to the KAEFER C&D's concept of a "one-stop-shop".



SAFETY FIRST

Shouting about offshore

550,000

hours without LTIs (Lost-Time Injury)

SEMBAWANG SHIPYARD KAEFER celebrated its first project for its Marine & Offshore business in Singapore with the safe completion of the ARV3/Aquarius Brazil conversion project at Sembawang Shipyards in 2013.

The project involved converting a former car and truck ferry into offshore accommodation for oil and gas installations and achieved more than 550,000 man-hours without a Lost Time Injury (LTI), a significant milestone given the nature of the project. In order to fit extensive new accommodation facilities for the vessel, which supports and services deep-water offshore facilities and projects, as many as 250 KAEFER staff were employed at peak times. The task called for the turnkey interior outfitting to accommodate 540 people and included architectural, electrical, piping and HVAC works. This meant building cabins to accommodate two and four men with wet units, wall panels, ceilings, flooring, furniture and other fittings.

Its scope also included re-fitting and extending the existing galley, installing new cold and storage rooms, fitted offices, a medical room, a fully equipped gym, cinema and internet room. A complete design and engineering team had to be put together from scratch. Usually there is a long lead-in for design and engineering, but in this instance KAEFER only had a few weeks. The work had to be completed in less than half the time of comparable projects.

Overseas staff working alongside local subcontractors who had to familiarise themselves with local working practices and help local staff bring their skills up to par where there were gaps all added to the challenges of meeting the deadline.



Peter Hoedemaker and Steen Hansen visiting the site of the ARV3/Aquarius Brazil conversion project in Singapore

Excellence rewarded

AIBEL HAUGESUND PLATFORM The 'Gudrun adventure' started quietly with a modest contract for piping insulation says KAEFER ENERGY AS Vice President for ISO Onshore, Bjørn Ommundsen. But excellent performance was rewarded with another contract.

The €2 million job was on the M10 project, a decking module for the Norwegian Gudrun oil and gas production platform at Aibel Haugesund. But additional tasks meant the scope surpassed the original work by ten times as much. KAEFER also assumed responsibility for passive fire protection, metallising, coating, chemical cleaning, scaffolding, regular cleaning, sign installation and installing fire boxes as well as for all outstanding work on pipe insulation on three other modules.

"The tremendous increase in the scope of work is due to the great enthusiasm and efforts of our employees, good management, and our willingness and ability to accept a wide range of tasks that go beyond our primary disciplines," he said. In such a hectic period, however, KAEFER's sister company Global Work was key to the successful completion of the project because it provided many additional skilled workers.

And further work is also in the pipeline: "Our efforts were crowned when we were awarded the contract in the summer of 2013 for the offshore hook-up work. Work has already started with scaffolding on the jacket offshore and will continue until 2014. It's a nice continuation of the successful project in Haugesund."

REFURBISHING ON- AND OFFSHORE

INDIA AIRCRAFT CARRIER In winter 2013, the Indian navy took delivery of the aircraft carrier Vicramaditya, a 284 m modified Kiev-class carrier, bought from Russia and converted at the Sevmash Shipyard in Severodvinsk.

After securing the contract to fit out the VIP and officers' cabins on the carrier, KAEFER's project team departed for the shipyard and completed the work in only four weeks in the yard plus two weeks offshore.

The scope of work included the redesigning of walls with LOLAMAT® wall panels, carpentry, painting, tiling, the installation of new wet units and the delivery and installation of furniture. The project with the client Innovative Technologies of Shipbuilding Co. Ltd was worth around €500,000.

Ordinarily, completing this project in four weeks in a Western European shipyard would not be a problem said Frank Bechert, Project Manager for KAEFER. But operating in Russia meant there was a very tight window to complete the work and no room for mistakes.

"It's not like a German or other European shipyard. The support services were limited, and we could not buy certain tools or parts. You had to take everything with you. Because it is also a Russian naval shipyard, the people there were not used to letting foreigners in and out. We only had a short window when we were permitted to do the work so we had to make every effort to deliver in time."



KAEFER provided outfitting for the VIP and officers' cabins on the Indian aircraft carrier Vicramaditya "Sun of Valour".

Serving our customer needs

THYSSENKRUPP MARINE SYSTEMS Despite a slow global naval market in recent years, KAEFER is busy on a range of projects for the navy industry in Europe, Africa and India. In addition to the refit work it is doing for India's first aircraft carrier, the Vicramaditya, a 284 m modified Kiev-class carrier, KAEFER is also working on German and Algerian frigates and submarines.

The latest project is for ThyssenKrupp Marine Systems, which awarded KAEFER the contract to design and install the hull insulation and cold storages for two MEKO A200 frigates for the Algerian Navy. The ships will be built at

HDW's shipyard in Kiel and are slated for delivery in 2015 and 2016. The project is currently in the design phase, and work on the insulation will begin in 2014.

The project poses a number of challenges. A vertical duct for the exhaust turbine and high operating temperatures require high-grade insulation and precision design and installation while the cold storage work demands exacting technical expertise.

The project time frame is also short for such a project, especially given the level of coordination needed with the shipyard and other contractors. KAEFER's continued strong

presence in the naval market comes despite an end to the boom in naval ship building which hit around 2008 and led to strong global competition for such contracts.

Customers are continuously awarding contracts to KAEFER because of the quality of its work and strong delivery record explains Project Manager Volker Singer-Jürgensen. "They come to us for the quality and our understanding of what the customer needs, for our strong background in these kinds of military projects and our ability to fulfil the most demanding technical requirements."

