Issue 2005, No. 23 | The Company Magazine of the KAEFER Group

**KAEFER GROUP** new locations in Eastern Europe – China opens up new perspectives – South Africa receives safety awards **SHIPBUILDING** buoyant demand for high-grade interior outfittings **OFFSHORE** Foundation of the competence centre KAEFER International Offshore (KIO) **INDUSTRY** portfolio experiencing expansion of scaffolding activities **CONSTRUCTION** major large-scale projects at Barmenia Versicherung in Wuppertal and the building of a new hotel in Cuxhaven **PRODUCTS / SYSTEMS** GK launches product offensive in building construction – bemo cooperates with profile manufacturer

# K|WERT

Dynamic growth worldwide:

## More than good ideas

## Dear Employees,
## Dear Friends of KAEFER!

This 23rd issue of "K-WERT" impressively documents the current development of our group of companies. By virtue of our mutual efforts we have succeeded in playing an active role in the internationalisation of industrial markets. The dynamic growth of the KAEFER Group of companies in more than 30 different countries throughout the world bears witness to the high levels of professionalism with which our foreign subsidiaries are capable of penetrating new markets and successfully building them up.

Highly challenging large-scale projects – Snøhvit in Norway and Dolphin Gas, for instance – contributed valuable impulses for new activities. Augmenting existing volumes of business, they provide the stable portfolio basis necessary for sustained international expansion.

But it was also possible to improve on a great part of our German business. Growth rates recorded by the business segments Industry and Construction are most encouraging – all the more so considering the backdrop of pessimistic forecasts in face of prevailing sluggish growth in the German economy. Our company's positive trend is supported by the strategic measures implemented in the segments of shipbuilding, rail vehicles and the aviation industry. We are on the best way to integrating KAEFER-specific know how in the field of insulation and interior construction systems in new promising segments of growth and to consolidating and reinforcing our market position with long-term commitment.

At the root of all our efforts, successes and consolidation, though, are our dedicated employees. Our investment in training and further education, in qualifications and new recruitment bear witness to this conviction. They are manifested in the JEP (Junior Executive Programme) and IGET (International Graduate Engineer Trainee Program) programmes of training and support for junior management, in employee assessment procedures and, not least, in our training of apprentices.

The "Training Ace" award presented to KAEFER by the Minister for Education, Ms Edelgard Bulmahn, in 2004 for Germany's best training company confirms that we are well-aware of the importance of "Human Resources" and that we are on the very best way towards meeting this challenge.

But in spite of such positive news we must not forget that the pressure of global competition never lets up and continues to exert pressure on us to economise and cope with change. But it is this constant, creative and critical appraisal of work procedures that leads to improvements and to the advancement of our products, helping us to fine-tune our business. This gives everyone of us the opportunity to make their own individual contribution with their own ideas.

All in all, there is good reason to look forward optimistically – a view to which you all have personally contributed and for which we would like to express our thanks and recognition! We wish you and your families a peaceful Christmas holiday and good health, happiness and safekeeping in the New Year 2006.

| Norbert Schmelzle | Jörn M. Fetköter | Peter Hoedemaker |
|---|---|---|
| Chairman of the Board | Managing Director | Managing Director |

# KAEFER 2005

**Spring 2005**
KAEFER International Offshore (KIO) is set up as new centre of competence


**April 2005**
Acquisition of TERMOIZOLA UAB, Lithuania


**May 2005**
IMM at botanika, Bremen

DECEMBER '04 | JANUARY '05 | FEBRUARY '05 | MARCH '05 | APRIL '05 | MAY '05

**Autumn 2004**
Completion of "BMW" project in Leipzig

**May 2005**
Work starts on Eckernförde-Wilhelmsthal facade renovation project

**Spring 2005**
Insulation work starts on polyethylene-granulate plant Borealis PE 4 in Vienna-Schwechat

**April 2005**
Australia/Thailand: supply of materials and installation work connected with extension of an aluminium works in Australia

**May 2005**
Allianz Arena is opened in Munich

**April 2005**
Bremerhaven: "PRIDE OF AMERICA" completed

KAEFER GROUP


**August 2005**
Acquisition of Polish company IZOKOR Plock SA

**August 2005**
MML: New in the KAEFER Group: Finnish conversion specialist for luxury ships

**October 2005**
Presentation of awards for the "Competition of Good Ideas"

JUNE '05 | JULY '05 | AUGUST '05 | SEPTEMBER '05 | OCTOBER '05 | NOVEMBER '05

CONSTRUCTION

**September 2005**
Airbus management enjoys new view of things thanks to bemo

**Winter 2005**
New hotel building in Cuxhaven: work begins near the Elbe

INDUSTRY

**July 2005**
Gas liquefaction plant is towed by barge to the Island of Melkøya

**August 2005**
Neste Oil refinery, KAEFER's largest industrial project in Finland to date

SHIPBUILDING

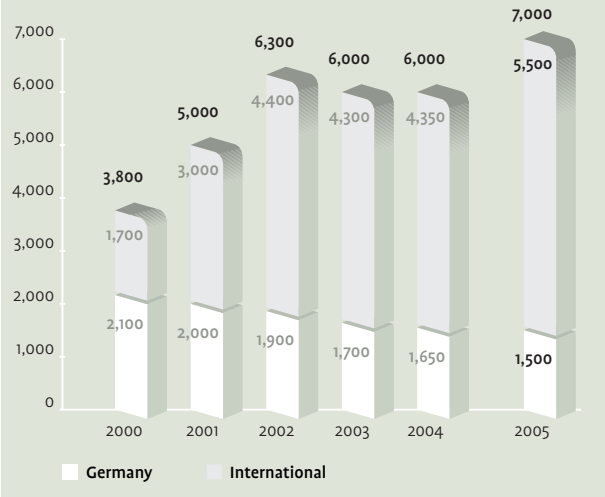
**June 2005**
Chantiers de L'Atlantique, St. Nazaire: order for 500 passenger cabins

**July 2005**
Christening of the ice-breaker research vessel "MARIA S. MERIAN"

CONTENT

# KAEFER Group 2005


*KAEFER turnover in EUR million*
*The financial year 2005 saw a slight increase of 12.1 % over the prior year's result. Encouraging figures from abroad showed an increase of 12.5 %. Contrary to the overall trend in the domestic economy, we were able to achieve a 11.5 % increase in turnover.*




*Employees KAEFER Group*
*A slight decrease in the number of employees in Germany was offset by a ignificant increase in other countries. This results on the one hand from recent company acquisitions, and on the other hand from the organic growth.*

# KIO: Global know how in the fields of oil and gas offshore

**Business in Norway is developing very nicely. As everyone knows, success has many fathers. But sometimes it even begets children.**

*Kim Twiggs*

KIO (KAEFER International Offshore) is the trading name given to a centre of competence set up as a joint effort between KAEFER IKM Norway and Bremen Headquarters in the spring of 2005. The aim was to bring our offshore know how in oil and gas to coastal exploration zones in other parts of the world. This is the task of Kim Twiggs, until the beginning of this year an employee of Aker Kvaerner, now our KIO man resident in Aberdeen, but with an address in Stavanger as well.

Why Scotland? Well, he is British, after all. But more important is that the Scottish coastline is highly active in offshore activities. This is also where our 20%-held KAEFER IKM partner is already present with its subsidiary company IKM-Testing. They are well-established as a testing and service provider for the construction and maintenance of offshore pipeline systems – a key interface for the mutual objective "new facility acquisition" and thus an ideal supplement to our KAEFER IKM competencies in further extending such offshore activities.

Kim Twiggs with his office in Aberdeen is thus something like a of IKM-testing, and from here he can market the mutual interests to other offshore zones around the world. The fact that we have for a long time been present in those regions with other KAEFER activities and therefore already possess some organisational background, without which it would not be possible to

tender for such large-scale orders, rounds off our plans. The time is ripe, as the booming oil industry shows – and we have subsequently not only been able to place our bids, but also to book some first orders for Canada (New Foundland).

KAEFER IKM is thus well on the way to successfully marketing the skills existing in Norway on the world market.

*Calligraphy exercises*


*A conservatory acts as conference room at IMM 2005*

# IMM – International Management Meeting, 26. – 28. 05. 2005, Bremen

This annually held meeting was organised by Managing Director, Jörn M. Fetköter, and his team comprising Anke Gregorzewski, Dagmar Steil and Heinz Lenk. A total of 79 participants from 18 different countries met to discuss KAEFER strategies and the latest developments within the KAEFER Group.

We're beginning to get used to it – and this year, too, the weather did not let us down – lots of sunshine contributing to the overall friendly atmosphere at the meeting, which was supplemented in the intervals by group activities with a far-eastern flavour, e. g.:

Aikido martial arts in the Japanese Garden
Tea sampling in the Chinese Pavilion
Tangram exercises in the Bonsai Garden Pavilion
Tai Chi in the Rhododendron Park
Calligraphy in front of a large Buddha

The three managing directors were able to report to the gathering of KAEFER executives on the successful development of the Group in various business segments and on the encouraging future outlook.

It was in this vein that Peter Hoedemaker made the following three international awards:

- Best International Development 2004: KAEFER TERMOIZOLACJA (Poland)
- Best International Development 2004: NECL
- Best International Performing Business 2004: KAEFER WANNER (France)

Jörn M. Fetköter subsequently took over to present the two national awards:

- Best National Performing Business 2004: Shipbuilding Division
- Best National Turnaround 2003-2004: Industry Division

*Participants at International Management Meeting*

*Photo left: Tangram exercises in the Bonsai Garden Pavilion*

# Finland: Largest industrial project will provide work until June 2006

*Neste Oil Refinery in Kulloo*

KAEFER Finland has been contracted to insulate some 35 km of pipework and 2,000 m² of plant facilities on the huge construction site at Neste Oil Refinery in Kulloo. The work will go on until the middle of next year. This is the most valuable Finnish industrial project so far and it will be carried out with help from Estonian and Polish fitters. The project in the south of Finland involves insulating a total of 180 km of pipelines and some 30,000 m² of equipment.

The team from KAEFER in Finland has been working for the same customer at another construction site for several years now. On average, 30 fitters are being kept busy insulating the pipelines and adjoining equipment. To facilitate the work, in 2002 the company installed its own offices and workshops on site. At the end of August 2005 the regular maintenance and repair work began, during which the refinery has to be closed down completely every four years. About 3,000 valve and flange caps, some 160 heat exchangers and 100 further components had to be partially dismantled and newly insulated. The largest caps have a diameter of 3 metres and an insulation thickness of 240 mm.

# Finland: Plenty of work on luxurious Freedom ships

She is not yet finished, but next year the "FREEDOM OF THE SEAS" will be setting world standards. The first ship of the ultramodern Freedom Class is presently under construction at Finnish Aker Finnyards in Turku. In June 2006 the new ocean liner will begin transporting passengers on fabulous holiday cruises through the western Caribbean. Within the next two years another two sister ships are to follow "FREEDOM OF THE SEAS" and join the fleet of Royal Caribbean International. The 340 metre ships can accommodate up to 4,370 passengers in 1,800 cabins.

The team from KAEFER in Finland is carrying out turnkey projects involving spas and solariums for all three ships. An area of 1,760 m² on "FREEDOM OF THE SEAS" is dedicated to a bathing complex under the theme heading Lagoon. A sumptuous swimming-pool creates the almost perfect illusion of being in a South-Sea lagoon. Cruise passengers gaze through glass walls onto coral reefs, and special underwater loudspeakers provide gentle background music. The chief attraction in this theme complex, though, are two whirlpools appointed on the outer side of the ship. Visitors have the impression of floating alongside the vessel. A dozen of 5 m high golden palm trees round off that perfect South-Sea holiday feeling.

The sauna and beauty area encompasses 1,870 m² and is even a little larger than the bathing complex. KAEFER is involved in building the saunas, a steam-bath area, beauty saloons and 15 wellness and relaxation rooms in this part of the ship. A circular staircase with glass steps leads into the area. More than 100 items of fitness apparatus supplemented by 25 treadmills ensure that the passengers work up a sweat. In addition there are facilities for team sports and an original size boxing-ring.

# Estonia: market with good prospects

KAEFER started its first business activities in the Baltic States back in 1993 – shortly after the collapse of the Soviet Union. We countered the significantly cheaper competition in the country with state-of-the-art insulation technology. And quality always wins through in the end. Consequent pursuit of this successful strategy enabled us to gain a foothold in the Baltic market.

Later, in 1998, KAEFER set up Isolatsioonitehnika OÜ. The new company is registered in Estonia and its Managing Director, Aivo Andrekson, is already well-known to the customers. Since then KAEFER Isolatsioonitehnika has successfully completed a number of valuable contracts and become firmly established in the Baltic market.

The latest large-scale project undertaken was the insulation of three steam boilers at the Balti heating and power station near the town of Narva in the North West of the country. Between October 2004 and April 2005 up to 20 KAEFERites and 20 other workers were busy providing thermal insulation to boilers and pipelines. The customer, AS Narva Elektrijaamad (Narva Power Plants), is Estonia's biggest energy provider and one of the country's main employers. The Balti power station exploits oil shale and maintains it is the largest plant of its type in the world.

*Insulation work at a power station belonging to AS Narva Elektrijaamad (Narva Power Plants)*

# New in the KAEFER Group: Finnish conversion specialist for luxury ships

Time is money – that also applies to the operators of cruise liners and their suppliers, especially the yards. For often enough cruises on the ships are booked many months in advance. There is therefore no room for delay when it comes to conversion or refitting work on luxury cruise liners. Increased pressure of time and the most demanding quality specifications make modernisation work on cruise liners to one of the most exacting logistical challenges in the whole field of shipbuilding. Not infrequently, all manner of tasks and jobs in tight spaces have to be coordinated and planned. Restaurants, large kitchen areas, solaria, discotheques and shopping arcades, as well as a number of passenger cabins often need to be refurbished and "smartened up" in a period of just a few weeks. It is not unusual for more than 100 fitters to be kept busy around the clock.

The Finnish enterprise MML Shipbuilding Oy, located near Turku, is a specialist company in the field of planning, construction and implementation of such complex projects. KAEFER recently acquired a majority shareholding in the company. In the past MML Shipbuilding Oy has carried out numerous major projects for such leading names in the cruise liner business as Carnival Cruises, Royal Caribbean and Crystal. This new KAEFER acquisition is expected to lead to synergies that will benefit both the ship owners as well as the yards that serve them. The company was already able to claim its first success: shortly after joining KAEFER Group, MML received an order to refurbish the SPA area on the cruise liner "CRYSTAL SERENITY".

*In the past MML and KAEFER already cooperated on diverse ships in the Voyager Class, for example on "MARINER OF THE SEAS".*

# HSE Award for Rune Hocking

*Karsten Gudmundset (left) and Rune Hocking*

This "Health-Safety-Environment" prize, sponsored by KAEFER Norway's Management Board, is endowed with the sum of 2,500 NKr (321 Euros). It is awarded annually for special contributions to the three aims which are of such importance for our work.

The prize money and cup were presented to the 2004 prize-winner, Rune Hocking, on 15th March this year in Stavanger. At the ceremony, Karsten Gudmundset explained that this year's prize had been awarded in recognition of Rune Hocking's commitment to the organisation and running of the first-aid facility on Melkøya (Snøhvit), and for his special contribution to safety especially in connection with scaffolding work carried out there. This honour confirms the prize-winner as "a good ambassador for KAEFER IKM".

# "Nordsjørittet 2005" – Twelve Made it to the Finish

People who cope successfully with large projects of the type handled by KAEFER do not shy away from other challenges. And so a small but resolute team of our colleagues made up their minds to carry the KAEFER colours across the finishing line at the annual "North Sea Ride", a traditional cycle race.

Every year this biking event which takes place in the coastal region south of Stavanger calls on men to give their utmost – and this time it included three women, too! The competitors burned up a lot of asphalt in training – after all, the race goes over a distance of 83 km, encompassing 240 m difference in elevation and often against stiff sea breezes.

On the day of the race, sunny and with agreeable temperatures around 18 °C, our team collectively demonstrated KAEFER team spirit. "Together we are strong" – true to this motto our peloton moved on from station to station. The KAEFER squad stayed close together right up to the final stage, when the chosen rider then broke away to improve on the 6-hour time recorded by our group with a good 40-minute lead – according to the motto "there is more than one way to do it". They certainly showed what teamwork is capable of. Later in Stavanger they were suitably rewarded with a celebration dinner, one which the participants still thankfully look back on.

Results: 5:19:00 hours: Rolf Ingebrigtsen; 6:00:00 hours: Eivind Berg, Anne Brakstad, Siv Åse Eiane, Karsten Gudmundset, Inge Orre Håland, Thorbjørn Jensen, Sunniva Johannessen, Stian Kolstø, Herbert Meyer, Rolf Magne Pedersen, Birger Susort.


# Success story Eastern Europe continues

**What do Poland, Hungary, Lithuania, Latvia and Sweden have in common? They all belong to KAEFER's Eastern Europe region. Although this deviates somewhat from school-book geography, it does have a certain logic within the organisational structure of our company.**

Robert Skrobisz, Regional Director Eastern Europe explains: "Cooperation between the various divisions and companies in the KAEFER Group is close between these countries. Thanks to this organisational unity we will be better positioned to benefit from potential future synergies. Incidentally, the Polish company TERMOIZOLACJA S.A. has also been operating successfully in Ireland for some time, where they have also now set up a subsidiary."

The region Eastern Europe within the KAEFER Group is increasingly revealing itself as a driving force for growth.

Looking back to the year 2001, KAEFER had just two companies and 20 employees there. By 2004 the number of companies in the region belonging to the Group had grown to seven companies, employing a total of 700 people. Many thought it would not be possible to improve on the extraordinarily successful year 2004, but KAEFER East Europe continues to grow. In the mean-

time 15 companies in six different countries report directly to Robert Skrobisz, and the number of employees has risen to more than 1,700!

"We are not only growing quantatively, but qualitatively, too", remarks the boss for Eastern Europe. For instance, the turnover and profit for our companies in the region have also been boosted.

At the beginning of 2005 two new countries, Ireland and Sweden, were included in the (KAEFER) region. Skrobisz: "The year before in Ireland we completed a major project worth more than 3 million Euros for Foster Wheeler to the customer's entire satisfaction. Following this success we were subsequently able to acquire additional high-volume orders. Because of the high potential we perceive in Ireland it was decided to set up a branch office there." The Irish subsidiary will be led by a branch manager from Poland. It is intended to employ Irish sales engineers in the near future.

We ventured into Lithuania in April this year, when KAEFER took over the majority shareholding in TERMOIZOLA UAB, Kaunas. The TERMOIZOLA Group comprises TERMOIZOLA UAB and three subsidiary companies in Lithuania; TERMOSFERA, TERMOVITA, TERMORANGA, employs some 400 people and with TERMOIZOLA o.o.o is also active in Latvia. Annual turnover of the company amounts to more than 6 million Euros. This makes TERMOIZOLA Group the leading insulation company in the Baltic States. The company, which was privatised in the 90's, has gathered significant experience in the Baltic area, Russia, Belarus and as subcontractor in Western Europe, too. Its main customers are power stations and refineries. The product spectrum encompasses industrial insulation, façade construction, scaffolding, fire-proof cladding and electrical heat tracing.

**The region „Eastern Europe" prepares for the future**

Although Lithuania is only a small country, it is very important for KAEFER. "In the next three years we expect that very significant investment projects will be undertaken there, partially as a result of Lithuania's EU membership", says Skrobisz. Above all, the conventional power stations will have to be adapted to conform to the more stringent EU environmental regulations, for instance. Furthermore, Lithuania is ideally located as a stepping stone into other eastern markets like Russia, Belarus and Kazakhstan.

The second acquisition followed in August 2005. KAEFER acquired the Polish insulation company IZOKOR Plock SA, thus considerably strengthening its activities in Poland.

IZOKOR employs more than 550 people and in 2004 achieved a turnover amounting to some 11 million Euros. We expect more than 14 million Euros for 2005. It is the third biggest company of its kind in Poland. Almost 80 % of turnover comes from activities in the petrochemicals industry. Main customers are PKN ORLEN, Eastern Europe's largest refinery, supplying 2,400 petrol stations, 500 of them in Germany, and the Lotos refinery.

