



der k-wert

The KAEFER - Haus Magazine No.

17

— Fast Cruise Liner — KAEFER in France — LOLAMAT — GK-Packing System —



Cruise Liner "Norwegian Sky"

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Dear Colleagues,

The last four years of the twentieth century have brought about continuous improvement in our enterprise's development. We can most probably count on becoming even more successful on the domestic and foreign market in 1999, i.e. for the fourth year in a row, as well.

As special as the upcoming turn of the year is, constituting at the same time a turn of the century as well as a turn of the millennium, it would be false to assume that things should become completely different from the way they have been in the most recent past. Although many people attach hopes to this unique event, and others even have fears concerning the future, all of us know that in our private and professional lives nothing new and better will automatically come about just because a new millennium has begun. Which is to say, unless we want it to happen and thus make it happen.

In the insulation branch, the most radical changes took place at the beginning of the 1990's; the next decade will not effect any dramatic changes in our core business. For the most part, we will experience a continuous development with the usual ups and downs. On the one hand, that is reassuring for us, because we have already more or less come to terms with the essential changes which have taken place in the KAEFER Group, in particular the establishment of collaboration with subcontractors and the necessary adjustments in our cost structure. On the other hand, the pressure to reduce prices will prevail. Our customers no longer accept the cost levels which are determined, in part, by collective

labor agreements. More and more smaller companies are capable of offering more for less, at least temporarily. Many of our customers tend to set lower standards than those adhered to in the past because they have to fight to keep up their previous good results as well. But in the meantime, we have learned how to deal with this development because what is at times a painful, but necessary, ongoing process of improvement in our own enterprise will enable us to hold our own on the future market as well, making it possible to deliver above-average quality, to meet difficult demands put on us by our customers and to carry out complex projects at fair prices.

The upcoming turn of the century has offered us the occasion to rethink the fundamental strategy of our KAEFER Group. Thus, we have requested the managers in the various divisions and abroad to present their strategy until the year 2002. On the basis of these results, the enterprise's management has endeavored to formulate a new strategy the importance of which is to extend beyond the year 2002. The results of this strategic reorientation will be discussed with all of those involved during the next months, and the necessary decisions will be made. For us the beginning of the 21st century should constitute a start in a new direction after all: We want to join all forces and bring about something new which will distinguish us from our competitors.

The first decision which will affect the new century has already been made: We will give very high priority to the facilitation of elementary and advanced training programs on all levels of the KAEFER Group. In this way, we want to assure that our large store of knowledge is not only available at some

locations, but is made accessible to and applied by all of the company's employees – and our customers – in Germany and abroad. One major emphasis will be, – initially within the framework of the Knowledge Management Program, – to learn from our best employees, meaning that we will look to outside sources for new, additional knowledge and experience only after these resources have been tapped. Qualified employees are the only ones who will be able to meet the future demands of our customers and partners and to master new strategic tasks. Those are the only kinds of employees who will be highly motivated and successful.

We are all completely convinced that we, the KAEFER Group, have succeeded in meeting the challenges of the difficult years in the recent past. Now we can look for new challenges and take our future into our own hands. You are the ones to thank for having brought us this far. And that is not the result of just one year of high performance and loyalty on your part. Many have contributed to this success on industrial construction sites, on ships and in the building industry. Others have done their part in offices, serving customers on site or at their PCs. You can all be proud of your work, and we, the management, thank you for your contribution. Those words of thanks also extend to your families, who have supported you.

For the Christmas season, for this special turn of the year and for the beginning of the century to come we wish you and your families health, trust and that bit of luck which we all need.

Sincerely yours,


Stephan K. Radermacher
is the new commercial managing director – a portrait

The Third Man on the Team

He was born in Karlsruhe, grew up in Hanover and Franconia and studied in Munich and, later on, the U.S.A. Dynamic and mobile, those are the most conspicuous features of his biography. And yet Stephan K. Radermacher is neither a globetrotter nor what one might call a jobtrotter in any real sense, but rather a determined wanderer between worlds, the German and American, for example, the legal and the entrepreneurial, a wanderer thirsty for knowledge, new phenomena and new challenges.

KAEFER is one such challenge, no doubt about it. Since April, the 39-year-old has been "the third man on the team", i.e. the management team, in charge of the business aspect. What makes him destined to hold this top job? That is hard to put in a few words. It is the sum of a multi-faceted professional life which has taken him from a lawyer's practice in Munich to the vice-president's chair in the ABB-Group.

The lawyer has been familiar with the industrial sphere since childhood. His father and grandfather were successful engineers in the automobile industry. Reason enough for the son not to walk in their footsteps but rather to take off in a new direction. For that reason he studied law despite his technical talent. "I was very fascinated by the systematic form of legal thought," he says.

Yet he never really practiced law. His first dream job at a lawyer's office in Munich quickly made him feel too constricted; he went out and acquired a "Master of Law", specializing in "Corporate Finance" at Duke University in North Carolina, one of the top-notch law schools in the U.S.A. The young German graduate, who was as enthusiastic about the uncomplicated American way of life as he was by the high degree of competitiveness and will to perform which marks society in the U.S.A., worked for an international law firm in Raleigh.



The law firm soon made him President of the Triangle International Association, a service enterprise whose task it is to develop the Triangle Science Park, a bustling high-tech region half as big as Bremen, a bit like Silicon Valley, a bit like a technology park, a bit like a research park. During the following two years, Radermacher's job was to assist European companies locating in the U.S.A. and working together with domestic companies. He got around a lot.

He, a German, would have liked to stay in the U.S.A.; his wife, an American, was eager to return to Germany. In this situation ABB, Zurich's engineering and technology group, which was expanding greatly at the time, took notice of him and asked him to join its team of young talents.

Radermacher grabbed at the opportunity, for he no longer wanted to do consulting work, but rather develop his own ideas. While at ABB, he initially managed their realty subsidiary in Germany and then became financial manager in the global hydroelectric power division until he was promoted to business controller at the group's headquarters in Zurich. As vice-president he was in charge of the financial department of the segment called "Power Generation" worldwide.

"That was an exciting task for four years and required strategic work on a high level," says Radermacher. Yet he was afraid he might not be staying on track and wanted to get back into the operative side of business. When ABB decided to get out of the power generation branch completely, he decided to change the company and accepted KAEFER's offer, particularly since he was still too young for a top position in the ABB group.

"KAEFER is a robust, large, middle-class company with international dimensions, a trim management team and enormous potential," says Radermacher, explaining his motivation for joining the company. And has a turning point ahead of it. Restructuring and turn around – "good work on the part of management" – are done; now there is room for new developments. The company and its individual divisions, each with a dynamic of its own, must direct itself towards the future. "What is our future potential and how can we realize it?" Those are the decisive questions.

A business plan should show "what global opportunities there are, how we can take advantage of them and how we can prepare ourselves for doing so". The general direction to be taken is clear: KAEFER must acquire a more stable foundation and continue to move away from specialization in assembly work, becoming to a great degree a marketer of systems. "We also need a strong hold on the international market and a product portfolio which allows for a broader distribution of risk."

KAEFER Initiates Safety Campaign 2000



"Start the Next Millennium Accident-Free"

For KAEFER Isoliertechnik, the year 2000 will be marked by safety. KAEFER wants to begin the new millennium with a campaign which aims to increase awareness of sources of danger and the importance of safety measures and to promote adherence to safety precautions on the part of all employees in the company. For accidents can be avoided – and they pose a threat to the health of everyone. One short lapse in attention, one careless moment, and there can be life-long consequences.

"We want to drive the question of safety home to our employees and therefore will be making it an issue all year long", says Hans-Joachim May, head of the work safety department. The widespread belief, "Nothing is going to happen to me," is the worst conceivable way of protecting oneself against accidents; the only way to protect oneself is to take active precautionary measures. One keynote of the campaign 2000 is safety education, the other is rewarding those who practise safety actively.

Reduce accidents by 12 %

The slogan "Start the next millennium accident-free" stands for an ambitious program with a competition which will involve almost all employees of KAEFER Isoliertechnik from January 1 until December 31, 2000 and which will reward all of those who practice all-round safety. This means that all accidents will be scrutinized carefully – not only serious ones. "We want the statistical Q100-value, i.e. the number of accidents per 100 employees, to be reduced by 12 percent," says May, defining the standards which have been set. We will count all accidents, including those which have so far not been subject to registration, i.e. those which cause an employee to miss even one day of work.

A second emphasis of the campaign will be the accident report. The goal is to speed up the notification procedure and to make such reports more thorough and informative. "The incidence of accidents can only be influenced positively on a long-term basis if accidents are analyzed carefully and effective preventive measures are described and taken," says May.

The best division receives the Safety Award

The competition will be carried out separately in each division, each phase of the year-long campaign lasting three months. Employees get points for notification of accidents (speed, thoroughness, measures taken to avoid further accidents) as well as on the basis of checklists and surprise inspections of construction sites. In particular, the use of ladders and scaffolding – hotspots in terms of accidents – will be focussed on.

The evaluation is made on the basis of points, which are added up in tables for each division. The winners are awarded every three months and receive prizes. Everyone has the chance to win! The campaign ends with the presentation of the Safety Award: It goes to the division with the greatest awareness for safety.

"Work safety," says Hans-Joachim May, "is not to be taken for granted. Practising safety is something which must be demanded and trained time and again." KAEFER won't loosen the reins after the end of the campaign either.

ESSO AG awards Prize for Success in Safety Management to KAEFER

Words of praise that really count



Esso Raffinerie Ingolstadt

Turnaround vom 22. Februar bis 25. März 1999

UNSER GEMEINSAMES ZIEL IM TA '99: NULL UNFALL!

Die 10 herausragenden Firmen im Sicherheits-Wettbewerb (Stand 27.03.1999):

Rang	Firma	Sicherheits-Aktionen	Punkte für sicheres Arbeiten
1	ARNHOLDT	✕ ✕	✕ ✕ ✕ ✕
2	SIEMENS	✕ ✕ ✕	✕ ✕
3	KAEFER	✕	✕ ✕
4	RAUSCHER	✕	
5	ERMO	✕ ✕ ✕ ✕	
6	WWV MM	✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕	✕ ✕
7	R+S	✕ ✕ ✕ ✕	✕ ✕
8	PEINIGER	✕ ✕	
9	ABB		
10	SCHMIDBAUER	✕	

The ESSO AG, which gets very high grades in Germany for its safety management and sets extremely strict safety standards for its own production as well as for those of outside contractors, paid the highest tribute to KAEFER for accident-free work. In the spring of 1999, the refinery in Ingolstadt, in which some five million tons of crude oil are processed annually, was put out of operation by ESSO in order to carry out maintenance and repair work. KAEFER was involved in the construction work, which had to be done on an extremely tight schedule, and was one of the most successful companies involved regarding work safety.

In a safety competition which 110 companies entered, KAEFER's insulation experts from Ingolstadt placed extremely well and received a trophy for their performance. In addition, KAEFER received a certificate for its successful work, as in 1998. That shows that KAEFER's employees practice work safety as a matter of course. Success is a powerful incentive!

Wann gehören Sie dazu ?

Virtual Rendezvous with Quality and Risks

KAEFER operates with state-of-the-art simulation software to calculate complicated technical insulation problems according to the finite-element-method (FEM). It is a "tool" for innovations and new developments.

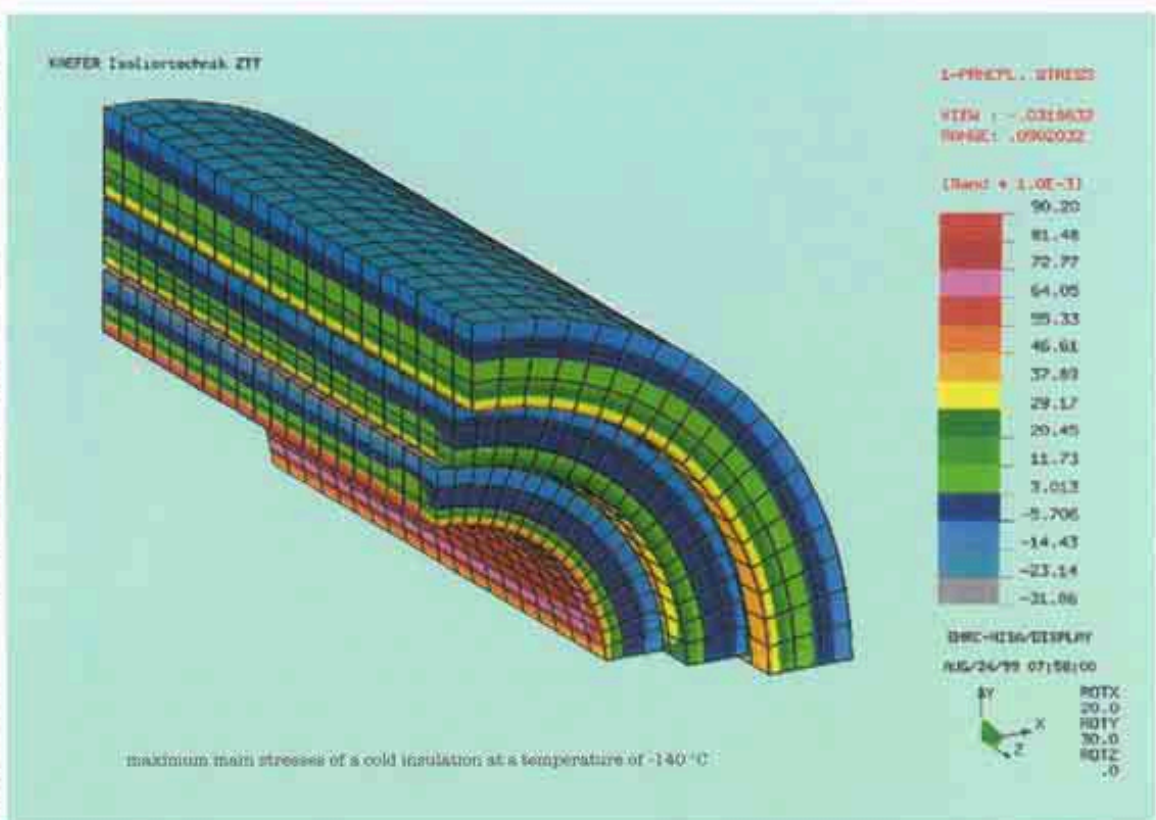
"Today you can't get along without finite elements," says Karl-Rudolf Friese. What did he say? What the Manager of the Corporate Technical Services has become so attached to is a truly advanced method of computer-based calculation - which comes into play at the decisive point where product development and manufacture intersect. This technology primarily offers benefits for quality assurance and risk prevention.

In technical jargon the method is called FEM (Finite Element Method); this all-round talent (see box) is a component of a kind of simulation software which originated in the airplane building industry and has come to be used in increasingly exotic ways ever since. FEM is the key to improving the quality and consistency of pasta or parmesan cheese while at the same time assuring the safety of exhaust pipes or enhancing the quality of the insulation of wind tunnels and liquefied gas tanks. Engineers employ FEM to look at the interior life of materials and to act out various scenarios on the monitor, watching how the moisture distributes itself in thin spaghetti or how an LNG tank with a circumference of 40 metres deforms inside its apron in the ship.

Simple idea – complex application

Fundamentally, the method is simple, but its application is all the more complicated. One must master the art of reduction: A total system (material or product) is split up into many small systems or units, the so-called finite elements, and then the material or product is observed as regards its consistency, temperature and resonance in detail. In this way, solutions are found on a small scale which can then be projected for the system as a whole. Considering the extreme complexity of geometric forms, this cannot be accomplished "by hand".

"The basic idea is to replace a complex problem with a number of simpler problems," Joachim Poblitzki, the person who is in charge of all FEM cases at KAEFER explains. At school you learn how to solve an equation with one



unknown, "but here we work on many equations with any number of unknowns." What is needed is much more than sheer mathematical genius or computer programs. Creativity, intuition and experience are essentials when it comes to solving problems virtually: "Before each calculation the model must be sketched and constructed correctly," says Friese.

Flexible, variable, fast and favourable in price

The strengths of the method are its high flexibility, variability and of course the speed with which it can be implemented on high-power computers. Yet the real charm of it lies in the effects it has on cost and risk management. Time-consuming investigations of the real object need not be carried out, resulting in a shortening of times of development. A second great advantage is that materials can be optimized, sometimes minimized. If the tension calculation carried out using FEM shows, for example, that a large refrigeration plant does not require three layers of insulation, but rather only two, that can save considerable amounts of money. In this way, FEM becomes a cost killer and increases the competitiveness.