Hub of activity

INTERXION GERMANY The data racing along information highways may be virtual, but the infrastructures needed to send them are very real. KAEFER Construction has been building complex carrier-neutral data centres for InterXion Deutschland since 2006.

The connectivity hubs provide space for companies to house their servers and connect to more than 450 telecommunication and internet service providers. KAEFER has built three InterXion centres in Frankfurt, expanded a fourth in Düsseldorf and is working on two more in Frankfurt in a consortium with air conditioning, heating and ventilation expert, MJS Air Klima, and building technology and the IT services company, Lück Group.

“We have become a smooth operating team that fully understands our client’s business model and is able to adapt to their changing needs,” says Achim Albrecht, the Regional Construction Manager of KAEFER Construction and the consortium’s Business Administrator. As well as actually building the centres, KAEFER manages the construction schedule.

Using lean management and building on past experience, each centre has been built quickly, at low cost and high quality. “By planning well in advance, we do not waste time delivering something we did not anticipate. We also know what problems can arise and build in time to deal with them,” Albrecht says.



InterXion centre built by KAEFER Construction

SHORT NEWS

Excellence brings long-term rewards

LUFTHANSA HAMBURG HQ KAEFER Construction Hamburg has acquired a prestigious customer in Lufthansa after securing a long-term agreement for interior work on the airline’s Hamburg Headquarters. KAEFER will carry out dry construction, ceiling, partition walls, fire protection and disassembly work. Lufthansa chose KAEFER for its 30 years of experience in the structural maintenance of complex real estate portfolios, its highly qualified technical staff, its flexibility and experience in framework contracts.

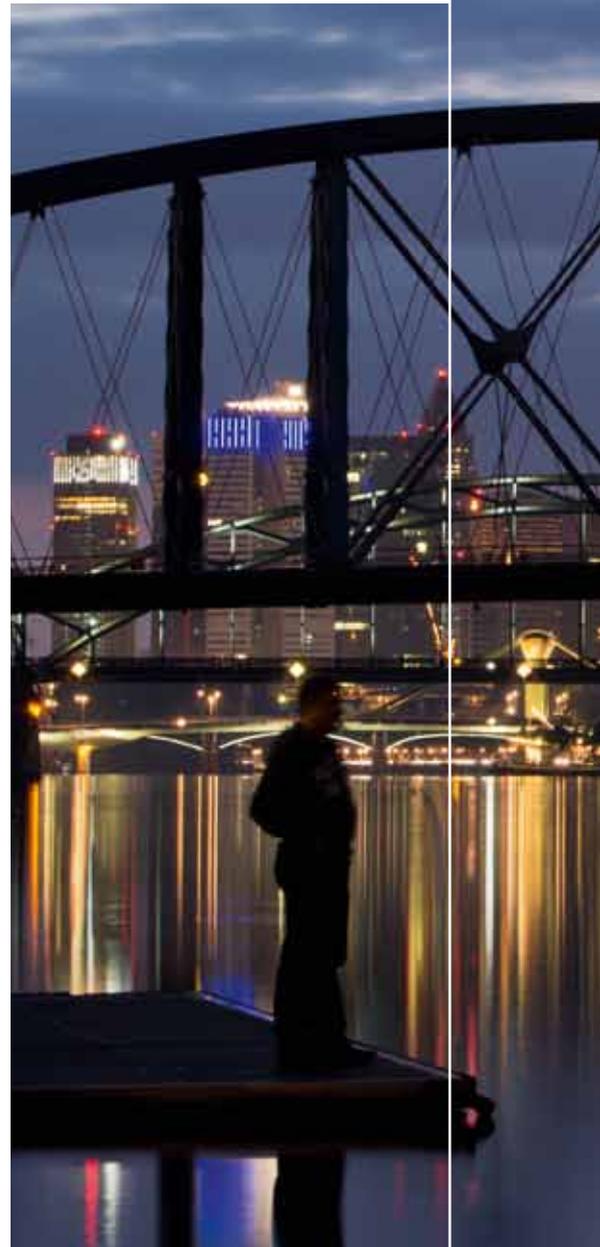
Improving royal acoustics

HERRENHAUSEN ROYAL GARDENS Schloss Herrenhausen in Hannover, built as a summer residence for the Royal House of Hannover in the 17th century, boasts one of Europe’s most beautiful Baroque gardens. The Orangery, which is located in the palace’s royal gardens and once housed the royal orange trees, was recently renovated as a venue for art exhibitions and classical concerts. KAEFER’s Technical Innovations Department in Düsseldorf was contracted to improve the acoustics in the building.

This is not the first listed building KAEFER has worked on. “KAEFER’s innovative sheets of transparent MICROSORBER® film, which absorb and reduce the reverberation time, are aesthetically unobtrusive and ideal for buildings which may not be altered too much,” says Sebastian Clauss, Project Manager.

Developed together with the Fraunhofer Institute for Building Physics in Stuttgart and patented in 1997, they are only 0,175 mm thick. Held together on an almost invisible structure, they can be suspended from the ceiling or hung against walls.

KAEFER’s Technical Innovations department in Düsseldorf worked closely with the architects to make sure that the structure blended into the Orangery’s architecture. The project was commissioned in July 2012 and completed in February 2013. “The sound improvement after the installation was very impressive,” says Clauss.



