



# HYDRAULIKPRESSE

MAGAZINE FOR CUSTOMERS AND EMPLOYEES OF THE HANSA-FLEX GROUP OF COMPANIES

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Photo: Stockphoto

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DEAR READERS,

a new year lies ahead of us, and we are looking to the future with confidence. We will be able to begin operations from our second central warehouse in Geisenfeld, Upper Bavaria, in late May 2010. This year will also see the opening of our 350th branch, which will provide us with a presence even closer to our customers.

The rescue personnel of the fire brigade must also be on the scene of an incident very quickly. Their rapid response saves lives. In serious traffic accidents, every minute counts. When someone is trapped in their vehicle and unable to free themselves on their own, the hydraulic jaws of life are extremely important. In the title story, you will read about the difficulties that may be encountered in such rescue operations, and how a relatively simple idea by ADAC may make the rescuers' jobs easier.

The team at the Wiesbaden branch was called to assist in an unusual undertaking in November 2009. They were asked to design and install two hydraulic systems for the stage show "India!", to produce yet more dramatic and spectacular effects. Travel with us to the land of the Maharaja and try your luck in our special contest. There are three pairs of admission tickets to be won!

In the "People at HANSA-FLEX" section, we introduce you to Clemens Otte in this issue. Read about the life and background of this enthusiastic music maker, how music can imbue a person's life, and why, for the manager of Industrial Assembly at Wilhelmshaven, without music nothing rhymes.

You can learn what metal hoses have to do with computer tomographs and be amazed by the incredible loads they have to sustain in our Practical report on page 16. This article describes how a family business in Schleswig-Holstein became a market leader in cooling systems for medical equipment, and why the weight of the metal hoses made by HANSA-FLEX in Boffzen must be correct to the last gram.

In the second and final part of our article "Round the world in an Adler", we follow Clärenore Stinnes on her journey through the Gobi Desert and recount her escape from brigands on horseback. On page 24, you can read how she crossed the Andes and finally arrived back in Berlin.

All this and much more awaits you in this issue of HYDRAULIKPRESSE.

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THE EXECUTIVE MANAGEMENT



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Picture o titel: Nadine Beneke

# EVERY MOMENT COUNTS

THE MORE SOLID THE VEHICLE BODY, THE MORE DIFFICULT THE RESCUE



Photo: iStockphoto

**S**erious accident on the motorway. Three vehicles are involved. The one in the middle has been so badly crushed that the driver cannot get out of the car unaided – he is trapped inside. The rescue services arrive quickly and set about freeing him. The hydraulic jaws of life are indispensable. But there is a problem: Where to attach it? Where can they cut? It is impossible to determine the make of the vehicle – the rescue personnel must simply try anything. They try several times to attach the jaws of life. Precious minutes tick by before they find a point where they can begin cutting.

Incidents like this are happening on our trunk roads all too often. Because car manufacturers are con-

stantly building sturdier vehicles from ever harder materials, rescue crews are finding it more and more difficult to free trapped passengers. Even hydraulic jaws of life cannot cut through everything. On the more modern vehicles, there really are only a certain number of points where cutting can be started, and these vary from one manufacturer to the next. If they are not found, the jaws of life may be unsuccessful. “This is a real problem, because as rescue personnel we aren’t immediately familiar with the features of every vehicle make, and sometimes the cars are so badly crushed that it is impossible to make out the year of manufacture or the series from a given manufacturer”, Peter Buchholz, chief of the Bremen southern district professional fire service, explains the

obstacles to a fast rescue. Not only must the accident victims be rescued, but the safety of the crews themselves is also paramount. For example, safety elements in the vehicles such as airbag gas generators can threaten the helpers’ safety if they are triggered unexpectedly. Commonsense, avoidable hazards, like disconnecting the battery, are also a problem in modern cars, because the battery is not always located under the bonnet. Some vehicles even have two batteries.

## THE SOUND OF THE FUTURE

The eCall system may be a solution. This is an electronic alarm system that sends a call for emergency



Photo: Julia Ahlers



Photo: Julia Ahlers

**THE RESCUE CARD** was developed at the instigation of ADAC – it offers standardised information about vehicle-specific bodywork reinforcements, which cause problems even when using hydraulic cutting gear. It is now offered by all major manufacturers. Every driver should keep it behind the sun visor on the driver's side. Then, the emergency services can find it easily in the event of an accident.

**FREEING TRAPPED VICTIMS IN TRAFFIC ACCIDENTS** often requires hydraulic equipment such as the jaws of life.

help automatically to the nearest emergency services centre in the event of an accident, providing important information such as the location, direction of travel, airbag deployment status, and vehicle type. This final detail is extremely helpful to fire brigades and other emergency services when heavy rescue equipment is needed. It means that rescuers know the make and model of the vehicles involved in the accident before they arrive at the scene, and are ready to attach the hydraulic jaws of life to the correct point and begin freeing trapped victims as soon as they arrive. This can sometimes mean the difference between life and death. However, there is one critical drawback: The system does not yet cover the entire country. It will be several years before it can be implemented fully.

### THE RESCUE CARD

But because emergency services need this information today for serious cases, the German ADAC has developed an interim solution, which relies on paper rather than digital technology: the rescue card. In the last few years, some manufacturers have already made rescue guides available on the internet. But these guides are often too voluminous, and they vary from manufacturer to manufacturer, so a standardised system is required. The rescue card is such a standardised document that provides rescuers with the technical information they need quickly and reliably. "With the full coverage of the rescue card, we could prevent up to 2500 accident deaths throughout Europe", estimates Thomas Unger, the accident investigation project manager for ADAC.

### BEHIND THE SUN VISOR

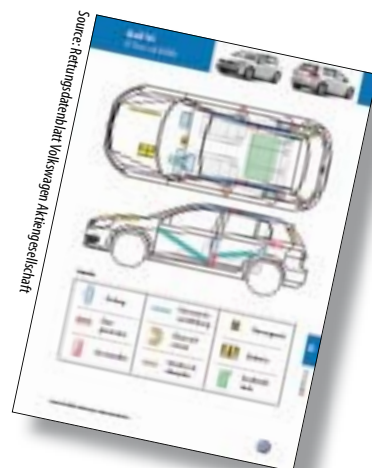
After a few teething problems, these instructions have now been implemented by almost all well-

known car manufacturers. A list of the participating companies is available on the internet ([www.rettungskarte.de](http://www.rettungskarte.de)). The objective: Every driver should print the rescue card for his or her car in colour from the internet and fix it securely behind the sun visor on the driver's side. Then, emergency crews can find it easily.

### FAST AID

Surveys carried out by ADAC show: The newer the vehicle, the longer it takes to rescue occupants. In accidents involving cars built between 1990 and 1992, rescue operations took less than 50 minutes in 40 percent of the incidents. For cars built between 2005 and 2007, only 20 percent were accomplished in this time. The "golden hour" as it is called is threatened. Ideally, a rescue operation should be completed in under an hour. 20 minutes for response and arrival, 20 minutes for rescue operations at the scene, and 20 minutes for medical care and removal. If the "golden hour" is maintained, the chances that a critically injured victim may be saved are good. The rescue card

can help significantly to shorten the time of rescue operations. This was demonstrated in an experiment conducted by ADAC: Two rescue crews tried to open two similar cars. The first crew had to do without the assistance of a rescue card. The result: The team without the standardised information sheet needed 27 minutes to free the trapped driver. The team that did use the rescue card only took 18 minutes. That is nine minutes, which in some cases can mean the difference between life and death.