The risk of damage can also be reduced dramatically. "If we are able to calculate in advance what insulation an exhaust pipe requires to prevent a fire from breaking out in the test chamber, that is a decisive advan-

tage," Friese explains. He is glad that due to its own know-how, KAEFER hardly ever needs to commission external testing companies and is able to act promptly.

KAEFER entered the computer world a whole two decades ago

The FE-method has its origins in the airplane building industry, but its real triumph came when it started to be employed by the automobile industry. Today FEM is the standard method used for crash simulations, but also for simulations of breast implants in medical technology, for calculation of knitted goods in the textile industry or for testing the load bearing capacity of the screws of a diesel engine. Razors, telephones, feather beds and beverage cartons are tested for stability by means of this procedure, and this is also what is used to test bridges for their ability to withstand earthquakes.

In the insulation branch, KAEFER has been a pioneer in this field. KAEFER embraced this new computer technology a whole two decades ago, in 1980, when the company accepted the commission to carry out the insulation work on the concrete wind tunnel in Cologne. The diverse know-how needed to do that job was acquired bit by bit on the company's own premises. The company used computer system HP 9835/36 and FEMBAS FE-programme until 1996, but now uses the NISA-programme, including its modules for temperature field and static strength calculations, which is much more professional.

The "Knowledge Management Project" has been initiated

If KAEFER Knew What KAEFER Knows!

The go-ahead has been given: KAEFER is becoming a "learning enterprise". The first steps toward effective "Knowledge Management" were taken in a project bearing that name together with Arthur D. Little (ADL) management consultancy services. What did it deal with? Knowledge is the most valuable resource which many enterprises have, but it is hard to get a grasp on and even harder to manage: Knowledge is to be found in the heads of the employees - and they sometimes become ill, retire or are unwilling to impart it to other people. Whether knowledge is utilized in an optimal way will determine a company's ability to stay ahead of the competition in the 21st century, however.

Good project management limits risks and is the decisive force in implementing an improvement of results and avoidance of profitability pitfalls. This means:

- KAEFER must learn more from experience;
- KAEFER needs a structured form of access

to stores of experience which might be used to improve opportunities to learn.

In an investigation, the KAEFER project team, Ralf König, Anja Mandel, Michael Feldt, Heribert Frantzen, Renke Fuhrmann, Thomas Heuermann, Dieter Scholz, as well as Hannes Säubert from ADL have identified relevant, but often very dispersed knowledge and continue to look for ways to make this knowledge accessible to everyone in the company.

Two months of work have yielded preliminary results. There are three kinds of knowledge which interconnect: technical knowledge, knowledge of processes and knowledge concerning human relationships and communication skills. Four interrelated procedures have been developed and put into practice which implement the transfer of decisive project knowledge:

coaching, training programs, project guide, map of knowledge sources



In October the results of the project group were presented to the managing director and the decision was made to continue the project. Initially, a pilot project will be carried out in the Building Division. In this way, further steps to be taken in other divisions can be prepared for systematically. The evaluations of the pilot project are to be presented to the management in the spring of 2000.

"KAEFER needs an open and active exchange of knowledge," say the two project team members Mandel and Feldt. "We must learn more quickly and learn from one another in order to carry out projects more efficiently while keeping risks down, thus also saving considerable amounts of money."

Quality and Safety Hand in Hand

Additional KAEFER companies are certified – ISO-Revision and Safety Management Standards in focus

In the future, the two fields of quality assurance and work safety will be more closely connected at KAEFER. In a first step, the various auditing procedures for different kinds of certification were delegated to one certification company, DET NORSKE VERITAS (DNV). Furthermore, there are plans to coordinate site inspections and integrate to the greatest possible degree all rules and guidelines presently in effect.

Meeting standards for quality and safety at work becomes more and more important as a strategy for ensuring success on an increasingly competitive market. Apart from making

use of technical possibilities, the employees' safety awareness must be constantly renewed. Likewise, quality should be on the minds of all employees at all times. Quality is what has been agreed with the customer, whether he comes from within the company or from the outside and is measured solely by whether that agreement has been fulfilled and the customer is satisfied with what he gets.

KAEFER has accommodated itself to that fact by means of a far-reaching company policy. A series of certifications for domestic and foreign companies (see table) underscores this. After initial certification took place in Germany in 1995 in accordance with DIN EN ISO 9001, successful re-audits were carried out in 1999 as well as initial certification for foreign companies. Future efforts in this realm will take place within the framework of Revision 2000 for the ISO-standard categories, according to which company processes will take center stage in the description of procedures. Re-certification of the Safety Management System (SCC) for the Industry Division in

Germany was carried out successfully in 1999 as well. For the first time, Austria's Industry Division was included in the process. The SCC (Safety Certificate Contractors) regulations were developed in 1989 and initiated by the petrochemical industry, and are intended for enterprises (contractors) who offer technical services. Whoever wants to be successful on the market today, needs the SCC Certificate.

Quality and Safety at KAEFER

Germany KAEFER Isoliertechnik Industry Division	Certificate DIN EN ISO 9001 SCC**
Foreign Countries	
Austria Industry Division	DIN EN ISO 9001 SCC**
Hungary	DIN EN ISO 9001
France	DIN EN ISO 9001
Spain	DIN EN ISO 9001
Norway	In progress
Finland	In progress
Subsidiaries Günther Kleit	DIN EN ISO 9001

KAEFER Enters into a New Information Era

SAP/R3 is on its way

SAP/R3 is on its way: The new management software system from the Walldorf-based software producer rings in a new era for information technology. For with R3 a complete PC-based data processing world on the basis

of a client-server architecture will be created which displays, for the first time, all business processes of the company in Germany as well as in France on one platform. Its high degree of functionality, its enormous capacity for integration and extraordinary flexibility make for one impressive system.

"R3 makes information processing simpler, more modern and more user-friendly," says project manager Ralf Peters, who is in charge of data processing at KAEFER. Under his supervision, a number of project groups have

worked very committedly in 1999 to prepare for the installation and to revise business processes. The official go ahead for putting the system into operation is to be Easter of 2000.

What is decisive is not so much the migration of data from R2 to the new generation, but rather the custom-fitted design of the new system for KAEFER and the development of new functions. "R3 is an excellent vehicle for modernizing workflows and for demonstrating new processes," says Peters.

Fast Cruise Liner Rings in New Era

Largest Shipbuilding Order in KAEFER's History

Cooperation scheme a novelty – with turnkey commission on the way to becoming a systems supplier

With its involvement in the construction of the first two Fast Cruise Liners (FCL) – a series of luxury liners with a velocity of 27 knots – KAEFER enters a new era in its company history. The luxury liners "Olympic Voyager" and "Olympic Explorer", which the Greek shipping company Royal Olympic Cruises (ROC) has commissioned Blohm + Voss Shipyards in Hamburg to build, set several new standards: in terms of touristic appeal due to the new cruises it has to offer, in terms of shipbuilding technology due to the innovative design of the hull, in terms of project organization due to the new cooperation scheme for the construction of the liners, and lastly in terms of KAEFER's company policy.

New touristic appeal

The design of the ultra-modern, rakish hull makes for a cruising speed of 27 knots when the engines are operating at 85 % of their capacity, thus giving the shipping company the chance to offer new and unique routes or more frequent departures. Conceived of as "luxury cruise liners for the 21st century", the ships combine a stylish ambience with elegant interior finishing and offer their discriminating clientele a new grade of tourism in keeping with the motto "small, sophisticated and speedy". The "Olympic Voyager" will take off for its first Mediterranean cruise on June 24, 2000 and will call at harbors on three continents (Europe, Africa, Asia). The "Olympic Explorer" will be delivered one year later.

Four partners in one boat

The worldwide structural changes in the shipbuilding industry inspired a new,

as yet unique cooperation scheme for the building of ships. Four systems partners, Blohm + Voss, ABB, ROM and KAEFER, are sitting in one boat. While the shipyard, as the main contractor commissioned by the shipping company, is building the steel hull and installing the machines (60 % of the total commission), ABB is responsible for the complete electrical installations (9 % of the total commission) and ROM is taking care of the air-conditioning (6 % of the total commission).

With its share of 25 % of the commission (corresponding to 75 % of the interior-space work), KAEFER is in charge of all the thermal and sound insulation, the fire protection as well as the complete interior finishing work. Our experts from the shipbuilding divisions in Bremen, Bremerhaven, Hamburg, Rostock and Stralsund will practically dress up the ships from head to toe.

According to the cooperation scheme, which determines who is in charge of what, the individual partners are completely responsible for their own work and operate independently. In addition, they are also responsible for financing their work – a novelty as well.

On the way to becoming a systems supplier

With this large order, KAEFER is entering a new realm, not only in terms of organization, but also in terms of performance. The ambitious goal is to get a hold on new markets with systems solutions. The range of KAEFER's services extends from thermal and acoustic insulation to fire protection to "turnkey" interior finishing. The interior finishing encompasses the passengers' and crew's cabins including the furniture, – the entire hotel operation with storage rooms, galleys and pantries as well as the public areas with restaurants, shops and the pool. The architectural particularities of the FCLs pose a challenge to those in charge of equipping and furnishing them.

In order to carry out the order successfully, the company developed its own internal organizational model: Instead of using the traditional approach, a project team is put in charge of carrying out the tasks. It consists of the project management, which includes a planning and construction group, a procurement and logistics group, a budgeting and controlling group as well as an assembly and project processing group. Each group carries out its specific tasks. Furthermore, the project taps the resources of the Shipbuilding Division and the Head Office within the framework of a matrix organization.

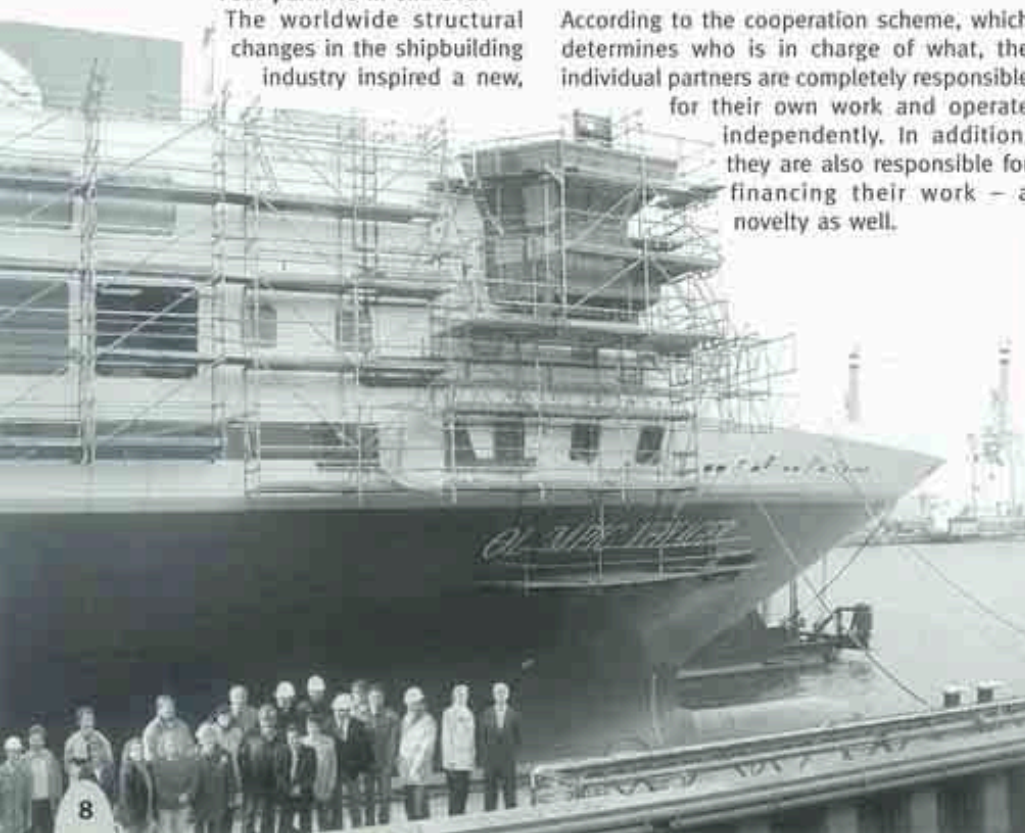
Teamwork Makes for Successful Projects

Well-functioning teamwork is a key to succeeding in a project. "Teamwork is effective, fun and ensures personal safety" is the principle which the project's managers operate on. That is the only way to master the complex challenges which such a project poses.

The members of the project team received training from an outside specialist to help them meet the demands put on them as members of a team and to master conflicts arising within the team. The two-day seminar held in the spring was intended to analyze strengths and weaknesses, carry out a self-assessment process, eliminate deficiencies and improve communication.

The positive feedback and the necessity for further improvement of techniques used to carry out tasks prompted the project management to schedule a second seminar.

– Teamwork Guarantees Smooth-Running Task Completion –



Project planning and supervision:

Logistic Tour-de-Force

A cruise liner is the most compact bundle of power generation and conversion, mobility, and quality of life and leisure imaginable. Thus, the process of turning a naked steel hull into a completely furnished luxury cabin or lounge is a tall order for the coordinators and supervisors of the individual tasks which need to be carried out.

With the help of the computer program MS Project, KAEFER has devised a sophisticated project management scheme for use on the FCL-building projects. Using a grid, the ship was divided up into 44 zones, all constituting closed rooms or functional units, which are displayed with all of the necessary construction site data and also serve as a basis for budgeting and cost control. The companies and departments which are involved in carrying out the project work together closely and are connected via a network. All activities are connected to one another and the individual steps are divided up chronologically up to the date of delivery.

At the beginning of the planning phase stands the shipbuilder's release of a particular zone, and the end is marked by "turning that zone over for inspection". The work in each zone is divided into two main steps: equipping and furnishing it. All partial tasks such as "gluing the coaming", "putting in insulation pins" or "closing up ceilings" fall into one of these two categories. The shipyard's master schedule determines the deadlines for each task.

With the help of a general, week-by-week estimate, it is possible to keep track of the progress which the project has made. The worksheets and deadlines are updated and visualized with the help of a plotter. By means of an algorithm, the individual data can be summed up so that the degree of progress made in each individual zone can be determined. The building process and its progress are clear to the members of the project team at all times.

Partners in the FCL-Project

The client: Royal Olympic Cruises. Two Greek ship owners, Epirotiki Lines and Sun Lines, merge. With 8 somewhat older ships they take over a market niche in the Mediterranean and the Caribbean Sea/Middle America.

The ships: "Olympic Voyager" and "Olympic Explorer", 178 meters long, 25.5 meters wide and having a 7.1-meter draft, 7 decks, 27-knot cruising speed, 920 passengers in 374 cabins (242 outside cabins, 128 inside cabins, 4 cabins for handicapped persons) as well as 48 suites (12 skyview suites, 16 bayview suites, 20 junior suites), 360 crew members in 145 crewmen's cabins, 2 restaurants, 2 large lounges, shopping area, pool, spa, casino.

The shipyard: Blohm + Voss, a shipyard in Hamburg with a long tradition which specializes in naval shipbuilding. With commissions

like this the shipyard wants to reclaim its place in the commercial shipbuilding industry. The modern hull configuration for the fast cruise liners is the result of years of experience in the naval shipbuilding industry. Blohm + Voss supplies the steel hull and is responsible for the engines and other machines.

Partner ABB: International electronics group, supplies and puts in all the electrical installations and equipment and the automation and communication technology.

Partner ROM: Specialized in ventilation and air-conditioning systems in the shipbuilding industry and particularly in the cruise liner business, is in charge of the air conditioning and the active fire protection on board.

Partner KAEFER is responsible for the insulation and interior finishing.



Bay View Suite
Original as shown in the mock-up and as artist's vision



Open House at Blohm + Voss

With a public festival and an open house, Blohm + Voss celebrated two shipbuilding highlights in July: The first Fast Cruise Liner, the future "Olympic Voyager", was undocked and for the second, the "Olympic Explorer", the keel was laid down. The mishap which occurred during the undocking – the construction dock got cracked while the ship was being let down to water – hardly dampened anyone's spirits. KAEFER's information and game booth really drew in the public. In addition, a group of visitors to the shipyard was presented with a model suite, a model standard passenger's cabin and a model crewman's cabin. This proof of KAEFER's performance yielded unlimited recognition.