FRANKFURT'S NEW LANDMARK PRESENT LOGISTICAL CHALLENGE

EUROPEAN CENTRAL BANK KAEFER is demonstrating a comprehensive range of its building competences on one of Europe's most ambitious projects: The new €500 million European Central Bank Headquarters in Frankfurt.

Scheduled to open in 2014, the 185/165 metre twin high-rise is a complex design project where the towers are connected by a low-rise building as well as by steel beams on multiple floors. The structural joints where the floors meet must cope with building movement and protecting such key components is essential.

An important part of KAEFER's work has been designing, building and installing fire protection for these connection points. More than 20,000 square metres of steel have to be protected. KAEFER is also carrying out extensive insulation work, which requires operating at heights of up to 40 m using specialised scaffolding systems.

"This is a large structure and it shows the whole range of work KAEFER is capable of," says Sven Burgard, Project Manager. "We are applying everything we know about fire protection there, including design, steel construction and special joint construction. It's a complex project with a short deadline and we are working on the highest floor, the 46th, and at the same time deep underground. Moving from one place to another is a particular challenge because there is a lot of material to handle."

To overcome these challenges, much of the material is pre-cut in the factory and installed onsite says Burgard. "We also have to ensure that the right parts are moved to the right locations so it's a big logistical challenge."



THE SHOW MUST GO ON!

DONAU PLEX IN VIENNA How do you give a giant public space a dramatic and extensive makeover while keeping it open for the 16 million visitors every year?



That was the challenge posed for KAEFER when Unibail-Rodamco, one of Europe's leading real estate companies, asked it to take a central role in refurbishing its Donau Plex, the largest shopping and entertainment centre in Vienna.

Unibail-Rodamco, which owns shopping centres in 12 European countries, commissioned BWM Architects in Vienna to create a modern, elegant and comfortable atmosphere for the centre, which has around 119,000 m² of rentable space and a IMAX Cineplex with 13 screens.

BWM came up with dramatic, eye-catching ceiling domes that formed major architectural features and posed practical challenges to execute. The ceiling area measures 400 m² and presented a challenge because it had to be suspended to a depth in some areas of up to four metres and needed to offer easy access to light fixings, inspection panels and windows.

Due to the specialised design and the precision required for a perfect finish, KAEFER worked closely in the planning phase with the architect to ensure that the intricate design requirements were achievable. The exterior ceiling was not the only demanding aspect of the work says Project Manager, Johannes Malik. "The wall panelling was also a challenge, since this was laid with a zero gap."

The scope of the project included 500 m² of plasterboard ceiling lining, 3,200 m² of metal ceilings and 150 m² of wall cladding. The project required eight tonnes of steel construction as well as LED light strips, shop aprons and shaped tubes. KAEFER also produced striking dome-shaped drywall mouldings to the design brief for the interior.

The biggest challenge in the interior was to perform the work while the mall functioned as normal says Malik. Despite this, the 10,000 man-hour project took KAEFER just six months to complete, while the Donau Plex shopping and shows went on.

Wilhelmsburg transformed

HAMBURG ELBE ISLANDS A new district has been taking shape at the heart of the Elbe islands in Hamburg that will help bring the city and its harbour together.

For a long time, the 30 ha area of Wilhelmsburg has been a disjointed, inner-city backwater, but an ambitious plan is seeing it transformed into a vibrant new quarter. KAEFER's part in this makeover zeroed in on two prestigious renovation contracts with property developer and landlord SAGA-GWG. The contract was worth more than €1 million and was for renovating the façade of two high-rise buildings. The work took almost two years and included 12,000 m² of scaffolding, 10,000 m² of exterior insulation finishing system and 3,000 m² of painting work.

A second contract, worth €1.5 million, was for renovating the façades of the one-story connecting building, as well as roof insulation and dry

construction together with reinforced concrete and masonry work. It involved 1,500 m² of scaffolding, the removal of 1,000 m² of façade and 1,000 m² of roof insulation and installing roofing. KAEFER teams also put up 300 m² of curtain wall, 1,000 m² of fire protection ceiling, 250 m² of precast reinforced concrete, 500 m² of masonry and plaster and 1,000 m² of exterior insulation and finish systems with clinker.

The building's narrow footprint, together with extensive redevelopment work happening on either side of the site made the project's logistics especially difficult because work was only permitted on certain days. In addition to these challenges, the site had to be partially approached with heavy equipment and much of the material had to be moved by hand. Nevertheless, the project was delivered on time much to the pleasure of the satisfied client.

Star-shaped headquarters improved



KAEFER carried out a complex renovation at star-shaped Bayer CropScience headquarters in Monheim.

BAYER CROPSCIENCE The dramatic architecture of Bayer CropScience's star-shaped headquarters in Monheim makes inspiring office space, but it posed some unique challenges when KAEFER carried out a complex renovation in 2012. For starters, the structure has barely a straight line in sight says Project Manager, Uwe Reinders. "The walls and ceiling that we had to build were very challenging, as the building has inwardly curved outer walls."

The refit required multiple, high-specification acoustic and aesthetic materials and systems. This included sound-insulated partition

walls with flexible ceiling connections, coving and ceiling linings, an aluminium-finned ceiling, an acoustic perforated plasterboard ceiling, an aluminium panel slab toilet and kitchenette, acoustic wall and ceiling fixtures and anti-glare windows. The result is an even more striking and comfortable environment said Reinders. "Despite the large areas, the building has great acoustics. The space is flooded with natural light without glare from the outside and it has a soft effect from the recessed lighting."