Source: Rettungsdienstleit Volkswagen Akkordeon

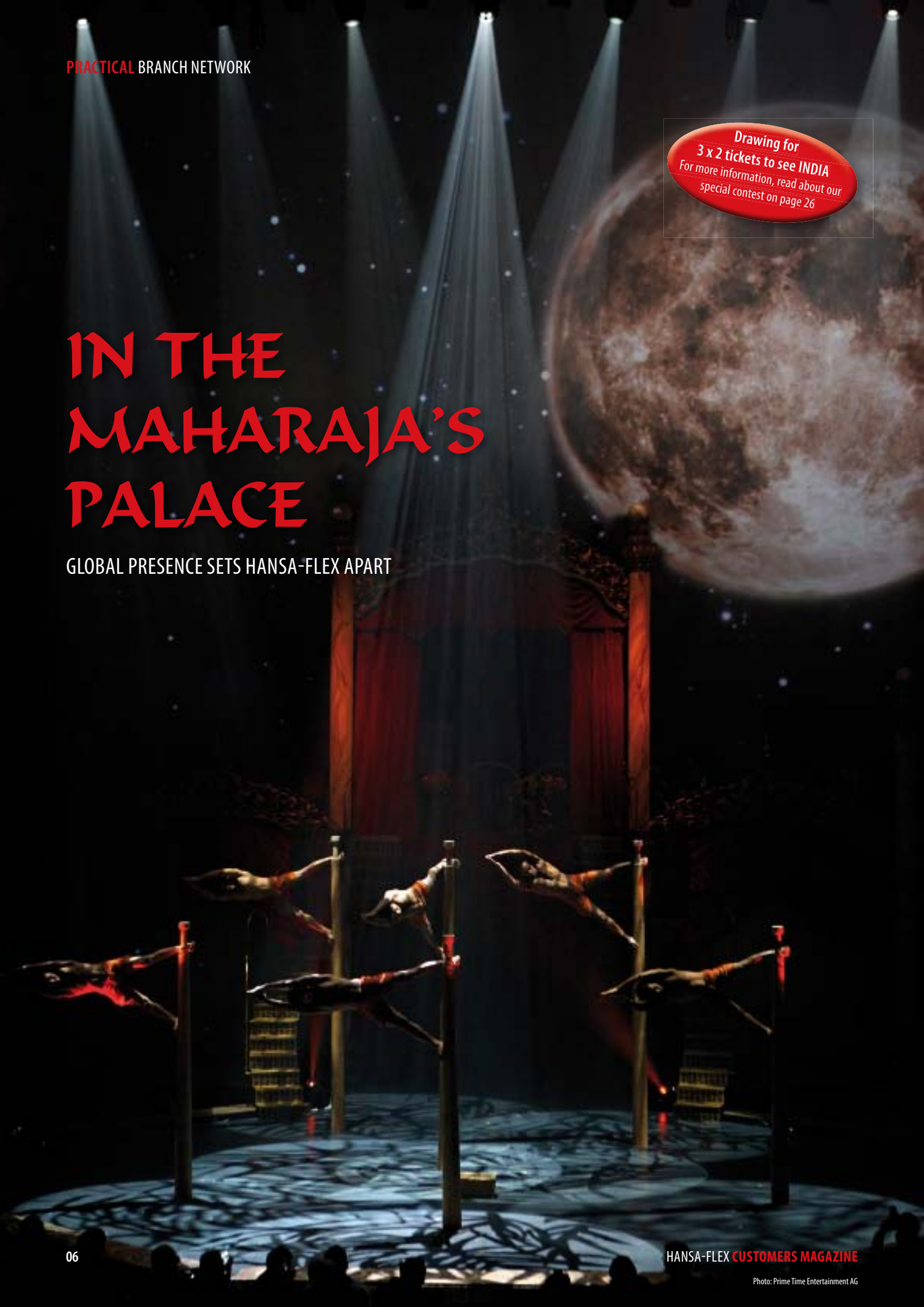


Photo: Julia Ahlers

Drawing for  
3 x 2 tickets to see INDIA  
For more information, read about our  
special contest on page 26

# IN THE MAHARAJA'S PALACE

GLOBAL PRESENCE SETS HANSA-FLEX APART



It is one of the highlights of the show. After an astounding light show, six pillars, towering five metres high, materialise on the stage as if from thin air. With a short approach run, the acrobats swarm up the pillars, defying the laws of gravity, and promptly wrap themselves around the “Malakambh Poles” like ivy. Apparently without effort of any kind, they strike extraordinary poses. This is pure physical control. The spectators gasp. But there are things they don’t see. This performance is only possible through the cunning use of hydraulic cylinders - for this is what keeps the pillars in place despite enormous loads. And who supplies the cylinders? The Wiesbaden branch of HANSA-FLEX.

This enthralling display is called “Malakambh”, a traditional sport in India. It is only fitting then that it is a part of the circus show entitled “INDIA”. Because in this follow-up production to the show “Africa! Africa!” authenticity is more than just an empty notion, it is the foundation and guiding principle. It applies to the stage sets – practically every last part was flown from the Indian subcontinent to Frankfurt – and even to the performers themselves. Every one of the 80 artistes was cast and hired for the show in India. So it is no wonder that for two hours the spellbound audience feel as if they have been transported to the land of the Maharajas. They are treated to a breathtaking display of acrobatics, beautiful dances, and moments of pure magic. This is the real India in all its diversity and contradictions. It is a hypnotically powerful combination of the mystic and the modern.

**HYDRAULICS UNDER THE BIG TOP**

INDIA can still be seen in Frankfurt until January 23. Then the circus leaves town for dates throughout Germany and Europe. Other tour dates in the future include the USA and Dubai beginning in 2012. “Their global presence was one of the major reasons why we decided to approach HANSA-FLEX for support in hydraulic matters. And the ease with which we have been able to work together to set up the hydraulic systems has proven that our decision was the right one”, declares Klaus Strängler, the technical director for INDIA. Rolf Spiess and his employees learned very quickly that clocks run differently in show business. “We were only able to install the components when the stage was not being used. This was often not until the weekend or late in the evening”, says the manager of the HANSA-FLEX Wiesbaden branch. For the Malakambh presentation, the team installed six hydraulic cylinders, supplied with the necessary pressure by a 400V power plant, below the flat stage. The cylinders hold the pillars completely motionless while as many as seven artists at once demonstrate their skills. Two more hydraulic cylinders keep a tightrope taut seven metres in the air, for a highwire act. “We had to use a flow splitter to ensure that the wire



Photo: Prime Time Entertainment AG



Photo: Prime Time Entertainment AG



Photo: Prime Time Entertainment AG

**THE ACTROBATIC SPECTACULAR FROM INDIA** would not even be possible without the clever use of hydraulic cylinders – they hold pillars and a tightrope firmly in place.

was under uniform tension along its entire length. I was finishing the installation under the stage as rehearsals were going on above”, recounts Rolf Spiess. He adds: “It is entirely thanks to my team that everything was such a resounding success. They turned up for work at the most extraordinary times, ready to give their all, as if it were the most natural thing in the world”. When their part was over, every employee received free tickets to the show. The unanimous verdict: Not to be missed!

**INDIA BY NUMBERS**

A few unadorned numbers will give a clear idea of the sheer size of the show. The 75 Indian dancers, acrobats and magicians are supported by a ten-piece live band playing Indian instruments. Over 400 workers were involved in constructing the stage. The INDIA showground is a small town. There are hairdressers, tailors, cooks, mask makers, carpenters, and much more. “In theory, our performers never have to leave the premises. We are completely self-contained here”, says Klaus Strängler. The team erected the largest show tent in Europe, covering an area of 18,000 square metres and with an overall weight of 400 tons. 50 articulated lorries are needed to move the production from one venue to the next. The tent

is 26 metres high and can seat 2,000 spectators. In comparison: The Alte Oper in Frankfurt had has seating for 1,367. 12,000 square metres of Indian textiles were used to decorate the tent support structure. For the technical components, the crew laid over 3,000 metres of cable. More than 40 costumes were designed and sewn especially for the show. The troupe puts on 350 shows a year, and will entertain a total of 700,000 spellbound spectators. Almost incidentally, the production costs for this amazing spectacle run to 7 million euros.

**Tour dates for “India”**

|                   |        |           |      |
|-------------------|--------|-----------|------|
| <b>Hamburg</b>    | 28 Jan | to 28 Feb | 2010 |
| <b>Berlin</b>     | 05 Mar | to 11 Apr | 2010 |
| <b>Munich</b>     | 15 Apr | to 23 Mai | 2010 |
| <b>Mannheim</b>   | 27 May | to 27 Jun | 2010 |
| <b>Stuttgart</b>  | 01 Jul | to 01 Aug | 2010 |
| <b>Brussels</b>   | 05 Aug | to 19 Sep | 2010 |
| <b>Düsseldorf</b> | 23 Sep | to 31 Oct | 2010 |
| <b>Vienna</b>     | 04 Nov | to 09 Jan | 2011 |
| <b>London</b>     | 20 Apr | to 24 Jul | 2011 |

*No responsibility is taken for the correctness of the details provided!*

For more information, please visit: [www.india-circus.com](http://www.india-circus.com)

# NO SKIING HOLIDAYS WITHOUT HYDRAULICS

OUT AND ABOUT WITH THE JONESES

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This winter in Europe has been the coldest and seen the heaviest snowfalls in a long time. It's party time for skiing fans. The best conditions for a perfect skiing holiday are currently in the Austrian Alps.





The Joneses had their skiing holiday planned a long time ago. Parents John and Mary are enthusiastic skiers, and now at last the children are old enough to go with them. Six-year-old Michael will be enrolled in children's ski school, Melanie is ten and impatient to learn to snowboard. The family sets off in the car, headed for their resort in the Austrian Tyrol.

The inevitable happens. They have barely got onto the autobahn when it begins to snow. At first, there are just a few flakes, but it becomes progressively heavier. Soon, the entire road is blanketed with snow. The Joneses plod on at walking pace. They are stuck in a traffic jam. But they have a stroke of luck. At the next junction, a large vehicle powers ahead of them onto the carriageway. With its hydraulic lifting device, the snow clearing vehicle lowers its plough onto the road, and before long the traffic is moving quite quickly again. Unfortunately, their advantage is short-lived. Young Michael must answer an urgent call of nature, so the Joneses pull into the next rest area.

After several such halts, and various squabbles between Melanie and her little brother, the family finally arrive safely at their destination. The children both plunge into the metre-high snow immediately while their parents are checking into the hotel. Over-excited from the long journey and the many new impressions, there is no chance that they will go to bed early. So John and Mary decide to take the children on a night hike. They have not been walking for long when Michael points with astonishment at the points of light gliding down the pistes like so many tiny glow worms. "What is that?" he asks his dad. "They're piste bashers, they make sure that the pistes are in the best possible condition for skiing tomorrow", John explains to his son.