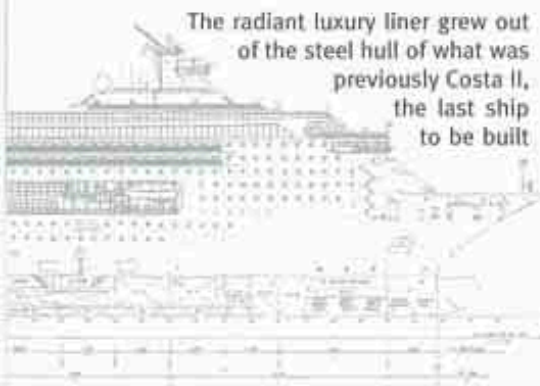
Luxury at Sea

The Lloyd Yard delivered "Norwegian Sky". The shipbuilders at KAEFER were in on "Construction-No. 108".

"In Bremerhaven they are still building ships," writes Dietrich Thöns, driving the message home for all times to all sceptical landlubbers. And the shipping engineer is not hard put to produce proof of that statement, pointing from his KAEFER-office at the Lloyd Yard to a swimming giant: a 300-meter long, twelve-deck high mammoth of the sea with a price tag reading 550 million marks and the name "Norwegian Sky".



The radiant luxury liner grew out of the steel hull of what was previously Costa II, the last ship to be built



a jogging course and a casino, a basketball court and golf nets or a Broadway theater seating 1,000 which performs its own theater productions. During peak construction periods, as many as 2,000 workers – from 25 countries – were on board, which is about equivalent to the number of passengers the ship holds. Yet on the vast expanse of the "Giant", one hardly noticed them.

Thöns' specialist team, which has had 15 years of experience in shipbuilding, had a number of tasks to carry out on the "Norwegian Sky", such as insulation, sound insulation, fire protection, and interior finishing, i.e. the installation of ceilings for two lounges as well as that of walls and ceilings for a series of pantries. Yet on the "Norwegian Sky" much more was at stake than mere installation work. KAEFER was involved in the planning and construction of the ship from the very beginning. "We got involved in making plans for fire protection, insulation and safety management early on and were able to exert

an influence on how they turned out. That is important," reports Thöns. For the result was that the KAEFER troop was able to help save considerable amounts of money. It is in this area that Thöns sees great opportunities for KAEFER on the global market.

He is familiar with the shipyard circuit like no other is. In order to support order negotiations, he has been known to grab his tennis bag and travel to Papenburg or to other places to make presentations. In a matter of minutes he has the purpose-made stainless-steel model galley unpacked and assembled. The sophisticated and yet so simple wall and ceiling system which complies with the world's highest standards in hygiene, those of the U.S. Public Health Administration, is simply a winner. "We have already put up 150,000 square meters of it," Thöns estimates. And that certainly won't be the end of it.

at Vulkan Yards, and embarked on its maiden voyage in August. If someone were to want to measure the whole ship – from the bow to the stern and from deck to deck, he would have to walk 20 kilometers. But he would get to see a lot on the way; in the middle of the ship an impressive atrium with a glass dome, 25 elevators, two completely separate parallel staircases, eight restaurants, twelve lounges and bars, an internet café and 14 penthouses,



An Unforgettable Experience:

Mini-Cruise on the "MS Deutschland"

While having my Sunday breakfast I saw the fantastic offer in the "Weser Kurier" – a unique opportunity to take an inexpensive mini-cruise on the barely one-year old "MS Deutschland" from Bremen's Neustädter Harbor to Cuxhaven via Helgoland.

My family and I struck it lucky and got five tickets for Deck 4. We could barely wait to go. On Saturday, July 10, at 6:00 p.m. with the sun shining they lifted anchor and the

voyage on the dream ship began. We went down the Weser past Farge, Brake, Lemwerder and many other towns.

After having a look around the beautiful and painstakingly furnished cabins and a glass of champagne on the Lido Deck, each of us went off to explore on his or her own, for our hours on the luxury liner were numbered. And there was so much to see! Starting with the unusual bronze statues on the individual decks, the inviting bars on various levels, a small shopping mall, diverse places to rest, a sauna area, sports facilities, a huge radar system as well as utterly beautiful, picturesque wall paintings on the "staircases" and of course the built-in wall and ceiling panelling provided by KAEFER solicited any number of "oohs" and "aahs".

Not to mention the impressive "Kaiser's Hall" – its majestic beauty and splendid furnishings in the style of the old sovereign were very enticing indeed. One does not need a lot of

imagination to picture what an evening spent enjoying an entertaining program in this hall would be like.

At around 8:00, it was time to change clothes, for the restaurant "Four Seasons" was opening its doors, ready to serve the greatest delicacies! You could see and feel that everyone enjoyed the hours spent on the water-borne "5-star hotel".

After a very short night – we wanted to enjoy our cabin for at least a few hours – we had a delicious breakfast and disembarked the ship having had everything the heart could possibly desire – happy to have had the experience, but sad to have to leave so soon.

I still think about this short but very memorable experience sometimes today, with a certain sense of longing. I wonder where the ship is now.

Jutta Stark, Industry Division



KAEFER Spain Insulates “Finnclipper”, a New Finnish Ferry

KAEFER is to be found on all seas of the world. The most recent proof that this slogan of the KAEFER company in Spain, KAEFER Aislamientos, is true are the “Finnclipper” and “Finn-eagle”. In the ferrybuilding industry, they are looked upon as state-of-the-art vessels.

At the Astilleros de Puerto Real shipyards in Cadiz, Spain, a new Ro-Pax-ferry which is to be used on the Baltic Sea and reaches a speed of 21.5 knots was built for the Finnish ship-owners Finnlines. The “Finnclipper” is one of the most modern ferries of its kind and has innovative features in terms of design, comfort, technology and freightage. It is the first ship of the new “Seapacer” series, which was initially commissioned to be built by the Spanish company for Finnlines and the Swedish Stena Line together. The second ship is the “Finn-eagle”, which is still under construction.

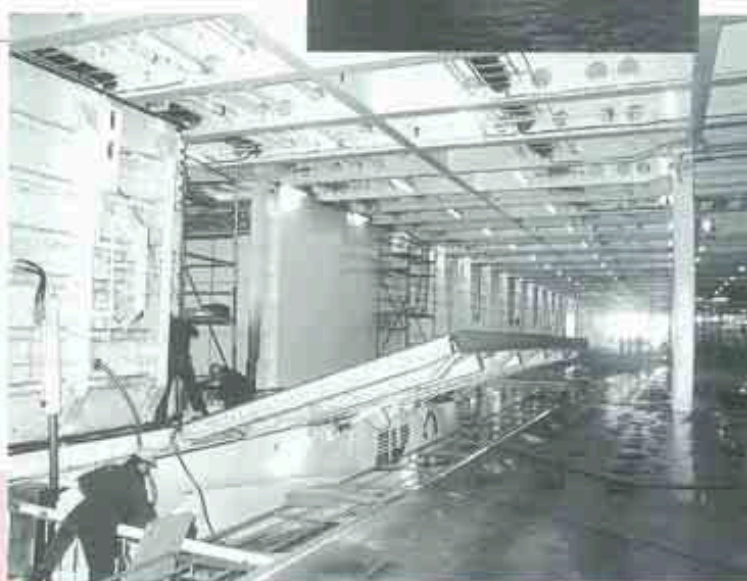
A part of the insulation work was carried out at the shipyards by KAEFER Aislamientos. A total of 33,000 square meters of ceilings and walls were insulated, those in the engine rooms, cargo compartments and accommodations.

The “Finnclipper” (30,500 GRT), has an unusually large capacity for passengers, holding 454 in number. On a total of three decks, 2,450 meters of RO-RO insulation are to be found. The ferry has been covering the route Travemünde-Helsinki since June but can also be used on other Baltic Sea routes.

Spain: Extraordinary Company Loyalty

Who said company loyalty was a Japanese phenomenon? KAEFER in Spain, which excels in shipbuilding, has a remarkable tradition. In 1999, no less than 19 employees of KAEFER Aislamientos S.A. celebrated their 30th year of employment at the company. They belong to the “founding generation”, for in the summer of 1969, KAEFER Isoliertechnik GmbH

and the Spanish company MONTERO S.A. of Bilbao joined together to form MONTERO-KAEFER S.A. An additional three employees have remained faithful to the company for 25 years. What do we say to this? Congratulación and sincere thanks for such commitment.



KAEFER in Finland

Grand Hotel “MS Europa” is Put to Sea



particularly for the installation of high-grade steel galleys in accordance with the strict hygiene standards of the US, USPH.

The new 5-star ship with an elegant interior and stylish ambience is the sixth ship in a long line of famous luxury liners to bear the legendary name “Europa”. The only thing which this new grand hotel has in common with the first “Europa”, a high-speed steamer built in 1930 for the Atlantic passage and awarded the “Blue Ribbon”, is its name. 408 well-heeled passengers can fulfill their maritime dreams and embark on cruises to Southern Europe, the Northland, the Mediterranean and the Black Sea or on a millennial trip around the world.

The First Ship of the Eagle Class was Delivered, too

In the fall of 1999, the first cruise liner of the Eagle class was delivered, too. KAEFER had the turnkey contract for the solarium, the fitness center, the recreation rooms and gymnasium for the ship’s crew as well as the workshops and storage rooms. The stately “Europa” is almost dwarfed by this giant cruiser. With its capacity for 3,100 passengers, a total deck area of 130,000 square meters and the height of a 20-story apartment building, this ship creates dimensions which were previously unheard of. Its operator is one of the pioneers of the modern cruise, the Royal Caribbean International (RCI), which was founded in 1969.

In the summer of 1999, the new “Europa”, a luxury liner in a league of its own which sails under Hapag Lloyd’s flag, was delivered. KAEFER’s Finnish company, KAEFER Eristystechniika Oy, was involved in the interior finishing work of the ship at the Kvaerner Masa Yards in Turku. The Finns were praised parti-

“Controlled Risk, More Success”

Which three companies did KAEFER acquire last year? Why do the three letters FCL have such a significance for KAEFER?

These and other information were conveyed during the second International Management Meeting, which took place in Bremen in March of 1999. The two-day meeting, the second one of its kind which Peter Hoedemaker invited some 50 KAEFER-managers from Germany and other countries to attend, focussed on risk management. This emphasis was reflected in the motto of the meeting: “Controlled risk, more success”.

A large part of the twenty-some speakers addressed to this topic, a topic which KAEFER will be paying particular attention to during the following years. The lecture given by Norbert Schmelzle and Peter Hoedemaker, “Risk Management as an Important Objective”, made this particularly clear. Special aspects of risk management like controlling legal risks, effective control as a means of taking influence, profitability traps etc. were treated.

In this connection the guest speaker, Sam V. Furrer from the Arthur D. Little consulting company, presented the project entitled “Knowledge Management”. Ways should be found to utilize the experiences of KAEFER employees strategically – repeating them and transferring them to others – to avoid project risks.



The exchange of experience and ideas which was inspired by Mr. Furrer's presentation was carried out by the managers during the breaks. Managers from Norway and Austria, Spain and South Africa shared experiences; Frenchmen spoke with Germans about what can be done in the shipbuilding industry – this international collaboration has already been successful. If anyone did not receive all the information he required, he had the opportunity to get valuable information from KAEFER's homepage, which was available outside the conference room, or to take a look at the Microsorber exhibit.

The participants were confronted with the issue of risk in the evening as well. They went to see “Jekyll & Hyde”, a musical performed in Bremen – and here the topic of the conference, albeit in a much more dramatic form, presented itself to them in a horribly awesome way. At the enjoyable gathering

which took place at the hotel bar following the performance, all the participants had the opportunity to talk at length about what they had seen and heard during the previous days, in keeping with the objective which the IMM 1999 had set for itself: “communicate, exchange information, synchronize”.

By the way: The three new companies are Sertisol+EFI=KAEFER S.A in France, KAEFER South Africa+Thermal Insulation=KAEFER Thermal Contacting Services and bemofensterbau in Weißenthurm. And FCL stands for Fast Cruise Liner, so far the largest project in KAEFER's history.

Michael Feldt, Managerial Assistant

Australia

KAEFER puts its feelers out to Australia – Partnership with Bains Harding Limited in Perth

The KAEFER map is getting more and more colorful. After engagements on non-European continents like Africa and Asia, the company is now putting its feelers out to Australia, having acquired 19.9 % of Bains Harding, the largest insulation company on the fifth continent. With this acquisition, KAEFER has established a good foundation for carrying out special projects in Australia and on the Southeast Asian market.

As the largest shareholder, KAEFER will play a key role in the future development of the company and has sent Peter Hoedemaker and Arno Recknagel off to join Bains Harding's supervisory

board. In the past few years, the Australian company underwent an economic crisis and now, after a successful restructuring and downsizing process, is well-equipped for the future.

Bains Harding does industrial insulation work, asbestos removal, scaffolding and industrial painting. In addition, the company produces polyurethane. It operates out of Perth but has branches all over Australia, such as in Melbourne, Sydney and Adelaide. Bains Harding employs 500 people and has an annual turnover of 50 million marks.



KAEFER Goes International in a Big Way

KAEFER has come to have an almost universal scope. Finnish paper factories, South African breweries, Norwegian drilling platforms, Korean liquefied gas tankers, power stations in Dubai or Indian gas turbines, – all of them stand for very diversified, global commitment which is promoted by exporting activities in Germany and by the activities of foreign companies and participations.

What began in the 1970's, now constitutes approximately one third of KAEFER's business volume, – but that is not the end of it. Peter Hoedemaker, who is responsible for the company's activities in foreign countries, has ambitious plans: "We want to continue to grow on a global scale and double the business we do on foreign markets."

In the future, KAEFER is to stand on two equally strong legs: the domestic market here, the foreign market there. The Dutch economist with a degree from Oxford jets half way around the world on a regular basis to sound out what opportunities the market has to offer, to make new contacts and keep up old ones, to take a scrutinizing look at what the foreign companies are doing or to evaluate ideas for new projects. At least half of his time is spent on the go.

That can be very strenuous, but then the opportunities don't present themselves to him at his desk in Bremen. Usually he has several collaboration and/or acquisition projects going at the same time. After a thorough evaluation usually only a few remain which seem really promising. The criteria are hard to meet: What do market, company and competition analyses say? What kind of collaboration is possible; how can personnel be used effectively; who is going to manage the project? Are the possibilities for financing the project viable? Does the partner even want to fuse with KAEFER? "The takeover of an unwilling company is absolutely ludicrous," says Hoedemaker, "because we are not buying machines. We need to be liked and trusted."

Three paths to success

KAEFER's involvement in foreign markets takes three directions: for one, the exporting activities of the divisions operating out of Germany. Whereas the Building Division is responsible for the Czech Republic, the Industry Export Division – with a foreign base in Abu Dhabi, Saudi Arabia – primarily concentrates its efforts on the Middle East and Southeast Asia. "Breathing" companies, which are registered on location, always get into high gear when a current project is being carried out. The export department of the Shipbuilding Division is active in Korea (see report on page 15) as well as in Belgium and Croatia. In the Industrial Noise Division exports play the main role in any case; at present, relatively large projects are being carried out in Argentina, on the Philippines, in New Zealand and in India. And last but not least, the Industry Division is making waves on the world market for the insulation of nuclear power plants.

The second direction which activities take is to establish and maintain foreign companies, they are functioning as important bridgeheads in promising markets. KAEFER companies are to be found in Norway, Finland (together with Estonia), France, Spain, Austria, Hungary and South Africa as well as Sweden and Portugal.

You have to stay on the move in this market. Strategies are changed by making sales or acquisitions or bringing about new integrations if the market demands it. The most recent example: the fusion of a KAEFER company, Francaise d'Isolation (EFI), with Sertisol S.A., to establish KAEFER S.A. (see report on page 14/15), thus making the new company the third most successful enterprise of this kind on the French market.

Thirdly and lastly, KAEFER is where the action is at selected nodal points, be it by means of representatives or through the shares it holds in foreign firms. Korea is one stage for such activities (see report on page 15), and Indonesia and India are others, along with Bains Harding of Australia, who is one of KAEFER's partners (see report on page 12).