Landmark 25th tunnel

E6 TRONDHEIM, NORWAY In August 2013, KAEFER celebrated the start of work on a landmark project: Its 25th tunnel in Europe in the last decade. The contract is to design and install fire protection and includes a tight deadline which gives the KAEFER team just six weeks to cover the walls and ceilings of the two 140 metre road tunnel sections of the E6 motorway in Trondheim, Norway. With some local logistical support from KAEFER ENERGY in Trondheim, the project team began installing 5,400 m² of Promatect 30 mm fire protection board.

Different levels inside the tunnel meant KAEFER had to come up with a special design explains Project Manager, Sven Burgard. "It's more difficult than usual to construct the ceilings because we have to allow for movement in parts of the tunnel. We had to design and construct a special kind of joint to fix the

boards in place." KAEFER has worked in the area before. It completed work on 2,700 m² of the Vaernetunnel in just three weeks near Trondheim Airport says Burgard. "This was one of the reasons why Statens vegvesen, our client, awarded us the contract for the current project."

Further tunnels are in the pipeline for KAEFER thanks to its well-established expertise in doing such work on a range of sites throughout Europe, including high-profile contracts in Germany and Switzerland, adds Burgard.

"In addition to Norway, we also have projects underway in the Netherlands, and we will be active in Sweden next. We have many good references and knowledge of how to do work to perfection in a short time frame."

SHORT NEWS

KAE mobil for VW recreation rooms

VW EMDEN A big part of Volkswagen's €1 billion investment at its Emden plant over the next five years includes a new factory called Hall 18 where the new Passat is produced. Besides fire protection, ceiling and flooring, KAEFER built recreation rooms with the KAE mobil wall system. About 2,600 m² of walls, 268 windows and 96 door elements were installed. Future work could use KAE mobil on site for 3,200 m² of office space.

Prussian cultural heritage

BERLIN STATE LIBRARY Berlin's 350-year-old State Library is one of the gems of Prussian Cultural Heritage. Germany's largest academic library holds 11 million books and entails enormous responsibility for KAEFER when it recently installed acoustic ceilings and plaster and door and glass partitions there. The project also called for KAEFER's passive fire protection coating panelling and construction expertise to help ensure the archives are kept safe for future generations.

Innovation wins further work

BMW RESEARCH KAEFER recently took on work at BMW's research and innovation centre (FIZ) in Munich and had to come up with innovations of its own on site. KAEFER had to insulate the metal ceilings in some of the technical areas, and despite the lack of a certified system for doing so, our construction specialists came up with a method of gluing mineral fibre onto them. KAEFER's flexible and adaptable approach to solving this and many other challenges led to further work on site, which will now run until April 2014.

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10 years with the company
H. C. Harbanslal Patti
Surendra Pradhananga
Badal Ray
Abdul Hannan
Ashok Kumar Thakur
Rajiv Kumar Rao
Jinesh Kumar Kochath Kesavan
Madan Kumar Puri
Sareena Koshy

Dear colleagues,

In this time when the celebration of your jubilee is so rightly recognised, I would like to thank you for your dedication, valuable wisdom and loyalty over the years. I have great admiration for your outstanding performance.

Yours,



Thank you for 40 years!



Bernard Tanis

KAEFER WANNER SAS, France

SHORT CV: Mr. Tanis began working at Wanner Isofi as a semi-skilled worker in a workshop. Then he worked at different sites throughout northern France. He has been gradually climbing the career ladder and became a site manager in 1995. Currently, he is appointed Chargé d'Affaires at Gravelines Nuclear Power Plant, as well as being the Workshop Manager at the Faches-Thumesnil workshop.

Jean-Luc Piquard

KAEFER WANNER SAS, France

SHORT CV: Mr. Piquard began working for Wanner Isofi as an insulator. He received various types of training and became Site Manager at several different sites. From 1981 onwards, he devoted himself to staff representation and became a union representative in 1988, and a Company Committee member and a Committee for Health and Safety at Work member later on. On a regional basis he joined Regional Technical Committees such as CPAM and CRAM.

Alain Volant

KAEFER WANNER Shipbuilding, France

SHORT CV: Mr. Volant joined Wanner Isofi as a sheet metal tracer. He was trained in scaffolding and he worked at various sites throughout France. In 1996, he joined Wanner Marine where he became a specialist in insulating exhaust collectors and piping at our Saint-Nazaire workshop. He has been a successful team leader for 10 years.



Gerhard Rockhoff

KAEFER Construction GmbH, Germany

SHORT CV: Mr Rockhoff joined KAEFER in 1973 as a skilled acoustical worker. He later became site manager and was responsible for a permanent site which was commissioned by Axel Springer publishing. Since 2003, he has been responsible for another permanent site commissioned by Airbus.

PERSONAL STATEMENT: Mr Rockhoff, better known as "Rocki", is a reliable colleague who always keeps his cool. He is held in high regard, not only by his colleagues, but also by the clients he serves.

Bernd Seidel

KAEFER Industrie GmbH, Germany

SHORT CV: Mr. Seidel joined KAEFER in 1973 as an insulator and later worked as an insulation foreman. During his career, he has worked in Saudi Arabia, the Netherlands, Norway and Yemen. After gaining experience as site manager, he decided to participate in the Works Council which he chaired for a number of years. Since 2012, he has worked part time, prior to his retirement.