There are countless piste bashers at work on the 75 square kilometres of ski runs throughout the Austrian Tyrol. Mostly at night. They groom the runs and

compact the snow so that the pistes will always be well prepared for skiers and snowboarders. To enable them to do their job, a clearing plate is attached to the front hydraulic attachment point, and this flattens small mounds and shifts the snow up the slope. Every skier who passes moves a small amount of the white blanket downhill. After each day of skiing, these accumulated quantities of snow must be moved back up the mountain. Each piste basher pushes up to five tons of the frozen water in front of the plate. Often on extremely steep inclines. The implements that are attached to the back of the vehicle, like the roller or smoothing board, are controlled hydraulically to compact the snow for boundless skiing enjoyment. Their immensely powerful engines – it is not uncommon for them to generate more than 400 horsepower – and chain drives enable the vehicles to climb the steepest slopes, and they can turn almost on the spot. With these performance characteristics,

*"Every skier who passes moves a small amount of snow downhill. In the evening, it must be moved back up the mountain by piste bashers!"*

obviously the hydraulic systems are exposed to very high loads. The frigid cold poses further demands for both equipment and materials. This makes it even more important that the hydraulic hose lines are able to withstand the repeated pressure peaks, even at such low temperatures. The extensive experience of HANSA-FLEX technicians in this field as well as their constant readiness to respond are just two of the reasons why more and more piste operators are choosing HANSA-FLEX as the service provider for maintaining their vehicle fleets. "With our branches in Austria, we are never very far away from our customers, and

we are on call even at night in case a machine breaks down", explains Adalbert Lukesch, HANSA-FLEX Austria.

By now, John and Mary are sharing a cozy evening in the hotel lobby. The children are asleep and their parents are enjoying a glass of wine before they too go to bed. The next morning, after a quick breakfast, the family sets off for the bunny slopes in fully regalia. Melanie and Michael are enrolled in ski school there. But in order to reach the slopes, they must first go up the mountain. To help with this, there are over 480 cablecars and chairlifts through the Tyrol ski area. Then there are more than 540 draglifts, giving a total capacity to carry up to 1.287 million people up the mountain every hour. But all of this needs hydraulics to work as well. Either as the primary drive or as the backup system, which usually rely on electrohydraulic or diesel hydraulic power. HANSA-FLEX is often called on to look after these systems too, because lift failures not only spoil the enjoyment of the holiday-makers, they can also have serious consequences.

Even the most wonderful holidays must end at last. After a week in the snow, the Joneses head for home. "What happens when no snow falls in winter? Can people just not go skiing?", Melanie asks on the way home. "Then they bring out snow cannons. They make snow out of air and water", mum explains to her inquisitive daughter. In fact, artificial snow is applied to as much as 55 square kilometres of the Tyrolean ski slopes. And – you guessed it – in many of the snow cannons, the water needed to make the snow flows through hydraulic hose lines manufactured by HANSA-FLEX.

Photo: Stockphoto



Photo: Stockphoto



Photo: Jilles Allers



**WITHOUT HYDRAULICS, NOTHING WORKS** Snow cannons are supplied with water through hydraulic hose lines – piste grooming machines with hydraulically controlled attachments redistribute the snow and flatten the pistes – cablecars and chairlifts are equipped with hydraulic braking and backup systems.

# WITH THE POWER OF WATER

## TOOLMAKING IN SAXONY

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Anyone who hears the word toolmaking probably thinks immediately of the manufacture of pliers, etc. In the small town of Lichtenstein, close to Zwickau in Saxony, this mental leap would only provoke a weary smile. At least when one is standing in the production halls of "Roos & Kübler Sachsen GmbH". Here, the tools they design and build are considerably larger and more complicated, and their customers include renowned car manufacturers, which use them to make car bodies. For years, the HANSA-FLEX branch in Lichtenstein has been their partner of choice for all matters related to hydraulic systems.

*"Then, valves open and water is forced into the hollow element under pressure of up to 4,000 bar!"*

Roos & Kübler Sachsen GmbH is one of the six companies that make up the Roos & Kübler Group, which employs about 550 workers throughout Germany. At the Lichtenstein site, the primary focus of activities is manufacturing transfer and follow-on tooling, and driven tools. They also make tools for hydroforming. If the customer wishes, the tools can also be configured with process-specific automation components. In this way, for example, "driven tools" – that is to say tools that are driven by a hydraulic cylinder built into the tool – can also be used as systems or system components without difficulty. An enormous range of products, innovations, and a high degree of flexibility are hallmarks of Roos & Kübler Sachsen.

The company also specialises in sheet metal forming and besides the automotive industry its customers include enterprises in the fields of heating and sanitary engineering and electromechanical engineering. Hydraulic systems are an important element in the functional capabilities of the tools. "We have no ambition to acquire professional expertise in hydraulics ourselves. So we are glad to be able to rely on the knowledge and skills of HANSA-FLEX", managing director Dr. Wolfgang Eisenreich explains the basis for the cooperation.

### CLOSE NEIGHBOURS

And this experience is at home just a few streets away, almost walking distance, at the HANSA-FLEX Lichtenstein branch. "We opened the branch in 1992, and just six years later we had to move to a larger building in order to continue servicing the needs of our customers adequately", says branch manager Andreas Dörfel. Today, a staff of four takes care of the needs of those customers. They often come straight to the branch building, and most of them are greeted by their first name. A certain amount of banter is

inevitable – these people know each other. "We are very relaxed in our dealings with each other. That is the "Saxon way", says Andreas Dörfel with a smile.

But while the conversation is friendly and casual, working together is completely professional. This is also and especially true in the case of "Roos & Kübler", because the tools they need for building cars are extremely complex. In order to promote lightweight construction in vehicles, and thus also energy efficiency, two processes are particularly important. In "hot working", a metal part is fed while still glowing hot into the appropriate tool. It is then modified to the desired shape by pressing and bending machines, and then cooled. There is also a side effect: The cooling process also hardens the metal.

### HYDROFORMING

In the hydroforming process, a steel pipe that has been processed to approximately its subsequent shape is placed in a mould that is slightly too large. Then, the upper half of the mould, the "lid", is lowered and closes with a pressing force of as much as 40,000 kilonewtons. Two hydraulic cylinders extend almost noiselessly, and force two sealing rams onto the ends of the pipe with a pressure of 200 bar. The component is now secured in place, any movement up or down, to the left or right, is completely impossible. Then, valves open and water is fed into the hollow element at a pressure of up to 4,000 bar. This immensely high pressure expands the intended axle beam from the inside out, and presses it into its mould. While the pipe is still under pressure, twelve hydraulic rams are extended and punch holes in the part at the points designated for this purpose. The hydraulic rams must work at almost exactly the same time to ensure that the pressure does not bleed off. Important advantages of hydroforming: Individual components can be combined in a line of

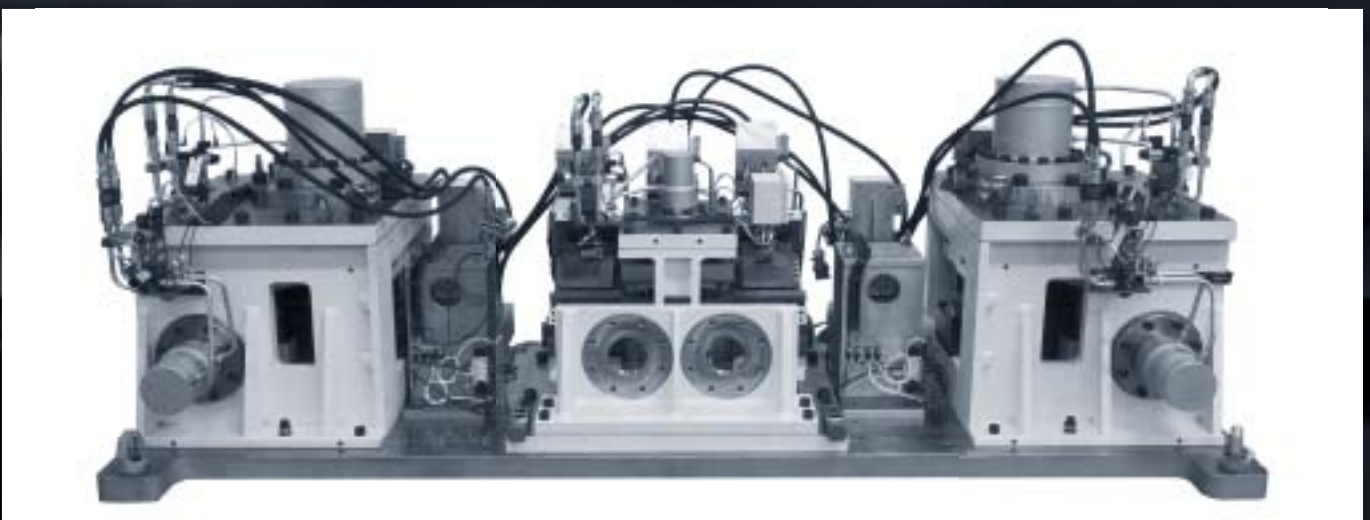
pipes, thereby increasing productivity. This method also assures a high degree of precision and repeatability – each part produced is precisely identical to the others.