Expand global position

Worldwide, five to eight large companies get a piece of the cake in the insulation business. "We hold a very good position," says Hoedemaker, "and we will continue to gain ground." The Industrial Export Division plays an important role in his plans. In the developing region of Southeast Asia activities are to be concentrated and additional holdings are to



be acquired. A further "target market" is South America, and KAEFER's South African Thermal Contracting Services has an eye on the African continent south of the Sahara. Hoedemaker has also cast a glance at China: "We'll see what happens there," he says. Plans for activities in Eastern Europe are more concrete. Not only industrial companies are potential customers, so are the operators of nuclear power plants. Eastern Europe is preparing for the modernization of its nuclear power plants, which is of urgent necessity. With its innovative insulation technology employing metal cassettes, KAEFER has something to offer. All in all, KAEFER's campaign for internationalization is really gathering speed.

KAEFER in Finland

Light and Flexible Like No Other

LOLAMAT

LOLAMAT wall and ceiling sandwich panels set new standards for interior finishing in shipbuilding

As yet, most of the passengers' and the crew's cabins on ships around the world, whether they are yachts or luxury liners, have metal panelling. A tradition which dies hard - unless someone comes up with a better product. Like LOLAMAT, for example. The new panel system, which KAEFER's company CF-Systems (see box) recently started to manufacture and market in Finland, has the potential for breaking this tradition.

The panel with the melodious name and with a granted patent is way ahead of its competitors' products in more ways than one. LOLAMAT is, as the name "low weight laminated material" indicates, a lightweight. It weighs up to 30 percent less than traditional metal panels, for instance. "That is an invaluable advantage, because for a ship, weight means everything," says CFS manager Holger Rhode. The lightweight panel also gets excellent marks for acoustics - and it is inflammable. "This wall system, which is a mere 25 mm thick, makes it into fire resistance class 30," Holger Rhode proclaims enthusiastically. No other system is known which can compete with that.

Large and jointless

But that is not all. LOLAMAT is very flexible in terms of its dimensions as well as its design. The panels can be as long as 2.40 meters and as high as 4.80 meters and are thus jointless. The customer can decide whether he wants the surface to be painted, wallpapered, pasted on or coated. The customer can be as spartan or extravagant as he likes.

Damaged areas can be repaired easily without removing the panel by cutting out the defective part and putting in a new one. Because the product is to a high degree pre-manufactured and, using a tongue-and-groove system, can be easily put in, installation is very time-saving. This in turn makes for attractive prices.

The only question is, what is LOLAMAT made of? "We have a special recipe for the manufacture of the ceiling elements which we will not divulge, of course," says Rhode, but describes the product's structure. The panels are constructed like a sandwich: The core consists of a layer of mineral wool between two extremely robust layers made out of inorganic, environmentally friendly material which is reinforced by fiberglass and is inflammable. Should it ever be discarded, it can be easily disposed of since the panels consist completely of mineral materials.

Premiere on "MS Deutschland"

The panels made their first appearance on the "MS Deutschland"; they also adorn a private luxury yacht, a Finnish ferry, and are used for the interior finishing of the Fast Cruise Liners (FCL) of Hamburg's Blohm + Voss Yard (see report on page 8). Whether the panels will ever become landlubbers and find use in building construction, waits to be seen. "We are sounding out this market, though," says Rhode. After all, KAEFER can offer the whole package - production, sales promotion, assembly.

CF Systems and LOLAMAT have yet to really take off. But the time is probably soon to come when this lightweight will become a heavyweight in the shipbuilding industry.



CFS

CF Systems - KAEFER's Finnish production

Practically halfway between Turku's yards in the southwestern part of Finland and its capital, Helsinki, in the southeast, lies the small town called Somero. With its 2,000 inhabitants, it is the location of C(omponent) F(ire) S(ystems) Oy. The company was newly founded in 1998 expanding on the core of a company which had gone bankrupt. At present it employs 20 people, and as the company grows, it hopes to triple that sum if the market is good. When the plant is in full operation and working on a two-shift basis, 200,000 square meters of panels can be produced annually.

KAEFER in France

EFI and Sertisol Combine to Form KAEFER S.A.



Philipp Dalheimer

Victor Zion

NOR-SHIPING 99

International Shipping and Maritime Exhibition and Conference from June 8 to 11, 1999 in Oslo, Norway

With well over 1,000 exhibiting firms from more than 50 countries, the NOR-SHIPING is one of the most important maritime exhibitions in the world. KAEFER Isoleringsteknikk A/S and KSW Systems participated with a joint stand, at which the ASPH System (Automatic Seaborne Handling) for cruise liners as well as KAEFER's A 60-Light-Weight System were presented.



From left to right: Tore Myhr Nilsen and Bente Paulsrud, KAEFER Isoleringsteknikk, and Emer Brodersen, KSW Systems

KAEFER has set up a new company in France: With the acquisition of the French enterprise Sertisol and the fusion with the already existing KAEFER-owned Francaise d'Isolation (EFI), a step which resulted in the formation of a strong new company, the French representation has been fortified considerably. The new KAEFER S.A., which is located in the vicinity of Paris, in Toussous-le-Noble, is now the third largest insulation company in France. With its 310 employees in eight branches, which cover the largest industrial poles in France, KAEFER S.A. has turnovers amounting to 145 million francs. Industry, asbestos removal and shipbuilding are the successful areas in which the company is involved.



New Orders Testify to KAEFER's Strong Footing on the Korean Market and in the Special Shipbuilding Industry



Success on Rough Terrain

The shipyards in South Eastern Asia have outstripped the Europeans in the building of liquefied gas tankers. No one is more aware of this fact than Peter Lukas, the manager of the export and gas transport insulation department in the KAEFER Shipbuilding Division.

With the establishment of a joint venture in 1989, the Shipbuilding Division made its premiere in Korea. "We got a good foothold in Korea," says Lukas, who is familiar with the snares of the market as well as the opportunities it has to offer.

The joint venture – the Kangrim-KAEFER Co. Ltd. in Pusan, the second largest city in Korea, – has to date insulated the storage tanks (including the deck piping) for a total of 28 liquefied gas tankers, which is to say all ships at Korean shipyards which transport LPG or ethylene. This underlines KAEFER's worldwide dominance in this branch, having insulated some 172 gas tankers since the beginning of the 60's.

Orders from all large shipyards in Korea

In 1999, additional commissions went to the German/Korean joint venture. "Insulation work on a 78,500 m³ LPG tanker with 4 prismatic storage tanks for DAEWOO Heavy Industries started in September of 1999. We also have an option for a reconstruction project with the same shipowner," Lukas reports.

In addition, Hyundai Heavy Industries placed an order for insulation work on an ethylene tanker as well as orders for the insulation of LNG deck piping on 2 LNG-tankers.

The Joint Venture is brought to an end.

Licence contract is made with Kangrim.

KAEFER's collaboration with its Korean partner Kangrim is to be put on a new basis. KAEFER is selling its shares and in the future, Kangrim Insulation Co. Ltd. will produce insulating panels on a licensing basis with the help of KAEFER's know-how. "This new structure," says Lukas, "takes the strain off business relations."

Orders for expansion of the Incheon Terminal

This restructuring process does not constitute a withdrawal from the Korean market, however. On the contrary, Lukas and his team were hired for a further expansion of the huge storage terminal in Incheon, southwest of Seoul, which went into operation in 1998.

"When this receiving terminal is done, it will be the largest of its kind in Korea," says Lukas. In the end, they will have 12 storage tanks holding a total of 1.5 million cubic meters of liquefied gas – corresponding to the cargo capacity of ten LNG-tankers – at their disposal. KAEFER's contribution to this project consists in supplying materials and carrying out engineering services for a large part of the LNG-pipe insulation.



Asbestos Removal in the "Manhattan Tower" of Paris



KAEFER S.A. in France got the order for asbestos removal in the Manhattan Tower, a looming 30-story office-building complex in La Défense, the main business district of Paris. This was the largest order in the field of disposal work which has been received so far, amounting to some 16 million francs. The work, which involves 12 stories with a total area of 27,000 square meters, will be carried out in equal parts by KAEFER S.A. and a partner company. As many as 50 KAEFER-employees will be assigned to this project.

KAEFER in South Africa

Insulation Works in Large Refinery

South Africa's largest refinery SAPREF – South African Petroleum Refineries – is located in Reunion, a suburb of Durban, which is South Africa's largest port on the Indian Ocean. SAPREF is jointly owned by two leading oil companies, Royal Dutch Shell and BP Amoco.

KAEFER's South African company, KAEFER Thermal Contracting Services (Pty) Ltd., was awarded a major contract for maintenance work within the Refinery Complex. The contract includes all insulation work, corrosion protection as well as scaffolding. Work commenced in June 1999 and will take 3 years to complete.

Service contract with S.A. energy giant ESKOM

KAEFER South Africa was recently awarded the contract for comprehensive service and maintenance work at ESKOM – South Africa's partially state-owned electricity supplier. The contract includes among other items the removal of asbestos.

ESKOM was founded in 1923 as "The Electricity Supply Commission". Today it supplies electricity to almost the whole of South Africa, and owns 24 power stations of which 10 are considered to be South Africa's most important coal-fired power stations. These are amongst the world's largest power stations of their kind

and each is capable of generating 3600 megawatts of electricity per hour, which is more than 50 % of all electrical power generated on the entire African continent.

KAEFER maintains five of these power stations on a 24-hour basis, 365 days per year. Maintenance and service include all scaffolding and insulation-related work. The KAEFER team will also assist during planned maintenance shut down intervals, which can require the presence of up to 400 KAEFER employees per power station.



KAEFER in Austria

A New Generation



At KAEFER Isoliertechnik Ges.m.b.H. in Austria, Gerhard Zak who acted as the company's managing director for many years and Holger Purns, authorised officer, retired after 25 years of employment. The growth of the enterprise located in Vienna is closely connected to their names. In the future, Hannes Knoblich will be in charge of the commercial management, whereas Gerald Tomes, engineer, will take over the management of industrial insulations.

KAEFER Austria, which was founded in 1968, is now one of the leading insulation companies in the country and offers the whole line of KAEFER services. Their specialty is interior finishing, which constitutes two thirds of their total commissions. Working out of Vienna, the company has also carried out projects in Poland, the CSR, Algeria and Mongolia as well as initiated the foundation of KAEFER Epitöipari Kft in Budapest.

**Millennium Tower
Preminent**

With a height of 202 meters, the new Millennium Tower in Vienna is Austria's highest building. Fifty stories adorn the 8-story base, forming a tower which reaches up into the sky and provides 38,000 square meters of office space. The KAEFER-team in Vienna has provided for the necessary fire protection. The 280 steel beams were given an F-90 cladding consisting of Fireboard panels.

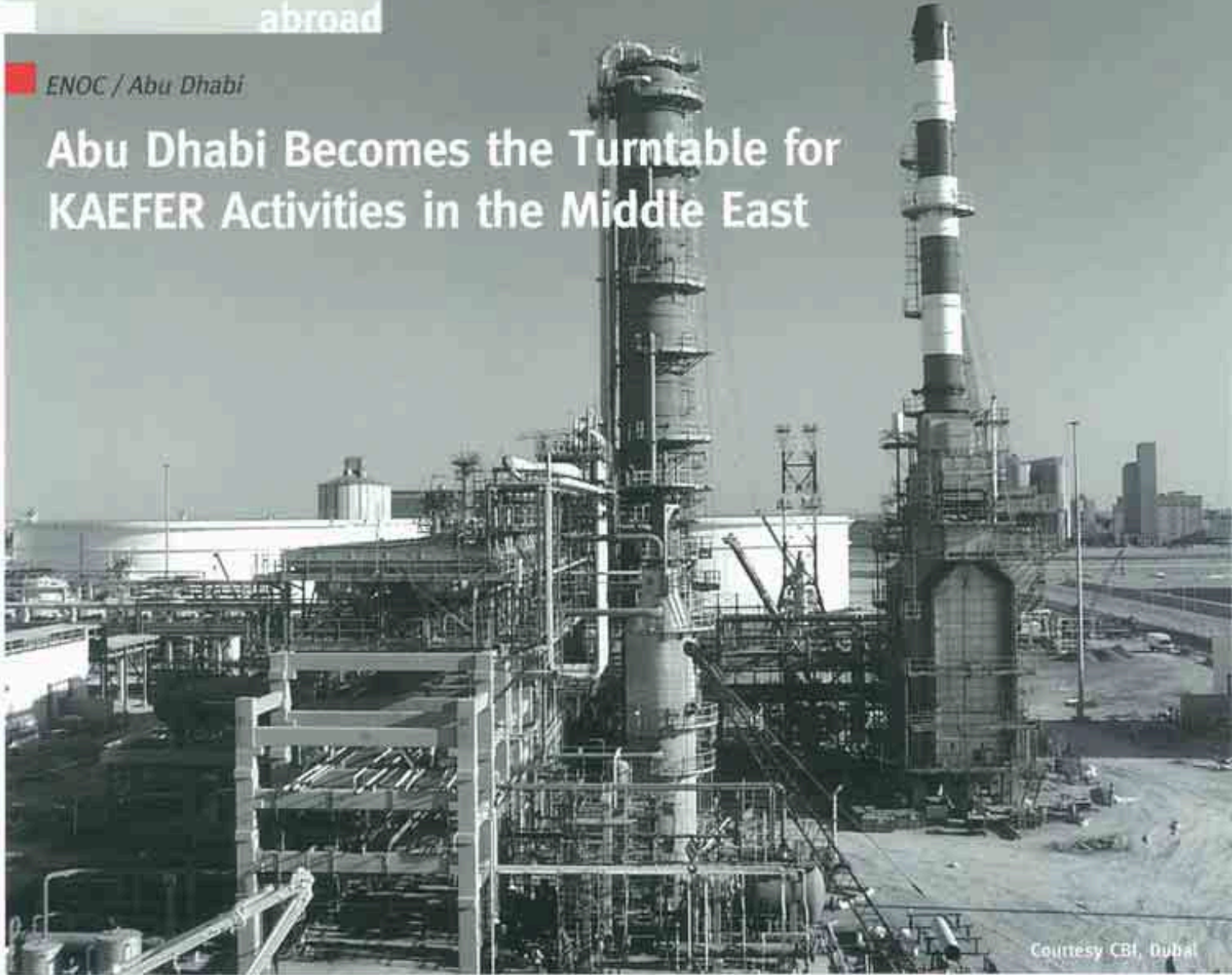


f.l.t.r.: Gerhard and Eleonore Zak, Holger Purns, Wilhelm Kaiser, Monika Purns



ENOC / Abu Dhabi

Abu Dhabi Becomes the Turntable for KAEFER Activities in the Middle East



Courtesy CBI, Dubai

Construction of the ENOC refinery: First large order with expanded range of services for the Industry Export Division

The branch office in Abu Dhabi, one of the seven autonomous emirates which joined together to form the United Arab Emirates in 1972, is well on its way towards becoming the turntable for all KAEFER activities in the Middle East. After some individual projects were initiated there in the early 1990's, the Industry Export Division built up this base bit by bit in order to be able to get a foothold in the region.

In the meantime, the KAEFER team has carried out larger projects in this area together with its local partner International Trading Circle (ITC). ITC, with its president Sheik Khalid Bin Ahmed Al Hamed, is active in many sectors of the economy and represents one of the most renowned families in the emirate. The installation work will be carried out – as is customary in the Middle East – by foreign workers from the Indian subcontinent under the supervision of KAEFER.

Expanded range of services

In expanding its infrastructure, KAEFER has also expanded its range of services and its insulation technology in view of the good

prospects for getting orders to do scaffolding, painting and refractory work. The first large order KAEFER received on this basis was its involvement in the construction of the refinery in Jebel Ali for the emirate's national oil company. The plant is operated by the internationally active ENOC concern. With a total contract volume of 3.3 million US dollars, KAEFER not only took care of the insulation work, but also the complete scaffolding work for all the trades involved.

In peak periods, 138 scaffolders were on site, putting up 110,000 meters of metal poles and 70,000 planks. The largest scaffolding, by the way, was a 46-meter high column. Some 120 fitters were employed to do the insulation work. The dimension of the task is remarkable: 22,500 square meters of piping, 7,500 square meters of containers and 3,900 square meters of pipe flanges and valves were insulated with insulating mattresses and mineral wool sections and slabs.