PERSONAL STATEMENT: Mr. Seidel has profound knowledge in his field and is known for his passionate and precise working manner. He is and was known as loyal and helpful among his colleagues.



Karl Heinz Schmitt

KAEFER Industrie GmbH, Germany

SHORT CV: Mr. Schmitt joined KAEFER in 1973 as an insulator in Gelsenkirchen. During his career at KAEFER he worked on diverse sites in Germany and abroad. He is known for his unfailing motivation and his team spirit.

PERSONAL STATEMENT: Although Mr. Schmitt is retired, he offered his assistance at a permanent site when they were short of staff. We are thankful for his outstanding commitment and wish him all the best for his well-deserved retirement.

Gabriele Sahn

KAEFER Industrie GmbH, Germany

SHORT CV: Ms. Sahn joined KAEFER in 1973 as a secretary within the Industry and the Surface Construction divisions. In 1978, she transferred to Monheim which proved to be a good decision as she became department secretary and has been in Monheim ever since.

PERSONAL STATEMENT: Since 1978, Ms. Sahn has been handling all communication related to matters in our Monheim branch.

Thank you for 40 years!

Gerold Knapp

KAEFER Isoliertechnik GmbH & Co. KG,
Germany

SHORT CV: Mr. Knapp joined KAEFER as an apprentice in 1973, followed by several years as an assembly fitter and site manager. Since 1994 he has been an active member of the Works Council. Currently, he chairs the Works Council Bremen as well as the Group Works Council and is part of the Managing Board of the Combined Works Council.

PERSONAL STATEMENT: He is witty and unflinching in speaking up for his colleagues while always keeping KAEFER's interests in mind. He has an unforgettable sense of humour.

Walter Bremeyer

KAEFER Isoliertechnik GmbH & Co. KG,
Germany

SHORT CV: Mr. Bremeyer joined KAEFER in 1973 as a technical employee. In 1989, he became Head of the Department Thermal Insulation. He held a leading role in developing a panel system which was used at the wind tunnels DFVLR and ETW. Moreover, he registered several patents in the field of cold insulation.

PERSONAL STATEMENT: Mr. Bremeyer has always been passionate about his work and has always been able to keep his cool. He has always been the go-to person for questions on thermal issues.

Hans-Jürgen Gefken

KAEFER Schiffsausbau GmbH, Germany

SHORT CV: Mr. Gefken joined KAEFER

in 1973 as an apprentice. He became a commercial clerk and in 1982 he took over management of the commercial division of the Emden branch followed by other managerial positions. Since 2001, he has been responsible for the shipbuilding business in Germany and since 2004 has been the Managing Director of KAEFER Schiffsausbau GmbH.

PERSONAL STATEMENT: He is renowned for his friendly and professional working manner as well as his outstanding expertise.

Thomas Wronsky

KAEFER Schiffsausbau GmbH, Germany

SHORT CV: Mr. Wronsky joined G+H Schiffsausbau GmbH in 1973 as an insulator. In the course of the acquisition of G+H Schiffsausbau GmbH, in 2008, he joined the Hamburg branch of KAEFER Schiffsausbau GmbH. Here he is currently responsible for material and workshop logistics at the B+V site, as well as for the fleet.

PERSONAL STATEMENT: Mr. Wronsky is a highly valued colleague due to his friendly and helpful working manner.

Eugenijus Sližys

KAEFER UAB, Lithuania

SHORT CV: Mr. Sližys began his career as a senior foreman at Lithuania Power station and became site manager in 1975. Since 1990 he has been the Technical Director of "Pribaltenergozashchita" and General Manager at UAB Termoizola since 1994. Currently he is the General Manager at UAB KAEFER.

PERSONAL STATEMENT: The greatest event in my life was when Lithuania became

independent and when we joined the European Union.

I am glad that KAEFER crossed my path and that I can work as part of a worldwide KAEFER team.

Eugeniusz Mielczarek

KAEFER SA, Poland

SHORT CV: Mr. Mielczarek began working for KAEFER in 1973 as a sheet metal worker/thermal insulation fitter. He worked on projects in Poland such as Katowice, Gdańsk and Ostrołęka as well as abroad in Germany, the Netherlands, Ireland, Finland, Norway and France.

PERSONAL STATEMENT: Mr. Mielczarek is married and has two daughters and one grandson. He likes to read a good book or watch an interesting movie.

Jan Kozanecki

KAEFER SA, Poland

SHORT CV: Mr. Kozanecki began working for KAEFER in 1973 as a fitter-mechanic in a workshop. He worked on projects abroad such as in Iraq and Germany. He currently works in our Equipment and Storage Base in Płock as an employee issuing scaffolding and forklift operators.

PERSONAL STATEMENT: Mr. Kozanecki is married and has two sons, a daughter and three grandchildren.



Thank you for 40 years!



Stanisław Jarzyński KAEFER SA, Poland

SHORT CV: Mr. Jarzyński joined KAEFER as a thermal insulation fitter in 1973. He has participated in many projects in Poland such as Olsztyn, Łapy, Police, Gdańsk, Świecie and Włocławek and abroad in Germany, Belgium, Norway and the Netherlands.

PERSONAL STATEMENT: Mr. Jarzyński is married. He likes to spend his free time in the garden.