The acquisition of IZOKOR fits ideally into KAEFER's overall strategy for Poland. Whereas TERMOIZOLACJA is mainly active in the areas of power stations and heavy industry, industrial projects tend to be rather underrepresented in IZOKOR's order book. Apart from the petrochemical branch, the new KAEFER company is specialised more on the paper and chemicals industry. As opposed to TERMOIZOLACJA, it is mainly active in the northern part of the country.


*The KAEFER region "Eastern Europe" is headed by Robert Skrobisz*

There have also been changes in Hungary, where Zsolt Böröndy took over as new Managing Director in April. Further, KAEFER Hungary has moved into new premises in Budapest. Recently, the first large-scale projects to be undertaken by the industry division were completed successfully.

That just leaves Sweden. Following the integration of the KAEFER team there in the region Eastern Europe, Robert Skrobisz expects new impulses to be released in this Scandinavian country. The technical background in Poland on the one hand, and the opening of the Swedish labour market for citizens from the new EU member states on the other, together with the competitive export capacity of the region overall augurs well for a continuation of the success story East Europe.

The market potential of the Eastern European economic area has by no means been exhausted by the eventful year 2005 – concludes Robert Skrobisz.

*Through 2004/2005 KAEFERites were working on the polypropylene plant belonging to the Slovnaft refinery in Bratislava, Slovakia. Project manager Jan Henne supervised diverse cold and heat insulation work on the pipes and armatures*

# KAEFER WANNER: safe disposal of leaded paint

**Some years ago France introduced new regulations that can force the owners of buildings to dispose of paint products which contain lead.**

This legislation has led to a new market for decontamination services, a segment in which KAEFER WANNER has proven successful. The company possesses considerable expertise in the field of toxic disposal, employing highly advanced techniques to dispose of the lead paint that result in maximum performance and safety. This explains the high levels of customer satisfaction.

Using hand-held milling machines specially developed and adapted for KAEFER WANNER it is possible to work contaminated surfaces down to between 3 and 10 mm. An attached filter and suction system automatically transports the waste away and ensures that none of the toxic dust can escape. Once treated, the surfaces can be easily worked, since they are left smooth, dry and free of chemicals.

Since February 2005 employees of KAEFER WANNER have been working on the construction site Pierre 1er de Serbie. By June this year they had removed a good 6,000 m² of lead paint. Several other projects have also been successfully completed. Currently studies are being carried out to find ways of optimising the reliability and efficiency of the materials used.

*Hand milling is called for to remove lead paint*

# KAEFER WANNER installs and builds passenger cabins on two cruise ships

*Interior photo of a completed cabin as fitted on the Q32 and R32 ships*

In cooperation with KAEFER International Shipbuilding (KIS), KAEFER WANNER has successfully competed for a major order for the building and installation of turnkey cabins on the newbuildings Q32 and R32 to be built at the yard Chantiers de L'Atlantique in St. Nazaire. These two passenger ships are being built for the owner M.S.C. and will be named "MSC MUSICA" and "MSC ORCHESTRA"; each will provide accomodation for 2,568 passengers. Together with the local company GESTAL, which is specialised in electrical installations on ships, KAEFER WANNER will install some 500 cabins on each of the ships. The contract has a value of approx. 3.5 million Euros.

The order comprises the acceptance, loading and assembly of the prefabricated cabins on board, the installation of approx. 50 cabin kits, the construction of corridors and other areas, as well as the purchase and testing of materials used. KAEFER WANNER is responsible for the project management, feasibility studies, procurement, quality and safety control, as well as the execution of about 70 % of the cabin installation. In addition, KAEFER WANNER will lay all the flooring.

The work is expected to involve approx. 30,000 work hours, whereby parts of the contract will be performed by WANNER MARINE and TERMOIZOLACJA. Work began in June 2005 and is expected to continue through to February 2007.

Throughout this period our French subsidiary company WANNER MARINE will be part of a working group comprising other major suppliers and the yard Chantiers de L'Atlantique. In particular, this working group will make proposals for standardising the process of cabin installation and gain insights for the construction of sister ships.

# KAEFER Aislamientos: Lots to do in power stations and observatories

Last year's K-WERT already carried a detailed report on the intensive activities of KAEFER Aislamientos for their customer IBERDROLA, one of Spain's biggest electricity utility companies. This market leader in the production of renewable energies on the Iberian Peninsular is stepping up its involvement in so-called steam-to-gas power stations. One such gas-steam turbine power station has been erected in Arcos de la Frontera in the southern Spain. The complex located near Cadiz comprises three units (Arcos I, II and III). On completion at the end of 2005 the 3rd unit will produce some 1,600 mw. IBERDROLA has invested around 850 million Euros in construction of the power station.

KAEFER Aislamientos was already successfully involved as contractor for extensive insulation work during construction phases I and II. Since February 2005, 25 KAEFER fitters, sometimes as many as 35, were engaged in work on the 3rd construction stage. They clocked up a total of some 32,000 working hours. The insulation work on pipelines, turbines and boilers was carried out and completed to the customer's complete satisfaction. At all times KAEFER Aislamientos maintained the very highest standards of safety, efficiency and quality.

*Management-Team KAEFER Aislamientos: Iñigo Bujedo, Carlos Allica, Christian Martin (from left)*

*40-meter radio-telescope at Centro Astronómico de Yebes in Guadalajara*

Quite near to the Spanish Mediterranean coast, in Escombreras near Cartagena, KAEFER was also active for another customer IBERDROLA. Here KAEFERites supplied and installed material for the façades and roofs of buildings in the complex surrounding the Escombreras power station. The work was carried out during a shutdown of the 820 mw power station. The particular weather conditions prevalent in the Escombreras Valley dictate that sandwich panels made of mineral wool and a special polyurethane-polyamide coating had to be used. More than 10,000 m² of façade and 5,000 m² of lagging had to be insulated under difficult conditions – installation up to 20 metres high and with eight-metre-long panels.

In Centro Astronómico de Yebes in Guadalajara the Spanish observatorio Astronómico Nacional has built a 40-metre radio telescope capable of picking up frequencies in the centimetre and millimetre range. KAEFER Aislamientos was engaged in the construction of the giant telescope as well as in the acoustic and thermal insulation work that went with the project. This involved insulation work on the control room and the sheathing of the parabol antenne.

# Price, experience, quality and environmental compatibility: KAEFER Aislamientos fulfils all these criteria!

The biggest package of orders in KAEFER's history: insulation, scaffolding and surface work on a gas liquefaction plant for Hammerfest in Norway is well under way. The core of the facility, the gas liquefaction plant, was built in Spain by Dragados Off Shore in Cadiz. For its part, KAEFER Aislamientos carried out extensive insulation work within the context of this extensive industrial project. The plant is the first of its kind in the world to be built off-site. In July it was towed by barge the 5,000 km from Norway to the island of Melkøya inside the Arctic Circle.

KAEFER Aislamientos carried out insulation work (heat, cold and acoustic) on some 18,000 m² of pipelines and 4,000 m² of equipment. In addition to this the KAEFERites had to install a further 2,000 m² in the pressure zone of the complex as well as in the energy generation sector.

The insulation is for temperatures as low as –190 °C. The plant has to operate under the most stringent noise and fire protection regulations – just one reason why this was one of the KAEFER subsidiaries most challenging and technologically advanced project to date. On average about 120 KAEFERites were involved with the work at any one time, although the number sometimes rose to 150 fitters.

*Gas liquefaction plant for the Snøhvit project in Norway*

# A challenging puzzle: floor insulation for reactor pressure vessel

*Ground insulation for reactor pressure vessel*

The Nordostschweizerische Kraftwerke AG, NOK, is an established customer of the region NECL. Since 1999 our engineers and fitters have been entrusted with maintenance and construction work in the power stations run by NOK.

In 2004 KAEFER was awarded another interesting contract: floor insulation for a reactor pressure vessel. “The task was particularly challenging, both with regard to the design as well as the fitting”, says Günther Ahlers, expert for nuclear insulation systems.

On the one hand, the requirement was for all-metal insulation, and apart from this the floor’s hemispherical composition with openings for 25 incore tubes made the design a veritable puzzle. “Even though the whole surface was only some 15 m², the complete insulation involved the assembly of some 124 parts”, Ahlers recalls. In order to cope with the special circumstances, the insulation had to be designed with the aid of modern CAD and 3D technology. Well-thought-through planning and preparation played a crucial role in ensuring that the on-site installation could be completed smoothly and on time in July 2005. Just a short while later the specialists found themselves working on the floor insulation of yet another reactor pressure vessel. The secret: both jobs were first test-run on a dummy in the Bremen workshop and filmed. The video recordings are used as training and illustrative material for KAEFER fitters and customers. In September the insulation could be carried out in the Beznau nuclear power station.

# Pressurizing station insulated

As part of the refitting of a pressurizing station in the Swiss nuclear power station at Gösgen, KAEFER was contracted to install mineral-wool insulation on a fuel assembly facility. As well as the pressurizing station, the work also involved insulation of adjacent fittings. Together with a Swiss partner, the work was completed in June to the customer’s entire satisfaction.

*Cassette insulation with mineral wool for pressure vessel system*

# LNG skill-sets are bundled

The large-scale project Snøhvit was not the first evidence of the opportunities to be found in the business segments surrounding liquefied gas. The conveyance, storage and the transport of liquefied gas (LNG) place extreme demands on insulation providers. Whether onshore or offshore, whether pipeline or specialised ships, different insulation systems are called for depending on location of the gas field and type of transport used. From now on the necessary know how can be found bundled in KAEFER’s NECL region. NECL Director Henry Kohlstruk: “We are in the process of building up a whole range of skill sets for insulation systems in the area of liquefied gas. As of next year all KAEFER business segments and companies will be able to call upon this exceptional know how.”

# Seizing chances in China: KAEFER sets up a company in the Middle Kingdom

More than 200 years ago Napoleon Bonaparte prophesised, “When China awakes, the whole world will tremble”. Today the Middle Kingdom has not only woken up – it is powering ahead at full steam. The economic boom shows no sign of faltering: already every second digital camera, every third mobile phone, every fourth washing machine in the world is made in the giant economy.

Of course, the market for industrial goods is booming, too. For instance, the Chinese government has decided to invest some 40 billion Euros on construction of 31 nuclear power stations over the next 15 years. In addition to this, it is planned to build a number of LNG plants. KAEFER is already participating in the construction of a first LNG import terminal in Guangdong. It is planned to build other terminals at Fujian and Zhejiang. There is likely to be considerable investment in offshore activities, too. Yet another area of opportunity is shipbuilding. China has set itself the goal of becoming world leader in shipbuilding by the year 2020. The largest shipyard in the world (Jiangnan Shipyard) is currently being built on an island just off the coast of Shanghai.

Reasons enough to enter the growing markets in the Middle Kingdom. The KAEFER organisation has risen to the challenge by means of bundling the expertise contained in the Export Division M.A.L.N.E. into the new NECL region and giving it a new orientation. Whereby M.A.L.N.E. stood for “Middle East/Africa/LNG/Nuclear/Export”, now NECL is the acronym for “Nuclear/Export/China/ LNG”. As Regional Director Henry Kohlstruk puts it: “The increasing importance of China was an important reason for the restructuring.”

Whereas it may be true that the scope for insulation work remains limited in China today, the increase in foreign investment means that higher quality standards will be placed on insulation in future.

KAEFER has been looking closely at the Chinese market. Initially KAEFER is setting up a so-called “wholly foreign owned enterprise” in the Middle Kingdom. „The company will at first serve our German and international customers in China and concentrate on two areas“, says Kohlstruk. This will entail the production of turbine mattresses, the manufacture of nuclear cassettes and the promotion of LNG business. KAEFER purposely chose Shanghai Chemical Industry Park to be the location, a petrochemical industrial complex of the superlative, some 50 km south of Shanghai. On this area covering an initial 30 km² one can find all the global players of the pharmaceutical industry. Among them are BASF, Bayer, Degussa and the Chinese oil giant Sinopec. Not only the geographical, but also the financial dimensions of the industrial park are awesome. Alone the first construction phase entails an investment of some 15 billion Euros. Plans foresee the industrial park advancing to become the most important chemicals production facility in Asia in the medium term.

In order to be able to also offer services to Chinese customers in China it is necessary that projects are undertaken in cooperation with Chinese companies, ort hat Chinese investors are involved. The KAEFER region NECL is currently looking into both possibilities. „In a transition phase we will certainly coordinate with Chinese partners on projects“, says Kohlstruk. The formation of a Joint Venture with Chinese partners would be the logical next step.

*Shanghai*

# Australia – down-under now a full member of KAEFER

**From a European perspective, things in Australia seem upside down. Two years ago this childish impression began to shape into reality. But following several not only climatically hot months these obstacles could be removed – and this is where the current report filed by our rounded-off subsidiary down-under "KAEFER Integrated Services Pty. Ltd." takes up the story.**

### Integration in South East Asia

Since December 2004 KAEFER Integrated Services is a 100 % subsidiary of KAEFER Insulation Technology Bremen. Freed from the influence of outsiders and the obligations of a public company, since then it has been possible to concentrate once again on the original business segments and, following a necessary restructuring, to pursue the company's integration into the KAEFER region "South East Asia" (SEA). For the Australian oil, gas and extraction industry is booming. Alone in Western Australia projects worth some 1.6 billion Euros are already in progress, and another 1.0 billion Euros has already been firmly committed. A further 122 projects are on the drawing board. Due to a culmination of high labour costs and lack of skilled workers, Australian customers are going over to contracting complete modules for prefabrication in the SEA region – in a similar way as the gas liquefaction plant was built in Spain for a customer in Norway, the heart of Snøhvit.

Subsequently, the decision to integrate taken at the beginning of the year is turning out to be greatly to the benefit of everyone concerned – not only with regard to internationalised procurement activities and cooperative project management, but even more so due to the mutual marketing opportunities and sales success resulting from the unitary cross-border presence of KAEFER as a strong group of companies.

### Great success: Alcan Gove G3

In this example the new strategy has already produced convincing results. With a view to almost doubling capacity at its aluminium works in the Northern Territory from 2.1 to 3.8 million tons annually by 2007, our regular customer Alcan decided to have the pipe racks, tanks and modules prefabricated in Thailand, Malaysia and Vietnam. The KAEFER Group was awarded the single contract for supply and installation of the entire insulation. This did not include the work to be done on-site in Australia – since from the outset Alcan ruled out the option to contract construction work to its established maintenance partner.

We owe this success above all to our presence in the above-mentioned countries, where in all crucial issues we are perceived as a group with uniform standards of safety and quality. Besides this, advantages from the prefabrication in Thailand und Malaysia accrue for our products TIPS- and INSTA-LAG which have been patented by KAEFER Australia. Known for its rationalisation effects on labour costs, scaffolding and installation time on site, Alcan specifically requested TIPS for the tank insulation and for safety reasons, INSTA-LAG for the pipeline insulation on-site in Australia.

Intensive, regional interlinking thus represents an inevitable precondition for achieving further success in the region – other projects being planned, like the Woodside LNG Train V, for instance, will be implemented with a similar proportion of prefabricated parts.

*Scaffolding for the Alcon Gove project*

*KAEFER region SEA & Australia*

**Employees**

The successful work performed by our Australian KAEFERites in 2005 was helped along by two rather exceptional people: Sebastian Jäger (23), the first trainee to be taken on since the company restructuring, who studied "International Management" in Magdeburg. Between March and September 2005 he made a valuable contribution especially in the departments "Offshore" and "Shipbuilding" – and not least during the writing of this report. Jürgen Edinger (26), student of Engineering Management/Construction in Oldenburg joined the company in August and has since been actively involved especially in the area of project controlling. KAEFER Australia is pleased to have their assistance and in turn is proud to be able to offer such keen trainees new and valuable experience and impressions.

**Safety**

In 1994 KAEFER was awarded the maintenance contract for the Norwegian Flinders coal-fired power station "Port Augusta", which encompasses insulation, cladding and asbestos removal. The parent company NRG Energy Inc. in Princeton, USA, is also a shareholder in two German brown-coal power stations, the MIBRAG and in Schkopau.

Steve Barnes, the KAEFER operation manager and currently working with 17 of his colleagues in "Port Augusta", was awarded by the client's station manager Michael Phillips at a ceremony held in his honour for more than 10 years without a single accident on this site.

Of course, our intensive activities in the market were also accompanied by appropriate internal measures. For instance, the "Balanced Scorecard" which had already been partially implemented in the KAEFER Group were further developed in Australia to be used for safety improvements and called "Safety Balance Score Card". At the beginning of the year, this system was implemented by KAEFER Integrated Services in Australia on the Gove site with exceptional success in Safety improvement. This enables an objective assessment of established safety processes, risk awareness and other factors and constitutes an on-going enhancement of accident-prevention measures on an individual level. The implementation of this system in other group companies is continuing.

**Exhibitions and organisational matters**

And there is another activity to report on which may lead to further future success – our participation at the "Austral-Asian Oil & Gas" (AOG) exhibition from 23rd till 25th February 2005. This drew large numbers of visitors from around the world and the event provided us with an opportunity for intensive relationship management and a comprehensive exhibition of our spectrum of products and services. Our Australian team received effective professional support from Karsten Gudmundset (Norway), Henry Kohlstruk (Germany) and Kim Twiggs (KIO).

# "Burrup Fertiliser Plant" – Western Australia

**The peninsular of Burrup is an up-and-coming industrial region. The newest addition to local development: a plant for the production and export of ammoniac, owned and operated by Burrup Fertilisers Pty Ltd.**

KAEFER Australia were awarded the contract to supply and install the insulation system for the pipe work associated with two ammonia storage tanks built by CB&I. The original scope was for the insulation of pipe work using a Multi-layer PIR cold insulation system for operating temperatures of –35 °C. The project scope grew and eventually included the insulation of five ammonia pumps; insulation of the suspended deck inside the two ammonia storage tanks; insulation of tank contraction bellows; supply and installation of High Density Polyurethane pipe support inserts.

A number of challenges were presented during the project. Project manager Chris Thomas and his team met each of them and solve them in a professional and timely fashion. Challenges included:

High density pipe supports were not in the original KAEFER scope and could not be resourced in a timely manner from within Australia. The KAEFER worldwide network assisted the site team to source the supports from KAEFER Thailand without delay to the project.

Compression bellows at the base of the tanks had to be insulated in a manner that allowed for unobstructed compression and expansion. A combination of field initiative from the KAEFER team and engineering support from the client provided the right solution.

There is a current skills shortage within Australia due to the large amount of resource development projects in the country. This was overcome by a combination of rigorous application of KAEFER recruitment procedures by the team's recruitment specialist Jacqui Thomas, backed up by on site development of the skills of team members driven by the KAEFER project supervisor Roy Jones.

The project was finished within the time frame and better than budgeted. The project manager commented:

"From the beginning the project management team developed a detailed project plan and we implemented it throughout the project. Add to that the support from the KAEFER network, and the site team spirit that grew from good team communication and the growth of mutual trust, how could we not succeed?"


*Shopping street at Phi Phi Island in the aftermath of the Tsunami*

*Lek Warawut (right) helped with the underwater clearing-up work*

# Exemplary aid in the wake of the tsunami catastrophe

Christmas 2004: In South-East Asia the tsunami claims more than 230,000 lives. Whole stretches of the coast in Thailand, Indonesia, India, Sri Lanka and other countries are utterly devastated. In an amazingly short time the flood wave destroys villages, towns and roads, making millions homeless and tearing families apart. But just a short while later a wave of help is also on its way.

The populations in the affected countries were not hesitant to set about the work of reconstruction. And KAEFER employees like Lek Warawut were part of the effort. She offered her active assistance to a group of navy divers deployed off the coast of the Phi Phi Islands, helping with the clean-up efforts underwater.

Before the catastrophe, these islands were among the most beautiful locations in South East Asia – with white sandy beaches and clear, blue waters. And then the tsunami washed almost everything into the sea. Television sets, computers, furniture, clothes – the divers even discovered a whole house off the coast of Phi Phis. The beaches and large stretches of coastline were spoiled and inundated with debris and rubbish. The divers were still finding the debris from houses and other buildings up to 150 metres off the coast.