300,000 man hours accident-free

"During the whole construction period of seven months, KAEFER worked very successfully in accordance with the strictest safety standards," explains Hermann Klezath, the head of the Industry Export Division. "Three hundred thousand man hours and not a single acci-

dent." The safety rules on Arabian sites are extremely stiff and compare to those in Germany or the USA.

"The ENOC project sets the stage for a KAEFER marketing campaign in Abu Dhabi," says Klezath, who has been very familiar with the region for 25 years. It comes at a good time, for the economic policy of the oil-producing emirates is undergoing a remarkable change of course: Instead of limiting themselves to the exportation of crude oil, the small countries in the gulf region want to free themselves from this one-sided dependence on exports and begin to manufacture more finished products themselves.

New orders on the horizon

This trend will result in a series of large investments in industrial building projects, ranging from the construction of power plants to petrochemical plants in the region of Bahrain and Oman, including Qatar and the UAE. "Of course we want to be involved," says Klezath. There are already new orders in sight for the branch office.



Interior Finishing at the Adelbyer Dairy in North Friesland

Within the framework of an extensive restructuring project, the Adelbyer Nordfriesland Milch eG, the largest independent processor of milk in Schleswig-Holstein, modernized and expanded its main plant in Nordhackstedt, adding on a 7,000-square meter large, 170-meter long extension. The entire interior finishing work was carried out by the KAEFER branch in Kiel. The new plant, which produces cheese, butter, milk powder and fresh milk, is one of the most efficient and best in Europe; in 1998, some 380 million kilograms of raw milk were processed at the dairy.



Sophisticated Room Acoustics with MICROSORBER

The artists at the Württembergian State Opera in Stuttgart can now rehearse under ideal and very comfortable conditions. Together with the Fraunhofer Institute for Building Physics, KAEFER created state-of-the-art room acoustics in the Large Rehearsal Hall, making it an ideal place for rehearsing. In the wall and ceiling area, laminated-panel resonators and wide-band compact absorbers were installed. In addition, the walls were equipped with a 2-layer construction of MICROSORBER absorbing controlled amounts of sound within the frequency range of 60 to 4,000 Hz.



Old Customs Court – Contemporary Architecture in Düsseldorf

The old commercial harbor in Düsseldorf - already a stronghold of creativity - is extremely renowned due to the attractiveness of its architecture and layout. After all, some of the world's first-class architects have left their mark there. One of them, the eminent American architect Frank O. Gehry, designed the "Old Customs Court" - from the first to the last stroke completely via CAD. The unusual office building belongs to an ensemble of three buildings. Not only Gehry, but also KAEFER has left its mark there. In the offices of the Deloitte Consulting Group, KAEFER workers from Düsseldorf installed a 500-square meter large MICROSORBER construction.



Kiel's Casino at Boat Harbor

The interior finishing department in Kiel carried out the entire dry construction work in the maritime gambling casino at the boat harbor in Kiel within a relatively short period of time; among other things, some 350 square meters of metal wall cladding with teakwood stripping, 600 square meters of metal ceiling as well as exterior ceiling cladding were put up. In addition, aluminum sails coated with stoving enamel were suspended horizontally on the exterior ceilings. At dusk, the special design of the lighting makes for an inviting atmosphere.



Insulation of Schkopau Chlorine Plant

After the acquisition of BUNA by the American company Dow Chemical and the establishment of the BSL BUNA SOW LEUNA Olefine network, one of the most important chemical enterprises in Germany's new Laenders came into existence, which is now being modernized at the cost of a total of 4.7 billion marks.

KAEFER was in charge of the entire heat insulation for the extension and modernization of the chlorine production facilities in the Schkopau plant, its total commission amounting to some 5 million marks for the first extension phase and about 1.2 million marks for the second phase. Pipelines and containers were insulated, and a large part of the plant was given a GFK plastic encasement. The other parts of the plant were given a stainless steel encasement.



IVANA at work

With the help of the IVANA drilling platform; Croatia has begun producing gas off its coast. The powerful giant - built at the Viktor Lenac Shipyard in the Croatian city of Rijeka - is the first in a series of drilling platforms with which a Croatian-Italian gas-producing company wants to exploit three gas fields off the coast of Istria. The KAEFER Shipbuilding Division not only took over the insulation work, but also delivered the three-story living module within the framework of a "turnkey project".



Ferrero's German Central Office is Renovated: Ceramic Façade Made of Fine Stoneware

In Frankfurt, the main administrative offices of the German subsidiary of Italy's huge candy producer Ferrero were renovated. The KAEFER branch in Pfungstadt was involved in the extensive modernization of the building, which was built in the 1960's. Apart from scaffolding, asbestos removal, steel construction work and thermal insulation, the workers from Pfungstadt put up the new ceramic ventilated façade made of fine stoneware, an absolute novelty in Frankfurt. Putting up the stoneware plates using a hidden fixing system called for a high degree of technical know-how. The plates are hung up, – which is not the case for procedures normally used, – invisibly, thus imparting an unusual visual quality to the façade.



Night Duty for KAEFER Team in Hamburg

The KAEFER team in Hamburg had to carry out an extremely unusual task. While renovating the ceilings of the 13-story main administration offices of the HEW Hamburg Power Plant AG in the northern part of the city, the team was on night duty. Since the operation of the offices of the power supply enterprise was not to be disturbed, the fitters didn't come to work until 5:00 p.m., working until 6:00 in the morning. In approximately 20 months some 22,000 square meters of metal ceiling were renewed. The renovation was not only tricky in terms of the workers' time schedule, but also technically speaking, because the HEW and its architects did not want the format and visual character of the 35-year old ceilings to be changed. Thus, after disassembling and disposing of the mineral wool insulation, the cassettes were cleaned, put into good order and reinstalled following exactly the prescribed design of façades and pillars. Furthermore, a fiber-free kind of insulation was used.



Renovation of a Cold Column at the Hydro Agri in Brunsbüttel

At the Hydro Agri fertilizer plant in Brunsbüttel, KAEFER did the insulation work on a 64-meter high CO₂-column. A technical expertise of the authorities at the plant's location together with the Corporate Technical Services had ascertained that renovation work was necessary. Inside the insulation of the two columns, which operate at temperatures of as low as 80 degrees below freezing point, there were about 20-25 tons of ice. Afterwards, KAEFER completely renovated one column while out of operation for six weeks. That included all the pipelines, the scaffolding, taking out the old insulation as well as putting in corrosion protection and new insulation consisting of a new, decoupled PU in-situ foam system with a weather-protective coat made of sheet aluminum.



Precision Work for STN ATLAS Electronics

KAEFER delivered a piece of high-precision work for the electronics group STN ATLAS Electronics. Five special cupboards were built for the novel, highly sensitive mine-detecting apparatuses called "Seafox", which are used on the mine-detecting ships of the German Navy which carry the same name. The cupboards are fully air-conditioned and equipped with shock absorbers. What constituted the technical challenge was the precision with which the pallets and carrying cases for the sensitive high-tech objects had to be cut and the way in which they had to be integrated in the cupboards.

Shutdown in the Largest Steamcracker in Europe – KAEFER Fitters Work at the BASF Site in Antwerp

The steamcracker at the BASF network site in Antwerp, the largest of its kind in Europe, had to be completely shut down in the spring for general maintenance work which is necessary every five years. KAEFER's Industry Division in Pfungstadt was involved in the renovation work in areas 3 and 4. At times, 160 fitters were working on the large site, working for over 70,000 man hours between March and July. They were in charge of removing and renewing the heat and cold insulation of the pipelines and containers at a total of 2,400 turn-off points. The commission came to about 7 million marks. For the first time, launching a pilot project, BASF planned and executed the shutdown of their facilities without the support of Linde, the plant supplier. To do so, it drew up plans showing some 4,000 turn-off points and evaluated them, this preparatory work taking two years; in this way it was possible, in particular, to premanufacture reusable shaped pieces made of PU and foam glass before the shutdown. The steamcracker is used to produce basic petrochemical materials such as ethylene and propylene. The fuel gas which is produced in the process flows into the company's own fuel gas plant. With its steamcracker and over 50 production sites for chemicals, plastics, fiber products and fertilizers, Antwerp is BASF's second largest of seven network sites worldwide.



From Ugly Ducklings to New Glamour



As main contractor, KAEFER is refurbishing apartment complexes in Dresden and Nordhausen built during the days of the German Democratic Republic – a logistic tour de force which requires a fine touch.

Bremerhaven is booming. Not the city itself, but rather KAEFER's branch in the Dorschstrasse, located in the middle of the fishing harbor. "In 1999, three large building projects were being carried out at the same time," explains Manfred Borowsky, the head of the branch and of the Building Division in Bremerhaven/Bremen, "with orders amounting to a total of 40 million marks." Besides the interior finishing work being done in the new Ministry of Justice in Berlin (see report on page 21) there were the large-scale refurbishing projects in Dresden and Nordhausen/Harz, the motto being "turn old into new".

The refurbishing of old buildings which are inhabited – one of the most recent and highly successful tasks which KAEFER has taken upon itself – constitutes a logistic tour de force of

a most particular kind. Nerves of steel are called for. After all, as main contractor, KAEFER employees not only have to painstakingly coordinate any number of diverse kinds of contractors – sometimes as many as 20; they must also solve problems which arise unexpectedly as a result of the dilapidated condition of the buildings in question and – what is most difficult – guarantee that construction work is carried out smoothly in cooperation with hundreds of tenants. A high-performance business only suitable for site managers schooled in coping with stress.

Yet the rewards are immediate. "We make the area more attractive and it is an indescribable feeling to see these changes take place before one's very eyes, to see how an old and ugly building acquires a new face and modern comfort," says Borowsky.

Refurbishing in Dresden

The refurbishing project in Dresden involved 636 apartments with a total area of 28,000 square meters in five pre-cast concrete slab buildings of type WBS 70. They are located in the Southwest of Saxony's capital in the district of Gorbitz II. In only seven months (May to November) the houses, which are owned by Kortlepel-Nölle Grundstücks-OHG Dresden, were completely renovated and modernized. KAEFER was in charge of the entire planning, coordination and supervision of the construction work. Together with local contractors, the following tasks were accomplished:



- Erection of scaffolding
- Composite heat insulation system
- Refurbishing of concrete
- New eaves on roofs
- Mitre-sill insulation
- Insulation of basement ceilings
- New windows and balcony doors
- New house intercom systems
- New entrance doors to apartments
- New balustrades (balconies)
- Refurbishment of staircases (walls and ceilings)
- New electrical installations
- Smoke detector systems
- New ventilation systems (baths)

Refurbishing in Nordhausen

The project in Nordhausen, the southern "gate" to the Harz Mountains, involved 350 residential units with a total of 22,000 square meters of living area. Here the ten apartment buildings in question were scattered over the former Reichsstadt with its 48,000 inhabitants. An additional difficulty arose from the differences in the architecture and age of the buildings. Some of them were built using the WBS-70 system, while others were erected before 1930 – being, as such, all the more dilapidated. Thus, in this case – unlike the situation in Dresden – additional work had to be carried out such as partial remodeling of the balconies or the installation of new heating and sanitary fixtures. Electrical installation was also a task which took on comparatively large dimensions.

The market: refurbishing of old buildings

"There is a huge market for the refurbishing of old buildings," says Manfred Borowsky. Yet the competition is tough as well, with large building companies vying for orders. The market is not only profitable, but also extremely complicated; for this very reason, it offers great opportunities for specialists like KAEFER. The refurbishing of buildings which are inhabited requires not only extraordinary knowledge of building construction, but also a fine touch in dealing with tenants and much management know-how.

Since at KAEFER the refurbishing of old buildings has been the field which has expanded most of late, and as great demands are put on the company in its role as main contractor, this area of activity has now been reorganized. On January 1, 1999 two new departments were set up in Bremerhaven, "Refurbishing of Façades of Old Buildings" and "Main Contracting for Refurbishing of Old Buildings". After KAEFER made a name for itself in 1998 by carrying out prestigious projects like the Holbeinstrasse in Dresden and Reinerskamp in Hamburg (Saga), which gave them the opportunity to show what they are capable of, they received the two large orders for Dresden and Nordhausen in 1999. Regarding the year 2000, Borowsky is optimistic and hopes that the trust which housing associations and private investors now have in KAEFER will lead to new orders.

KAEFER is involved in the construction of the new Ministry of Justice in Berlin

“In the Name of and at the Cost of the Federal Republic of Germany”

In the year 1991, the Bundestag made the decision, which is being implemented in the years 1999 and 2000, to move to Berlin. Among others, KAEFER is involved in this project of the century. The company's Building Division, working out of Bremerhaven under the direction of Manfred Borowsky, is responsible for the interior finishing work of the new Ministry of Justice on Jerusalemer Strasse. The building consists of what is in part a group of historic buildings located in Friedrichstadt, in the southern part of the city, not far from the Gendarme Market and the new State Department, - buildings which have made history: Here, Günter Schabowski, a functionary of the SED, announced the sensational opening of the wall in 1989 (see box).

In October of 1998, KAEFER beat competitors from all over Europe in its bid for the entire dry construction work, receiving an order worth some 14 million marks. "Our prices were what convinced them," Borowsky recalls. But the

A historic site

On the evening of November 9, 1989 at 6:53 p.m. something incredible happens. Günter Schabowski, a member of the new SED-Politbüro, announces, at the end of an international press conference which was broadcasted live by East Germany's television company, almost as an aside: "The party has decided to set up rules for departures occurring on a regular basis, i.e. for leaving the Republic." Then, he reads the new regulations set up by the Council of Ministers, written on a slip of paper which had just been handed to him. Citizens of the German Democratic Republic are able to apply for permissions for regular departures and to take private journeys without having to fulfill the requirements they had formerly had to meet. Permission would be granted short-term.

"When will this take effect?" a journalist asks. Schabowski casts a furtive glance at his slip of paper and answers: "Immediately, without delay!" This announcement spreads like a wildfire: Three hours later the inhabitants of East Berlin, who have come out in large numbers, are forming long lines with their Trabis and Wartburgs, all headed for the Wall, bringing about the first opening of it, on Bornholmstrasse. Six hours later all the crosspoints between the two parts of the city are open and thousands of Berliners are dancing on the Wall in front of the Brandenburg Gate.

The site of this historic announcement was the bleak and conservative conference room of the government's press center in Mohrenstrasse, Haus Stern. It belongs to the building

model room which KAEFER constructed before the order was granted and which the government's Secretary of State himself had inspected, must have been convincing as well. "In the name of and at the cost of the Federal Republic of Germany", as we read in the commission formulated by the Federal Office of the Building and Construction Industry and Environmental Planning, KAEFER's employees had to accomplish a great deal within a period of fifteen months, putting up 4,000 square meters of partition walls, 5,000 square meters of dry construction walls, 7,000 square meters of suspended ceilings and 3,000 meters of specially designed ceilings, putting in 845 doors (wooden doors, steel doors and fire doors), as well as installing 1,000 built-in cupboards. Standards are high, in particular with regard to fire protection.

The tasks must be completed by February of 2000. Minister Däubler-Gmelin and her staff want to occupy the premises shortly thereafter.

complex in which the Federal Ministry of Justice will reside in the future. The complex, spreading across a city block, consists of buildings which were constructed at different times and have differing architectures. The individual buildings of the complex are to be brought together to form a homogeneous unity. The whole project includes renovation of the historic buildings at Mohrenstrasse 37a/b, which are listed under a preservation order, the refurbishment of the building at Mohrenstrasse 36/37 as well as the construction of an extension to Kronenstrasse 41, to which the building at Jerusalemer Strasse 24/28 will be connected; a three-story shell was erected before the fall of the Wall but not completed until 1994, then being used as Berlin's Office of the Ministry of Justice. Now it is to be enlarged to house the library.

The building complex on the block formed by the Mohrenstrasse / Jerusalemer Strasse / Kronenstrasse, which was erected around the turn of the century, consists of what was originally the Nagel Building (1896), more recently the site of the East German government's Patent Office, and the "Mohren Colonades" (built in 1787), which were a part of it, the "Prausenhof" (1912-14), the Haus Stern (1900/01) and Haus Muthesius (1913-14). The complex belonged to what used to be the center of Berlin's garment trade, which formed around the Hausvogteiplatz from about 1836 on. Towards the end of the nineteenth century, large stores began to be erected here, whose typical department store architecture - large windows and vertically accented façades - became a marked feature of the city.