Lesław Wesołowski KAEFER SA, Poland

SHORT CV: In 1976, Mr. Wesołowski graduated from the vocational school in Zielona Góra as a profession insulation fitter and sheet metal worker and started working for KAEFER. He has been on different building sites in Poland as well as abroad, for example in Germany.

PERSONAL STATEMENT: He is a reliable employee who is disciplined and very friendly. He has two daughters, Anna and Isabel.

Józef Wiśniewski KAEFER SA, Poland

SHORT CV: Mr. Wiśniewski graduated from the Vocational School in Plock 1972 and he started working for KAEFER as a thermal insulation fitter. He worked on construction sites in Poland as well as in Germany, Belgium and the Netherlands. He is currently working as a tinsmith on a DOW project in the Netherlands.

PERSONAL STATEMENT: Mr Wiśniewski is married and has three children. In his spare time he enjoys fishing.

Henryk Wybierała KAEFER SA, Poland

SHORT CV: Mr. Wybierała started working at KAEFER in 1973 as a thermal insulation fitter and sheet metal worker. He used to work as a foreman at: Łapy Sugar Plant, Łagisza HP, Dalkia Łódź HP, Białystok HP, amongst others. He has also worked abroad in Germany and the Netherlands. He is one of the most valued employees in our Branch Office in Toruń.

PERSONAL STATEMENT: Mr. Wybierała is married and he has three daughters. He likes travelling and spending his spare time in nature.

Andrzej Nowicki KAEFER SA, Poland

SHORT CV: Mr. Nowicki joined KAEFER in 1973 as a thermal insulation fitter and sheet metal worker. He is a highly qualified employee and a master of his craft. He worked as a foreman at Głinojeck Sugar Plant, Ostrowitec Sugar Plant, SEFAKO Boiler Factory, PKN ORLEN, Zachem Bydgoszcz, Elena PET, amongst others. He has also been abroad in Iraq, Germany and the Netherlands.

PERSONAL STATEMENT: Mr. Nowicki has a wife and a son. In September he began his university studies in economics.

Józef Ćwiok KAEFER SA, Poland

SHORT CV: Mr. Ćwiok began working for KAEFER on the Power Plant Turoszów in 1973. He joined different projects such as Gdańsk Refinery, Nitrogen Plant in Tarnow, Power Plant Połaniec. He has also been abroad in Norway and Germany.

PERSONAL STATEMENT: He likes to spend his holidays with his family and to help with work on the family farm.

Ryszard Kowalówka KAEFER SA, Poland

SHORT CV: Mr. Kowalówka started working for KAEFER in 1973 after graduating from the vocational school as a professional insulation fitter. During his long career he carried out a number of projects in Poland and abroad, mainly in Austria and Germany. He climbed the career ladder and went from being an insulation fitter to Director of the Branch Office Oświęcim.

PERSONAL STATEMENT: His greatest passion is ice hockey as his three sons are Polish representatives of this sport. Mr. Ryszard's biggest pride and joy is his 3-year-old grandson, Oscar.

Mirosław Szatkowski KAEFER SA, Poland

SHORT CV: Mr. Szatkowski joined KAEFER in 1973 as an insulation fitter. Later on, he worked as a sheet metal worker. He carried out a number of projects in Poland, for example in Kwidzyn Hajnówka and in Bytom, as well as abroad in Latvia, Lithuania, Iraq, Belgium and the Netherlands.

PERSONAL STATEMENT: Mr. Szatkowski has a wife, two sons, one daughter and four grandchildren. In his spare time he enjoys fishing.

Thank you for 40 years!

Janusz Chacia
KAEFER SA, Poland

SHORT CV: Mr. Chacia began his career at KAEFER in 1973. After graduating from technical school, he was employed as a thermal insulation fitter and later as foreman and construction manager. Finally, as manager, he was responsible for the most challenging construction projects carried out by the company. He worked abroad in Ireland, the Netherlands and Germany.

PERSONAL STATEMENT: He is married and has a daughter and a son as well as two grandchildren.

Andrzej Wyrwa
KAEFER SA, Poland

SHORT CV: Mr. Wyrwa started working for KAEFER in 1973 after graduating from technical school as an insulation fitter. He also worked as a tinsmith in one of our workshops. He has worked on many construction sites in Poland and in Germany.

Ryszard Ratajczak
KAEFER SA, Poland

SHORT CV: Mr. Ratajczak started working for KAEFER in 1968 first as a thermal insulation fitter and then as a foreman. As a site manager, he worked at many sites in Poland, for example at Copper Smelter in Głogów, Power Plants in Polkowice, Lubin and Legnica as well as abroad. At present, he is Deputy Director of a Branch Office.

PERSONAL STATEMENT: He is married and has two daughters and two grandchildren. His hobby is numismatics.

Zygmunt Słowiński
KAEFER SA, Poland

SHORT CV: Mr. Słowiński started working for KAEFER in 1968 after graduating from technical school in Wolsztyn as a sheet metal worker. He worked in Poland and abroad in Germany. In 1980 he completed his master craftsman's diploma for an insulation fitter. From 1973 until 2001 he worked as an instructor at the vocational school in Zielona Gora. Since 2002, he has been Site Manager in our Zielona Góra Branch.

PERSONAL STATEMENT: He is married and has two beloved daughters.

Andrzej Makoszewski
KAEFER SA, Poland

SHORT CV: Mr. Makoszewski started working for KAEFER in 1973 as a tinsmith. He also gained experience as a carpenter, scaffolding fitter and thermal insulation fitter. He worked on many sites in Poland and abroad in Germany, Finland and the Netherlands.