Lek Warawut of KAEFER Thailand stayed for six days, helping to clean up the beaches and the coastline. Three to four times a day the divers went down to remove the debris. A Thai proverb says: “When life gives you a hundred reasons to cry, show life that you have a thousand reasons to rejoice”. This is the spirit in which Lek Warawut did her part; giving the tsunami victims a reason to smile again.

## KAEFER Thailand has come far in a short time

KAEFER Thailand is currently engaged in extensive insulation and scaffolding works at the chemical plant of THAI Olefins Co. Ltd. in Map-Ta-Phut. The works on the East coast of the Gulf of Thailand produces ethylene oxide and ethylene glycol. Between July 2005 and February 2006, fitters working for KAEFER will have installed some 6,000 $m^2$ of columns, 3,750 $m^2$ of tanks, 25,000 $m^2$ of pipes and 4,900 $m^2$ of equipment. The contract also encompasses approx. 60,000 $m^3$ of scaffolding. At peak times up to 230 KAEFERites are working on the site. One of the highlights was the completion of scaffolding and insulation work on the 100 metre high columns T-115 within a period of just 15 days.

# Know how from Thailand for Australian aluminium works

The global demand for aluminium continues strong. In order to meet future demand for the light metal, the Australian subsidiary of Alcan Inc., Canada, has committed some 2 billion Australian dollars to extending its aluminium works in the Northern Territories. The project will raise annual production of aluminium from the current 2.1 to 3.8 million tons by the year 2007. Prefabricated modules used in the extension of the works are manufactured by the Thai company Clough Sino Thai, located at Sattahip near Pattaya. Up to 115 fitters working for KAEFER Thailand are involved in the project. Between April 2005 and July 2006 they will have completed a considerable amount of insulation and fitting work. This also involves the manufacture of so-called Tank Insulation Panel Systems (TIPS). The Thai production unit will supply insulation for a total of 106 modules, amounting to a total weight of some 26,000 tons.

## Refractory materials installed on schedule

In recent years KAEFER Thailand has made efforts to build up their own business segment for high temperature-resistant materials. The year 2005 saw the acquisition and completion of the first large-scale orders. An extensive project was implemented for Southern Steel Corporation in Vietnam which involved the lining of a "Walking Hearth Furnace". Altogether, within a period of just two months 800 tons refractory material were installed. More than 80 refractory masons were required on the construction site. Despite the incredibly tight time schedule, all the jobs were completed within the prescribed deadlines and to the customer's complete satisfaction.

In Thailand refractory work had to be carried out on the Thai Caprolactam PCL incinerator plant and boiler system during the short time the plant was closed down. Here 92 KAEFERites installed a total of 72 m³ of refractory material within just 12 days.

# Scaffolding Training Centre opened in South Africa

In early March, KAEFER opened a training centre for scaffolding workers in South Africa. Following some 12 months of preparation, the training centre for KAEFER employees and external scaffolding workers in Elandsfontein, Johannesburg, finally became operational. The Sizani Training Centre is the very first facility of its type within the Group. It possesses all the necessary equipment and is located in a newly renovated building completely dedicated to the training purposes. The first training courses took place in March. John Deacon is the leader of the training centre, which has been certified by the South African Construction Education and Training Authority (Ceta).

*Training scaffolding in front of Sizani Training Centre*


*Award for 3.5 million accident-free working hours*

*The "Ukuzingelwa Kwezingwenya" game ("crocodile hunt")*

# South Africa: No Chance for Crocodiles

**"In Richard's Bay, which is where I come from, there are lots of lakes full of crocodiles. They're just lying around waiting for you. You have to be constantly on your guard if you want to survive. If not – you're a goner!"**

Ernest Gumede, safety officer for KAEFER South Africa had a super idea. He contrived a game to be used as a safety exercise which uses crocodiles as a symbol for the danger lurking for construction workers. The game "Ukuzingelwa Kwezingwenya" (crocodile hunt) was extremely well received by KAEFERites and customers alike. Our customer SAPREF, South Africa's biggest oil refinery, found the exercise so good that they invited Gumede and his colleagues to perform the crocodile hunt for the benefit of their own employees and subcontractors.

Efforts to enhance safety like this are obviously having their effect, as shown by the statistics. For instance, KAEFER South Africa recently broke through the 4-million-hour mark without a single accident at SAPREF.

Safety has always been a major factor for KAEFER South Africa. To quote just one example, a safety system was developed that is oriented to the body of rules and regulations called "5 Star System" laid down by the country's National Occupational Safety Association (NOSA). This is a holistic system encompassing many different facets of health, safety and environmental protection. In the past ten years the South African KAEFER organisation has undergone audits in accordance with NOSA regulations. The success is tangible: for instance, for the sixth time running the KAEFERites in South Africa received a „5 Star Rating" for safety from their customer SASOL in Secunda. For the future KAEFER South Africa is planning to obtain certification in accordance with guidelines laid down in the OHSAS 18000 Rules.

# Large order in the Middle East for KAEFER

The Dolphin Gas Project includes the construction of a Natural Gas Processing Facility at Ras Laffan in Qatar. The gas comes from the North Dome Gas Field which is one of the largest gas fields in the world. KAEFER is to carry out an extensive thermal insulation and scaffolding contract for JGC Corporation, the Japanese EPC contractor. When operational the gas will be pumped from Ras Laffan via undersea pipelines to the neighbouring countries including the UAE. As many as 400 KAEFER fitters will be needed at the construction site between October 2005 and March 2007 to complete the works.

**Excellent Work in the Middle East: Long Hours Accident Free**

In the Middle East too, work safety occupies a priority position high on the agenda. The numerous accolades and safety awards coming from our customers RasGas, Siemens, Samsung, Larsen & Toubro, IHI and ADGAS bear witness to the excellent accident free work performance of KAEFER workers in the region. Our UAE Company is certified in accordance with ISO 9001, 14001 as well as the safety guidelines of OHSAS 18001. The same certification is being sought by other KAEFER Companies in the region.

*The residential Hotel Palais Coburg in Vienna*

*Swimming pool in Palais Coburg*

# Just before landing at Vienna ...

**... from the air you can catch a glimpse of a KAEFER project in the district of Schwechat. But that is not all – in the city itself you will also find other construction sites bearing the "KAEFER hallmark". Let us take a look one after another:**

**Vienna-Schwechat, directly at the airport**

There is the Borealis PE 4 plant which has been erected next to the OMV refinery. This plant produces the polyethylene granulate used in the making of plastics for automotive parts.

KAEFER Austria acquired the new customer Borealis for this major project worth over 1.2 million Euros. From the beginning of 2005 up to August work was carried out on the insulation of the gas-phase reactors, all the pipelines and other equipment, the installation of electro-auxiliary heating, as well as the extensive scaffolding necessary to do the job.

**Fire protection and clean air ...**

... is the task entrusted to the KAEFER Austria at the Columbus Centre belonging to Raiffeisen-Leasing in City District 10. The contract for this multi-storey shopping mall and office centre, which also includes four underground levels – three of which are car decks – came from M. and W. Zander in Nuremberg, a subsidiary of the Jenoptik Group. Beginning in July 2004 and ending in August 2005 it encompasses all the fire protection and insulation work and has a volume of more than 1 million Euros.

The department for fire protection installed 6,000 m² L90 ducts, 600 fire protection pipe sleeves and approx. 2,000 tumescent ("distending") fittings for the heating, air conditioning, ventilation, sanitary facilities and electrics.

At the same time the department for industrial construction fitted 16,000 m² of aluminium laminated mineral wool to insulate the ventilation ducts, as well as some 26,000 m of HKS-Armaflex insulation material and 3,000 m² of flashing for outside air ducts.

**Mirror finish in Vienna's Palais Coburg**

It was just a matter of 60 m² of ceiling – but quite a highlight. The greater project involved extensive modernisation of the Palais Coburg, a building with an impressive pilaster façade in an exclusive part of Vienna. Financed by the Pühringer Foundation, the project entailed the construction of bank premises (complete with vaults) and a residence hotel housing gourmet restaurants as well as a wellness area. In keeping with the customer's exacting demands, KAEFER was chosen to erect a "heavenly" ceiling over the adjacent swimming pool.

This consists of four partly round, partly polygonal segments of midnight blue Barrisol mirror-finish foil. This tensioned spanning-material is available in about 200 different colours and qualities. It is custom-manufactured with border piping. Installation on-site then involves warming the material and fitting it into the desired wall profile. Spans of up to 12 m are possible and it is also possible to integrate lighting and ventilation elements, as well as other fittings as required. In this case, the material is supplied with cut-outs reinforced at the borders.

The installation is as sophisticated as the material is impressive: the seamless, high-gloss ceiling element creates quite an impact and its installation presented a tantalising challenge for the KAEFER team led by Silvester Biro. The team well-knows why they regularly attend training seminars run by the manufacturers, Barrisol, in Kembs/France. This beautifully finished pool is likely to impress especially backstroke swimmers, who will be able to gaze in appreciation at the impressive reflections from the ceiling.

*Borealis PE 4 in Vienna-Schwechat*

*Shopping mall in Brussels*

*Photo right: Schloss Bossestein*

*Bottom left: Tank storage on the Schelde*

# Belgium and the Netherlands: the Proven and the New

Managing Director Freddy Tulkens reports that KAEFER WKS/ WKSB has been building up a new department for "non-industrial scaffolding". Efforts in this direction, which began in 2003, are focused on large structures like churches, bridges and classical buildings with complex façades – but do not rule out large modern buildings. The success is documented in the following project descriptions.

**Belgium: Bossestein Castle near Antwerp**

This 14th century castle has had an eventful history with many changes of ownership. The last restoration work was undertaken in 1906. Now, after a hundred years, major renovation work – subsidised by the government – is once again to take place. KAEFER WKSB will carry out all the scaffolding work, encompassing 3,000 m². The customer is PIT Renovatie NV, a construction company that we have often worked for in the past.

By April 2006 the privately used property should be completely restored to its former glory, and will again act as a worthy centre of attraction within the premises of the long-established golf club. The club premises, which include outbuildings and old stables, are surrounded by the golf course.

*Insulation for Degussa, Belgium*

**Belgium: Brussels main station**

Here we erected 15,000 m² of scaffolding to be used during renovations lasting until July 2006, also subcontracting for PIT Renovatie NV. Currently, work is being carried out on the outside of the structure. Of course, the station must remain in full operation and correspondingly strict safety precautions have to be in place at all times. The next phase will involve the interior renovation. This entails an even greater challenge and could encompass up to 20,000 m² of scaffolding.

**Belgium: Brussels shopping mall**

The former Shell office building was converted into a shopping mall. The work, for our old customer John Saey Renovatie bedrijf NV, encompassed 5,000 m² of scaffolding. Completion is scheduled for the end of this year.

**Belgium: Degussa, Antwerp**

This is the first time that our old customer Degussa has asked KAEFER to work for them in Belgium. As part of the extension of a chemicals plant for the production of industrial components contracted by Uhde/Fluor, we carried out insulation work on pipelines and tanks belonging to sometimes new, sometimes older installations. The whole contract is worth 5.8 million Euros. Since October 2004 the work occupied an average of 50 men: the final stage in the early autumn of this year, though, will involve 100 people working "round the clock".

**Netherlands:**
**Boskoop Bridge near Gouda**

This is not of a work of art, but sophisticated scaffolding erected for the repainting of the pivoting section of a lifting bridge over a Dutch canal. The work is for the company Iris Painting.

**Netherlands: Tank storage**

Under the site management of the engineering company Tebodin, the company "OIL TANKING", an international company specialising in large-scale tank storage, set up a new unit for diverse chemical products at the mouth of the Schelde. Tebodin awarded KAEFER WKS the contract for 80,000 m² of scaffolding as well as for insulation of the pipework, pumps and tanks (ø 43 m). The whole contract is worth 3.5 million Euros. Of special note: the "multifunctional" order – since as a rule, scaffolding and insulation are usually contracted separately.

The work, which began in October 2004 and ended in autumn 2005, was carried out under the leadership of Michael Grünfeld from the Industry division in Bremen. On average 40 people were involved in the project.

*Robert Skrobisz (left) with Managing Director of KAEFER Peter Hoedemaker*

*Photos from left to right:*

*Project TVK Olefin-2*

*Astoria Station on the Budapest underground*

*Zsolt Böröndy*

# KAEFER in Hungary

**Following a very difficult year 2003, now some good news is flowing in from Budapest. Successful organisational integration into the Region Eastern Europe under the leadership of Robert Skrobisz, two major contracts awarded at the end of 2003 and a number of other commercial successes begin to add up to an overall better picture.**

Zsolt Böröndy (41 years old, married, two children), Managing Director since March 2005 and successor to József Gránitz, who held the position since 1989, outlined the situation on the small but high-growth Hungarian market for the following report.

**Industry**

At the end of 2003 the revitalised Industry division won a 1.8 million Euro contract from LINDE for the TVK OLEFIN-2 project in Tiszaujváros (cold insulation), as well as from LURGI for the heat insulation for a flue gas dust collector at Budapest's incinerator power station, worth 600,000 Euros. The two projects took up most of 2004. Punctual completion in customary KAEFER quality helped to consolidate our reputation with these important customers and throughout the region. Site project manager Carsten Röder of KAEFER Düsseldorf and foam specialists from Vienna and Hamburg provided valuable support for the LINDE project.

This augurs well for the desired increased international integration of KAEFER Hungary. Prefabrication work is underway on a LINDE project in Schwechat near Vienna, and there are a number of international companies operating from Hungary into other countries of the region, e. g. the Ukraine and Romania. Gaining a stronger foothold there via our own contacts is the main objective.

**Interior Engineering Department**

Interior engineering is also experiencing a boost. In cooperation with the Hungarian company BUDA-CONSULT, 2005 saw work successfully undertaken on the reconstruction of three underground railway stations on behalf of STRABAG. This included installation of about 4,000 m² of metal sheet covering at Astoria Station. Budapest's underground transport system counts among the oldest in Europe and reconstruction work will be necessary for many years, which holds out the promise of follow-on contracts. But there are also a number of other interesting projects in the pipeline for 2006.

**Cooperations**

Altogether, it was possible to conclude the financial year 2004 with a positive result and identify encouraging prospects for the future. Working conditions for our staff were also considerably improved following the move to more suitable premises mid year.

Zsolt Böröndy: "We have a high-capacity dedicated workshop complete with plasma cutting equipment at our disposal and an experienced team, some of whom have worked for several years in Pfungstadt. These resources would also enable more intensive cooperation with other members of the KAEFER Group, especially in the field of supplying manufactured articles, but also in future by subcontracting our competitive workforce. We are clearly able to offer efficient support to other KAEFER companies in other EU countries."

# IGET goes into 2nd round

*Second group of International Graduate Engineer Trainee Programme (IGET)*

In autumn 2005 the second group of IGET (International Graduate Engineer Trainee), consisting of eight graduate trainees, started their programme. The new KAEFER people from Malaysia, Vietnam, China, Mexico, Poland and Lithuania gathered in Bremen, Germany, for the two-week orientation programme (10th to 21st October 2005). They had the chance to build up personal ties to one another. Thanks to the joint efforts of the different divisions and the Head Office, they get an extensive introduction in the major activities and competencies of KAEFER. On completion of the orientation programme the young engineers started immediately their first deployment. They are now working in Norway, Germany, France, Spain, South Africa, Malaysia and Australia.

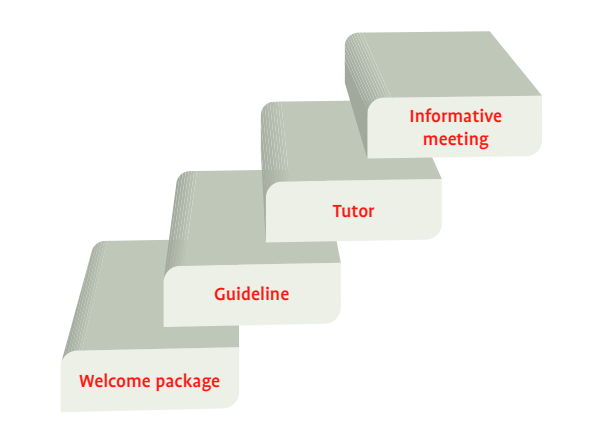
The five participants of the first IGET programme successfully finished their second period of training in summer 2005. September saw them starting work on their next assignments for KAEFER. Three of the engineers are now working in Australia and the other two in France and Thailand.

# Good start for new employees

It is not always easy for new employees. They know neither the company, nor their new colleagues, are not informed about internal procedures or informal channels, and often receive too little support whilst starting the job. In order to achieve a certain level of standardisation and to facilitate the integration of new employees in the Group, KAEFER has now introduced an integration programme comprising four components.

Reinhild Heider from our Personnel Department explains: “The aim of our programme is to ensure that new employees become quickly familiarised with their new tasks and integrated in their department. This will enable them to make positive contributions. From the outset, new employees should feel that they are welcome and that their work is appreciated.”

The first module of the programme consists of a welcome package, which is given to the new employee before his work starts. Apart from the usual introductory formalities and forms, the package also contains details on how the first day’s work should proceed, the KAEFER corporate principles, and information on the company pension scheme. The second part of the welcome package contains further details of the integration programme, the current issue of K-WERT, a brochure explaining the KAEFER confidential personnel dialogue, and sundry information material. This is handed over on the first day by the new employee’s superior.




*The four components of an integration programme for new employees*

As second module of integration programme the superior receives a guideline containing an overview of tasks and responsibilities regarding the integration period of the new employee: What has to be done? What should one generally be aware of? What things have to be prepared?

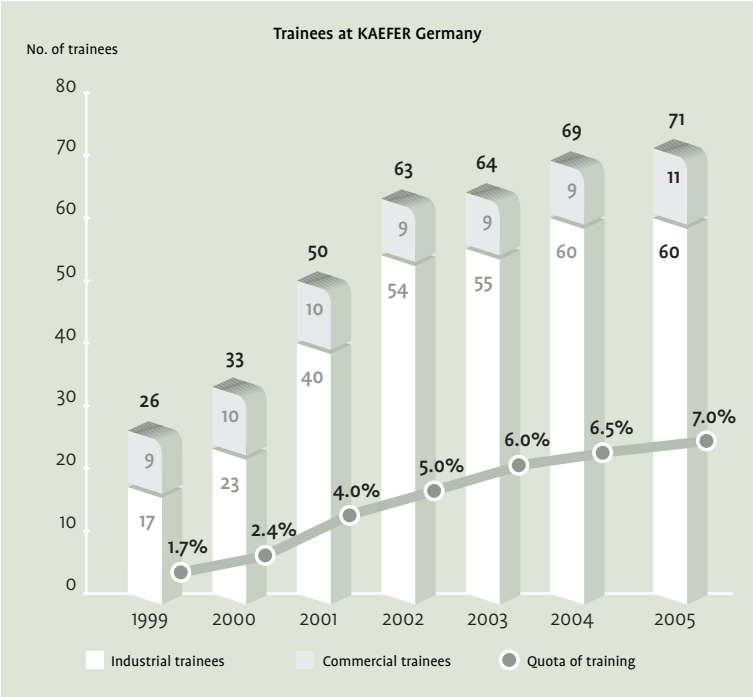
The third component is a tutor for 100 days. The tutor, who should ideally belong to the same hierarchy level as the new employee, takes special care of his new colleague for the first one hundred days and is on hand to counsel and advise. “People are free to choose whether they wish to take on the tutor role, which calls for high level of social competence and integrative abilities”, as Reinhild Heider points out.

The fourth and last module comprises a one-and-a-half day meeting. This is a gathering of all new employees at the Bremen location for an exchange of information. The participants are officially welcomed and given information about current projects. By this they have the opportunity to meet other new KAEFER people. The meeting is completed by a practical workshop.

“We want the new colleagues to know as soon as possible what KAEFER is about. By this means they will be able to integrate and identify with the company’s goals quickly”, summarises Ralf König, head of the personnel department. “The above-mentioned four components are designed to give our managers maximal support.”

# Outstanding commitment to training

KAEFER is currently training a total of 71 young people at locations throughout Germany. The commercial trainees (at present 11) are supplemented for the first time by two apprentices for the IT business. The quota of trainees has once again been raised and now stays at 7 %.