### TRUSTING COOPERATION

In order to ensure that the end result meets the customer's specifications exactly, Roos & Kübler Sachsen GmbH employs highly qualified design engineers and toolmakers. "Our customers often only give us the properties and dimensions of the sheet metal part we are to produce, and the size the tool is allowed to be in the customer's press. Then, our work begins", design engineer Jan Herold explains the procedure. Andreas Dörfel is brought on board as early as the planning stage, so that the specifications for the hydraulic components are clearly understood. "During this phase, we are talking to each other all the time", reports the branch manager.

Once all the specifications have been agreed exactly, the HANSA-FLEX network proves its worth. The necessary units are produced in Dresden Weixdorf and sent directly to Roos & Kübler. The personnel at the Lichtenstein branch connect the hoses and test the unit with all hydraulic components on site, then they install it in the vehicle. The tool and the finished part are not shipped to the end customer until it is undergone a battery of rigorous tests at Roos & Kübler. "With equipment this complex, we have to be working with a supremely capable, reliable partner, and particularly one that works well under pressure", Dr. Eisenreich concludes. Another advantage: If the end customer ever needs a replacement part, they simply contact the nearest branch. And since every hose line is identified with an X-CODE, replacement parts procurement is fast and error-free.

Photo: Roos & Kübler Sachsen GmbH



# FROM DOOR TO DOOR

## EMPLOYEES RECEIVE INSURANCE PROTECTION WHILE COMMUTING

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The merciless tones of the alarm clock shatter the morning quiet. An experimental toe is extended to test the temperature above the covers, eyes are rubbed awake. Sad, but true: It is time to get up. Anyone who has an accident on the way to or from work is covered by his employer's insurance. Accidents on the way to and from work are perfectly normal work-related accidents. They are known colloquially as "transit accidents", although this term does not appear in the accident insurance act in Sozialgesetzbuch VII (SGB VII).





Photo: Julia Ahlers

**THE JOURNEY TO WORK**, which is covered by insurance, begins at the door to the building.

General insurance protection for journeys between home and the workplace is governed by §8, 2, SGB VII. The following provisions are set forth:

Employees are insured from the door of their residence on their way to work, and as far as the door of their residence on the way home from work. The stairwell in a block of flats is not part of the journey to work. But as soon as the worker steps outside the building, coverage begins. Normally, he must travel to work by the most direct route in order to receive insurance protection. But there are exceptions: People who take their children to daycare institutions on the way to work are legally insured for this stretch of the journey as well, so this detour is permitted. The same applies for other people who require care. Similar allowances are made for car pools. It is permitted to make a detour to pick up colleagues on the way to the workplace. In this case, all passengers in the vehicle are insured, provided they work for the same employer. Insurance coverage also continues if workers are forced to take a different route to work due to exceptional traffic conditions. So it is quite legitimate to take a different route to avoid a traffic jam. Very important: The means of transport is entirely unimportant. Insurance extends to any mode of transport, whether the employee walks, drives, cycles, takes the train or roller blades.

### NO PERSONAL ACTIVITIES

Insurance coverage is suspended for the time a person deviates from his normal route to work. If the employee stops off at the supermarket to buy a few groceries, be it ever so briefly, and slips in the car park, breaking a leg, he cannot claim coverage for a work-related injury. The trip to the supermarket

is viewed as a purely personal activity. As soon as the employee returns to his normal route to work, insurance coverage is reinstated, provided the interruption has not lasted longer than two hours. The situation is different if the purchases he makes in the supermarket are intended to sustain him for work. If he drives to the nearest chip shop to buy lunch on his lunch break, this journey is also covered. If he goes home to eat lunch during the break, his journeys home and back to work are also insured.

### THIRD LOCATION

The situation becomes more complicated when the employee does not begin his journey to work from home. For example, someone who spends the night with a partner and travels straight to work from the other person's residence is only insured if this other route is reasonably comparable to the normal journey. In other words: If the distance from the person's own residence to his place of work is five kilometres, and the distance from the 'third location' is significantly longer – say 30 kilometres – in this case the employee is no longer insured for the journey.

### DUTY TO REPORT

If you have to visit a doctor as a result of an accident while travelling between home and work, you must inform the doctor that you have suffered a 'transit accident'. Your doctor will then report this accident to the occupational safety organisation. Of course, there are exceptions to this as well. All accidents that render the victim unable to work for more than three days, or result in death, must be reported. Report your commuting accident in any case to the personnel department.

### SPECIAL CASES

As has been mentioned several times, insurance protection begins and ends outside the entrance door to the building the employee lives in. But the following case might certainly be disputed: Your life partner left your house before you and absentmindedly locked the door to your flat as he or she left. You are now unable to get out of the flat, because he or she took your key as well. So you attempt to leave in a less conventional manner, by climbing out of the window. In the process, you fall and break your leg. The following applies under all circumstances, regardless of where your journey to work starts from, or what mode of transport you use to get there: Accidents due to the influence of alcohol can never be claimed as work-related or transit accidents. This also applies in the case of impaired ability to drive due to drug abuse or overtiredness that is not caused by working for your employer.



Photo: Julia Ahlers

**THE CHOICE OF TRANSPORT** for making the journey to work is irrelevant – even rollerblades are acceptable. For insurance purposes, the route to work is more important. Detours are permitted under certain circumstances, but private activities between home and work are not covered by insurance.

In 2008, 88,226 'transit accidents' occurred throughout the Federal Republic of Germany. Of these, 211 resulted in death. In the same year, HANSA-FLEX employees reported a total of four transit accidents. This corresponds pretty closely to the national average. Full details regarding the legal provisions for transit accidents may be read in Sozialgesetzbuch VII or obtained from the occupational safety organisation. But regardless of whether you may or may not be covered: Be careful, be safe!



# WITHOUT MUSIC, NOTHING RHYMES

FOR CLEMENS OTTE, MUSIC IS NOT JUST SOUND, IT'S A WAY OF LIFE

Photo: Julia Ahlers

**03.12.2009** **HYDRAULIKPRESSE** meets Clemens Otte in his office in the recently built Wilhelmshaven branch. A Rolling Stones publicity poster hangs on the wall. Music is playing in the background. After a few words of greeting, conversation with the manager of industrial assembly is warm and frank. Clemens Otte laughs often as he talks. He talks readily and at length. He has at least one anecdote to tell about every stage of his life. The two hours set aside for the interview fly by.

Music has been Clemens Otte's constant companion for all his life. When he was just a lad, his grandfather taught him to play the zither. He would often sit and home and make music with his mother, an aunt, and his grandfather. "That was always a lot of fun, and it's why I know all the hits from the 1920s," he says with a laugh that fills the room. Clemens Otte radiates

cheerfulness. To those who meet him, he looks ten to 15 years younger than his 61 years.

## REBELLION AND ROWDINESS

These days, he is happily married with a family, but back in the 60s, he bought his first guitar and met regularly with friends to play music. When the Rolling Stones first broke big in 1962, the 14-year-old musicians thought: "We can do that too", and they formed their first band. The very next year, in 1963, they played their first gig, in the school hall. They played songs by the Beatles, the Kings, and the Stones of course. "The Stones' songs were much more than just music to me. They were an attitude to life, they were rebellion! I wanted to be a part of that", says the singer and guitarist, his eyes shining. And he was a real rebel. After receiving three reports in

one day at school, he was so furious that he and a friend tore the urinal off the wall in the school toilet and threw it out of the window. "My friend and I were expelled from the grammar school and spend the last year of school at the comprehensive. Of course I got into enormous trouble at home," he grins broadly, though his love of music remained undimmed.

## ON THE OPEN SEAS

But this setback obviously did no permanent damage. After leaving school, he began an apprenticeship as a mechanic, which he completed in 1966 with top marks. In April 1967, he signed on as a radio operator with the German navy for four years. "I was never a good soldier, but there were very few who were better than me at my job," recalls Clemens Otte. In 1969, leading seaman Otte took part in a NATO

competition in which contestants had to listen to Morse code and type the characters on a typewriter as quickly as possible. Otte typed 136 characters per minute. That earned him third place. "I can still do it today," says the former radio operator, his pride still evident.

### ROCK 'N' ROLL IN UNIFORM

It goes without saying, Clemens Otte didn't stop making music throughout his time in the Navy. At the Navy Petty Officer School in Plön, Schleswig-Holstein, he founded the "Navy Tramps", a band which played at officers' dances and similar events. "We played rock 'n' roll in uniform, and besides, we always got three days' special leave for it. That was a good deal."