Ryszard Budziłek
TERMOKOR KAEFER, Poland

SHORT CV: Mr. Budziłek graduated from the vocational school in Ostrołęka as a corrosion fitter. He began to work at TERMOKOR Warsaw in 1973 as a thermal insulation fitter. During his long career, he carried out a number of projects in Poland, for example in Koźienice, Bełchatów, Zduńska Wola, Rybnik, Dolna Odra, Gdańsk as well as abroad in Hungary, Germany, Czech Republic, Sweden, and France. During his employment he used to manage several brigades of tinsmiths.

PERSONAL STATEMENT: He is married and has two sons and one daughter. Sports are his hobby, especially football.

Józef Kaczmarczyk
TERMOKOR KAEFER, Poland

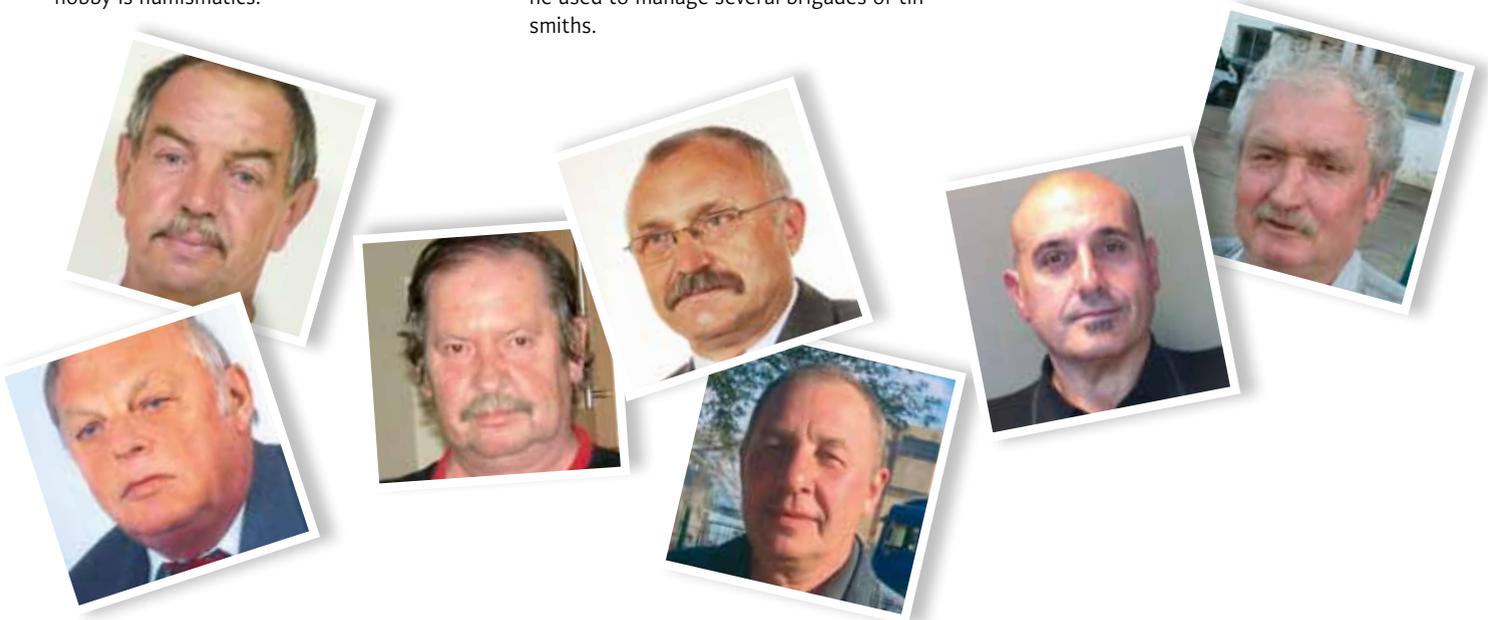
SHORT CV: Mr. Kaczmarczyk graduated from the vocational school in Tomaszów Mazowiecki as a turner. He began working at TERMOKOR Warsaw in 1973 as a construction employee and later as painter of steel structures. He has participated in projects in Germany, Sweden, France, Belgium, Czech Republic and Poland, for example in Koźienice, Bełchatów, Łódź, Warszawa and Siekierki.

PERSONAL STATEMENT: He is married and has two sons.

Roberto Rebolledo Cerrato
KAEFER Servicios Industriales, Spain

SHORT CV: Roberto Rebolledo Cerrato joined KAEFER in 1973 as an apprentice and soon became a foreman. He has successfully worked on various projects such as Santana Perera in Las Palmas of Gran Canaria and Conservas Garavilla in Pontevedra. Nowadays he is in charge of the enclosure works at the Smurfit Kappa paper mill in Durango.

PERSONAL STATEMENT: I feel really proud of the work that I have accomplished throughout all these years at KAEFER, and am proud of having shared so much with my colleagues.



Thank you for 40 years!



Eduardo Gonzales Monje

KAEFER Servicios Industriales, Spain

SHORT CV: Eduardo Gonzalez Monje joined KAEFER as an apprentice in 1973. After becoming a qualified worker, he developed into a first class worker. He has worked successfully on various projects, such as at a water-treatment plant on Lanzarote and on some international projects, for example, in France and Tunes.

PERSONAL STATEMENT: My experience at KAEFER has enriched me not only on a professional level, but also personally.