# Worthy Winners of "Competition of Good Ideas"

Our "Competition of Good Ideas" closed on 30.09.2005. One week later the jury had assessed the contributions and named the winner. Mr. Norbert Schmelzle (Chairman of the Management Board) hands over prizes to the first three winners.

1st Prize (endowed with 3,500 Euros) went to Klaus Wuttke, Bremen, for two ideas he submitted concerning the production process of LOLAMAT panels.

The 2nd Prize was won by Heiko Krause, Muggensturm, for his ideas to do with the production of moulded parts made of RECORE and the transport of gypsum plasterboard.

And 3rd Prize was awarded to Benadin Hadzic, Bremen, for two ideas to facilitate the labelling of panels and components made of LOLAMAT.

The total value of the nine prizes awarded amounted to some 13,000 Euros.

*From left: Klaus Wuttke, Benadin Hadzic, Norbert Schmelzle and Heiko Krause following the award*

# Insulation with nothing but thin air

Where nothing exists, energy cannot be transported and no heat can be conducted. “Nothing” – in other words a vacuum – is therefore the ideal insulator.

“Insulation takes up a lot of space” says ZSP head, Karl-Rudolf Friese. For example, when fitted with a conventional insulation layer of 160 mm, an LNG pipeline with a diameter of 200 mm swells to a total diameter of 520 mm. So the insulation takes up twice as much room as the pipeline. Using a vacuum-based insulation technique only takes up approx. 60 mm, reducing the total diameter of the insulated pipeline to a moderate 320 mm. Everywhere where space is expensive and in short supply – i.e. oil platforms, or highly sophisticated plant and equipment with extreme insulation requirements like gas liquefaction – there is therefore an enormous premium on lean insulation sheathing.

Vacuum insulation (from the Latin vacuum = empty space) is nothing new. Everyone knows the thermos flask which is based on this technique, where a double-skinned glass container with a weakish vacuum between the glass walls provides sufficient insulation to keep liquids hot or cold.

Flat “evacuated” (i.e. void of air) elements have been around for some time. These contain of a porous plate which acts as a protective sheathing against outside atmospheric pressure. Atmospheric pressure compared to the vacuum pressurised interior can build up impressive forces in the region of 10 t/m². Compressed silicone compounds and special glass-fibre materials are used for the plates. Despite their stability, both materials exhibit low temperature-conducting qualities and they are fire-proof. These plates are “wrapped up” in a sheathing of multilayer laminated film, which owes its tensile strength to the plastic and its gas-impermeability to the aluminium. These foil “wrappings” are then passed through a special chamber where they are tailor-fitted by means of vacuum-welding. Brought back into the normal atmosphere the foil is pressed against the inner supporting plate by the surrounding air pressure, creating an air-free, firm and, above all, optimally insulating unit – this can best be compared with a bag of vacuum-packed coffee with its familiar stone-hard solidity. For industrial insulation, though, curved parts need to be covered in shells which fit exactly. Techniques of series had to be developed.

Without the possibility to fit such vacuum insulation to curved pipes and other doubly curvilinear plant components, little advantage accrues from the use of conventional evacuated cylindrical pipe shells.

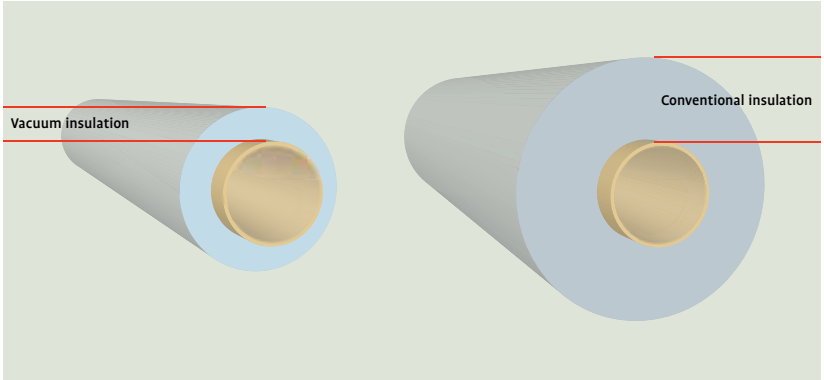
In an attempt to solve this problem, in summer 2003 KAEFER teamed up with two universities and four other commercial partners. With the help of the Euro-Infocenter in Bremen they succeeded in obtaining EU funding for a joint project to develop an insulation system based on the technology for flat plates – and what do you know? In the late summer of 2004 – seven months after the official start of the European project – they finally achieved the breakthrough: the first doubly curved vacuum element, a half shell to fit a curved pipe, was produced under laboratory conditions. Proof was now evident of the fundamental feasibility of producing covering shell shapes for the entire spectrum of application geometries.

Whilst the production technology for these insulation elements was still being refined KAEFER conceived and built an experimental structure on which vacuum insulation can be tested under near-reality conditions. The first test of an insulation system for cold pipelines was successfully carried out on 20th July 2005. Even under cryogen conditions at –162 °C it could be seen that the insulation technique used exhibited extremely low heat conductivity qualities, thereby permitting a considerable reduction in insulation thickness: the above-mentioned objective of 60 mm instead of 160 mm was actually improved on even further.

The secret of obtaining the desired shape lies in highly-precise calculations of the blanks used, which subsequently leads to producing the exact shapes required.

“The extremely low thermal conductivity enables substantial savings in amounts of steel and space used in the construction of refrigeration units, both with regard to volume as well as height. Then there are the high fire resistance qualities of the insulation material, which considerably enhances safety levels without any increase in weight”, says Karl-Rudolf Friese, convinced that this system has a promising future ahead of it.

*LNG conduit pipe*




*Vacuum insulation for an elbow pipe*

# Mobile laboratory for tests under extreme conditions

They may not look very special from the outside, but they conceal a veritable "treasure" on the inside – the two grey coloured 20-foot containers that are currently parked outside the premises of Corporate Technical Services, Thermal Insulation Department (ZTT) in Bremen. These containerised laboratories are used to create the extremely low temperatures required for tests being carried out within the context of a European research project on the practical application of innovative vacuum insulation techniques. The Technical Service experts in Bremen have been working on the containers and setting up experiments in them since the end of 2004. Two test series have already been run, at temperatures as low as –180 °C. Currently, the engineers are working on another series of tests and further improvements to the experimental equipment.

"We use liquid nitrogen to create the low temperatures", explains Departmental Head, Walter Bremeyer. One of the containers contains two storage tanks. The other is fitted out with test rig and measuring devices. "In order to start a cold experiment, first a computerised process cools the whole facility down to the desired temperature", says another member of the Technical Services team, Thomas Heuermann. It takes about 12 hours before the experimental equipment consisting of DN 100 pipes, pipe elbows, beddings and T-pieces reach the desired temperature. "The secret then is to hold this temperature until a steady state condition has been reached so that measurements can be taken", Heuermann continues. An experiment usually takes between four and five days, including the cooling-down process and subsequent return to the start temperature.

Apart from the measuring equipment attached to the test object itself, other instruments in the container are needed to monitor a number of additional parameters. "Being subject to the highest safety standards, apart from the inside temperature we also have to monitor the humidity in the container and the oxygen level. All these data have to be fed into the computer and constantly checked", says Bremeyer.

Throughout the experiment, records are made of the temperature at the test object and the insulation at predetermined points. There may be up to 60 or more measuring points, as required. "It is always particularly crucial at the joints where the insulation layers meet", says Bremeyer. It is above all supports, T-pieces and pipe elbows that pose the greatest difficulty for insulation. Special measuring plates measure the heat flow over a surface of 150 $cm^2$ as mean value.

Incidentally, a thesis currently being written by a student of the Bremen University of Applied Sciences deals with the planning of a measuring facility for monitoring the heat loss of separate components (pipe elbows, T-pieces, etc.) Although the container is meant primarily to operate in cold conditions, it can also be heated up to as much as +300 °C. "We want to create near-reality conditions in our test container so that we can observe how insulation materials and shaped parts stand up to extremes of temperature", says the head of the Technical Services Department. Later it is intended to demonstrate the experiments directly on customers' premises. "That was one of the reasons we packed the experimental setup into two mobile containers", Heuermann reveals.

*Experimental set-up for vacuum insulation in extremely low-temperature test container*

*Working in the acoustics testing laboratory*

# Acoustics testing laboratory moves

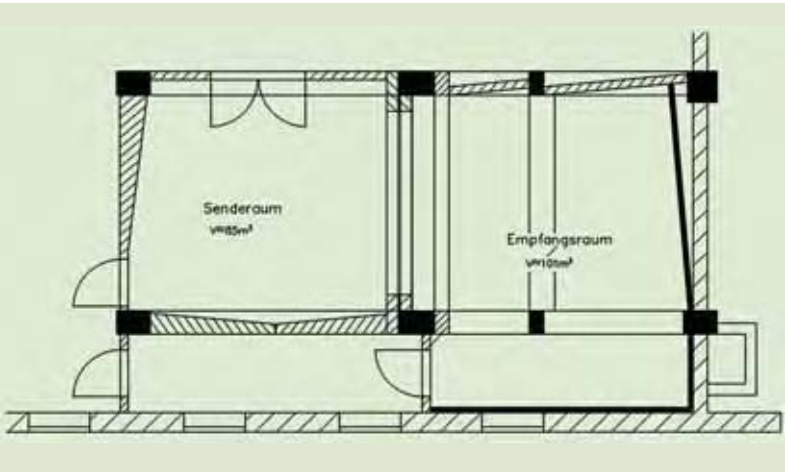
Turning circumstances to one's own advantage – this just about sums up the move of the ZTA acoustics laboratory from a bunker in Bremen-Findorff to its new location in Pillauer Strasse. The new testing premises boast significantly improved features in respect of size, acoustic insulation and elimination of external noise. On top of this the laboratory now enjoys more convenient assembly and logistics conditions.

For about ten years our main laboratory for acoustics technology was housed on one floor of an old bunker in the Bremen suburb of Findorff as an acoustics test room. At the beginning of this year the bunker's fate was sealed. The tenancy agreement expired and was not renewed. And so the acoustics experts had to look around for a new location. They found it in the basement of our premises in Pillauer Strasse. Head of the ZTA department, Joachim Rennecke: "We were able to make use of the rear part of the underground car park. It only took a short time and relatively little effort to convert the area into a test room to quite high specifications."

The contractually agreed reconditioning work in the Findorff bunker began at the end of February, at the same time as work on the new testing laboratory. Within a space of just two months the team set up a wall-test stand complete with source receiving and room. The testing aperture is 10 m² and in accordance with all regulatory rules. Because of the elimination of external noise and due to the high acoustic insulation of flanking test stand components, Rennecke has good cause to be content: "We have already carried out extensive measurements for CF-SYSTEMS in the presence of the customer Fincantieri. Everyone was extremely pleased."

A versatile acoustics test stand has been set up at extremely low cost and with great commitment on the part of the department's staff. The workshop is also in the immediate proximity, which means that test specimens can be delivered more quickly. On top of this, due to the premises ease of accessibility it will also be possible to test larger components. "That wasn't so easy in the bunker", recalls the head of ZTA. The sole drawback: the laboratory in Pillauer Strasse has no facilities for testing silencers. But this may only be of short duration. After all, there is enough room for one.

*Floor plan of acoustics testing laboratory*



# bemo "self-closing fire windows" fulfil F30 and G90 fireproofing requirements

This is the first time that "self-closing fire windows" succeed in fulfilling both F30 as well as G90 fireproofing requirements. The coolfire "self-closing fire windows" fitted with local aluminium profiles have satisfied the fireproofing standards F30, G30, G60 and G90 for sealing-off elements. This gives rise to a number of advantages: for instance, by incorporating these fireproof "windows" as part of the glass façade it is possible to dispense with fire protection doors, which would not possess such good sealing-off qualities. In the event of fire, the patented coolfire core insulation provides reliable heat protection and thus ensures maximum safety. And individual ventilation is made possible since the "window" can be opened. Moreover, as a rule it is possible to achieve savings on cleaning, since it is no longer necessary to install costly cleaning facilities on the façade front.

# bemo to cooperate with Alcoa

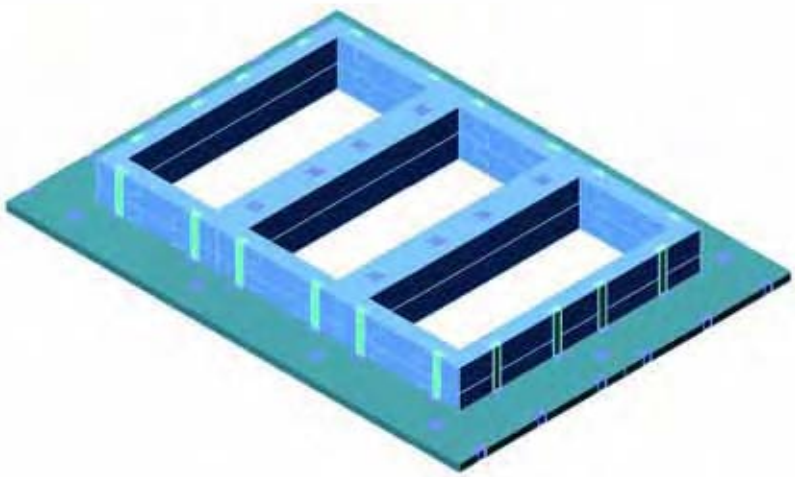
The KAEFER subsidiary bemo Brandschutzsysteme GmbH, Weißenthurm, and Alcoa Architectural Systems, Iserlohn, have agreed to a close cooperation. The KAEFER specialist for transparent fire protection systems and Alcoa, one of the leading suppliers and manufacturers of aluminium profile systems, hope to achieve synergies and thus strengthen their market positions.

Alcoa will be able to enhance its product spectrum in the metal-working field with the transparent fire-protection product coolfire. This will give Alcoa an important competitive edge. For its part, bemo will be able to go international and be present on markets in the EU. Edgar Timm, managing director of bemo: "The cooperation presents an opportunity for both companies to benefit from each other's expertise and enhance customer orientation". Alcoa Architectural Systems belongs to the global group Alcoa Systems, with 120,000 employees in 41 countries and an annual turnover of some 22 billion US dollars.

*A glimpse into the furnace during fire testing of the modular bulkhead system*

# GK-SYSTEM launches a new product offensive in structural engineering

GK-SYSTEM GmbH in Ahrensburg is the technology specialist for fire protection systems in the field of cable ducts used in shipbuilding. The company's expert know how aims to find applications in industrial projects on land in the future. With this in mind GK-SYSTEM has developed a fire protection concept based on a modular bulkhead system. The objective is to enhance the attractiveness of the modular system for building construction.



*The new LKR synthetic frame is the future in both building construction as well as shipbuilding. It features considerable weight-saving potential compared with conventional steel frames and fulfils the same purpose*

The new system is reproducible, mechanical and adaptable. Currently the materials inspection authorities (Materialprüfungsamt [MPA]) in Dortmund/Erwitte is curently carrying out tests on the newest fire protection applications.

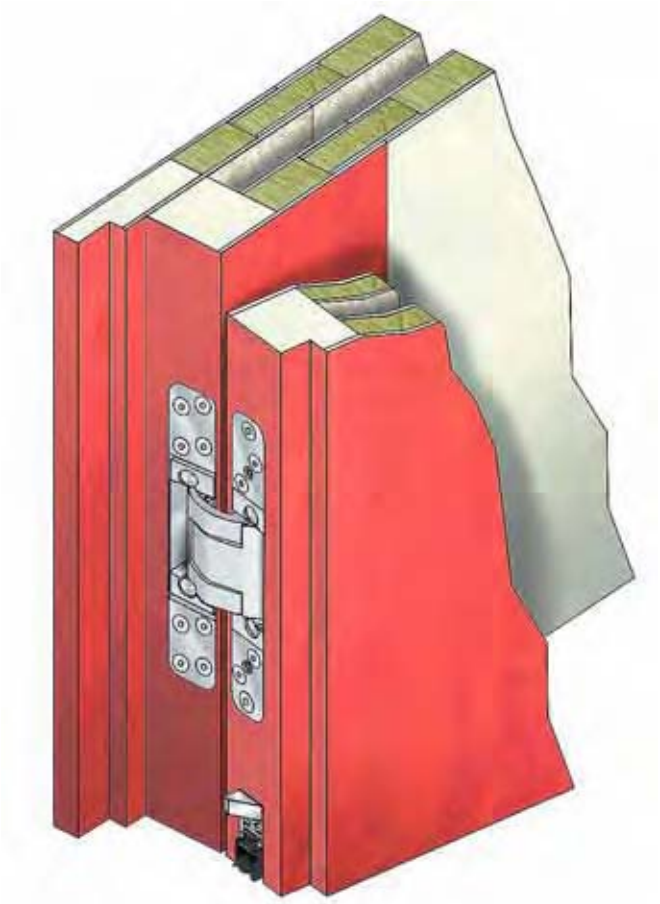
The products are suitable for all types of works with a minimum of 10 cm and ceilings with a minimum of 15 cm, S90/S120 fire protection solutions for DIN classified cables, pipe bundles, elliptical and radial waveguides for communication facilities. They are also suitable for use with EMV cables, flammable and inflammable pipes up to 160 mm external diameter (EURO standards). Installation can be facilitated by square combination frames made of plastic, polymer concrete and steel. A variety of round penetrations is also available.

The lightweight plastic frame presents the most innovative solution currently on the market and carries the S90 fire protection classification. The attractive price-performance ratio ensures that it will be in high demand for use in building construction, ship and yacht building.

All the various systems will be introduced into the market this year. Details will shortly be available in a comprehensive new product catalogue.

Visit www.gk-system.com for further information.

# Attractive, lightweight and high-grade: CF-SYSTEMS develops a new cabin door for yachts and cruise liners



*Section of a "frameless" cabin door made of LOLAMAT*

Good news for all marine architects and designers: A product innovation of CF-SYSTEMS GmbH opens up groundbreaking possibilities in both technical as well as optical dimensions. The new "frameless" cabin door KT-B30-Y boasts top technical features. Not only has it received approval for the fire protection class B30, it also looks good – perfectly in harmony with the high-grade fittings used on yachts or cruise liners.

The innovation's main feature: in place of a steel frame, the KT-B30-Y is fitted with a frame made of the mineral wool material LOLAMAT that smoothly fits into the wall on one side. This enables it to merge perfectly with the flat surface of the wall and enables a variety of design alternatives, e. g. door covering in natural wood or laminate. The adjustable hinges are buried and quite invisible when the door is closed. The door closer on the inside is also hidden. The door leaf is also made of LOLAMAT, which means it is possible to dispense with a sheet-metal frame.

The LOLAMAT product is not only lightweight and can be covered with high-grade materials, it also possesses good acoustic qualities. The double rabbet with two seal faces and double-layer door leaf provides good noise protection. Besides that there is a mechanical noise protection on the underside of the door leaf. The KT-B30-Y cabin door has been developed especially for high-class accommodation and quality yachts. It recently received approval in accordance with the Marine Equipment Directive (MED).

The KT-B30-Y cabin door is already a winner: Even though so far it only appeared in prototype form at SMM 2004, some 100 doors have already been sold.

# The lovely "STELLA" stands out due to her exceptional interior qualities

She is 61 metres in length, sleek, super elegant and is one of Italy's most beautiful yachts: the "STELLA MARIS", currently under construction at Viareggio Superyachts SRL in Italy. The entire interior – decks, walls, floors and fire doors – is fitted out with LOLAMAT. A total of 1,500 m² walls, 830 m² decks, approx. 1,100 m² flooring and 50 fire doors – all made of LOLAMAT – were fitted between July and November.

*The launching of "STELLA MARIS"*

# France is right on track: RECORE panels for the TGV

**The fastest trains are in France. Back in 1981 the first TGV (Train à Grande Vitesse) trains were underway on the Paris-Lyon line. In 1990 the TGV set up a record 515 km/h speed, making it the fastest train in the world. Today the name is synonymous for reliable, fast and elegant travel. On international routes the trains are also known as Thalys and Eurostar.**


KAEFER's Products/Systems Division has developed ceiling panels made of RECORE for the new TGV Duplex. These panels recently received manufacturer's approval. Lightweight, insulating, fire proof – some of the qualities that have made the special material RECORE such a success on the market for rail vehicles. Approval of the super-lightweight and fire-proof material on the part of the French railway operator SNCF scores a breakthrough for KAEFER – and it may even lead to a complete refit of existing trains.