### DECISIONS NEVER REGRETTED

Otte becomes serious for just a moment when he is asked why he never became professional musician. In those days, he says, they might have had a real chance, but they just missed it. In the early 60s, German rock bands were springing up all over the place, and he says his band had what it took to make it. After all, they were still just schoolkids and Clemens Otte's father had put his foot down. "Today, I'm grateful that he did. Who knows what might have become of me if I had gone into the music business," he reflects. His father wanted him to learn a proper profession first. The Stones fan actually wanted to be a technical draftsman, but his father

*"It was much more than music. It was an attitude to life, it was rebellion! I wanted to be a part of that!"*

did not think the profession would sustain him in the future. He told his son: "One day, they will automate technical drawing as well, and then you won't be any good to anybody. Learn a trade instead." That was in 1963! "My dad was always very farsighted in things like that. I have never regretted my decision to become a mechanic," concludes Clemens Otte.

### THE LONG AND WINDING ROAD TO HANSA-FLEX

After his service in the Navy, Otte worked as a mechanic in Wilhelmshaven



Photo: Julia Ahlers

for 14 years, reaching the position of deputy department head. Then, in 1985 he went to work in the hydraulics division of a hydraulics company in the harbour town. He stayed there until 2003. Then he worked for himself for a year, until he received a call from Klaus Behr in early 2004. "At that time, HANSA-FLEX wanted to expand its industrial hydraulics division. A former workmate had recommended me," recounts Clemens Otte, who is now the head of industrial assembly. Following an interview with Reiner Plöger and Klaus Behr, Otte joined HANSA-FLEX on April 1, 2004, and set about steadily expanding industrial assembly at the site. "When you see what we have done in the last few years, it is very impressive. You only have to look at our new branch

Photo: Julia Ahlers



here in Wilhelmshaven. The entire team has done exceptional work," the master mechanic sums up the achievements of the last few years, gazing at his own office and the area beyond it.

Photo: POCUT 5



### WITHOUT MUSIC, NOTHING RHYMES

It goes without saying, through all those years, Clemens Otte's love of rock 'n' roll never faltered. In 1983, he founded the band "POCUT 5", and he played with them regularly until 1993. The five-piece band played its biggest event in Liepaja, Lithuania. In 1990, they were the first western band to play covers of songs by the Stones, the Kings, the Animals and many other famous performers at a festival in a football stadium to 18,000 enthusiastic fans. Even today, the singer still meets a couple of his friends from time to time and plays in local bars under the name "Clemens Otte & Friends", because for him, without music nothing really rocks. "I always have music on. Whether I'm

CLEMENS OTTE has always made music – in the 80s he performed regularly with his band „POCUT 5“.

here in the office, in my car or at home. It's just a part of who I am. These days, it may not have anything to do with rebellion any more, but it is still my attitude to life," says Clemens Otte with a smile. Could there be a more perfect way to sum it all up?

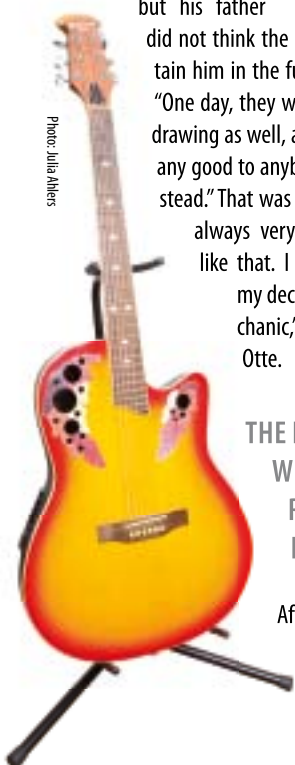


Photo: Julia Ahlers



Photo: iStockphoto

# NO COOLING, NO IMAGES

## THE COMPONENTS IN CT SCANNERS MUST BE ABLE TO WITHSTAND EXTREME LOADS

The Nobel prize for physics was awarded for the first time to Wilhelm Conrad Röntgen in 1901. In 1895, he had discovered the electromagnetic rays that bear his name, paving the way for revolutionary approaches to medical diagnostics. His discovery led directly to today's highly accurate x-ray tubes, the images from which save millions of lives every year. The cooling units manufactured by KLÜVER Aggregatebau GmbH are critically important to the functionality of these devices. And the cooling units in turn rely on stainless steel hoses from the HANSA-FLEX metal hoses division.

The family-owned company, originally called "Jens Klüver Aggregatebau", was founded on January 1, 1973, and is based in Kaltenkirchen, Schleswig-Holstein. In 1981, the name of the company was changed to KLÜVER Aggregatebau GmbH, and since then it has grown into a leading manufacturer of cooling plants in the x-ray tube market segment. Today, KLÜVER products are fitted in x-ray equipment, magnetic resonance imaging units, computer tomography scanners, and similar equipment by prestigious manufacturers from all over the world. And since these are highly specialised, extremely sensitive instruments, thorough expertise in all aspects of producing the machinery is imperative.

### STANDING STILL MEANS LOSING GROUND

"We can draw on 35 years of experience in manufacturing compact cooling units and recirculating coolers, and we are always able to meet individual, customer-specific requirements," Sven Klüver - operations manager and son of the company's founder and CEO Jens Klüver - explains why the firm is so successful. To ensure that the necessary quality always reflects the latest capabilities of technology, KLÜVER employs a team of highly qualified developers and design engineers, who work full-time to improve existing equipment. "Standing still means losing

ground. Especially in our field," the operations manager always says.

### ENORMOUS FORCES

Anyone who has ever lain in an x-ray tube knows how loud it is in there. Among the sources of the noise are the cooling units, which rotate about the tube at very high speed to prevent the device from overheating. They rotate so fast that the units are subjected to forces up to 30 g, that is to say 30 times the acceleration of gravity. Trained fighter pilots lose consciousness at about 12 g. 14 g would normally be lethal to people. At rotation speeds this fast, the



weight of the units must be calculated with extreme precision. Otherwise, imbalances would be created, which might not only damage the equipment, but could also injure the patient lying in the tube. "We're talking about a tolerance range of +/- 150 grams per cooling unit. That is not much. So every last component must meet our specifications exactly," Sven Klüver explains why the specifications are so stringent.

### EXTREME PRECISION

This is one reason why KLÜVER Aggregatebau GmbH relies on HANSA-FLEX as its supplier for stainless steel hoses. Every hose manufactured in Boffzen must fall within a tolerance of three grams or less with respect to the specifications from KLÜVER Aggregatebau GmbH. Absolute accuracy and cleanliness in the manufacturing process are of the utmost importance. "Every stainless steel hose we make for KLÜVER is soldered by hand here," says sales engineer Mario Trompeter. Before the soldering is even begun, they calculate exactly how much solder may be used so that the hose is not too heavy or too light. The same applies for the kink protection, which ensures that the hoses are not affected by all the movement. This too is dimensioned to satisfy the specifications in every respect, in terms of both safety and weight. Finally, every hose that is shipped to KLÜVER is weighed by hand. Only then do the items leave Boffzen.

"Apart from the quality of their metal hoses, we also appreciate the short communication paths at HANSA-FLEX and the professional care we receive on site from Mr. Trompeter. HANSA-FLEX finds a solution in very short order for any change in our require-

ments," says Sven Klüver, summarising the basis for this excellent working partnership.

### QUALITY ASSURANCE

The finished units are tested exhaustively in KLÜVER's own in-house quality assurance program, and then they are shipped all over the world from Kaltenkirchen. To test the equipment for leaks and pressure resistance, the units are pumped full of helium. A sensor "sniffs" the device. If there is a leak anywhere, the sensor detects the escaping helium and sounds the alarm. The mechanical strength of the units is tested in a special cooling booth at temperatures from -30 to +80°C and under various humidity conditions.

### ROTATION UNDER REAL CONDITIONS

The most spectacular test to watch is conducted in the rotation machine. Here, the units rotate even faster than the speeds at which they will be used later in the x-ray tube. This is how KLÜVER Aggregatebau GmbH makes absolutely sure that the cooling units fulfil the specifications of its clients in every respect. A comprehensive computerised log is generated at every stage in the quality assurance process. This is undoubtedly worth pointing out, but to Sven Klüver it is self-evident: "We offer our customers absolute transparency with regard to the performance capabilities of our products, and we satisfy the highest standards in quality and environmental management. Our certificates attest to this".



WITH MORE THAN 35 YEARS OF EXPERIENCE in manufacturing compact cooling units and recirculating coolers, the most detailed customer requirements can be met at all times. All parts are tested thoroughly by KLÜVER according to their in-house quality assurance system.

### The advantage of certification

KLÜVER Aggregatebau GmbH is certified to DIN EN ISO 9001:2000 and DIN EN ISO 14001:2005.

Besides cooling units and medical equipment, Klüver Aggregatebau also manufactures cooling plants for industrial and research applications.

PRECISION IS PARAMOUNT in production. Every stainless steel hose must not deviate from the specifications by more than 3 grams, otherwise dangerous imbalances may be created when the computer tomographs are operated.



# ANCIENT AND INEXHAUSTIBLE

## HYDRAULICS IN SOLAR POWER STATIONS

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It is about 4.5 billion years old, and has a diameter of 1.5 million kilometres. It sends energy-charged radiation out into space with unflinching intensity. Without the Sun, life as we know it would not even exist on our planet.