Microsorber with Colani Touch

He has designed almost everything imaginable: vehicles and airplanes, furniture and cameras, computers, pens, glasses, watches and much more: the industrial designer Luigi Colani, who some even hail to be the Leonardo da Vinci of the 20th century. In the course of his forty and some years of work, the philosopher of form and professor of design who was born in Berlin has given impetus to whole branches of industry and influenced the design of their products on an international scale. His designs, which in the meantime are on exhibit in many museums, are often unconventional and extravagant but convince the customer time and again due to their excellent functional features and ergonomics.

Now the Colani touch will be imparted to KAEFER's Microsorber. The star designer has been commissioned by the company to find aesthetically sophisticated solutions for attaching the prize-winning micro-perforated sound insulation foil. The transparent Microsorber is usually spread like a tarpaulin and hung up at the edges using ears and springs. At a presentation in the summer, Colani exhibited his first drafts and prototypes, for example a nicely shaped new kind of corner covering for the attachments. In addition he has developed alternative kinds of attachment to partitions or ceilings - creating a sail-like effect, in order to integrate the Microsorber into the individual architecture in a harmonious way. Architects, planners and engineers like Microsorber due to its highly effective noise-absorbing qualities, its enormous flexibility and its inconspicuous appearance.



Building Division establishes Cooperation Cup

Team Spirit Gets You Ahead

Competitions are exciting. In sports as well as in business, competition spices things up. Comparing your performance with that of others gives you a better idea of your own potential, your weaknesses and strengths; it makes you more concentrated and awakens the desire to perform better. Yet competitions don't have to be carried out in the spirit of "everyone for himself", but rather can promote and reward team spirit, and KAEFER's Building Division with its 18 departments demonstrates this fact – two times over.

"Those who help others get help themselves."

The division has broken completely new ground with its countrywide invitation to compete in the Cooperation Cup. The challenge cup goes to the department which develops the most appealing innovative and cooperative approach. "Those who help others, get help themselves," says Sabine Manig, the commercial manager of the division, describing the basic idea behind the competition. "It doesn't matter whether help is needed in marketing, accounting or project management, what is important is that the kind of teamwork sets new trends, for example ideas for new products or services, new installation procedures, new forms of project supervision or new ways of dealing with other people.

"We weren't even sure the idea would get a good response," the initiator reports. Yet the trial run for the first trimester, at the end of which the first winner got his award, was an overwhelming success. At the division meeting in the spring, the various departments outdid each other with suggestions as to who should receive the award. The eight best entries were shortlisted and then a secret vote was taken – and there was a tie between the interior finishing departments in Pfungstadt and Berlin. Their names were the first to be engraved on the decorative trophy.

Competition with set goals

The Building Division carried out an internal work performance competition for the first time in 1999. In contrast to competitions held in the Industry Division, the departments, which have a total of some 250 employees, do not compete with each other directly, but rather they must – and that is new – fulfill clear goals, to reach benchmarks. "This initiative is devised to promote team spirit, to increase motivation and to focus on priorities," says Sabine Manig. The individual goals are to sharpen awareness of problems, to foster determination in the planning and execution of projects, but also to promote leadership.

The evaluation, which is made three times a year at the end of each trimester, is based on three criteria: reduction of profitability traps (not exceeding 2 percent of the turnovers), minimization of accounts receivable or monetary deficits (not more than 15% or 25% of the accountable revenues) and reduction of sick time concerning industrial employees

(down to less than 4.8%). The fourth criterion, the acquisition of new (permanent) customers, is not evaluated until the end of the year. To do this, proof of three potential new customers must be produced.

The Building Division's "jackpot" is full to the brim. Per trimester the best interim results are rewarded with money prizes ranging between 500 and 5,000 marks. The decision as to how to use the prize money is made – in keeping with the principle of teamwork – collectively within the department. The individual trimester results are added up to find the all-over winner. The race is on! Who will be the Building Division's champion of 1999?

Industry Division Initiates New Competition

The Industry Division has initiated a new competition with the aim towards increasing employee awareness of the requirements of the market and improving team work in the company. After the successful premiere in 1997, money prizes will be granted this time as well. The competition will take place at 22 locations from January until December of 1999. The employees can enter any of six disciplines and show what they can do. The competition concerns itself with profitability traps, outstanding invoices, work accidents and cost optimization in the field of work and organizational procedures.

Ideas are Worth Good Cash

The Suggestion Scheme for Employees

The "little annoyances" are sometimes what makes one's day at work turn sour. And they seem to come up just when one is least capable of dealing with them. Yet there is a way to get rid of these annoyances - to one's own advantage as well as to that of the company as a whole.

What is meant is the suggestion scheme for employees. That may sound rather complicated and bureaucratic, but what it means is that each employee has the opportunity to improve procedures and processes, tools, equipment and construction parts in his area of work. And good ideas can often be cashed in on. Depending on creativity, utilizability and economizing effect, the person who has come up with the idea might get a bonus of as much as 5,000 DM.

We encourage all of our employees to participate and share their ideas. Not every sug-

gestion can be rewarded, but if you don't get into the act in the first place, you have no chance of winning.

By the way: This year Hermann Böning, production supervisor in the industrial noise control department in Pfungstadt, struck it lucky. His idea for a new, more efficient technique for combining sound insulation elements won him a bonus of 750 marks as well as a certificate. Congratulations!

And of course many thanks to all of those who participated.



l.l.t.: Hermann Böning, Erich Eppert and Holger Matthes

Suggestions for improvements can be made to:

Hans-Joachim May,
Chairman of the Evaluation Committee for the Suggestion
Scheme, Head Office
Dagmar Mangels, Head Office
or your Works Council

The suggestion made by Hermann Böning: an easily and quickly dismantlable combining corner element for substructures in the field of sound hoods, warming cupboards etc.



Always in Search of a Compromise

May we present Wulf Nöhrenberg, Chairperson of the Works Council

Wulf Nöhrenberg is one of KAEFER's real characters. The trained insulation fitter has been in charge of the works council in Bremen for 20 years and in addition has chaired the Central Works Council for the past twelve years. In the course of those years, he has experienced the ups and downs of the enterprise like no other, the rapid expansion in the 70's and 80's as well as the painful adaptation process after 1994. "Those were hard times for the works council as well," he says.

He likes to point out how good the working relationship between the works council and management is, one "characterized by cooperation and team spirit". Yet in doing so no one ever suspects him of making common cause with them. The clever tactician can be firm and unyielding if necessary, but is also willing to compromise. "Of course there are conflicts of interest. That is just the way it is. But when conflicts arise, it is necessary to talk to one another and look for a compromise." Not at all costs, but in such a way as to make things bearable for both sides and to enable the enterprise as a whole to profit.

"Flexitime" safeguards jobs

For more than two years, Nöhrenberg and the works council negotiated with the company management on the issue of "flexitime". For the longest time, the council was opposed to this new "overtime pool", particularly because the employees were to lose what had until this time been their vested right to decide how overtime is compensated for. But Nöhrenberg doesn't get caught up in details; he keeps the whole picture in mind. And in this case, jobs are what "the whole picture" is. "Flexitime" safeguards jobs and prevents short time. In the building industry, our agreement is one of the best around. The advantages and the potential for flexible solutions were what ultimately convinced Nöhrenberg. "It will take awhile, however, until everything runs smoothly," he says.

Furthermore, he is proud of the "icing on the cake" which the works council fought hard for: Overtime on weekends and holidays are not affected by the new agreement, - as opposed to what is stated in the collective wage agreement, - but rather continue to be paid for directly. Secondly, the move towards more flexibility will take place in connection with the enactment of new models for general employee participation and old-age benefits. "I have always toyed with that idea," says Nöhrenberg.

He has about two more years to pursue his greatest goal. Before he retires, "Vision 2000" should be sewn up. It is true, he was forced to give up his idea of in-company stocks due to technical difficulties they would have caused for the accounting department, but the new insurance plan which allows employees to pay part of their earnings - tax-free and without deductions for social contributions - into an additional retirement plan as well as the planned profit sharing system which will, for the first time, allow for a part of the profits to be distributed among all the company's employees, make him very optimistic.

"In doing so, we are entering uncharted territory. Once the step has been taken, such models are easily expandable." Nöhrenberg knows that the proof is in the pudding and points out what control mechanisms have been set up. But he hopes that the company's staff appraises the offer properly and cooperates.

What has changed over the course of all these years? "There has been an increase in egotism and a decrease in the sense of company loyalty and identification with one's work," he says. He is aware that this is a societal phenomenon, but he doesn't want to accept it without protest. That is another reason why he takes such a vested interest in "Vision 2000". He feels it would be a means of reactivating the traditional sense of family at KAEFER and of motivating the company's employees.

Agreement on making working hours more flexible

On June 1st of this year, the new general company agreement concerning the adjustment of working hours to correspond with production conditions took effect. It replaces the agreement made in 1994 concerning "compensation for overtime". The new agreement pursues four goals: 1) reduction of costs; 2) avoidance of short time; 3) levelling out of annual income; and 4) avoidance of loss of working hours due to lack of orders or bad weather. An integral part of this agreement is "Vision 2000", which has developed new models for company retirement plans and employee profit sharing. This agreement designates that an annual working time account is to be set up in which the weekly overtime - not to exceed 156 hours per year - is registered and can be compensated for depending on order inflow by giving employees time off. Overtime on Saturdays, Sundays and holidays is paid for monthly, however. If at the end of the year an account has time left on it, this will be paid for including a 25% surplus.

After 33 Years: Klaus Knickmeier Retires

After more than 33 years, Klaus Knickmeier said farewell to KAEFER Isolieretechnik on October 31, 1999 in Hamburg. On March 8, 1966 the trained insulation sheet-metal worker came to the company and worked as a fitter on domestic and foreign sites. Later, he supervised large sites such as the coal gasification plant Krupp Koppers/Deutsche Shell in Hamburg, the second construction phase of HEW at the Moorburg power plant or tank 1 for



Klaus Knickmeier (top left) with Jürgen Carstens, Berndt Sudendorf and Stephan Rademacher

ESSO Hamburg-Harburg. His many years on the Works Council at the Hamburg branch as well as on the General Works Council Committee, on the Economic Committee and in the Group Works Council, which he has chaired ever since it was established, will not be forgotten. Knickmeier did not limit his efforts to the company, however, but was active in the political arena and the union as well and in addition held several honorary posts, for example as head of the IG Bau District Office of Hamburg or as honorary judge at the State Labor Court. Knickmeier was always extremely committed. KAEFER will miss him.

New Branch for Building Division in Muggensturm

In September of this year, a new KAEFER branch was set up. In the fully equipped workshop in Muggensturm near Karlsruhe, the following tasks can be carried out:

- novel processing method Recore for ventilation ducts
- special furniture building with unusual materials
- carpentry work
- CNC-processing of parts made of woodworking materials

The new branch is under supervision of the building branch Pfungstadt. The on-site supervisor is Heiko Krause.

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phone: 07222 / 405 79-41
fax: 07222 / 405 79-88

KAEFER Isolertechnik, Head Office

25th anniversary
 Brigitte Blauwitz 01.06.1974
 Gisela Kellner 01.01.1974

10th anniversary
 Jürgen van Glim 01.09.1989
 Dieter Weber 01.04.1989

KAEFER Isolertechnik, Bremen

30th anniversary
 Udo Bohne 02.01.1969
 Helmut Gyrke 13.01.1969
 Lothar Preuss 28.09.1969

25th anniversary
 Helmut Bents 02.12.1974
 Klaus Beamehn 09.05.1974
 Jürgen Brinkhus 01.08.1974
 Donald Carstens 25.09.1974
 Kurt Funk 01.08.1974
 Helmut Grauerholz 01.06.1974
 Jörg Hauschild 07.05.1974
 Hermann Heit 11.12.1974
 Torsten Henning 19.03.1974
 Izair Izail 11.11.1974
 Halli Jusuff 15.07.1974
 Marlene Kalt 01.04.1974
 Ramiz Kastrati 05.12.1974
 Horst Logemann 29.08.1974
 Thomas Nieder 01.08.1974
 Heiner Poppen 22.01.1974
 Gerhard Siolle 25.09.1974
 Dieter Tesch 01.08.1974
 Dieter Zack 01.11.1974
 Emin Zumbiri 06.06.1974

30th anniversary
 Jens Fischer 01.08.1979
 Joachim Hoffmann 16.08.1979
 Thomas Habenstein 01.08.1979
 Abdula Ljaili 10.12.1979
 Ralf Michael 02.04.1979
 Jörg Randermann 01.08.1979
 Redzep Redzevi 27.08.1979
 Hans-Dieter Schulz 01.08.1979

10th anniversary
 Torsten Andersson 03.10.1989
 Andreas Beszon-Sengstake 09.07.1989
 Abdemarak Bopyoaran 16.08.1989
 Franz-Josef Frerich 28.06.1989
 Karl-Heinz Gauthier 01.02.1989
 Fred Kempf 01.02.1989
 Torsten Kresschmeier 24.07.1989
 Franz-Josef Kupski 01.02.1989
 Jürgen Kluge 01.09.1989
 Rainer Pape 03.01.1989
 Christoph Reimann 16.10.1989
 Andi Röttger 16.08.1989
 Frank Siefkes 01.01.1989
 Ivan Vrankovic 16.08.1989
 Ernst Wermuth 01.10.1989
 Jürgen Wierers 15.11.1989
 Ruth Wittstock 01.09.1989

KAEFER Isolertechnik, Hamburg

40th anniversary
 Manfred Dettmann 01.04.1959



Manfred Dettmann

30th anniversary
 Werner Dietrich 07.02.1969
 Klaus-Dieter Reins 01.10.1969

25th anniversary
 Ernst Becker 01.02.1974
 Egon Kreuzfeld 16.04.1974
 Erich Plagemann 22.10.1974
 Dieter Steinwarb 04.09.1974

20th anniversary
 Jürgen Ahrens 11.09.1979
 Wolfgang Berger 01.09.1979
 Frank Blaschke 01.09.1979
 Milenko Buha 01.10.1979
 Klaus Miesling 05.04.1979
 Matthias Münster 01.09.1979
 Jürgen Runge 02.05.1979
 Siegfried Schulz 02.04.1979
 Ronald Weenrich 01.09.1979
 Manfred Zahn 01.09.1979

10th anniversary
 Harald Baetjer 25.10.1989
 Heiko Martschat 10.01.1989
 Peter Ramcke 01.07.1989
 Mathias Schultz 01.09.1989
 Klaus Voigt 17.01.1989
 Jörg Will 03.07.1989
 Bernd Wittorf 10.10.1989
 Bernhard Zynda 02.01.1989

KAEFER Isolertechnik, Bremerhaven

25th anniversary
 Dietrich Thöns 01.04.1974

10th anniversary
 Detlef Fehse 19.10.1989
 Fred Fischer 08.09.1989
 Egon Stadniczuk 01.02.1989
 Thomas Vogt 01.08.1989

KAEFER Isolertechnik, Hanover

30th anniversary
 Reinhold Rüdiger 09.10.1969
 Alfred Walter 01.04.1969

20th anniversary
 Wilfried Bergmann 22.08.1979
 Günter Guder 29.10.1979

10th anniversary
 Jens Bethke 01.08.1989
 Thomas Marsthey 16.02.1989
 Andreas Meyer 16.08.1989
 Manfred Nagel 16.02.1989

KAEFER Isolertechnik, Pflugstadt

30th anniversary
 Mato Vujicevic 30.06.1969

20th anniversary
 Mustafa Ayar 22.11.1979
 Michael Beini 01.07.1979
 Helmut Dietenbeck 03.09.1979
 Mate Lubiuric 06.08.1979
 Lothar Pfeiffer 02.01.1979
 Klaus-Peter Schatz 05.10.1979
 Frank Scheuermann 01.09.1979
 Gottfried Städtler 01.07.1979

40 Years at KAEFER
 In our modern, fast-moving society, such an anniversary is a rare thing and deserves special attention: Manfred Dettmann has been working for KAEFER Isolertechnik for 40 years. In 1959, he began to train as a fitter and was employed at the Hamburg branch at first before becoming involved in industrial projects in Sweden and the former German Democratic Republic. As construction supervisor he was in charge of the large ESSO project in Cologne, the nuclear power plants in Krümmel and Stade as well as the GKSS Research Facilities in Tesperhude, carrying out his duties with great commitment. He was also on site duty at DEA Grasbrook, the Norddeutsche Raffinerie, the Vereinigte Aluwerke Stade, Schumann Sasol and DOW Chemical Stade.