The TGV Duplex is a very special train: the French state railway has ventured a great step forward with this double-decker TGV. The aerodynamic streamlined front is particularly noteworthy. The train will be used mainly on routes going south from Paris.

# MICROSORBER caters for optimum room acoustics in the cafeteria at Nord/LB

Glass, steel and concrete dominate the Nord/LB's new building in Hanover's city centre. The urban show-piece in the capital of Lower Saxony houses some 1,500 bank employees and stands out architecturally due to the high degree of transparency and spaciousness. Glass offices, attractive roof decks and inviting cafeterias all combine to provide a communicative atmosphere. In order that excessive noise in the cafeteria does not detract from this atmosphere, the architects Behnisch/Behnisch und Partner elected to install a double layer of MICROSORBER foil. The foil ensures that the high demands placed by the architect and the bank on communication and relaxation, especially in the cafeteria areas, are fulfilled at all times.

*Canteen at Nord/LB in Hanover*

# Keep cool – with brand new LOLAMAT solutions from KAEFER Shipbuilding in Bremerhaven

**Keeping a nose in front calls for innovation and constant upgrading. And our colleagues in Bremerhaven won't allow anyone to steal an edge over their unique expertise in the area of "galleys – pantries – cold storage for passenger ships". Apart from anything else, we are lucky to have LOLAMAT. Ergo: successful cooperation produces three highly promising new developments at the same time.**

### A-60 cold storage insulation with LOLAMAT

Cold rooms (approaching 0 °C) and deep-freeze stores (down to –25 °C) which people can also walk into are often needed adjacent to large galley areas. These fall under the fire protection category A, though, which presents certain insulation problems: up to now, panels made of PU-foam have been the preferred materials – as opposed to their good insulating values and resistance to moisture, though, they tend to be somewhat "dirty" should they catch fire. This subsequently incurs high costs for sealing off with steel, which is also very heavy, of course. Considerably cheaper fire protection can be provided by insulation made of mineral wool, but this is considered unsuitable due to its proneness to condensation. A problematic constellation for our experts to deal with – and one that puts LOLAMAT to the fore. By way of experiment, the mineral wool core of these non-inflammable panels was increased fivefold. The panels, now 100 mm thick, were then installed in the ceiling of a deep-freeze store belonging to a restaurant in Bremerhaven. Spiked with measuring sensors, the ceiling had to stand up to the test of everyday use for several months. And what do you know? The problem of condensation which usually arises when steel is used in combination with mineral wool did not occur. It was neutralised due to the specific qualities of the LOLAMAT covering. Should this surprising result, which is so contradictory to accepted theory, prove to be ongoing it could cause nothing short of a small revolution for fire protection in the construction of cold rooms and deep-freeze stores: the considerably lighter LOLAMAT panelling with the classification A-60 would immediately translate into significant savings in cost and weight, quite apart from doing away with the need for sealing off with steel and the corresponding gains in space.

### A-60 cold room doors

Previously, such doors for fire protection areas were not freely available on the market, which was virtually a knock-out criteria when tendering for the building of cold rooms.

*A-60 doors for cold-storage areas*

If you haven't got one, make one – under this motto our experts searched for a partner company and set about mutually developing not merely a substitute product, but a superior one at that. Namely, lightweight doors that by means of a clever combination of vacuum panelling, mineral wool and stainless-steel covering not only achieve the required insulation properties, but at the same time represent a 40 % saving on weight compared with conventional products. Custom made as hinged or also as sliding doors in all desired dimensions, this innovative product is also available in USPH standard.

Above all, though, the A-60 certification has already been approved and the first versions have already been installed on ships built at the Lürssen yard – quite a success for all those involved!

### Turn-key pantries

Why shouldn't KAEFER also help in the preparation of the food – KAEFER helps to keep fresh? After many years of experience in the field of building pantries and galleys in all manner of shapes and sizes, the time was ripe for a new version: the turn-key pantry.

The ready-to-install module was developed together with the Meyer yard: comprising floor-pan, walls and deck system it is supplied complete with all the necessary connections and fitted with ice-maker, sink and dish-washer. Put it in, hook it up, cheers! – nothing can get stuck and nothing can leak out. In September this "plug & play on board" was installed for the very first time in the new cruise liner "PRIDE OF HAWAII", built at the Meyer yard. The type of cold drink imbibed by the fathers of the idea when demonstrating the module's immediate operability is unfortunately not on record!

*Turn-key pantry*

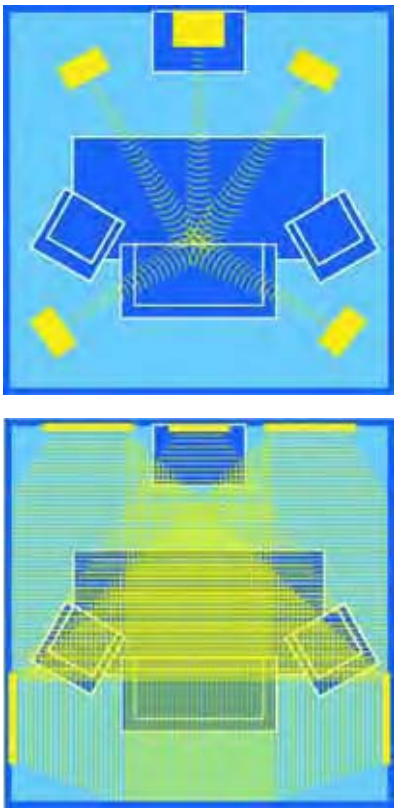
# Yacht and cruise-ship interior fittings with a new sound!

Together with Puren, KAEFER Shipbuilding as exclusive distributor for high-quality ship interior fittings is opening up a new dimension in stereophonic sound.

This system was already presented and well received at the 2004 SMM trade fair in Hamburg: a combination of LOLAMAT and purSonic "Soundboards", which operate on the principle of using carrier materials as loudspeaker membranes. In this way, the sound generators remain invisible, and can be installed behind mirrors, tiles, and pictures, or even integrated into simple wall surfaces without any covering at all. Indeed, it is even possible to install them under flooring; this has already been implemented successfully.

You do not see anything, but you hear — and better than ever, since this technology radiates sound at a much wider angle, instead of the conventional point source, so that better and completely uniform audibility is achieved in the entire room, despite a lower, less disturbing volume.

LOLAMAT proved to be a particularly suitable material, whose shipbuilding and designing advantages combine ideally with the problem-free, invisible integration of purSonic components. Thus a new creative scope for the interior design of yachts and cruise ships is opened — in harmony with acoustics with an unheard-of quality.



*Even acoustic irradiation (bottom graph) in a room fitted with purSonic-Soundboards*

# Royal Navy: KAEFER goes on board

The state sector can be difficult terrain. To a certain degree, European cooperation has already been achieved in the field of aircraft manufacture. Now there seems to be some movement in the area of naval shipbuilding – not least thanks to the qualities of LOLAMAT and a yard's drive to reduce production costs and win new markets.

The British yard VT Shipbuilding (VT-S) in Portsmouth has been working exclusively for the British navy and up to now has preferred to follow a "one stop" policy. Now, however, they have decided to work with an external German supplier – CFS together with KAEFER Shipbuilding. The contract is for interior outfitting and complete cabins for an OPVH (offshore patrol vessel with helideck).

In cooperation with VT-S we will be supplying a total of 28 cabins complete with wet cells for the ocean-going patrol boats. These almost corvette-sized vessels carry a crew of 44, are 81 metres overall and designed for 6-year tours of duty in seas around the Falklands / Cape Horn. The decks and ceilings are made of LOLAMAT and we are also supplying the cabin fixtures. Installation will be carried out by local subcontractors, but under our supervision and responsibility.

Project manager Martin Bremser: "We are on the right path. Final preparations are already underway: construction begins in January, delivery in May 2006. And seemingly we have sound reason to assume that will just be the beginning of a lasting relationship".

Parallel to this order, work is in full swing on another contract for the construction of modular cabin units for a new British aircraft carrier. For this contract KAEFER and VT Shipbuilding have gone one step further: this project will no longer be executed in the traditional customer-supplier-relationship, but in equal partnership between VT-S and KAEFER Shipbuilding. The team is very confident that subsequent to completion of the cabins they can also expect an order for delivery and installation.


# Ice-fringe research vessel "MARIA S. MERIAN"

**K-WERT 2003 already carried a detailed report – the ship was christened on 26th July this year and the scientific trials planned for the month of September.**

The ship has been fitted out to meet the standards required of a universal research vessel. She is equipped with a number of laboratories for varying purposes, a station dedicated to taking depth soundings, winches capable of collecting samples from the seabed, etc. With an overall length of 93.6 m and a beam of 19.2 m she is able to carry out expeditions to all parts of the world. The vessel has an expected life of 30 years.

KAEFER made a major contribution to the building of the vessel: KAEFER Shipbuilding from Hamburg took care of the whole insulation, lining and completion of the interior accommodation in living quarters and working areas, including many of the furnishings – but not, of course, the scientific facilities on board – the KAEFERites from Stralsund supplied the wooden decks and the team from Bremerhaven the ship's canteen and adjacent areas. Altogether our company was busy on the project for Krögerwerft/Rendsburg from February 2003 till September 2005.

*Galley and crew mess room on the "MARIA S. MERIAN"*

# "NORWEGIAN JEWEL"

*Shopping areaway on the "NORWEGIAN JEWEL"*

KAEFER played a significant role in the construction of this NCL cruise ship at the Meyer Yard: all the kitchens and pantries, the twin atrium decks, the Italian Restaurant, Court Yard and Villa Garden, as well as the suites and penthouse suites (with LOLAMAT walls) all carry our trademark.

# "MS DEUTSCHLAND": KAEFER Schiffbau/General Contracting from Bremen plows the waves

**Refitting of ships is seldom done at sea, but if time is short, our team will also work under these more difficult conditions.**

*Photo left: The new Cleopatra bath with a 2.11 m high-polish bronze bath tub*

*Photo right: The new rhassoul steam bath – a ceremonial of oriental pleasure*

The Peter Deilmann shipping company commissioned us to renovate the "wellness" area of their flagship "MS DEUTSCHLAND" and all its auxiliary facilities completely, and so luxuriously that it achieves the five-star-plus category. Completion: within the barely three weeks' layover at the shipyard in Barcelona! Start of work: while the ship was underway to Lisbon.

This job gave our team the opportunity to try out themselves for once the cabins they have built so many of. But they did not have much time to relax, because there was a lot to do: converting two crew cabins into cosmetic studios, two dialysis rooms for massage purposes, a Finnish sauna into a rhassoul steam bath, installing two Kraxn sauna stoves, making a Cleopatra bathtub, and enlarging and modernising the hair-dressing salon for the demanding tenant: star coiffeur Udo Walz.

The high-quality decorative interior fittings were specified by the Hamburg architects Partner Ship Design – customized creations to the highest standards of quality, involving a corresponding effort in procurement.

The conversion site Barcelona not only presented us with considerable logistical challenges, but also reduced our tight time-frame even further, since the shipyard exceeded the specified deadline for re-installing water and drain pipes within the area for the KAEFER conversion by more than a week. A few extra carpenters and floor tilers were flown in to help solving this problem, as well; the passengers who had been booked for Cadiz for months were able to go on board in mid-March on schedule, and enjoy the redesigned areas.

*Atrium dome on the "PRIDE OF AMERICA"*

# "PRIDE OF AMERICA" on virgin voyage

**On 22nd July 2005 "PRIDE OF AMERICA" took the first passengers on board in Honolulu for the cruise liner's maiden voyage. Passengers enjoy the ultimate in luxury on board – among other things, in the 42 suites supplied by KAEFER using its own B-15 system.**

The fire-resistant and noise-reducing LOLAMAT panels were supplied by KAEFER subsidiary CF-SYSTEMS GmbH. The seamless walls and ceilings were delivered on board ready-to-fit, accurate to size up to 5 x 2.4 m and fitted with electro connectors. They can be assembled in a minimum of time and can be furnished immediately on completion. Thus "LOLAMAT" cabins combine reduced installation and fitting out time with top-grade quality of substance and finish – ideal for the high demands placed on ships in this category.

KAEFER also played an important role in other matters of taste on board: we supplied the complete room assemblies in stainless steel, including the floors for all the kitchens and pantries; altogether 2,200 m². And guess who provided all the insulation for the ship's electronics …

*Family suite*

# A stadium sporting the club colours …

**KAEFER Munich joins in the building of the Allianz Arena.**

Representing a milestone in modern architecture, it sets standards far beyond the Bavarian capital, Munich: the Allianz Arena. The soccer stadium of superlatives was opened on 30th May 2005 with a friendly match between TSV 1860 München and 1. FC Nürnberg. The next day saw Bayern München play against the German national team. Both games – how could it be otherwise – were totally sold out weeks beforehand and both took place in front of 66,000 spectators.

A referendum held on 21st October 2001 decided whether a new stadium should be built or alternatively the existing Olympia Stadium should be extended. This ballot resulted in a two-thirds majority in favour of a new building.

This was the cue for an innovative concept developed by the Swiss firm of architects Herzog & de Meuron, whose concept for the stadium foresaw a transparent sheathing made of ETFE foil cushions. The sheathing can be illuminated from inside and is self-cleaning. Building of the stadium commenced in autumn 2002.

The stadium is located at the northern end of the Munich suburb of Freimann in Fröttmaning. Of the 66,000 total number of seats, 10,000 in the north and south curve respectively can be clapped up to make standing room. Only the first 30 rows are not roofed over. The stadium contains 106 spectator boxes with a total of 1,374 seats. In addition the stadium has areas containing more than 2,200 places for visiting VIP business people. The stadium runs childcare centres, fan shops and numerous restaurants and stalls spread over an area of some 7,000 m². The four-storey car park with space for 9,800 cars is the largest multi-storey car park in Europe.

The roof and façade were made up from 2,760 ETFE foil cushions, which are constantly kept pumped up with dry air. The illumination for the cushions can be selected in either white, blue or red. So the stadium can always be lit up in the respective colours of whatever team is playing.

KAEFER Munich participated in the construction of this magnificent building with extensive noise protection and insulation work. This encompassed the installation of some 28,000 m² of insulation for cold and hot water pipes, 45,000 m² sound-proofed ventilation pipes, 7,500 m² ventilation ducts insulated with L90 fire proofing, 2,400 m pressed fire protection shutters and some 1,000 L90 inspection hatches for the kitchen extractor ducts. As part of the pipe laying work, about 9,400 break-throughs were carried out to take R90 pipe feedthroughs. The work took 18 months to complete and involved approx. 60 KAEFER fitters. It was well worth it. The Allianz Arena in Munich has to be one of the most spectacular in the whole of Europe. The stadium has already earned itself a reputation for sight-seeing. So far well over 100,000 visitors have journeyed to see the arena, quite apart from spectators at sporting events. In addition to this the boxes and other parts of the stadium are in great demand from companies and other organisations for product presentation purposes and congresses.

# ESSO shutdown used for maintenance and new project

Construction of the ESSO refinery in Ingolstadt was KAEFER's very first incentive to expand into Bavaria – and the company is still a loyal customer of the KAEFERites in the south of Germany. In the past year, too, our installation workers were once again engaged in disassembly and reassembly work during a turnaround at the refinery. Up to 90 KAEFERites were kept busy for three months on projects within the plant.

# Extensive insulation work at SKW and AMI in Piesteritz near Wittenberg

For over ten years now, employees at KAEFER Leipzig have been supplying building site equipment for maintenance work undertaken at the SKW nitrogen plant in Piesteritz, above all during the annual maintenance shutdown in the ammonia facilities. The plant is located about 90 kilometres south-west of Berlin, quite near to Luther's Wittenberg. It is Germany's biggest producer of carbamide and ammonia and has its own research and development department. SKW Piesteritz is active in the market for industrial chemicals as supplier of base chemicals such as ammonia, carbamide and nitric acid. When in spring 2005 Germany's largest and most modern melamin plant on the premises of SKW Piesteritz became operational, KAEFER was also awarded an umbrella contract for the insulation work to be carried out when it was shut down for maintenance and inspection.

This was at the same time as the shutdown of the SKW plant and the work was undertaken as a subcontractor for MCE Industrieservice. For two weeks at the heart of the four-week shutdown in July up to 40 KAEFERites had their hands full at the SKW and AMI plants. The main task at SKW's ammonia facility was to install heat insulation, but there was a considerable amount of cold insulation to be installed, too. KAEFER took care of the insulation engineering involved with the refurbishing of a cold drum. Besides providing the PUR foam insulation, KAEFER also coordinated the scaffolding and corrosion protection work. The work on the melamin facility mainly involved providing high-temperature insulation.

# Lots to do at chemicals plant Schwarzheide

Cyclics Europe GmbH has just built a plastics manufacturing facility on the site of BASF Schwarzheide GmbH in the south of Brandenburg – some 50 km north of Dresden and 120 km south of Berlin. The new plant produces the raw materials used in the production of automobile components made of plastic. Our team from Berlin took care of the insulation work on the tanks, apparatus and pipelines, which altogether add up to a total surface area of 10,000 m². A further extension to the plant is already in planning.

# Bio diesel won from vegetable oil

The German federal state Brandenburg is one of Europe's most important regions for producing bio fuels. Recently, yet another bio ethanol plant went into production. Following an investment of 42 million Euros, the North Brandenburg Umesterungswerke (NUW) in Schwedt will employ 80 people in the conversion of 160,000 tons of vegetable oil into 150,000 tons of bio diesel and 15,000 tons pharmaglycerin yearly. After KAEFER Berlin carried out extensive insulation work for the bio diesel plant in Kyritz in 2004, the KAEFERites based in Germany's capital city were once again in demand to provide the insulation for tanks, vessels and pipelines for the bio diesel plant. In Schwedt the insulation work encompassed a total surface area of 6,000 m².

# Noise protection hoods for compressor station in Söhlingen

As part of a construction project for ExxonMobil Production Deutschland GmbH at a natural gas compressor station in Söhlingen (Lower Saxony), the department Technical Noise Protection, part of KAEFER's Industry division in Bremen, built two large noise protection hoods over two natural gas compressors. The compressors are driven by high-speed electric motors. The outer casing of the noise protection hoods comprises specially made facing elements which possess particularly good noise protection qualities. A special feature of these hoods is that the overhead roof elements can be removed in one-piece, so that the whole compressor unit can be easily lifted in and out. For instance, at the beginning of 2006 the second compressor unit will be dropped through the opened roof for final installation. The two noise protection hoods each incorporate an explosion-proof ventilation unit with air intake filters, high-performance ventilators, ventilator and outlet silencers, and control and check valves. The entire work took 4,000 man hours from prefabrication to complete installation and was carried out without a single accident occurring.

# Preemraff Schweden: a septet plays the tune!

The contract from ABB Lummus for the Preemraff refinery in Sweden – worth 5.4 million Euros, including more than 50,000 m² of insulation, fire protection and electrical heating for the Gas Oil Project – involved the cooperation of seven KAEFER divisions. It demonstrates the strength of KAEFER as a group.

The project PO 11 (NL, 2003) carried out by the Industry division in Germany set an impressive bench mark for the execution of large-scale projects. Our Dutch colleagues proved their right touch for customer service. On-the-spot support in Sweden for obtaining official permits, building site equipment and implementing the initial phase of the project was provided by KAEFER's Swedish colleagues. The actual work, which started in March and goes on till November 2005, is being carried out by TERMOIZOLACJA (Poland) and TERMOIZOLA (Lithuania).

The Industry Division in Bremen is responsible for project management, with assistance from KAEFER Finland on the business side. An experienced member of the Export Department is responsible for the site management.
Seven players – a successful project – something to be proud of!