**GLOBAL POWER ELECTRICITY SUPPLY** from solar energy alone is a realistic possibility. The DESERTEC project plans to establish an enormous solarthermy park that would have the capacity to meet the energy needs of the EU, or possibly even of the entire world. The graphic opposite illustrates the areas that would be needed for such a project.



Photo: Stockphoto

The solar rays that reach the Earth's surface hold many thousands of times more energy than required for all of Mankind's needs. Staggering potential, of which only the tiniest fraction has been tapped up to now. Now, energy companies, scientists, the industrial community and politicians are promoting solar energy aggressively, based on technologies that are not really that new. The most ambitious project is called DESERTEC.

### PHOTOVOLTAIC TECHNOLOGY

There are many different technologies and methods for turning sunlight into electricity. Probably the best known is photovoltaic technology. The word itself is a combination of the ancient Greek "phos" (meaning light) and the unit of electrical potential, the Volt. The term refers to the direct conversion of solar energy into electrical energy. This is achieved with the aid of solar cells, the overwhelming majority of which use silicon as the semiconductor material. Solar cells were first used in 1958, when they were developed for space exploration. That was when the USA sent the first satellite equipped with solar cells into orbit around the Earth. For those who wonder what direct benefits space exploration has for life on Earth, this is one of many answers. Today, solar cells can be found on house roofs, in football stadiums, in parking meters or pocket calculators, to name just a

few of their uses. In 2005, the rated output of all the solar energy systems working in Germany was estimated to be about one gigawatt. That is very, very close to the amount of energy produced in a year by a nuclear power plant.

### SOLARTHERMY

Another method for obtaining solar energy is called solarthermy. Solarthermal power stations convert solar radiation into heat and use this heat to generate electricity. There are a number of different designs for doing this. One relatively old but still effective method is the parabolic mirror power station.

### PARABOLIC MIRROR POWER STATIONS

Parabolic mirror power stations operate very differently from conventional photovoltaic conversion. The power stations work with curved mirrors, called parabolic mirrors. They collect the sunlight into an absorber feed. This tube contains a liquid (usually oil or water), which is heated to several hundred degrees Celsius and consequently the state of the filler material changes from liquid to gas. The gas is used to drive turbines, which generate power. Thermal accumulators ensure that power stations of this type can continue to generate power through the night.

To ensure that solar radiation is always exploited to the full, the mirrors in modern parabolic mirror power stations are turned to follow the Sun by a hydraulic system. The first power station of this kind – though without hydraulic systems – was commissioned in 1912 in Meadi,

Egypt. In 1916, the German Reichstag resolved to invest 200,000 Reichsmarks in the construction of a parabolic mirror power station in German Southwest Africa. However, the project was never completed because of the First World War. Solarthermy enjoyed another brief resurgence of interest during the oil crisis of the 1970s. A number of solar thermal power stations were built in the USA between 1977 and 1984, and some of them are still in operation. The largest and currently most powerful parabolic mirror power station in the world is located in the province of Granada in Spain. It was commissioned in 2009.

### SOLAR TOWER POWER STATIONS

Another technology that uses the Sun's heat to generate electricity is that of the solar tower power station. A hydraulic system is used to align several hundred mirrors so that sunlight is focussed at the top of a tower. The top of the tower houses an absorber, through which heat carrier medium flows. The solar radiation is concentrated so strongly that temperatures at the top of the tower can reach several thousand degrees Celsius. As with parabolic mirror power stations, the steam generated in this way is used to drive steam or gas turbines, which in turn generate electricity.

### DESERTEC

The Sun is the most sustainable source of energy available to us. It will supply our planet with a practically constant flow of energy for the next 900 million years. Taking into account all possible disruption factors, the solar energy that strikes the surface of the Earth is equivalent to about 165 Watts per square metre. This is an average, and of course it may vary depending on geographical location and weather conditions. The value is significantly higher in deserts. And this is precisely the basis on which the ambitious DESERTEC project is founded. A consortium consisting of power supply companies, political and scientific communities, and technology enterprises plans to build a solarthermy park of unprecedented size in the Sahara Desert to supply the energy needs of the countries of North Africa, Europe, and the Near East. Based on a purely arithmetical calculation, due to the high radiation values in the Sahara, the current energy needs of the inhabitants of this area could be met from about three percent of the area of the North African desert. The graphic on the left illustrates this potential dramatically. Like all innovations, DESERTEC also has its pros and cons. It has its share of enthusiasts and critics. But whatever the end result is, one thing is beyond dispute: The future belongs to renewable energies.



Photo: DESERTEC Foundation

# SAFETY FIRST

## REGULAR CHECKS MINIMISE RISKS

The hydraulic hose line, caulked personally by the operator, is already installed in the machine. But as soon as the machine is started up, the hose fitting breaks free. Propelled by the enormous oil pressure, the coupling flies several metres through the air and punches a hole in the wing of a nearby van. Pure luck that no one was standing close by, and the clip and squirting oil did not hit anybody. The consequences would undoubtedly have been serious, perhaps even deadly. "They made that up", you are thinking. Absolutely not.

This example is intended to illustrate how critically important it is to follow instructions when working with hydraulic systems and machinery, and to ensure that maintenance is carried out regularly. In this case, the hydraulic hose line had not been caulked in accordance with the manufacturer's instructions, so it could not withstand the oil pressure. In order to guarantee that hydraulic hose lines are integrated safely, the person who integrates/assembles them must have a thorough knowledge of both the integration procedure and the devices and components that are to be used. And it should always be borne in mind: Hydraulic hose lines are wearing parts: they must be inspected regularly, and replaced as soon as this becomes necessary. This is the only way to prevent machinery breakdowns and stoppages, and the associated financial losses. And of course it is also essential for ensuring employee safety. Responsibility for this lies with the operator. In the event of a serious incident, ignorance is no defence against a penalty.

### COMPREHENSIVE REGULATION

To ensure that there is no room for ignorance, the responsibilities of hydraulic hose and machinery manufacturers, and of the operators of hydraulic systems, are set forth in various instructions. The most recent and most complete set of rules and standards is the professional association directive which entered into force in November 2008, entitled BGR 237 "Hydraulic hose lines – rules for safe handling", with substantial contributions from Ulrich Hielscher, the director of the IHA training centre. This new, comprehensive set of regulations was necessary because hydraulic systems are becoming progressively more powerful and more effective. Machines and systems operate under ever higher working pressures. Added to this, cycle times are constantly getting shorter, machines are running faster, operating times becoming longer. As a consequence, pipe and hose lines must withstand significantly greater stresses than ever before. If they are not maintained regularly, serious accidents can



Photo: Ulrich Hielscher



Photo: Ulrich Hielscher

**INCORRECT INSTALLATION** of hydraulic hose lines can lead to serious accidents, which may not only damage machinery and cause production losses, but may also threaten the lives of people close by.



occur, which may result not only in machinery stoppage and consequent production losses, but may also threaten the lives of people working in the vicinity. "The new safety regulations provide operators with detailed information about how to work with and on hydraulic components", declares Ulrich Hielscher.

### INSTALLATION AIDS AND TIPS

The value of the new BGR 237 to operators of hydraulic systems is obvious. They have a specific working aid for evaluating possible sources of risk and the measures that must be taken in response to them. And the regulations also provide complete guidance. For example they describe preventive measures that the operator must take in advance to prevent damage from occurring. Besides installation advice and practical tips, the effects of harmful environments on hydraulic hose lines are also illustrated dramatically.

### CORRECT INSTALLATION

"Many operators are not aware of their own responsibility, and trust in the adage 'Ignorance is bliss'. But ignorance is no excuse in a court of law, and operators are duty-bound to familiarise themselves with the ordinances. This is one of the reasons why we have completely revised the old ZH1/74, which dates from 1988, and adopted BGR 237", Mr. Hielscher explains. The professional association regulations provide operators with detailed instructions for working

with safety-critical parts. In this way, they can avoid errors even during installation that would inevitably lead to breakdowns. Anyone with a good knowledge of BGR 237 will soon see in practice whether a hydraulic hose line has been installed correctly.

### AUTHORISED PERSON

But since theoretical knowledge is not enough when it comes to practical realities, the company as the machine operator must appoint an "authorised person" to inspect the hose lines, and ensure that this person receives the appropriate training. Seminars and advanced training courses designed specifically for this purpose are offered by HANSA-FLEX's cooperation partner, the International Hydraulics Academy. Training contents include how to work correctly with hydraulic hoses and pipelines and the associated connecting equipment. Upon successful completion of the training, the person named as the authorised person by the company will have the knowledge he needs to inspect hose lines on the basis of all safety-critical instructions. These visual inspections must be carried out regularly – this too is provided for in BGR 237. The length of the inspection interval is determined by the operator itself after a thorough safety analysis. Maintenance intervals of six to twelve months are recommended. But machine operators should also comply with the manufacturer's instructions. If inspection intervals are extended, this decision must be reasonable, justified and documented from a safety point of view.