10th anniversary
 Sooja Nösinger 01.11.1989
 Robert Semler 04.09.1989

KAEFER Isolertechnik, Bielefeld

30th anniversary
 Dieter Bossat 14.04.1969

25th anniversary
 Heiko Hirschal 14.10.1974
 Detlef Schorr 18.03.1974
 Hasan Susic 10.09.1974

KAEFER Isolertechnik, Düsseldorf

30th anniversary
 Karl-Heinz Huysmann 30.09.1969

25th anniversary
 Norbert Böike 02.09.1974
 Sabir Dzebilli 06.08.1974
 Diether Gonski 11.07.1974
 Hussein Hadzic 23.09.1974
 Herbert Itzigssohn 19.05.1974
 Klaus Schönbeck 07.10.1974
 Rainer Sponholz 02.09.1974

20th anniversary
 Heinz-Egon Baithen 02.07.1979
 Ivan Komadina 28.05.1979
 Rainer Liedke 01.08.1979
 Uwe Ranzelhausen 01.02.1979

10th anniversary
 Wolfgang Steinmetz 01.10.1989
 Dietmar Thaisen 28.06.1989

KAEFER Isolertechnik, Kiel

25th anniversary
 Manfred Steen 02.04.1974
 Helmut Würzburg 06.06.1974

20th anniversary
 Mehmet Bakind 10.05.1979
 Rüdiger Lütt 23.05.1979
 Horst Lütt 17.09.1979
 Wolfgang van Wickenen 01.04.1979

10th anniversary
 Bernd Büttner 18.01.1989
 Anneliese Schmidt 01.01.1989

KAEFER Isolertechnik, Munich

30th anniversary
 Blaz Klaric 05.05.1969
 Ivan Vrcenaj 22.08.1969

20th anniversary
 Anto Dmic 03.04.1979
 Zdravko Music 04.07.1979
 Günther Schwarz 02.07.1979

10th anniversary
 Janko Kurcmanic 23.01.1989
 Jürgen Neihlsen 08.05.1989



On August 1, 1999 Juan Carlos Allica Celebrated his 30th Anniversary at KAEFER

After receiving his training at Bilbao Technical College, he joined the insulation company, which was founded in 1969 as the result of a joint venture between KAEFER

KAEFER Isolertechnik, Rostock

10th anniversary
 Jörg Engel 01.07.1989

KAEFER Isolertechnik, Berlin

10th anniversary
 Ilija Milosevski 18.09.1989
 Waltraud Plam 01.01.1989

KAEFER Isolierungsstechnik, A/S, Norway

20th anniversary
 Ketil Aresen 05.01.1979

10th anniversary
 Bente Paulrud 13.01.1989
 Morton Pedersen 16.01.1989
 Tor Arild Kammedal 06.02.1989
 Jørn Holmann 06.02.1989
 Aas Heuge 13.02.1989
 Stemann Josef 22.02.1989
 Bent Roar Wik 06.03.1989
 Heimit Wallner 01.04.1989
 Rune Helland 15.04.1989
 Reidar Sollid 22.05.1989
 Frank Andersen 01.06.1989
 Frank Askildsen 01.06.1989
 Helge Flatøy 01.06.1989
 Øystein Greve 01.06.1989
 Terje Paulsen 01.06.1989
 Rolf Magne Pedersen 01.06.1989
 Nils Molvik 07.06.1989
 Helge Gaustad 22.06.1989
 Karl Magnar Vågnes 01.07.1989
 Thor Malvin Westervik 01.07.1989
 Tom Øvstebø 17.07.1989
 Atle Erik Hedstrøm 27.07.1989
 Eivind Berg 01.08.1989
 Trond Hanevik 01.08.1989
 Einar Tveranger 10.08.1989
 Roger Brekke 18.08.1989
 Toril Haugen 23.10.1989
 Frode Ekeland 17.11.1989
 Børge Losvik 17.11.1989
 Haldor Jordal 20.11.1989
 Bjørn Kåre Hjartholm 05.12.1989
 John Arvid Hayvik 08.12.1989
 Tor Leknes 11.12.1989
 Helge Halgesen 18.12.1989
 Torgeir Rvén 18.12.1989

KAEFER Isolertechnik, Ges.m.b.H. & Co. KG, Austria

25th anniversary
 Horst Adunka 01.09.1974
 Gerhard Kaufmann 01.02.1974
 Holger Pums 03.02.1974
 Josef Silzezer 19.08.1974
 Gerhard Zak 01.04.1974

20th anniversary
 Franz Enigl 19.11.1979
 Herbert Radakovits 17.09.1979
 Richard Schmidmeyer 02.05.1979

10th anniversary
 Christian Baldassi 01.01.1989
 Izudin Popovic 12.06.1989
 Wolfgang Steinkolner 16.01.1989

Isolertechnik and the Montero S.A., working as a commercial manager. From 1970 to 1972 Carlos Allica was to a large degree responsible for building up the branch in Tarragona. As the project and site manager, he was in charge of the insulation work which was carried out at Bayer Chemicals' new plant and afterwards supervised the work done at the newly built power station in Castillon, working on site in both cases. It was during this period that he worked together closely with Dow Chemical in Tarragona for many years.

Having performed outstanding work in the practical realm, Carlos Allica returned to Bilbao and has been the managing director of KAEFER Aislamientos S.A. since 1975, a company which has made a name for itself in Spain in the field of insulation technology during the past 30 years.

KAEFER Aislamientos S.A., Spain

30th anniversary
 Juan Aguiayo 01.08.1969
 Juan Carlos Allica 01.08.1969
 Antonio Aranz 01.08.1969
 Gines Bernal 20.08.1969
 Luis Carlos Bilbao 18.12.1969
 Feo. Jesús Carrillo 01.08.1969
 Ramón Diaz 08.08.1969
 Fernando Dominguez 01.08.1969
 Arsenio Fernández 01.08.1969
 Begoña Gamboa 01.08.1969
 Miguel Garcia 01.08.1969
 Antonio Gil 08.08.1969
 Emilio Junguito 01.08.1969
 José Martínez 09.12.1969
 Manuel Pernas 01.08.1969
 Carlos Sanchez 01.08.1969
 Juan Revuelta 03.09.1969
 Mario Trabanco 08.09.1969
 Andoni Uriarte 01.08.1969

25th anniversary
 Luis Delgado 01.02.1974
 Juan Garcia Souto 14.05.1974
 Salvador Lopez 19.02.1974

10th anniversary
 Pedro Carreiro 02.03.1989
 Gonzalo Iguazola 09.10.1989
 Emilio Quintela 11.09.1989
 Lourdes Rabazo 01.06.1989
 Francisco Redondo 05.08.1989
 Angel Rodriguez Mompear 01.03.1989
 Joaquin Rodriguez Mompear 02.03.1989
 Domingo Rodriguez Paz 09.05.1989

KAEFER THERMAL Contracting Services S.A., South Africa

30th anniversary
 Joseph Mawane 15.10.1969
 Andries Sithathu 07.05.1969

25th anniversary
 David Mocha 01.05.1974
 Elias Vilakazi 17.04.1974

20th anniversary
 Tanny Bongwe 19.03.1979
 Jerry Dikgale 11.04.1979
 Simon Madhlaba 05.09.1979
 Daniel Mafata 14.08.1979
 Gideon Makhubela 08.01.1979
 Lubishe Makua 19.06.1979
 Thomas Manganyi 07.08.1979
 Tailor Maphika 27.11.1979
 Solomon Mariri 04.05.1979
 Mokgobate Mashumo 14.05.1979
 Thomas Mollada 30.10.1979
 Daniel Mthethwa 19.04.1979
 Solomon Mtsweni 10.09.1979
 Jafsa Mkhambule 17.07.1979
 Cebe Ntuli 12.06.1979
 Juhanni Reyneke 16.07.1979
 Sipho Zulu 14.05.1979

10th anniversary
 Phillip Chilwane 09.05.1989
 Wellim Dlada 14.02.1989
 Renata Fuccinco 25.09.1989
 Jine Jacobs 09.01.1989
 Meshack Khanye 03.05.1989
 Johannes Letsoko 08.02.1989
 John Malaka 28.03.1989
 Stephen Malete 08.02.1989
 George Malope 08.02.1989
 Piet Maphapha 12.09.1989
 Cedrick Mashile 28.08.1989
 Phillip Mashilo 10.08.1989
 Isaac Mthibi 15.05.1989
 Mkhutwazi Matiso 22.05.1989
 Andries Mkuisi 01.05.1989
 Stephen Makgabudi 06.02.1989
 John Moluniwa 03.04.1989
 Lucas Moshote 16.01.1989
 Isaac Motloung 23.08.1989
 Petrus Mutsoneing 18.09.1989
 Johannes Mphanama 28.03.1989
 Maturu Mtshazi 22.05.1989
 Freddie Nizamba 29.05.1989
 Doctor Phakati 06.02.1989
 Phean Saliwa 11.09.1989
 Sample Setlale 18.02.1989
 Getshandu Shandu 05.08.1989
 Michael Sikhwenkane 22.05.1989
 Jacob Simelane 06.02.1989
 Albert Tshilanga 29.05.1989
 Lucas Udisi 28.09.1989



f.l.l.: Walter Schubert and Leo Müller

Walter Schubert celebrates his 25th anniversary on the construction site

Since August 14, 1974, Walter Schubert has been employed by KAEFER at Unterweser Nuclear Power Plant, first as a senior fitter and since 1979 as a site supervisor for the Industry Division. The Unterweser Nuclear Power Plant AG had a small celebration in his honor. As a special expression of thanks for the many years of good service, Leo Müller presented him with a certificate on behalf of the customer.



Jürgen Lür

It is almost impossible to say how many orders have landed on his desk. Jürgen Lür, responsible for the order administration for many years and most recently head of the accounting department at the company's Corporate Finance Department, retired on March 31, 1999 – after working for KAEFER Isolieretechnik for 44 years. He came to the company on April 1, 1955 as a 15-year old apprentice and was hired as a regular employee after qualifying to become a commercial clerk.



Helmut Brehm

He spent his whole professional life at KAEFER Isolieretechnik. On January 3, 1958 Helmut Brehm began working as a fitter at the Monheim branch of the company. For many years he worked on the permanent site at Bayer Dormagen. After more than 41 years of employment, he retired on April 30, 1999.

John-Owen Griffiths

His illustrations make him unforgettable. In his own unique way he pulled people's legs – including his own. He was responsible for KAEFER's advertising, on the national as well as international stage, for more than 25 years. Born in Wales and holding a degree in commercial art, he made KAEFER presentable, in prospectuses and brochures, in ads and at exhibition stands, in video productions – and last but not least, in the "k-wert", which he helped to put out from the time of its inception. Now he has retired. So long!



f.l.l.:
Elke Sand, Hermann Meyer,
Helene Kowatz

Walter Rohwer

Many of the large projects which KAEFER has carried out in the last four decades, in Germany and in other countries, are connected to his name. In June he retired, after having belonged to the company for 43 years. Walter Rohwer contributed his diverse know-how and his immense store of experience to the execution of numerous projects – power plants and industrial – in Germany and in other countries. Tunisia, Sweden, Denmark, Norway and the Netherlands are only some of the places he worked. From 1990 on he also spent much time in Germany's new Laenders.



Hermann Meyer retires after 37 years

f.l.l.: Henry Oetker, Wolfgang Hillenbrand, Sabine Ellers, Hermann Meyer, Dorit Lafferenz, Volker Berends, Manfred Eisenbarth

Starting a career at KAEFER – the next generation of industrial fitters

David-Tim Campbell | Peter Baus
Tobias Mohmeyer | Björn Blumenthal
Ronny Lösche | Oktay Yildirim



Sven Giphner

Jens Rohdenburg | Marc-André Kujan

Apprentices

On this photo you see the KAEFER team, which is not always held in such high esteem, yet although we are not such a favourite lot, You'll have to admit, we're the best that you've got.

Due to our cost-cutting measures we are out and out treasures, for it's our bargaining clout that makes KAEFER win out.

Of the seven of us on the photograph only six are left on the virtuous staff, for the old guy you see on the picture with us has left us without making a ruckus or fuss.

Will the work that he's done be to good effect? That's something next year will tell, I suspect. As a rhyming bard, in any case, he might be rather hard to replace.

Hermann Meyer, Corporate Purchasing Department

Close the Bulkheads!

Günther Klein's High-tech Packing System protects sensitive areas against high-frequency radiation in an optimal way.

Highly sensitive equipment on (naval) ships, in offshore areas, but also in industrial buildings for example, are particularly vulnerable to damage if there is no sufficient protection against electromagnetic noise fields as a result of lightning or electromagnetic interference of other kinds. The KAEFER company Günther Klein Industribedarf GmbH in Ahrensburg has come up with a unique and very flexible solution to this problem. It has added a new product to its conventional, widely sold GK packing system for cable penetrations to provide for "emc" and "nemp" safety. Cables can thus be protected against high-frequency radiation in an optimal way. This system is applied by GK on modern naval ships.

The secret behind it all is: Elastic and corrosion-free metal pads – made out of pressed, gilded wire – are thoroughly integrated into the modular system, thus producing a complete metal barrier. In the insulated area, the metal pads encase the cable shield, which is absolutely necessary, completely, so that all electromagnetic interference can be diverted to a special mounting frame – made of a special steel and finished with a continuous flange – at low resistance, from which they are then conducted to ground potential.

Extremely fail-safe

"This stable and elastic contact guarantees fail-safety even in the case of high degrees of dynamic strain for many decades," Olaf Horn of the technical sales department at Günther Klein explains. Extensive investigations and measurements have demonstrated the excellent attenuation response. Even with frequencies of up to 1 GHz, the measurements taken showed excellent surface transfer impedance. "There is nothing comparable to it on the market at present," says Horn.

With this emc-nemp-high-tech-variation of its packing system, the Günther Klein GmbH lives up to the company's policy, "Safety First". For this product matches the performance of the conventional system, one of the company's most important products.

Fireproof, gas- and waterproof, halogen-free

The system, which consists of a packing frame, sealing elements at each end and packing modules meets the high quality standards necessary in the shipbuilding industry in several respects. It is not only fireproof (flame-resistant in accordance with IMO A-754 (18) in the case of bulkhead and deck pipe fittings for A60-, A30-, A15- and A0 applications), but also gas- and waterproof (gas pressure tightness up to 0.3 bar, water pressure tightness up to approx. 4 bar).

In addition, the basic modular concept guarantees an extremely high degree of flexibility; it can be made to fit all standard cable sizes. "Wherever it is installed, it fulfills its purpose," says Horn, pointing out its advantages. Special solutions, which the company's own tool-making department comes up with, for example for contact rails or data buses, are part of the company's service. Like the encasement for the cables itself, all non-metallic elements of the packing system, i.e. the thermoplastic elastomers, are absolutely halogen-free.

pyrotherm-system, any number of requirements (sound insulation, heat insulation, break resistance, penetration resistance, fire protection) can be met with one and the same framework construction. By this, an economical change in the function of glasswork becomes possible, simply by exchanging one kind of glass for another.

Particularly when alternative types of glass become necessary as a result of replanning, changes in the use of the building in question, or changes in lines of production, this system cannot be beaten because it offers so many options. It also makes it possible to integrate doors and wings, for example fire-protective rotating wings.



Apart from having purely technical advantages and being easy to install, the GK-System has economic advantages as well. Since the insulation is one-sided, shipyards and builders save, to start with, on installation. What is more important, however, is the fact that the system is easy to repair and can be upgraded.

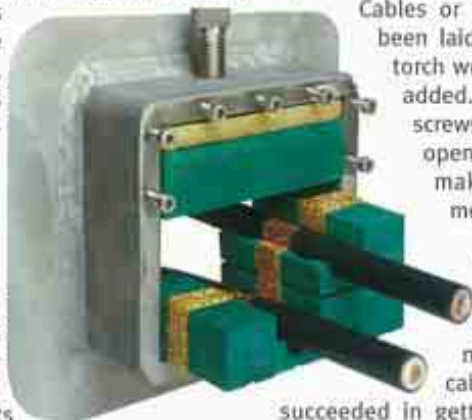
Cables or pipes which have already been laid can be replaced without torch work and new cables can be added. By loosening the tension screws, the packing frame can be opened at all times in order to make the necessary adjustments.