# Modern combined heat and power biomass plant is kind to budgets and to the environment

KAEFER Munich was involved with insulation and sound-proofing work during the construction of a combined heat and power facility for a medium-sized timber company in Eberhardzell near Memmingen, Baden-Württemberg. Up to 35 fitters were occupied for three months doing work on the boilers and pipelines. The modern facility uses wood residues produced by the saw mill. Some 70,000 tons of wet and 40,000 tons of dry wood are turned into heat and electric energy. The plant supplied by the Danish tank and boiler manufacturer Aalborg Energie Technik a/s produces 7,500 kilowatts of electricity and 4,000 kilowatts of thermal output. Surplus electricity is fed into the local grid and the process heat is used to drive the saw mill's wood drying plant. This makes sound environmental sense, too, as it is no longer necessary to transport the wood residue by lorry over long distances. Furthermore, burning the wood only releases as much $CO_2$ into the atmosphere as the trees it comes from accumulate during their lifetime.

# Cross-border cooperation in Saarland

In 2004, SFW, SaarEnergie GmbH and RAG Saarberg AG merged to form the STEAG Saar Energie AG. KAEFER Düsseldorf acquired the umbrella contract from RAG, and KAEFER Pfungstadt was subsequently contracted to carry out all maintenance work to be performed on the power stations belonging to the newly merged company. STEAG Saar Energie AG is the largest independent electricity utility in the region. It possesses considerable know-how in the field of power station and energy technology. The total capacity of all Saarland's heating and power stations taken together amounts to an impressive 2,000 megawatts of electricity and 630 megawatts of community heating. The KAEFER team from Pfungstadt will carry out the work in cooperation with the French KAEFER WANNER. Further proof that the internationalisation of the KAEFER Group can also bear fruit in the border regions of Germany. The cooperation between KAEFER Pfungstadt and KAEFER WANNER stretches far beyond the power station work in Saarland.

# From waste to electricity: KAEFER insulates plant at Buschhaus power station

KAEFER Hanover carried out insulation work on a garbage incinerator boiler and flue-gas dust collector during construction of the 3rd line of a thermal recycling plant in the brown-coal fired power station at Buschhaus near Helmstedt. The incinerator boiler insulated by KAEFER produces 57.5 mw of heat. Some 35 KAEFER fitters were kept busy with the work between November 2004 and June 2005. In the course of the project about 5,500 $m^2$ of boiler insulation and approx. 3,200 $m^2$ of heat and noise insulation material were fitted to ducts and other parts of outdoor equipment. The Buschhaus power station has a gross nominal electricity output of 380 mw. After a complete refit in 2002, the plant's efficiency was significantly raised. Annual production of electricity exceeds two billion kilowatt hours.

*Buschhaus power station*

# Schleswig-Holstein: position consolidated

*Renovated façade of an apartment building in Eckernförde-Wilhelmsthal*

The renovation/façade department continues to attract new customers. Following last year's success with the large-scale Twistering project and the addition of "Süderelbe eG" to our regular customer base, this year has also seen a number of new customers – including yet another major company. Altogether – quite a considerable achievement.

Frank Heimbau Kiel GmbH has engaged KAEFER to renovate the shells of 350 apartments in a residential area in Eckernförde-Wilhelmsthal encompassing a total of 23 apartment buildings. The bonded insulation system for the façade, supplied by sto, will be installed by the Polish firm Fab-Lok, and WIBAU will carry out the roof renovation work. The contract runs from May this year up to the end of 2006 and involves a volume of more than 2.5 million Euros.

# BMW: how quality can win a key customer

For some time now the series 1 and series 3 models have been rolling off the line at BMW's Leipzig plant – surrounded by an impressive 4.5 kilometres of KAEmobil partitioning walls. The walls' metal-laminated coating in 12 somewhat extravagant RAL-tones were made up according to a colour scheme specially designed for BMW, including Bordeaux Violet, Capri Blue, Aluminium White and Perl Gold.

In addition, the contract encompasses a broad spectrum of conventional interior finishing works, including walls, ceilings and doors. The contract was landed thanks to a particularly inspired presentation - the outcome of much meticulous preparation. Subsequent developments confirm that the execution of the order was also way above standard: several extensions of the contract have brought up the contract value.

As if this were not enough, the notable success has given birth to another: the quality-conscious Bavarians were so impressed by what KAEFER accomplished that they have entered into an open-ended outline agreement for "drywalling/KAEmobil", which now gives us the chance to repeat this brilliant performance at all other BMW locations. A textbook success story!

# BARMENIA Wuppertal: major contract for the interior finishing department in Pfungstadt

In April 2005 we acquired a new customer, BARMENIA-Versicherung, who gave us a contract to complete the interior finishing of their new head office in Wuppertal.

KAEFER will carry out work on the floors, walls, tiling and painting, insulation, staircases and balustrades for two wings with an initial seven floors, to be built in two lots. Part of the contract is to remove the existing structures. The amounts involved all run into four-digit numbers, the two lots culminating in 3,000 m² of textile wall coverings, 11,500 m² of concrete and stone flooring, 15,000 m² carpet as well as 3,000 door elements.

Work on the first lot started in June this year, the second lot is planned for 2007 – a project of truly great dimensions.

# Construction department Bremerhaven/ Bremen: News from the Elbe and Spree

Not only shipbuilders, but also the team at "General Contracting – Turnkey New Buildings/Refurbishing of Old Buildings" working with Klaus Kanngeter, take a fond view of the water. The reason for this is that, along with the work currently being carried out on their main occupation Berlin, they have managed to land a new contract directly on the "banks of the Elbe".

**Fresh from Cuxhaven: Hotel with view over the Elbe**

Cuxhaven is the location of a major project commissioned by a newly acquired customer, the new owner of the well-known Hotel Seepavillon near the outer dyke.

A bedroom wing is being demolished to be followed by two building phases: a 5-storey apartment building plus penthouse level and underground garage. A second building phase will provide a restaurant and additional flats.

Planning permission has been applied for and the construction work at "Bei der alten Liebe" – directly on the Elbe maritime waterway – is expected to begin at the turn of the year.

*Model of new hotel building in Cuxhaven*

**Fresh from Berlin: "an expression of our thanks"**

Last year K-WERT carried a report on the modernisation work done by the department "General Contracting" in the computing centre at DB Systems GmbH. The interior conversion required sophisticated structural engineering and was finished in record time. The railwaymen were obviously very satisfied, because we now expect further contracts from Deutsche Bahn (German Railways): another computing centre is to be built, and we have already been asked to take care of the planning for this.

**Parc du Bois, Potsdam**

The residential conversion of what was once the Potsdam Military Hospital (built 1890/94) is coming along nicely in the capable hands of our experienced refurbishing team. Following the start of the project this July, work is already underway on 2 of the 12 buildings and 146 out of a total 180 living units have already been sold. Completion is due in 2007 – so we can already look forward to a series of attractive photos.

# Cooking with Dr. Oetker – building with KAEFER

Even in the surroundings of Trier, Bitburg and Traben-Trarbach the term "alimentation" means a lot more than the local Moselwein and Bitburger Pils. The Dr. Oetker frozen foods division near Wittlich, for instance, whose premises were extended by 10,000 m² in the second half of 2005 to accommodate a large pizza production facility.

The division Cold Storage from Neubrandenburg managed to acquire the Dr. Oetker Group (a new customer) for this contract, supplying and installing 11,000 m² Paroc fire protection ceiling panels in accordance with the highly stringent demands on hygiene necessary in the production areas. A further 8,000 m² of trapezium metal ceiling was installed above the ceiling panels to provide a sturdy platform for all the technical equipment associated with servicing the building. In addition, another 3,000 m² of EMS insulated partitioning walls were used for the adjacent cold-storage areas along with EMS insulated doors.

**Stringent hygiene regulations were also applied to the new building of an EDEKA hypermarket in Kassel**

Among the highlights was the installation of 45 metres of window front for the frozen-food cabinets, the building of walk-in cold storage areas with generously proportioned window displays, the installation of four T90 sliding-doors for the frozen-food area, as well as the building of insulated rapid-action doors which act as a "sluice-gate" for people going in and out. On top of this the KAEFER team from Neubrandenburg installed some 5,000 m² of insulated wall and ceiling elements, tiled 1,400 m² of walls and floors and carried out 500 m² of flooring and concrete work. 30 smaller sliding doors for cold rooms and cold storage areas, 20 doors to building-service areas, two T90 revolving doors and 140 ram-proof structures completed the order.

# Keep a cool head …

**… and warm feet – guaranteed to put the doctor out of work. An old adage, and naturally of interest to insurers, too. Maybe one of the reasons that the Mannheimer Insurance decided on chilled ceilings for the administration and training rooms on the upper floor of their new seven-storey office building in Mannheim.**

The building which was designed by star architects Murphy & Jahn, Chicago/Frankfurt, is crowned with a flattened arched roof, partially made of glass, which, apart from transmitting light of course, also lets the heat of the sun shine through. The elegant solution to neutralise the unwanted heat is to use a chilled ceiling, rather than clumsy air-conditioning. The chilled ceiling for its part, though, should not be allowed to obstruct the incoming light. A challenging task, and therefore entrusted to the experts at Pfungstadt.

100 units of square grid elements were used, which allow lots of light to pass through. The cooling water circulates through thin, virtually invisible pipes in the moulded upper profile of the units, providing a cooling capacity of up to 180 Watt/m², and with none of the draught associated with air conditioning. 600 m² of ceiling sails were installed in the non-glass sections of the roof, finely perforated panels which apart from their cooling function, also exhibit good acoustic qualities. All the elements used are coated with DB-701 "pure aluminium", a colour whose metallic shine further enhances the attractiveness of this climatically as well as architecturally sophisticated ceiling solution – and therefore the benchmark character for future extensions of our chilled ceiling activities …

**But bankers need to keep a cool head, too. Which is why we were also asked to install chilled ceilings in the new Düsseldorf premises of NRW Bank – and how!**

We fitted out these prime city premises with ceilings totalling 14,000 m² – of which a lofty 11,000 m² comprised Durlum-Sysdec metal chilled ceilings, involving complicated precision work with small components, a high power rating (94 Watt/m²), a tight work schedule (9 months) and challenging installation conditions (full inspection access with a ceiling cavity of just 15 cm).

A Christmas gift for the 500 employees of Nordrhein-Westfälische Landesbank, who will move in at approximately the same time as this issue of K-WERT appears: in December 2005.

# AIRBUS: clear overview for the management

The Interior Construction Department has broken new ground at the AIRBUS works in Hamburg-Finkenwerder. The order was for partition walls and fire-protection doors – but at the same time the customer wanted the interior areas to be airy and light. The solution was to use a future-oriented symbiosis of KAEmobil walls from the Flexika-line and products supplied by the KAEFER subsidiary bemo, everything made of glass – including the doors – and partly in F-90 quality.

Despite the tight work schedule and complicated logistics, as well as the need to first dismantle and reassemble 2,500 m² of existing metal ceilings, the reconstruction work was completed on time. This was in no small part due to the excellent co-operation between Interior Construction Hamburg and bemo fire protection systems. Now the management staff who occupy the floors in four wings of House 25 have a clear overview.

# Kiel, Construction division: Healthy inside hospitals

**The Interior Construction Division in Kiel has just completed two major hospital projects that were begun in 2003: reconstruction of the Neurology Centre at Klinikum Kiel, and the new building of "Bethesda Allgemeines Krankenhaus Bergedorf".**

From KAEFER's point of view, the main feature of the construction work carried out at the Neurology Centre was the size of the project and the numerous jobs that had to be completed within its scope – altogether including some 16,500 m² of walls, plaster, facing formwork and high fire-resistance classification, even radiation-protection walling. The list continues with 10,000 m² of ceilings, including heavy-load and Dipling ceilings installed with broad-span beams, supply and installation of 600 door windows and observation elements, 720 inspection hatches in gypsum plaster board ceilings F0 to F90, iron fittings, skylights with electrical interior shutters, darkening blinds, ceiling runners and a whole lot more …

Project leaders Dietrich Hartz and Carsten Scheffler report that at times as many as 90 workers were needed on site – a difficult coordination task presenting a real challenge to the construction manager, Günter Beyer. As always, we were able once again to provide our old customer "Gebäudemanagement Schleswig-Holstein" with the very best service. Also from the aspect of safety, the construction work went extremely smoothly.

It was much the same at Bethesda-Krankenhaus in Hamburg-Bergedorf, involving a similar project scope for walls and ceilings. Main feature here: the remarkable order for some 1,000 doors. A particular challenge was presented by the OP sliding doors and the wood-glass frame elements, as KAEFER was also responsible for the electro-hydraulically operated door mechanisms – each individual element being a virtual unicum.

The three construction phases encompassed the entire refurbishment of the 5-storey main hospital building, new building of a radiology and psychiatric facility over 3 floors together with a connecting passageway to the old building, and the complete refurbishing and conversion of the old nurses' residence into what is now an administration building. Background to the project was the merger with a neighbouring clinic, which is where the patients were accommodated during the construction period. Following the changeover, which took place within just 24 hours, both hospitals are now spread over the fully refurbished and extended premises.

Axel Blass was responsible for the management of construction work on-site and the supervision of up to 70 workers. Wolfgang van Wickeren and Melanie Schick were the leader of the overall project. This contract, undertaken for our old customer Planungsbüro tsj Lübeck, could also be completed to everyone's entire satisfaction.

*Entrance area of the Neurology Centre at Klinikum Kiel*

# Information from the General Works Council

Already another year has gone by.

Changes at the work place and in working life dominate the current agenda, and this has consequences for us all.

We think of the restructuring measures undertaken in 2003, the transformation of KAEFER's Shipbuilding Division, the opt-out clause contained in the supplement to the collective agreement for insulation workers, the new collective agreement for the construction industry and the framework agreement for salaried workers. Not to mention numerous other changes to the law.

Dear Colleagues,

Even the Works Council cannot change the laws of the land and we are bound to them just like everyone else. They must be observed by all of us. However: works councils are able to provide information and support in the application, implementation and observance of the law. The works councils can exert considerable influence, up to and including co-determination, on internal procedures and the implementation of change, and in the application and implementation of opt-out clauses contained in collective agreements and the observance of such agreements.

For instance, in the wake of the restructuring during 2003 the Works Council at KAEFER Isoliertechnik managed to ensure that the "Iso-Trans" training institute was set up to help those colleagues threatened with redundancy.

Furthermore, we played an important role in ensuring that once again young people are able to receive a full vocational training at KAEFER, also in the commercial area.

The transformation of the shipbuilding division into an independent company KAEFER Schiffbau GmbH ensued smoothly with no financial sacrifice on the part of the employees. We restricted the possibility for the employer to make more extensive use of opt-out clauses. The 13th supplementary agreement (Christmas bonus) remains intact, albeit in a different form. Hardship payments foreseen by the supplementary collective agreement will also continue to be paid, also with slight changes.

The above-mentioned cases are just a small sample of what the works councils at KAEFER have undertaken to prevent otherwise possible and serious pay cuts.

In the absence of works councils – and this is something you can be quite sure of – many of the agreements containing benefits for the work force would have been annulled, working conditions would have deteriorated and incomes would have been under even greater pressure.

Therefore, Dear Colleagues:

Ballots for the works councils will take place in spring 2006. Take part in the ballots, step forward as candidates, and continue to support your elected representatives. Only a strong works council is able to represent your interests to the full and protect your rights as employees.

In the name of the General Works Council I would like to wish you and your families a healthy and successful New Year.

Jürgen Carstens
Chairman General Works Council

# The Euro Works Council at KAEFER is working on the future

The EWC (European Works Council) currently comprises members from Germany, France, Norway, Spain, Austria and Poland:

EWC is no "toy": it has very real legal duties. The organisational bodies of workers in the various European states have different duties, as well as different rights and obligations.

EWC embraces all these different legal "provenances", traditions and cultures.

We provide a forum in which employees can exercise their pan-European right of information and consultation. Despite all the differences, there are also many mutual interests, common issues and topics:

- Protection of the right to information and consultation (within a European context)
- Work migration, mobility and maintenance of minimum standards, maintenance of ILO minimum norms (International Labour Organisation)
- Job protection and occupational health and safety in Europe for all workers
- Implementation of European Regulations (e.g.: EWC-RL, regulations governing the provision of services, Regulation I+C (Information and Consultation)
- Ensuring that all European employees of the KAEFER Group enjoy comparable conditions of employment
- Conclusion of what may become pan-European agreements

It is also always fascinating to observe the different historically and culturally determined approaches assumed by the representatives of workers from the various European countries, and despite such differences to discover common ground that is not, or should not be, reduced to "the lowest common denominator".

The European Works Council would like to wish all KAEFERites and their families a happy Christmas and a healthy, prosperous New Year for 2006.

Klaus Dworatzek
EWC Chairman

# Information from the Group Works Council!

Dear Colleagues,

Another year has passed and looking back we once again ponder: what is a year, how quickly it goes by, and what has happened in the meantime?

When we reflect on the year as your Group Works Council, the first impression is a positive one. Why? you ask: because 2005 resulted in hardly any redundancies at KAEFER's various locations. Although there were some structural changes, at the levels of General Works Council and Group Works Council we were able to almost completely maintain the number of jobs in the group. And this, dear colleagues, represents a departure from developments elsewhere in the construction industry. Job security remains our main objective!

Although last year the agreements concluded between the works councils and KAEFER and its subsidiaries failed to secure jobs 100 %, there still was a certain degree of success in making them more secure.

As a group, KAEFER is growing in its structure. Parallel to this, all of us have a natural suspicion of change. This raises the question, whether we really ought to be afraid of change? Most probably not! It would give more cause for misgivings if everything were to remain as it once was!

An old proverb states: someone who is preoccupied with the past has no future. Let us therefore attempt to cope with these changes and look confidently into the future; let us take up the challenge and face the future together. Let us go forward together as a group and show off our combined strength, and let us together go down the bumpy road and together remove the obstacles in our way. We can assure you, your Group Works Council will do its utmost to ensure success. We believe we are on the right path and at this juncture we want to ask for your continued support.

**"Be reasonable to each other".**

Looking back over the year 2005, it just remains to report that we as your Group Works Council will do our utmost to ensure that all employees in the KAEFER Group have equal working conditions. It is our greatest wish that all the employees in the Group feel they are KAEFERites and that we will grow together as one big family.

Since it is not only the end of another year, but also because the next ballots for the works councils must take place and together with other bodies they must be newly elected, we would like to take this opportunity to thank all readers for their trusting, but not always so easy, cooperation and for the trust you have shown in us.

**Let us be forward looking!**

And in this spirit we would like to wish all the employees in the group and their families a happy and peaceful Christmas and a happy and prosperous future.