Photo: Jan DeVaux



Photo: Jan DeVaux



**DANGER OF ACCIDENT** due to improperly caulked hose lines: the fitting broke free under the enormous operating pressure, the coupling punched a hole in the wing of a nearby van – this accident could have been deadly.

### Essential points at a glance

#### The operator is responsible for:

- Using the hose line in compliance with the regulations
- Scheduled monitoring and systematic inspections by an authorised person with the appropriate qualification and knowledge of hose line equipment
- Detecting and eliminating defects
- Replacing hydraulic hose lines in accordance with a schedule

#### Correct installation of hydraulic hose lines:

- Determine the length of hose lines depending on the installation conditions
- Avoid twisting
- Observe bending radiuses
- Install hydraulic hose lines according to their natural lay
- Ensure that there is always a straight section behind the fitting
- Avoid external damage such as abrasion
- Use fittings that are adequate for the purpose
- Install at a sufficient distance from heat-radiating parts

# IT'S ALL ABOUT THE PACKAGING

## OLDENBURG INDUSTRIAL ASSEMBLY RAISES SAFETY LEVEL



It was an important part of many an impromptu game of football, in the school playground or in the alley between houses. It featured prominently on advertising billboards and caused more than one public litter bin to overflow. Even today – seven years after a deposit was introduced for cans – the aluminium can is still a very popular drink container. But it has all but completely disappeared from our rubbish dumps.

When the German Federal government introduced deposits for cans in 2003, most people thought this would be the kiss of death for the beverage can. But as it has turned out, their predictions were decidedly premature. It did not take long for the leading supermarkets to discover that their customers are quite attached to this method of packaging. They were returned to the shelves in very short order. And most of them are produced at the three German production sites of the British packaging company REXAM Beverage Can. REXAM is one of the largest manufacturers of aluminium cans in the world. In 2008, they turned out 55 billion. With an annual turnover of more than four billion pounds sterling, and over 24,000 employees in 20 countries, the concern is in the packaging industry's super-league. They supply brewery combines such as InBEV, and soft drink manufacturers such as Coca Cola, and the energy drink titan Red Bull.

### BETTER THAN YOU WOULD THINK

As a drink container, the aluminium can has many advantages over other packaging types. It is easy to carry, and lends itself exceptionally well to being stored. Because of its material properties, it cools quickly and is break-resistant. It is also the only form of packaging that is completely impermeable

to oxygen and light. This protects the contents and ensures a long shelf life. If recycled conscientiously, it has a good ecobalance, because aluminium cans are 100% recyclable. And they can be recycled an infinite number of times with no deterioration in quality. At the same time, the energy savings compared with production of new items is 95 percent. And though this may be surprising: The aluminium can has the highest recycling rate of any packaging form worldwide.

### SETTING CHALLENGES

Working from the HANSA-FLEX branch in Berlin-Tempelhof, Sylvia Seidel has been looking after this customer on-site since 2008. On her very first visit, she learned from Bernd Hoffmann, the repair workshop manager at REXAM, that the can recycling press was constantly breaking down and leaking, and no one seemed to be able to fix it. This situation was unacceptable given REXAM's stringent safety requirements. A solution had to be found. And that was precisely the task Bernd Hoffmann set Sylvia Seidel. With the merest hint of a wink, he said: "If you want to become our supplier, you have to be able to do what your competitors don't dare." He meant the can recycling press. At the HANSA-FLEX technical expert's conference in Dresden, Ms. Seidel discussed

her dilemma with Bernd Nieder, deputy manager of Industrial Assembly in Oldenburg. Soon afterwards, they both returned to REXAM in Berlin to have a closer look at the problem. It was immediately obvious that something needed to be done here. "The whole setup was completely non-standard, and not even up-to-date", says Bernd Nieder. "It was imperative to us to find a permanent solution that would substantially improve the system's runtime and conform to our demanding safety standards", Bernd Hoffmann explains REXAM's concerns.

### CONVINCING CONCEPT

Following the first tour of inspection, Bernd Nieder and his team worked out a concept that would not only improve the runtimes of the can recycling press, but would also make it easier to service the system in the future. A specially designed block of four valves would replace the old setup, which in turn would mean that the pipework between the individual valves could be dispensed with. This ought to reduce the number of fault sources drastically. The customer's existing hydraulic drive consisted of a plant with two pumps, each with a displacement of 250 litres per minute. The concept was acceptable, and three telephone calls later, the order was awarded. The block was designed by EAB/Dresden's engineering

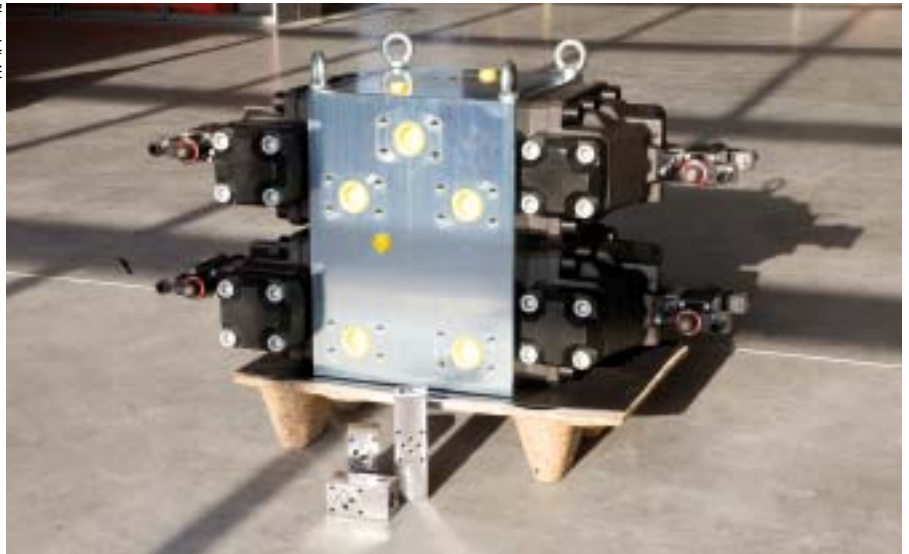


team, led by Ralf Weichert, according to the specifications supplied by Oldenburg Industrial Assembly, and manufactured on the new CNC machining centre. After undergoing preliminary commissioning on the test bench at EAB/Dresden, the control block was freighted to the customer in Berlin by a haulage company. Once it arrived, the Oldenburg Industrial Assembly team under Bernd Nieder set about installing it.

Even before they started, it was discovered that the flanges on the old system that were used for the original installation did not conform to modern standards, and it would not be possible to buy flanges of the same size and shape. "We produced the adapters and built each flange individually", Bernd Nieder recalls just one of the challenges of this project. It practically goes without saying: Every last hose line has been provided with an X-CODE to ensure that obtaining replacement parts in the future will be much easier.

The valve block has been operating since the beginning of December 2009. Since that time, there have been no more leaks or breakdowns. A welcome side-effect of the HANSA-FLEX solution: The can recycling press also performs its task a good bit more quietly than before.

Photo: Julia Ahlers



**THE NEW SPECIAL VALVE BLOCK** for controlling REXAM's can press was developed by the HANSA-FLEX Engineering/Plant construction division in Dresden. The massive valve block (for comparison purposes, commonly used valve blocks with normal dimensions are shown in the foreground in the photograph) works without the old pipework, thus substantially reducing the number of possible fault sources.

### Technical data for the valve block

- Weight: approx. 540 kg
- Equipped with four pilot-operated NG32 distribution valves
- "P" and "T" lines connected to each other internally
- 4 x "A" and "B" outlets on each
- All connections flanged in accordance with SAE DN40

**IHA** [www.hydraulik-akademie.de](http://www.hydraulik-akademie.de)

Issue

## Training seminar schedule February – March



|                  |  |                  |
|------------------|--|------------------|
| 01. – 05.02.2010 | Maintaining hydraulic systems                                      | Dresden-Weixdorf |
| 10.02.2010       | Principles of line equipment                                       | Boffzen/Höxter   |
| 11.02.2010       | Principles of line equipment                                       | Bremen           |
| 08. – 12.02.2010 | Principles of fluid technology part 1                              | Dresden-Weixdorf |
| 08. – 12.02.2010 | Proportional hydraulics  | Dresden-Weixdorf |
| 11. – 12.02.2010 | Introductory seminar to stainless steel and elastomer compensators | Boffzen/Höxter   |
| 19.02.2010       | Principles of line equipment                                       | Manching         |
| 15. – 19.02.2010 | Mobile hydraulics  | Dresden-Weixdorf |
| 22. – 26.02.2010 | Principles of fluid technology part 2                              | Dresden-Weixdorf |
| 01.03.2010       | Principles of sealing equipment                                    | Eisenberg        |
| 11.03.2010       | Principles of line equipment                                       | Bremen           |
| 08. – 12.03.2010 | Proportional hydraulics  | Dresden-Weixdorf |
| 15.03.2010       | Introductory seminar on metal hoses                                | Boffzen/Höxter   |
| 15. – 19.03.2010 | Principles of fluid technology part 1                              | Dresden-Weixdorf |
| 22. – 26.03.2010 | Mobile hydraulics  | Dresden-Weixdorf |
| 22. – 26.03.2010 | Principles of fluid technology part 2                              | Dresden-Weixdorf |



Photo: taglicht media

# ROUND THE WORLD IN AN ADLER – PART 2

## FROM MOSCOW TO EUROPE VIA THE ANDES

Photo: taglicht media



ENCOUNTERS WITH FOREIGN CULTURES were an everyday event for Clärenore Stinnes and Carl-Axel Söderström on their journey round the world.