José Luis Santiso Puga

KAEFER Servicios Industriales, Spain

SHORT CV: José Luis Santiso Puga joined KAEFER in 1973. Throughout his career, he gained experience in many different fields as well as being a Site Manager in Tarragona and abroad. Due to the high quality of his work and his profound knowledge, he was well trusted by both colleagues and clients.

PERSONAL STATEMENT: It has been an honour for me to work at KAEFER. Teaching other people what I have learned in 40 years of work has been an experience that I enjoyed very much.

Baldomero Aguayo Padilla

KAEFER Servicios Industriales, Spain

SHORT CV: Baldomero Aguayo Padilla joined KAEFER in 1973 at the Thermal Central in Castellón. Since then he has worked on sites all over Spain and Europe, for example in Germany, the Netherlands, Ireland, Wales and Italy. Moreover, he supervised the commissioning and 26 shutdowns at the Almaraz Nuclear Power Plant.

PERSONAL STATEMENT: Over the years I have enjoyed teaching as well as learning from other people about how things are done at KAEFER.

María Angeles Sanchez Portuondo

KAEFER Servicios Industriales, Spain

SHORT CV: María Ángeles Sanchez Portuondo started working at KAEFER in 1973 in the administration department. She currently works in the purchasing department. During her years at KAEFER, she has worked in different departments where she has met many great people. Although most of them are already retired, she still keeps in touch.

PERSONAL STATEMENT: During my time at KAEFER, I have grown as a person, learned to value other people and learned the importance of teamwork. My experiences have been very positive and enriching.

We are grieving for:

Netherlands

Jan Nossent, † 30.03.13

Mexico

Juan Murillo Tamayo, † 09.06.2013

Poland

Dawid Holak, † 07.05.13

Antoni Żydek, † 05.02.13

Finland

Ari Sandberg, † 06.01.13

France

Jean Louis Tran, † 24.11.12

Jean Gregoire Franco, † 21.11.12

Alexis Aguado, † 14.03.13

England

William Hewitt, † 19.03.13

Norway

Ronny Dale, † 01.05.13

Karl Jakob Sømoe, † 02.11.12

UAE

Hazara Singh, † 04.09.12

Australia

Leslie Rule, † 28.11.12

Reynaldo De la Cruz, † 13.04.12

Raymond McPhee, † 01.05.13

Germany

Willy Pechmann*, † 22.10.12

Thomas Beer, † 24.12.12

Dieter Borchert*, † 21.11.12

Adolf Brüntje*, † 20.12.12

Gani Ismajli*, † 19.04.13

Hartmut Fellermann*, † 19.06.13

Peter Berger*, † 12.01.13

Ferdinand Klönne*, † 03.09.12

Heinrich Seedorf*, † 03.02.13

Johann Nolte*, † 07.06.13

Günter Seidel*, † 27.04.13

Johannes Maus*, † 07.06.13

Helmut Kiehl*, † 18.10.12

Redzo Begovic*, † 08.10.12

Klaus Lindemann*, † 17.03.13

Ewald Münster*, † 04.04.13

Ivan-Johann Walzl*, † 02.03.13

Momir Marjanovic*, † 01.12.12

Hermann Martschat*, † 25.04.13

Jürgen Ahrens*, † 24.01.13

Manfred SteuBloff*, † 13.11.12

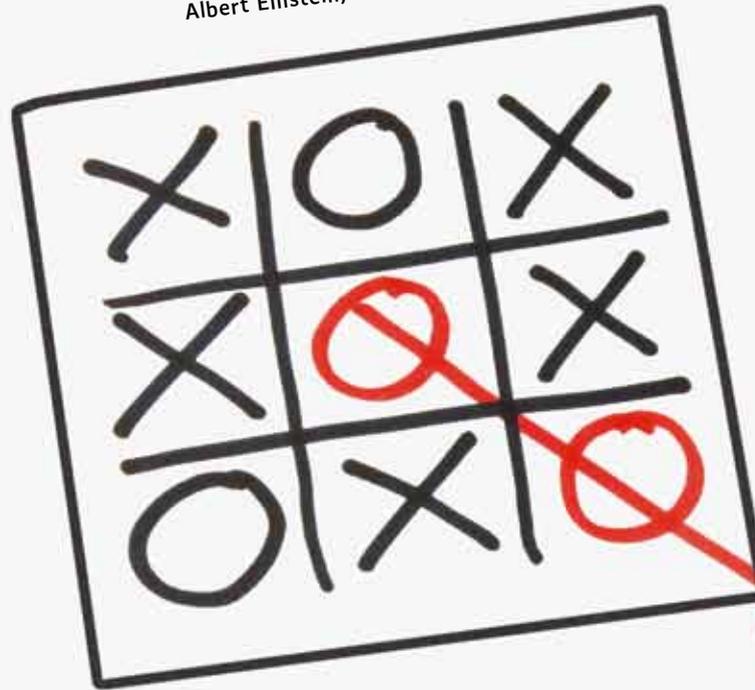
Horst Grigo*, † 10.04.13

Holger Matthes*, † 02.06.13

Ivan Kipicic*, † 19.01.13

“The world we have created
is a product of our thinking; it cannot be changed
without changing our thinking.”

Albert Einstein, theoretical physicist (March 14, 1879 – April 18, 1955)



K|WERT – THE KAEFER MAGAZINE FOR EMPLOYEES, CLIENTS AND PARTNERS

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