The Group Works Council

# We mourn for

**Germany**
Günter Gnadt, † 15.10.2004 (Bremen)
Hans-Georg Knapp, † 20.10.2004 (Bremen)
Peter Schiege, † 09.11.2004 (Bremen)
Heribert Klein, † 17.11.2004 (Bremen)
Günther Niemuth, † 25.11.2004 (Bremen)
Friedhelm Treutler, † 26.12.2004 (Bremen)
Karl-Heinz Amme, † 31.12.2004 (Bremen)
Werner Haaf, † 11.01.2005 (Bremen)
Bernd Uch, † 27.01.2005 (Bremen)
Alwin Möller, † 27.02.2005 (Bremen)
Wolfgang Hennemann, † 13.03.2005 (Bremen)
Herbert Cichon, † 22.03.2005 (Bremen)
Berend-Walter Arnecke, † 24.03.2005 (Bremen)
Siegfried Steffen, † 19.05.2005 (Bremen)
Mürside-Ahmet Gücük, † 20.05.2005 (Bremen)
Georg Pugacz, † 22.05.2005 (Bremen)
Willy Lux, † 21.06.2005 (Bremen)
Bernard Sudendorf, † 29.06.2005 (Bremen)
Freimut Faller, † 01.07.2005 (Bremen)
Avdo Adilovic, † 17.07.2005 (Bremen)
Lothar Wippel, † 02.09.2005 (Bremen)
Heinrich Kwauka, † 25.09.2005 (Bremen)

**France**
Louis Arlanne, † 21.02.2005 (Provence)
Yvan Renault, † 11.06.2005 (Normandie)
Mr. Leveuf, † September 2005 (Normandie)

**Lithuania**
Riciardas Savicius, † 14.06.2005 (TERMOIZOLA UAB)

**Austria**
Werner Tassler, † 04.02.2005 (KAEFER Austria)
Heinz Medwenitsch, † 21.05.2005 (KAEFER Austria)

**Poland**
Feliks Topolewski, † 10.02.2005 (TERMOSPRZĘT)
Stanisław Sobawa, † April 2005 (TERMOIZOLACJA)
Stefan Cibor, † Mai 2005 (TERMOIZOLACJA)
Jan Kołodziej, † 21.09.2005 (TERMOIZOLACJA)

**South Africa**
Albert Makhuvele, † 23.10.2004 (Sasol Secunda)
Mfaniseni Chiliza, † 26.11.2004 (Sapref KZN)
Alan Govender, † 01.01.2005 (Sapref KZN)
Khulekani Zulu, † 05.01.2005 (Sapref KZN)
Charles Sinclair, † 14.03.2005 (Head Office Elandsfontein)
Elias Mavimbela, † 21.04.2005 (Tutuka Power Stn)
Elton Mbuyisa, † 06.06.2005 (Sapref KZN)
Nikile Mphahlakwana, † 29.06.2005 (Sapref KZN)
Peter Mmohla, † 19.07.2005 (Arnot Power Stn)
Christopher Sidu, † 19.08.2005 (Sasol Secunda)
Siyabonga Ngcobo, † 19.09.2005 (Sapref KZN)

**Spain**
Carmelo Sabido, † Januar 2005 (KAEFER Aislamientos)

**Thailand**
Lhaemthong Kunakam, † 15.04.2005 (KAEFER Insultec Ltd.)

**Hungary**
János Varga, † 15.10.2004 (KAEFER Építőipari)

# Celebrating 40 years

**Eugeniusz Kozioł** (joined us on October 8, 1965): Eugeniusz Kozioł started with TERMOIZOLACJA in 1965. He worked as a scaffolding fitter on the biggest construction sites in Poland, such as Łaziska, Jaworzno, and Rybnik, as well as in Germany. He also worked there as a welder. Though Eugeniusz Koziol has retired, he continues to work for TERMOIZOLACJA as a maintenance technician, and is known in our Zabrze office as "Golden Hand."

**Hans-Georg Evermann** (joined us on April 1, 1965): On April 1, 1965, Hans-Georg Evermann (married, with one child) began his training as an insulation fitter, and subsequently worked on various construction sites and in the workshop before beginning work as an instructor in 1985. As a member of the company works council and the audit committee, which he joined almost 30 years ago, Hans-Georg Evermann has an unparalleled knowledge of KAEFER. In addition, he has been a member of the company's suggestion system since October 1985, and since 2002 has served as instructors' representative to the general works council. Currently, Hans-Georg Evermann is in active semi-retirement until August 2006, and is regarded by his coworkers as a valuable and well-liked colleague.

**Peter Mahn** (joined us on April 8, 1965): Peter Mahn began his work at KAEFER on April 8, 1965, as an acoustic fitter on various construction sites. After completing his studies to become a government-certified construction technician, in 1972 he moved to an office position, and was entrusted with overseeing construction sites for the entire Federal area, as well as in Belgium and the Netherlands. Beginning in 1974, Peter Mahn was also responsible for our long-term clients Airbus and ERNO Space Travel. He earned his high status at KAEFER through his many years of service as project supervisor for interior finishing in Bremen, and as a specialist for multistory KAEmobil indoor installations. The KAEmobil laminate shielding system he developed is also used in the aircraft industry, and was awarded a design patent. On May 1, 2001, Peter Mahn entered his active semi-retirement phase, and moved to full retirement on May 1, 2004.

**Werner Cwiertnia** (joined us on April 1, 1965): Werner Cwiertnia began his training at KAEFER on April 1, 1965, and was subsequently employed as an insulation fitter in the shipbuilding division, where he still works today. During this time, he specialised in gas tanker insulation at various worksites worldwide, including Norway and Singapore. From 1982 to 1983, Werner Cwiertnia worked in Sumatra (Indonesia), and since 1988 he has been construction site supervisor at the Meyer shipyard in Papenburg, where he works on gas tankers, ferries, and cruise ships. His résumé is by now quite impressive: he has worked on a total of 18 cruise ships and 22 ferries for Indonesia, proving his reliability time after time.

**Holger Hebrock** (joined us on March 8, 1965): After training as a plumber and working briefly for the companies Wölfel and Grünzweig, Holger Hebrock joined our shipbuilding division. After completing work on two automobile ferries, he worked for four years in Mannheim at the double cogeneration plant, and then went to Pfungstadt. There Holger Hebrock worked as a surveyor and prepworker on various large construction sites, such as ER Mannheim, BASF Ludwigshafen, ESSO Karlsruhe, Marathon Burghausen, AK Chemie Biebelsheim, CF Budenheim,

# Celebrating 50 years

**Jan Zientek** (joined us on June 9, 1955): Jan Zientek has been working for TERMOIZOLACJA for 50 years! He began with us as a production supervisor. At the end of the 1950s he moved to the Industrial Safety Department, and later worked in the Export Department. He entered retirement, but then came back to TERMOIZOLACJA as a safety specialist, working in the corresponding areas of the company, and is now known as "Mr. Guardian Angel" Jan Zientek enjoys his work, and is satisfied with his present position and its important responsibilities.

Bayer Antwerp, Ruhrgas Gernsheim and DTA-Claus Heide. During this time, Holger Hebrock advanced to the rank of head fitter, and from 1972–1994 he was a committee member of the Pfungstadt works council. From 1986–2003, he served as a general problem solver and handyman at the company Weber, or Kamps AG, in Pfungstadt, and also worked in Pfungstadt as a domestic technician. Since 1 June 2005, Holger Hebrock has been enjoying a well-earned retirement.

**Jochen Doberstein** (joined us on October 4, 1965): Jochen Doberstein began at KAEFER on October 4, 1965 as a fitter at the Bayer Leverkusen construction site. In 1966, he worked at a number of different sites as a polyurethane fitter, including, beginning in 1969, the ESSO site in Cologne, where in 1972 he advanced to the rank of deputy superintendent engineer. Jochen Doberstein passed the corresponding examinations in 1973 for the non-destructive materials tests that KAEFER carried out at ESSO, and became a radiation protection officer in 1977. In 1982, Jochen Doberstein took over the post of site supervisor at the ESSO construction site, and will end the active phase of his employment at the end of this year.

**Henri Hamann** (joined us on April 1, 1965): After successfully completing his apprenticeship (1965 – 1968), Henri Hamann joined the division for construction and domestic engineering, where he specialised in plaster claddings for conduits, as well as cold insulation using Armaflex and foam glass. This insulation work was carried out mainly in the 1960s and 1970s. Henri Hamann has worked on many construction projects in the Hamburg area, such as at CCH Hamburg, Deutsche Bank, the university and the television tower, but also on sites in areas of new development, such as Osdorfer-Born, Lohbrügge-Nord and Bergedorf-West. At the HDW shipbuilding company in Kiel, Henri Hamann also worked on plaster insulations. For the last 16 years, he has worked at the HEW (Hamburg Electrical Works) in the north of the city, in the areas of heat, cold, and fire protection, and is responsible for the maintenance and rebuilding of about 45,000 m² of ceiling panels.

**Gerhard Balke** (joined us on April 1, 1965): On April 1, 1965, Gerhard Balke began his training as an insulation fitter and plumber, and was subsequently employed at various construction sites in Hamburg and the surrounding regions as a domestic engineer. As construction supervisor, Gerhard Balke was responsible for handling projects such as new construction at the Wilhelmsburg trade school, Rotring, the neurosurgery unit at the university clinic at Hamburg-Eppendorf, and others. He was also construction supervisor at the HDW shipbuilding company, responsible for cold, heat, and climate insulation on the "Super Fast" ferries. He successfully completed a course of study in fire protection, and since 1999 has been responsible for clients including DE VAU GE, NEA, Fruchtquell DODOW, and projects at the HEW.

**Heinrich Wiesenberg** (joined us on April 1, 1965): After his training as an insulation fitter (1965 – 1968), Heinrich Wiesenberg worked in the domestic engineering division Hamburg, in the central workshop for installation. In 1974, he was head fitter on small and large construction sites in the Hamburg area, including Hamburg district heating, the airport, office buildings, power plants, and refineries. From 1985 – 1986, Heinrich Wiesenberg also worked abroad, at sites in Norway and Holland, after which he worked on large publishing houses and printing facilities. Since 1998, he has worked as a plant insulation fitter at the company Hermes Schleifmittel.

**Hans-Jürgen Hirnschal** (joined us on October 4, 1965): On 4 October 1965, Hans-Jürgen Hirnschal began his work at KAEFER as an assistant on the construction site for the regional vocational school in Brackewede. He subsequently worked under fitter Werner Gimmler for eight years, at the Bertelsmann construction site. In 1974, Hans-Jürgen Hirnschal was appointed to the post of fitter at the construction site of the clinic at Bad Salzuflen, and was made head fitter on August 1, 1981. As construction supervisor, Hans-Jürgen Hirnschal led the Knoll AG (now BASF) site in Minden for several years. Since August 1, 2003, he has worked as construction supervisor at the public works in the city of Bielefeld.

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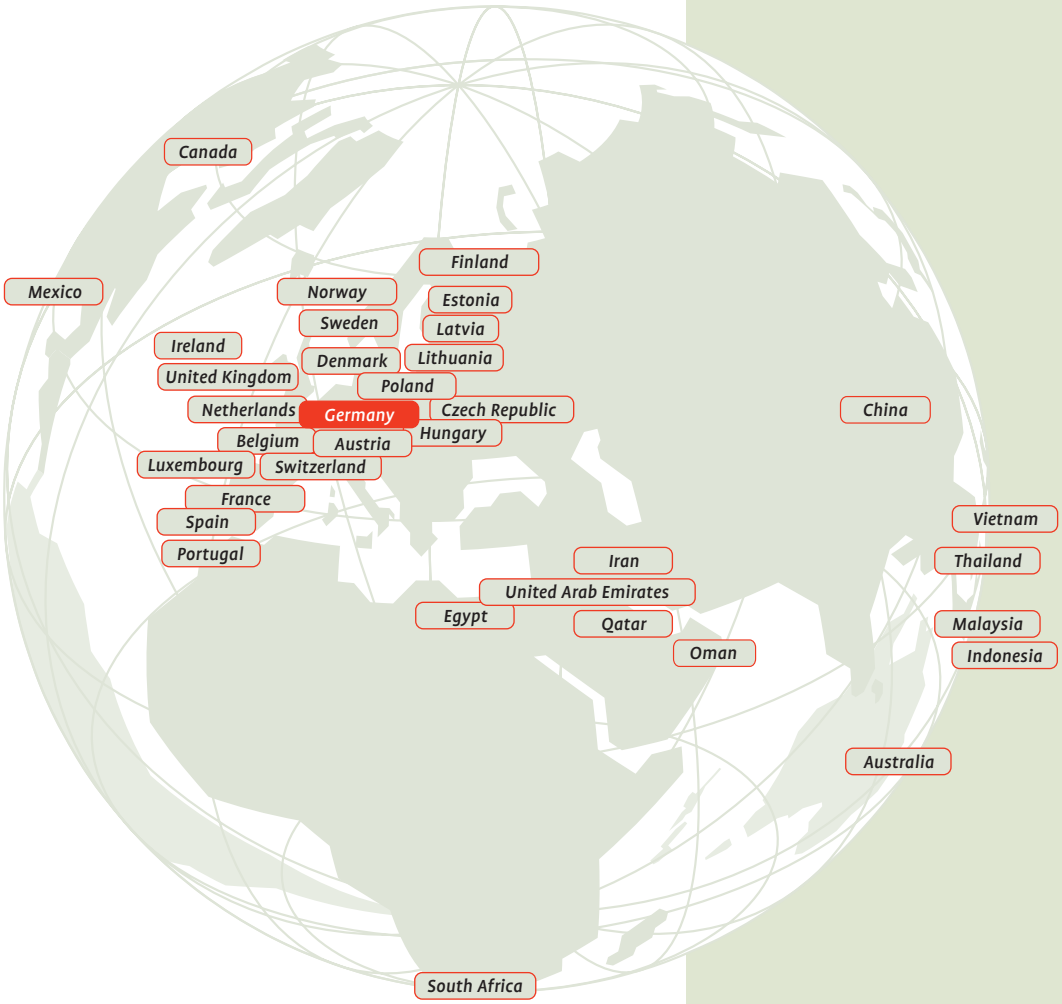


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KAEFER

# KAEFER Jubilees

## KAEFER Isoliertechnik GmbH Berlin/Dahlewitz

**20-year anniversaries**

| | |
|---|---|
| Thomas Müller | 18.06.1985 |

## KAEFER Isoliertechnik GmbH Bielefeld

**40-year anniversaries**

| | |
|---|---|
| Hans-Jürgen Hirnschal | 04.10.1965 |

## KAEFER Isoliertechnik GmbH Bremen

**40-year anniversaries**

| | |
|---|---|
| Hans-Georg Evermann | 01.04.1965 |
| Peter Mahn | 08.04.1965 |

**30-year anniversaries**

| | |
|---|---|
| Reinhard Carstens | 26.05.1975 |
| Helmut Gernand | 07.10.1975 |
| Anke Gregorzewski | 01.11.1975 |
| Herbert Hilgen | 08.12.1975 |
| Werner Holthusen | 01.07.1975 |
| Britta Lukaschek | 01.08.1975 |
| Jens Mathies | 01.08.1975 |
| Herbert Meyer | 01.01.1975 |
| Erich Schattschneider | 20.01.1975 |
| Jürgen Waßmuth | 01.08.1975 |

**25-year anniversaries**

| | |
|---|---|
| Hans Benkewitz | 19.01.1980 |
| Joerg Blumstengel | 01.09.1980 |
| Werner Duwe | 26.11.1980 |
| Lothar Frenkler | 29.07.1980 |
| Frank Gesse | 01.09.1980 |
| Michael Grünfeld | 21.10.1980 |
| Hans-Jürgen Kück | 01.11.1980 |
| Helga Napiwotzki | 01.03.1980 |
| Jens-Friedrich Roettger | 01.09.1980 |
| Gerda Singer | 18.08.1980 |
| Thomas Wanschura | 01.09.1980 |
| Lothar Wippel | 01.06.1980 |

**20-year anniversaries**

| | |
|---|---|
| Peter Blunck | 13.06.1985 |
| Olaf Groskurth | 12.08.1985 |
| Aswin Leo | 01.06.1985 |
| Andrea Lindhorst | 07.01.1985 |
| Walter-Friedrich Möhl | 01.10.1985 |
| Reinhard Mueller | 01.10.1985 |
| Sven Oestmann | 11.11.1985 |
| Heiner Petz | 21.06.1985 |
| Georg Sowka | 06.06.1985 |
| Frank Weinert | 06.06.1985 |
| Dittmar Wellbrock | 15.08.1985 |
| Georg Zgrzebski | 06.06.1985 |

**10-year anniversaries**

| | |
|---|---|
| Peter Heitmann | 01.08.1995 |
| Holger Krull | 06.11.1995 |
| Claudia Penning | 01.01.1995 |
| Norbert Schmelzle | 01.10.1995 |

## KAEFER Isoliertechnik GmbH Bremerhaven

**10-year anniversaries**

| | |
|---|---|
| Bernd Eilers | 31.07.1995 |

## KAEFER Isoliertechnik GmbH Brunsbüttel

**25-year anniversaries**

| | |
|---|---|
| Hans-Helmut Blender | 12.11.1980 |

## KAEFER Isoliertechnik GmbH Düsseldorf

**40-year anniversaries**

| | |
|---|---|
| Jochen Doberstein | 04.10.1965 |

**30-year anniversaries**

| | |
|---|---|
| Michael Erhart | 01.09.1975 |
| Marian Franke | 01.09.1975 |
| Rainer Kaminski | 22.09.1975 |
| Werner Noll | 10.11.1975 |

**25-year anniversaries**

| | |
|---|---|
| Werner Kremser | 01.08.1980 |
| Carsten Roeder | 01.08.1980 |
| Thomas Wille | 01.08.1980 |

**20-year anniversaries**

| | |
|---|---|
| Petra Droste | 01.12.1985 |
| Klaus Dworatzek | 29.07.1985 |
| Uwe Reinders | 08.04.1985 |
| Ralf Steinmann | 26.08.1985 |

## KAEFER Isoliertechnik GmbH Emden

**25-year anniversaries**

| | |
|---|---|
| Heinz Kluge | 20.10.1980 |
| Helmut Korporal | 25.08.1980 |

## KAEFER Isoliertechnik GmbH Hamburg

**40-year anniversaries**

| | |
|---|---|
| Gerhard Balke | 01.04.1965 |
| Henri Hamann | 01.04.1965 |
| Heinrich Wiesenberg | 01.04.1965 |

**30-year anniversaries**

| | |
|---|---|
| Ivan Antolagic | 25.03.1975 |
| Thomas Boßel | 01.02.1975 |

**25-year anniversaries**

| | |
|---|---|
| Gerald Fankhauser | 25.08.1980 |
| Jörg Lemke | 25.08.1980 |
| Thomas Wylegala | 01.09.1980 |

**20-year anniversaries**

| | |
|---|---|
| Torsten Bauer | 22.07.1985 |
| Martin Schubert | 26.08.1985 |

## KAEFER Isoliertechnik GmbH Hanover

**30-year anniversaries**

| | |
|---|---|
| Juergen Ahlvers | 20.08.1975 |
| Peter Lotz | 03.02.1975 |
| Klaus Ostermann | 15.09.1975 |

**25-year anniversaries**

| | |
|---|---|
| Thomas Biedritzki | 01.08.1980 |
| Jaroslav Nebrensky | 15.09.1980 |

**20-year anniversaries**

| | |
|---|---|
| Olaf Rodewald | 01.08.1985 |

## KAEFER Isoliertechnik GmbH Ingolstadt

**25-year anniversaries**

| | |
|---|---|
| Wilhelm Becker | 10.11.1980 |

## KAEFER Isoliertechnik GmbH Kiel

**25-year anniversaries**

| | |
|---|---|
| Horst Tietz | 01.12.1980 |

**20-year anniversaries**

| | |
|---|---|
| Klaus Behrendt | 10.04.1985 |
| Rainer Fragel | 07.01.1985 |

**10-year anniversaries**

| | |
|---|---|
| Anke Ehrhardt | 23.01.1995 |

## KAEFER Isoliertechnik GmbH Leipzig

**30-year anniversaries**

| | |
|---|---|
| Roland Wengel | 01.09.1975 |

**10-year anniversaries**

| | |
|---|---|
| Detlef Büchner | 01.04.1995 |
| Jörg Dietrichkeit | 01.04.1995 |
| Ralf-Peter Ludewig | 01.10.1995 |

## KAEFER Isoliertechnik GmbH Munich

**20-year anniversaries**

| | |
|---|---|
| Herbert Anderlik | 16.09.1985 |

**10-year anniversaries**

| | |
|---|---|
| Michael Schleindlsperger | 03.07.1995 |
| Helmut Hüttemann | 01.08.1995 |

## KAEFER Isoliertechnik GmbH Pfungstadt

**40-year anniversaries**

| | |
|---|---|
| Holger Hebrock | 08.03.1965 |

## KAEFER Isoliertechnik GmbH Roxheim

**25-year anniversaries**

| | |
|---|---|
| Bozo Kalac | 30.10.1980 |

## KAEFER Entsorgungstechnik GmbH Düsseldorf

**20-year anniversaries**

| | |
|---|---|
| Inge Diels | 01.08.1985 |

## KAEFER Entsorgungstechnik GmbH Pfungstadt

**10-year anniversaries**

| | |
|---|---|
| Achim Albrecht | 16.10.1995 |

## KAEFER Schiffbau GmbH Bremen

**40-year anniversaries**

| | |
|---|---|
| Werner Cwiertnia | 01.04.1965 |

**30-year anniversaries**

| | |
|---|---|
| Thomas Kolwe | 01.08.1975 |

**25-year anniversaries**

| | |
|---|---|
| Manfred Bullwinkel | 01.07.1980 |
| Joachim Busker | 18.02.1980 |
| Hinrich Rodow | 18.06.1980 |
| Borislaw Synyszyn | 15.10.1980 |