Whereas in Germany the packing system has long since surpassed the alternative casting systems for cable insulation, it has not succeeded in getting a strong hold on all foreign markets yet despite its advantages. Thus the technicians from Ahrensburg want to step up their activities in the world market.

- emc = electromagnetic compatibility
- nemp = nuclear electromagnetic pulse

This is how the packing system functions

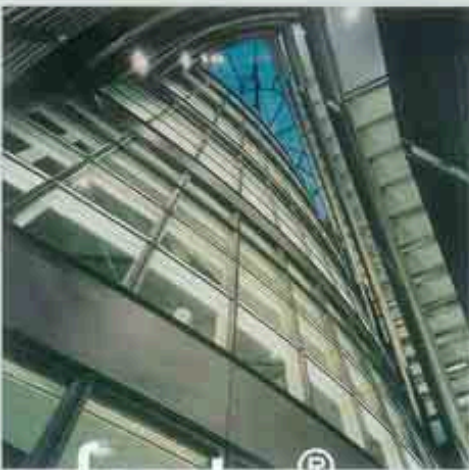
After a hole has been burned in a bulkhead or deck, the right-sized mounting frame will be welded or screwed on. After weather-proofing of the steel components, the cables or pipes are laid. Each cable or pipe is surrounded by a modular pair. Layer by layer, the tension frame is filled up, and filling modules close the empty spaces. Finally, the sealing element at the end is tightened, pressing the system together. Bulkhead and deck are tight!



Fire-Resistant Glass Architecture

Technological progress makes it possible to use glass in places which were off bounds before because of fire protection regulations. bemofensterbau, the 100-percent KAEFER company in Weißenthurm which specializes in windows, develops and markets new and creative solutions for fire-protective glasswork.

The company now offers planners and builders a turnkey solution with multi-functional features for every purpose: With the bemotherm/



bemofenster®

Special Façade Work on the Upswing

Success with PAROC fire protection system elements – Timm's wooden window frame plant in Berlin shows the way

The project is just beginning to bud, but there is every reason to believe it will blossom magnificently: Together with PARTEK-PAROC of Finland, one of the world's largest producers of rock wool and system manufacturers, KAEFER's Industry Division and its technical noise insulation department are establishing a new branch which markets special façade systems. This area offers many opportunities because with the use of an extraordinary façade technology, the high standards which the building industry sets for fire protection, for example, can be fulfilled. Furthermore, KAEFER and PAROC already work very closely together, and this project will expand their partnership.

KAEFER and PAROC have already completed their first joint projects; they were involved in the construction of two new commercial and industrial buildings, one at TRASCO in Osterholz-Scharmbeck and the other at DaimlerChrysler Aerospace Airbus in Nordenham. Thus, KAEFER has already put up some 25,000 square meters of PAROC façade elements with their characteristic sandwich construction (see box), most recently for Timm's wooden window frame plant in Berlin. The trade press has given this building a lot of praise because of the excellent technical performance and craftsmanship which went into it, unanimously calling it a "jewel" in what would seem to be one large construction site: Germany's capital Berlin.

The KAEFER-PAROC team gave the four-floor factory in Marienfelde, a district of Berlin, its entire exterior. For the 2,700 odd square meters of façade, PAROC cut the sandwich panels exactly to size. This high degree of pre-fabrication paired with high-quality workmanship employing a tongue and groove system made for very efficient and thus also inexpensive fitting work. Furthermore, no scaffolding was required, since it was possible to fit the construction elements using a lifting platform. All in all, the KAEFER workers put up 200 different cut-to-fit elements – including the covering profiles and stairway panelling – fitting them precisely.

For builders, PAROC elements have any number of advantages: Not only do they provide excellent noise and heat insulation (extending from top to bottom and not installed floor by floor) as well as protection against fire, but also stand out in terms of design and aesthetics, – much to the joy of the architects, – thus contrasting with the usual architectural hodgepodge one sees. Besides, the fitted surfaces need no treatment after installation; the surface is designed in such a way as to make time-consuming painting, cleaning and other forms of façade work unnecessary.

The PAROC Sandwich Element

In the 80's, PAROC constructed a new kind of sandwich element with a non-combustible insulation core for façade work: The specially developed, extremely fine rock wool with vertically standing fibers which is placed between two hot-galvanized, plastic-coated steel sheets does not absorb moisture. Its heat-insulating features and non-combustibility were tested under extreme conditions and fulfill all legal standards. The sandwich elements are not only light, but are also very variable in terms of thickness, length and surface. They can be used indoors as well as outdoors, for ceilings as well as for walls, and can be placed pointing in various directions. Not only in Scandinavia, but also in many other European and non-European countries has PAROC succeeded in convincing customers of the merits of this innovative system.



BOWLING in Hanover 1990-1999



Our combined sports competition which took place in 1989 (cf. k-wert No. 7) led to the establishment of ongoing bowling competitions in Hanover at the beginning of 1990, with an average of 10 to 15 employees participating each time. Among the many players who have participated in these events we also find a division manager, a regional and a sales manager as well as several department managers. Other employees who were in Hanover to receive training or to stand in for other employees short term have gotten into the act as well. In view of the divisional structure of our company, my impression is that our bowling events help to bring about a feeling of solidarity amongst the players which transcends single divisions. The gist of it is: Bowling is an enjoyable way of bringing people together, regardless of trade or title! One thing remains to be mentioned: The annual highlight, namely the popular Christmas bowling event in December, which is followed by a pleasant and enjoyable evening. Our motto for the next millennium will stay the same: The bowling ball rolls and rolls and rolls... **Manfred Gohlke, Hanover**

We remember our deceased colleagues

Beier, Charlotte	26.09.1999
Bolender, Heinz	22.04.1999
Büttner, Fritz	22.01.1999
Dreckmeyer, Harry	13.12.1998
Dulkies, Dettief	18.01.1999
Falke, Karl-Heinz	03.03.1999
Glander, Maria Anna	27.09.1999
Hantke, Rudolf	29.03.1999
Janssen, Herbert	04.02.1999
Janßen, Magdalene	04.05.1999
Kasanowski, Heinz	19.01.1999
Kiehl, Eduard	10.11.1999
Kremer, Franz	15.08.1999
Kühl, Bruno	27.11.1998
Kullwitz, Hans-Jürgen	13.05.1999
Lindemeier, Anna-Marie	19.02.1999
Müller, Walter	03.06.1999
Ostertoh, Anna	17.01.1999
Poppe, Franz Dieter	03.07.1999
Renken, Gerda	28.02.1999
Rolfs, Lothar	25.12.1997
Sachs, Josef	27.03.1999
Schneider, Andreas	11.06.1999
Vajda, Martin	28.02.1999
Vöge, Johann	24.03.1999
Wienbergen, Elisabeth	18.01.1999
Wiker, Käre	01.05.1999
Wille, Horst	07.07.1999
Wilken, Karl-Heinz	07.09.1999

Employees in Munich and Ingolstadt Make Donations for Children with Cancer

In Munich, Christmas is celebrated in a big way. KAEFER's employees in Munich/Ingolstadt are well on their way towards establishing a very special charitable tradition. At their works meeting, followed up by a Christmas celebration, they have had a raffle every year since 1997, the proceeds of which go to the cancer ward of the pediatric division of the hospital in Munich/Harlaching. The idea came from Erwin Wetterich and Markus Listl. The first time a total of 1,420 marks was raised, and in 1998 it was as much as 1,860 marks. For Christmas of 1999 a raffle has been planned as well, with Christmas presents from suppliers, advertising gifts and donations of other suitable objects from employees as prizes. Others should begin to take their example!



Gloss

It Feels Like Christmas

What do fairs have in common with Christmas? Everything! You anticipate them for a long time, but they surprise you every time. People who do the preparation work for them are familiar with this phenomenon.

You can take full advantage of the surprises which fairs have in store for you by following a few simple rules:

- Make your interest in participating in the fair known early on, but do not decide whether you will actually take part until the day before the deadline for registration. That way you are almost sure to get a corner stall in the last hall near the restrooms. And the restrooms really draw visitors.
- Don't commit yourself as to what you want to exhibit; that makes the preparation work much easier.
- Don't worry about who your potential visitors might be, because a fair is a fair.
- Choose large exhibits shortly before the fair begins; that limits the number of visitors.

■ Don't adhere to a budget, because the controlling department wants something to do, too.

- Save on brochures, because they only end up on the desks of your competitors or in the wastebasket.
- Storage space and a kitchen are superfluous. Keep them small, so the stand doesn't look untidy; coffee is bad for you anyway.
- Don't get people to staff the stand; that would just constrict you, and people don't usually stick to plans anyway.
- Assume that you will be the only expert at the exhibition, because so-called professionals are only charlatans.
- After the fair, only talk about the bad things; that motivates the people who are preparing for the next exhibition to give their best.

If these rules are followed, many big surprises are in store for you, giving you that Christmas feeling any time of the year.

Karl-Rudolf Friese, Corporate Technical Services

More Flexibility with New Companies

KAEFER Montage GmbH, KAEFER M & L GmbH and a company in Portugal have been founded.

For a services company like KAEFER, flexibility becomes more important all the time when it comes to putting personnel resources to good use. This is particularly true for the building sector with its specific rules of order placing.

In order to respond to the market with greater agility and to be prepared for periods with an abundance or scarcity of commissions, KAEFER has founded two new companies in Germany and has also acquired a Portuguese enterprise which operates in full as a subsidiary company. In light of the increased risk of liability due to recent legislature, one's own companies guarantee a higher degree of legal protection than do those owned by others.

The KAEFER Montage GmbH, which operates out of Nordhausen/Harz, has been working for the Industry Division of the company since December of 1998. The fitters who work for KAEFER, approximately 140 in number, belong for the most part to the permanent staff of KAEFER Isoliertechnik, but some new staff

members have been hired for thermal insulation work as well.

On the other hand, the second 100-percent company, the KAEFER M & L GmbH, has an entirely new team. The enterprise, which is located in Ganderkesee, carries out painting and enamelling commissions for the Building Division, but also does dry construction and façade work.

And in April, Feitisol, an enterprise which works out of Barreiro, a city near Lisbon, became a member of the KAEFER Group. The company will not only intensify its activities on the Iberian peninsula, but also, if not to say primarily, in Germany.

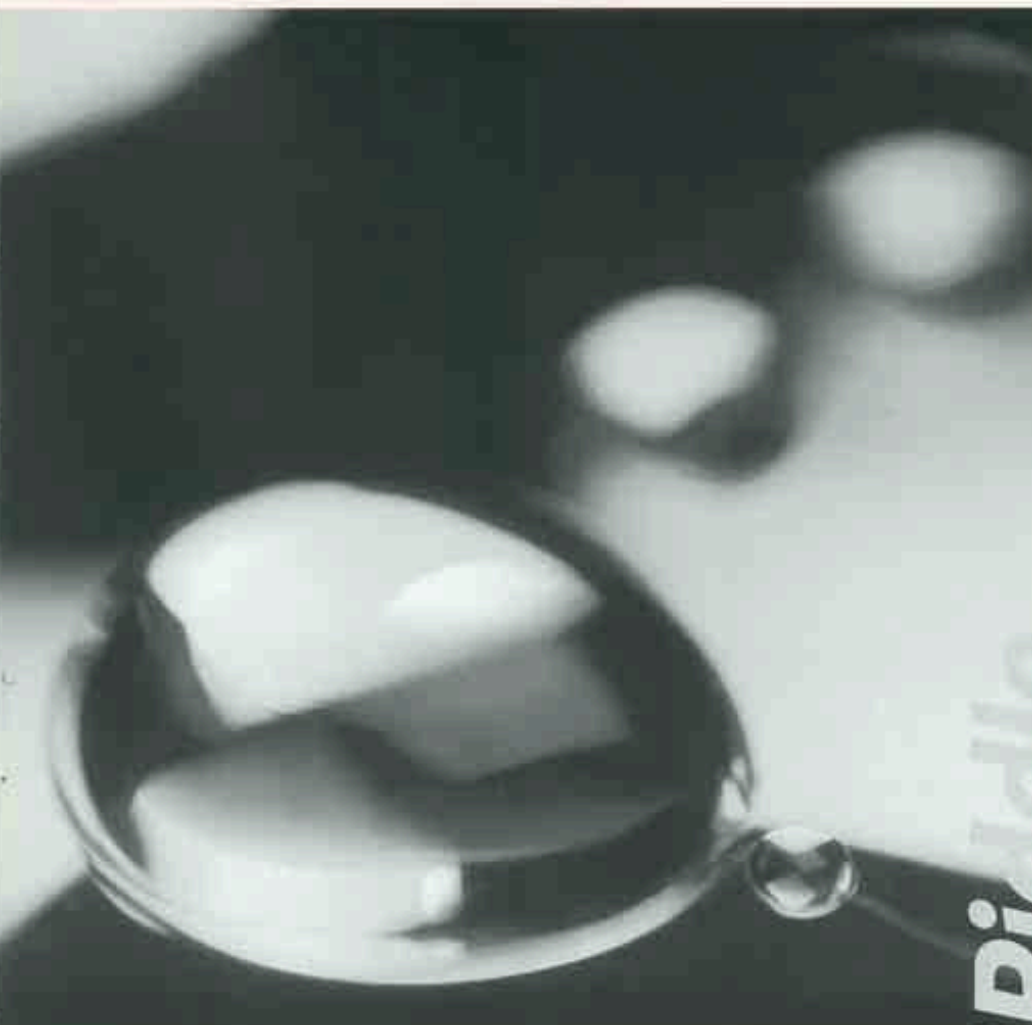
"These days no enterprise in our branch can get by using German manpower alone," says Petra Schwemann, a member of the management team of all three companies, summing up her experience. In her view, KAEFER cannot ignore this trend, which is intensified by international competition; to facilitate flexible use of employees, further innovative solutions must be found. One might soon find Dutchmen and Eastern Europeans working for KAEFER.

Main Contractor Becomes Main Debtor

Legislators have tightened the ropes in the building industry: Since January 1st, main contractors are no longer only liable for direct contracting parties, but also for all sub-contractors if they do not pay the required minimum wages or do not pay into the vacation benefits fund in Wiesbaden. This so-called extended recourse applies to German as well as foreign employees – and that can get quite expensive!

The new paragraph is not limited to building enterprises; rather, the main contractor's liability, independent of whether that contractor is culpable or not, holds for a number of precisely defined services in the building industry. These include numerous typical KAEFER services such as insulation work, prefabricated building work, stucco and plastering work, dry construction and fitting work or the installation of thermal insulation systems. In order to reduce the risk – for example fines amounting to as much as 1,000,000 German marks for violation of minimum pay laws – KAEFER has stepped up its administrative controls and has adjusted work contracts accordingly.

In the course of this year, Petra Schwemann from the department "Corporate Coordination of Contracted Performances" has trained some 250 employees – from division managers on up to site supervisors – and pointed out the pitfalls of the new legal situation. No serious problems have posed themselves yet. "We do not only pay attention to quality, but also to the reliability of our subcontractors," says Petra Schwemann. For if they make a mistake, it is detrimental to KAEFER's image as well. Collaboration on the basis of mutual trust and teamwork is something which will play an even greater role in the future, taking on the form of "co-contractorship". KAEFER already has subcontractors carry out some 40 % of its commissions.



Riddle

What is shown in the picture?

1. dewdrop
2. soap bubble
3. air bubble caught in glass

(Solution on page 31)





1999 2000

House magazine 1999

Published by:
KAEFER Isoliertechnik GmbH & Co. KG,
Düggewieser-Gründl-Straße 70, D-12125 Bremen, Germany
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Manufacture:
Press-Union, Dr. C. Bachmann
Ammer-Keim-Str. 10, D-12125 Bremen,
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Layout:
SANDTERT Werbeagentur,
Bismarckstraße 84, D-12125 Bremen,
Telephone +49 421 3 81 82 16, Fax +49 421 3 81 82 16

Sales network:
Bücher-Express, Hamburg
H. Falga, Nürnberg
Hornl-Feuerher-Maler / Salm
Fotoatelier Linzer, Spiez
Walter-Helmich, Vienna
Hornl, Berlin, Cologne
J. Dahl, Coblenz
KAEFER Architekt
Stephan Füll, Cologne
SANDTERT Werbeagentur

Illustration: ATZ, Bremen

Photo research: Bielefeld

Typography: SANDTERT Werbeagentur

Paper: printed on environmentally friendly paper



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