**20-year anniversaries**

| | |
|---|---|
| Gottfried Adler | 15.01.1985 |
| Klaus Quader | 01.10.1985 |
| Alois Roesner | 13.06.1985 |
| Karl-Heinz September | 02.05.1985 |

## KAEFER Schiffbau GmbH Bremerhaven

**20-year anniversaries**

| | |
|---|---|
| Thomas Beer | 01.03.1985 |
| Alfred Till | 13.03.1985 |

## KAEFER Schiffbau GmbH Hamburg

**30-year anniversaries**

| | |
|---|---|
| Henning Korth | 01.11.1975 |

**25-year anniversaries**

| | |
|---|---|
| Jürgen Bartels | 01.09.1980 |

**20-year anniversaries**

| | |
|---|---|
| Bronislaw Balcer | 11.11.1985 |
| Claus Dethlefs | 16.09.1985 |
| Marten Kelling | 01.09.1985 |
| Kerstin Schipper | 07.08.1985 |

## bemo brandschutzsysteme GmbH Weissenthurm

**25-year anniversaries**

| | |
|---|---|
| Karl-Heinz Haub | 03.11.1980 |
| Helmut Wunsch | 01.01.1980 |

**10-year anniversaries**

| | |
|---|---|
| Michael Knight | 01.08.1995 |

## GK SYSTEM GmbH Ahrensburg

**20-year anniversaries**

| | |
|---|---|
| Ralf Potthast | 01.09.1985 |

## KAEFER Integrated Services Pty. Ltd. Australia

**25-year anniversaries**

| | |
|---|---|
| Phil Canfell | 02.10.1980 |

**20-year anniversaries**

| | |
|---|---|
| Brian Boscott | 01.07.1985 |

**10-year anniversaries**

| | |
|---|---|
| Steven Barnes | 01.03.1995 |
| Tong Tran | 24.10.1995 |
| Sang Yi | 26.06.1995 |

## KAEFER WKSB N.V. Belgium

**10-year anniversaries**

| | |
|---|---|
| Martins José Antonio Pires | 15.05.1995 |

## KAEFER Eristystekniikka OY Finland

**20-year anniversaries**

| | |
|---|---|
| Jarmo Lahtinen | 15.01.1985 |

**10-year anniversaries**

| | |
|---|---|
| Kristiina Ketola | 06.02.1995 |
| Markku Virtanen | 15.05.1995 |

## KAEFER WANNER SAS France

**30-year anniversaries**

| | |
|---|---|
| Charles Beaudequin | 02.09.1975 |
| Serge Hembert | 30.06.1975 |
| Patrice Guittet | 04.02.1975 |
| Yvonnick le Diberder | 06.08.1975 |
| Sylvain Lecrivain | 05.08.1975 |
| Abdallah Lemaini | 08.12.1975 |
| Christian Michel | 18.08.1975 |
| Jack Piaulenne | 20.05.1975 |
| Francis Renault | 02.12.1975 |
| Daniel Sloma | 02.01.1975 |

**25-year anniversaries**

| | |
|---|---|
| Didier Baquet | 06.02.1980 |
| Bruno Barra | 24.11.1980 |
| Philippe Beclier | 12.11.1980 |
| Jacques Boulet | 17.09.1980 |
| Mohamed Brahim | 05.08.1980 |
| Patrick Braz | 04.02.1980 |
| Bernhard Brunin | 06.02.1980 |
| Manuel Martinez Costas | 02.01.1980 |
| Gennaro Gabriel D'Antonio | 05.05.1980 |
| Daamache Mouloud | 19.11.1980 |
| Pascal Dechartre | 01.12.1980 |
| Roland Delisle | 05.05.1980 |
| Marcel Dentz | 21.01.1980 |
| Thierry Deshais | 30.09.1980 |
| Bernard Devos | 27.03.1980 |
| Emmanuel Djimli | 15.09.1980 |
| Jacky Duclos | 05.06.1980 |
| Jacky Erbs | 01.09.1980 |
| Jean Paul Filloleau | 25.08.1980 |
| Jean Pierre Fossard | 08.12.1980 |
| Patrick Gery | 03.11.1980 |
| Jean Luc Gibeaux | 25.08.1980 |
| Jean Pascal Gimenez | 31.03.1980 |
| Yannick Guiheneuf | 01.09.1980 |
| Daniel Heranval | 17.06.1980 |
| Jean Luc Mallet | 01.09.1980 |
| Floriano Martins | 01.07.1980 |
| Claude Merienne | 25.07.1980 |
| Serge Meslard | 16.06.1980 |
| Stephane Misbare | 07.07.1980 |
| Roland Moginot | 30.01.1980 |
| Gilles Olivier | 27.10.1980 |
| Jean Louis Perronis | 01.09.1980 |
| Pascal Petitjean | 07.10.1980 |
| Valentin Piazza | 15.07.1980 |
| Serge Polfliet | 31.03.1980 |
| Jean Luc Rio | 01.09.1980 |
| Bruno Ruchon | 05.05.1980 |
| Bruno Sartory | 19.05.1980 |
| Jean Michel Saval | 25.02.1980 |

| | |
|---|---|
| Joaquim da Silva | 03.07.1980 |
| Pascal Starck | 18.09.1980 |
| Salvatore Tedesco | 10.03.1980 |
| Patrick Tinel | 01.09.1980 |
| René Trupel | 25.08.1980 |
| Pierre Unterhalt | 23.06.1980 |
| Herve Vendeville | 30.09.1980 |
| Christian Wirtz | 01.12.1980 |

**20-year anniversaries**

| | |
|---|---|
| Jacques Alberola | 30.12.1985 |
| Jacques Berranger | 09.09.1985 |
| Gilles Briot | 01.04.1985 |
| Jean Pierre Capa | 07.01.1985 |
| Jean Claude Charpiot | 02.12.1985 |
| Joelle Delevoye | 02.01.1985 |
| Jean Michel Dubois | 05.08.1985 |
| Michel Fossard | 03.06.1985 |
| Christian Guilbert | 02.09.1985 |
| Regis Bernard Imbrasse | 17.06.1985 |
| Philippe Martin | 02.12.1985 |
| Sassi Mnafakh | 17.06.1985 |
| Michel Laupie | 18.02.1985 |
| Franck Laurent | 28.05.1985 |
| Bruno Lefebvre | 12.03.1985 |
| Arnaud Lejemble | 26.07.1985 |
| Maurice Loi | 09.12.1985 |
| Juan Manuel Lozano Casado | 01.08.1985 |
| Bernard Obry | 03.06.1985 |
| Jocelyn Parent | 04.07.1985 |
| Patrick Pawlonka | 25.10.1985 |
| Pascal Senis | 20.05.1985 |
| Cyrille Thuillier | 28.01.1985 |
| René Warlouzet | 11.03.1985 |

**10-year anniversaries**

| | |
|---|---|
| Michel Audion | 12.06.1995 |
| Dragisa Dakic | 02.05.1995 |
| Laurent Doualle | 23.01.1995 |
| Serge Gauthier | 01.08.1995 |
| Herve Gougeon | 14.06.1995 |
| Thierry Hautcoeur | 03.04.1995 |
| Morsli Morsli | 01.08.1995 |
| André Proux | 10.04.1995 |
| Vianney Sainseaux | 02.11.1995 |
| Sylvie Sardais | 16.01.1995 |
| Sylvie Troin | 01.04.1995 |
| Luc Vega | 20.09.1995 |

## TERMOIZOLA UAB Lithuania

**30-year anniversaries**

| | |
|---|---|
| Zita Darmograj | 10.06.1975 |

**25-year anniversaries**

| | |
|---|---|
| Violeta Kšečkauskienė | 14.07.1980 |

**10-year anniversaries**

| | |
|---|---|
| Olga Alšauskienė | 03.07.1995 |
| Irena Astrauskiene | 03.07.1995 |
| Janina Birbaliene | 03.07.1995 |
| Liudas Brazdeikis | 03.07.1995 |
| Jonas Budrys | 03.07.1995 |
| Ramūnas Budrys | 03.07.1995 |
| Jonas Ćiuras | 02.01.1995 |
| Liudmila Dubanevič | 03.07.1995 |
| Romas Gintalas | 04.04.1995 |
| Arūnas Galminas | 03.07.1995 |
| Danutė Gargasienė | 03.07.1995 |
| Genė Goštautienė | 03.07.1995 |
| Arūnas Jarutis | 04.04.1995 |
| Viktor Kaleganov | 03.07.1995 |
| Aleksandr Kozlov | 03.07.1995 |
| Danutė Kugrienė | 12.07.1995 |
| Jurijus Lavkovas | 11.10.1995 |
| Marija Litvinova | 03.07.1995 |
| Aldona Lindienė | 02.01.1995 |
| Algimantas Majauskas | 03.07.1995 |
| Nikolaj Mazurin | 22.05.1995 |
| Romualda Meilonaitienė | 03.07.1995 |
| Antanas Mikalauskas | 02.01.1995 |
| Dalė Norbutaitė | 02.01.1995 |
| Vilius Pakaušis | 02.01.1995 |
| Marytė Ringienė | 03.07.1995 |
| Juozas Ruškys | 18.09.1995 |
| Andrejus Sernovas | 03.07.1995 |
| Vaidotas Šimkūnas | 06.02.1995 |
| Jevgenij Sinkevič | 03.07.1995 |
| Petras Stonkus | 03.07.1995 |
| Leonas Šutas | 02.01.1995 |
| Algirdas Švelnikas | 03.07.1995 |
| Stanislava Šyvokienė | 03.07.1995 |
| Arnoldas Ulevičius | 02.01.1995 |
| Aidas Vaitiškis | 03.07.1995 |
| Tomas Vaitkevičius | 03.07.1995 |
| Regina Vasiliauskaitė | 02.01.1995 |
| Vladas Vilimas | 02.01.1995 |
| Kęstutis Visockas | 02.01.1995 |
| Vidas Volskis | 03.07.1995 |
| Liudmila Zablockienė | 03.07.1995 |

## KAEFER WKS B.V. Netherlands

**20-year anniversaries**

| | |
|---|---|
| Menno de Palm | 25.02.1985 |
| Stanko Stjepanovic | 18.07.1985 |

**10-year anniversaries**

| | |
|---|---|
| Geert van der Weide | 06.06.1995 |

## KAEFER Norge AS / KAEFER IKM AS / KAEFER Isolering AS – Norway

**25-year anniversaries**

| | |
|---|---|
| Hans Bjørn Paulsrud | 01.05.1980 |

**20-year anniversaries**

| | |
|---|---|
| Gudmund Stuerød | 12.06.1985 |

**10-year anniversaries**

| | |
|---|---|
| Rune Eiane | 01.12.1995 |
| Per Otto Gargul | 02.01.1995 |
| Arve Gundersen | 04.01.1995 |
| Bjørn Johansen | 02.01.1995 |

## KAEFER Isoliertechnik Ges.m.b.H Austria

**25-year anniversaries**

| | |
|---|---|
| Gerhard Böhm | 25.11.1980 |
| Monika Kittinger | 05.02.1980 |
| Kurt Zehetbauer | 04.08.1980 |

**20-year anniversaries**

| | |
|---|---|
| Zoran Denic | 07.01.1985 |
| Oswald Schmidmeyer | 04.03.1985 |
| Robert Wallner | 20.05.1985 |
| Kurt Zawrel | 09.04.1985 |

**10-year anniversaries**

| | |
|---|---|
| Doris Ambros | 22.06.1995 |
| Helmut Göltl | 27.03.1995 |
| Stipo Kirzanac | 10.04.1995 |
| Herbert Kühmayer | 03.07.1995 |

## TERMOIZOLACJA S.A. Zabrze Poland

**50-year anniversaries**

| | |
|---|---|
| Jan Zientek | 09.06.1955 |

**40-year anniversaries**

| | |
|---|---|
| Eugeniusz Kozioł | 08.10.1965 |

**30-year anniversaries**

| | |
|---|---|
| Eugeniusz Farys | 01.09.1975 |
| Stanisław Tyrała | 27.03.1975 |
| Krzysztof Smoszna | 11.05.1975 |

**25-year anniversaries**

| | |
|---|---|
| Tadeusz Chamioło | 08.03.1980 |
| Wiesława Cichoń | 09.09.1980 |
| Władysław Duda | 22.06.1980 |
| Marian Pawlina | 08.05.1980 |
| Roman Słota | 24.05.1980 |
| Wiesław Wach | 12.01.1980 |

**20-year anniversaries**

| | |
|---|---|
| Leszek Borowiecki | 13.06.1985 |
| Ireneusz Bugała | 29.11.1985 |
| Józef Ćwiok | 11.02.1985 |
| Dionizy Dąbrowski | 28.12.1985 |
| Henryk Gołaszewski | 15.01.1985 |
| Tadeusz Kasprzak | 22.10.1985 |
| Kazimierz Kumorek | 06.11.1985 |
| Andrzej Majka | 06.02.1985 |
| Helena Stryczek | 20.08.1985 |
| Stanisław Sysło | 10.02.1985 |
| Jan Zając | 19.02.1985 |
| Tadeusz Pękala | 29.11.1985 |

**10-year anniversaries**

| | |
|---|---|
| Stanisław Bojo | 17.04.1995 |
| Wiesław Czpla | 18.01.1995 |
| Małgorzata Darowska | 02.01.1995 |
| Grzegorz Faliszewski | 01.12.1995 |
| Andrzej Figas | 06.05.1995 |
| Gabriel Górnicz | 20.12.1995 |
| Bogdan Hojnowski | 10.05.1995 |
| Zbigniew Jaszczur | 06.06.1995 |
| Bogusław Jurek | 03.03.1995 |
| Robert Kilian | 24.03.1995 |
| Ryszard Kopyt | 12.07.1995 |
| Zbigniew Korzec | 10.08.1995 |
| Bernard Lebryk | 21.02.1995 |
| Witold Misiaszek | 21.01.1995 |
| Józef Muszyński | 12.04.1995 |
| Tomasz Nawrot | 13.11.1995 |
| Henryk Pękala | 26.04.1995 |
| Bogdan Ryba | 12.09.1995 |
| Jacek Tomasik | 24.09.1995 |
| Kazimierz Zając | 02.07.1995 |

## TERMOIZOLACJA Zachód Poland

**30-year anniversaries**

| | |
|---|---|
| Roman Pieczarka | 02.09.1975 |
| Stanisław Wolański | 04.08.1975 |

**25-year anniversaries**

| | |
|---|---|
| Andrzej Konieczny | 01.09.1980 |

## TERMOIZOLACJA Oświęcim Poland

**30-year anniversaries**

| | |
|---|---|
| Jan Baluś | 01.10.1975 |
| Andrzej Gworek | 01.02.1975 |
| Władysław Korzeniowski | 01.07.1975 |
| Zdzisław Płonka | 01.08.1975 |
| Jacek Wójcik | 01.09.1975 |

**20-year anniversaries**

| | |
|---|---|
| Zdzisław Orkisz | 01.01.1985 |
| Adam Pokrzyk | 01.09.1985 |
| Bogusław Wider | 01.10.1985 |

**10-year anniversaries**

| | |
|---|---|
| Marcin Bernaś | 11.08.1995 |
| Edward Bieniek | 02.03.1995 |
| Andrzej Grubka | 09.04.1995 |
| Ewa Kowalówka | 02.01.1995 |
| Andrzej Kita | 08.09.1995 |
| Paweł Linkiewicz | 09.01.1995 |
| Krzysztof Rakoczy | 28.06.1995 |
| Janusz Spadek | 06.07.1995 |

## KAEFER Aislamientos S.A. Spain

**30-year anniversaries**

| | |
|---|---|
| Mario Becerro Ponce | 09.06.1975 |
| Rafael Campos Carrillo | 29.09.1975 |
| Francisco Castro Alamillo | 11.08.1975 |
| Felix Chillaron Notario | 21.07.1975 |
| Acacio De La Hera Vegas | 01.04.1975 |
| Francisco De La Torre Bonales | 28.07.1975 |
| Rafael Fernández Gómez | 01.07.1975 |
| Fernando Folgar Liñeira | 08.01.1975 |
| Francisco José Jimenez Prados | 13.12.1975 |
| Rafael Mesa Muñoz | 24.11.1975 |
| Juan José Paz Mora | 16.07.1975 |
| Ineso Pérez Barba | 09.09.1975 |
| Felix Pérez Garcia | 05.08.1975 |
| José Luis Rama López | 22.09.1975 |
| Antonio Sabido Almansa | 15.04.1975 |
| José Ramon Santamario Perez | 30.09.1975 |
| Baldomero Suarez Patiño | 25.06.1975 |
| Joaquín Vicente Fernandez | 07.10.1975 |
| Antonio Zuloaga Petralanda | 03.11.1975 |

**25-year anniversaries**

| | |
|---|---|
| José Luis Maqueda Lasa | 21.01.1980 |

**10-year anniversaries**

| | |
|---|---|
| Marcos Nubla Otaola | 21.11.1995 |

## KAEFER Thermal Contracting Services (PTY) LTD. – South Africa

**30-year anniversaries**

| | |
|---|---|
| David Khumalo | 05.07.1975 |
| Diane Goldblatt | 08.07.1975 |

**25-year anniversaries**

| | |
|---|---|
| Thabo Maboya | 21.01.1980 |
| Daniel Mathebula | 16.04.1980 |
| Reuben Mbethe | 17.01.1980 |
| Boyboy Mohlala | 26.05.1980 |
| Hamilton Motloung | 07.07.1980 |
| Amos Mthimunye | 09.06.1980 |
| Johannes Mthombeni | 16.10.1980 |
| Thembile Mzukwa | 16.04.1980 |
| Moshima Skhosana | 22.07.1980 |
| Johannes Thukwane | 20.05.1980 |

**20-year anniversaries**

| | |
|---|---|
| Absalom Buthelezi | 30.09.1985 |
| Esaiah Gabarone | 30.01.1985 |
| Ben Gaseranye | 09.02.1985 |
| Wilson Malinga | 05.08.1985 |
| Abram Morifi | 25.11.1985 |
| Leftye Motloung | 28.08.1985 |
| Johan Ngema | 14.03.1985 |
| Phillemon Tau | 01.10.1985 |
| Germiston Toti | 06.02.1985 |

**10-year anniversaries**

| | |
|---|---|
| Moses Nkosi | 01.08.1995 |
| Total Nkosi | 22.09.1995 |

## KAEFER Insultec Ltd. Thailand

**10-year anniversaries**

| | |
|---|---|
| Sajid Bhombal | 01.06.1995 |
| Wandee Boonsong | 01.04.1995 |
| Thomas Kochumman | 24.02.1995 |
| Payung Muntham | 01.04.1995 |
| Nung Pansiri | 16.05.1995 |

## KAEFER LLC United Arab Emirates (U.A.E.)

**10-year anniversaries**

| | |
|---|---|
| Kmallsanan Babu | 08.01.1995 |
| Abdul Hamid Insurahi Muddin Diwan | 08.01.1995 |
| Antonio D'Souza | 01.06.1995 |
| Nandlal Kewat | 05.01.1995 |
| Pappu Manohar | 05.01.1995 |
| Mohammad Abdul Mistry | 08.01.1995 |
| Atiwor Rahaman Mollick | 08.01.1995 |
| Kesavan Thulasi Nair | 08.01.1995 |
| Udayakumar Narayanan | 11.01.1995 |
| Gangeddula Jangu | 11.01.1995 |
| Pokkattu Kuttykunjamma C. Pillai | 05.01.1995 |
| Sasidharan Raghavan Pillai | 05.01.1995 |
| Raju Raghavan | 05.01.1995 |
| Neelam Rajalingam | 11.01.1995 |
| Suresh Kumar Rajamma | 08.01.1995 |
| Gujjala Shivam Reddy | 11.01.1995 |
| Kodepally Raja Reddy | 11.01.1995 |
| Puthiya Parambath Soopy | 08.01.1995 |
| Hafiz Khursidalam Abdul Subhan | 05.01.1995 |