Clärenore Stinnes was the first person ever to circumnavigate the world in a car. In the first part of this article, HYDRAULIKPRESSE recounted the start of her journey, until she reached Moscow. There, the two technicians who were travelling with her gave up, and Miss Stinnes and her cinematographer Carl-Axel Söderström pressed on alone.

In Moscow, they bought weapons. Three rifles, 2,800 rounds of ammunition and several canisters of fuel were loaded onto the escort lorry, which Carl Axel Söderström drove after Moscow. From Moscow, they headed east. Predictably, it was very cold – the engine oil had to be thawed every morning before they could drive on. Clärenore decided to drive over the frozen Lake Baikal alone. Söderström would hear nothing of it, and followed her anyway. In the middle of the lake, a huge crack opened up in the ice. Miss Stinnes floored the accelerator and jumped over the gap. Safely on the other side, the Swede Söderström confided in his journal: “We escaped by the skin our teeth. We are being shadowed by wolves. Miss

Stinnes suggests that we address each other less formally.” The start of a love affair that neither wished for – Söderström was married.

The drove on through Mongolia to China. In the Gobi Desert, they were chased by robbers on horseback. Stinnes managed to pull away from their pursuers. Then a spring failed on the truck. They replaced the spring in 28 minutes, and barely escaped the galloping hordes. In Japan, they took ship for South America. Kilometres travelled after the first year: 30,000. From Lima, they continued over the Andes. Impossible gradients and nonexistent roads forced them to take extreme steps. The Adler was lifted up mountains with a block and tackle. They had to blast a path through the rock repeatedly. They drove down hillsides that were so dangerous they seriously took their final leave of each other before proceeding. In August 1928, it took them an entire day to travel 150 metres. They drank the water from the Adler’s radiator to save themselves from dying from thirst. Söderström became ill and no medicines seemed to help.

Clärenore made him a tea from coca leaves; they had to go on. After arriving in Buenos Aires, they turned around and went back to Chile and Peru – crazy!

When they finally reached the West Coast of the USA by ship, the situation became easier. There were roads, workshops, petrol stations. They met Henry Ford, President Hoover and Indians. Sailing from the United States, they first touched European soil again at Le Havre. Söderström’s wife was at the dock waiting, and travelled with them to Berlin. By all accounts, little was spoken on this stretch of the journey. Söderström and Clärenore were deeply in love.

On June 23, 1929 – two years after setting off – they returned to Berlin, where crowds turned out to congratulate them. Miss Stinnes decided to drive on to Stockholm in Söderström’s honour. Back in Stockholm, the cameraman divorced his wife. A year later, he married Clärenore. The couple raised three of their own children and several adopted children on a farm in southern Sweden. They never undertook another expedition. Clärenore Stinnes died in Sweden in 1990.

Photo: HANSA-FLEX Event GmbH



HANSA-FLEX’S XWORLD TOUR IN 2008/09 through Europe and Asia was an adventure, even with a better infrastructure.



# VACANCIES

“OUR EMPLOYEES ARE THE KEY TO OUR SUCCESS”

Photo: Julia Ahlers

## Industrial assembly manager, m/f – Hydraulics division

for our new facilities in Wismar and Bentwisch (job ref. 566).

### Your tasks:

Developing/coordinating new business. Managing industrial assembly operations with corresponding leadership responsibilities. Product and project consulting, also project supervision. Developing customer-specific solutions.

### What do we expect from you?

- Technical training (engineer, technician or master's qualification in a metalworking trade) and substantive commercial experience
- Substantive knowledge of hydraulics / You can read and prepare hydraulic circuit diagrams / Knowledge of the market and its trends
- You have performed management duties in the past
- Experienced in dealing with customers / Knowledge of SAP desirable
- Team spirit, good communication skills, and initiative

Send your written application, together with salary requirements, to:

HANSA-FLEX Hydraulik GmbH | Ms. Orywal  
Zum Panrepel 44 | 28307 Bremen  
pa@hansa-flex.com

HANSA FLEX

## Field technical staff with knowledge of hydraulics, m/f

for our branch in Stockstadt (job ref. 567).

### Your tasks:

Acquiring new customers, while maintaining and developing existing customer potential. You will advise our customers and ensure high customer satisfaction with your friendly, knowledgeable manner.

### What do we expect from you?

- Commercial profession with technical skills, or you have a technical background (qualified technician, master's qualification in a metalworking trade) with commercial skills
- You already have substantial, successful experience in field sales
- Extensive knowledge of hydraulic connection equipment
- You are highly motivated and able to work in a team
- You are adaptable and communicate well / class B driving licence

Send your written application, together with salary requirements, to:

HANSA-FLEX Hydraulik GmbH | Mr. Elezovic  
Industriestraße 5 | 64331 Weiterstadt  
d.elezovic@hansa-flex.com

HANSA FLEX

## Industrial assembly fitters, m/f experience with hydraulics and pipeline fitting

for our industrial assembly operation in the Wismar and Bentwisch area (job ref. 565).

### Your tasks:

You will respond quickly and use your technical skills to minimise equipment downtimes for customers at their sites. You will be responsible for repairing, maintaining, and installing hydraulic systems.

### What do we expect from you?

- Technical training (agricultural mechanic, fitter, metalwork)
- Professional experience in hydraulics, pipe installation or agricultural machinery
- Experience in repairing and installing hydraulic systems
- You are reliable and focused, even under time and operational pressure

Send your written application, together with salary requirements, to:

HANSA-FLEX Hydraulik GmbH | Ms. Orywal  
Zum Panrepel 44 | 28307 Bremen  
pa@hansa-flex.com

HANSA FLEX

## In-house technical services staff, m/f

for our branch in Gütersloh (workshop/warehouse).

### Your tasks:

Advising customers, counter sales, completing incoming orders. Packaging hose line assemblies and mechanical processing of connection fittings. Collecting items for shipment and monitoring inventory levels with computer assistance.

### What do we expect from you?

- Training in a metalworking profession (fitter, metalworker, or similar.)
- Knowledge of hydraulics / class B (3) driving licence
- Recognise technical relationships easily and solve problems confidently
- You have an instinctive service-oriented approach to customers and gladly work as part of a team

Send your written application, together with salary requirements, to:

HANSA-FLEX Hydraulik GmbH | Ms. Orywal  
Zum Panrepel 44 | 28307 Bremen  
pa@hansa-flex.com

HANSA FLEX

For more information about the company and the vacancies advertised here, please visit [www.hansa-flex.com](http://www.hansa-flex.com)

# NEWS TICKER

Photo: Julia Ahlers



### News about X-CODE

Ever since its introduction, X-CODE has been very popular with our customers. The alphanumeric code simplifies reordering of hose lines tremendously, and saves time and money. More and more customers appreciate its advantages. Up to the end of 2009, X-CODE had been used 4,275,714 times. And new orders are received every day.



Photo: Julia Ahlers



### Authorisations confirmed

The branches at Barleben and Hamburg-Stellingen passed their regular testing by the German Army last month. They and eight other branches retain their authorisations to manufacture hose and fitting combinations for the German Army according to Vg 95922-2. Besides Wilhelmshaven, one other branch passed the comprehensive test by the Army.



Photo: Prime Time Entertainment AG

## „INDIA“ SPECIAL RAFFLE

### PRIZE DRAWING OF TICKETS TO CIRCUS SHOW “INDIA” IN BERLIN

Experience a performance of dance, acrobatics and magic in a way never seen before in Europe. Join the artists, dancers, magicians, tightrope performers and fire swallows on a journey to the fabulous world of the Maharajas – in the heart of Berlin. The show conveys a panorama of Indian culture between tradition and the future. The largest show tent complex in Europe, with the atmosphere of an travelling kingdom, accommodates a veritable labyrinth of alleys and ornamented pavilions. Modern light and sound equipment creates the perfect illusion of a gorgeous palace setting.

The performances in INDIA are among the best in the world. Stage direction is in the hands of a team led by Franco Dragone, who is known chiefly as the

designer of successful Las Vegas productions such as “Le Rêve”, and as a long-time partner of “Cirque du Soleil”. The stunning dance sequences are directed by Shiamak Davar, India’s most famous choreographer. Together with Ray Leeper, a veteran of many show productions, he has created dance forms that reflect the vibrant spectrum of old and new India.

With the kind support of Prime Time Entertainment AG, we are raffling 3 pairs of admission tickets for the INDIA! performance on Saturday, March 27 at 2:30 pm in Berlin. The deadline for entries is Friday, March 12, 2010.

To be included in the drawing, simply send an email with “INDIA!” in the subject line to [ma@hansa-flex.com](mailto:ma@hansa-flex.com)

Photo: Prime Time Entertainment AG

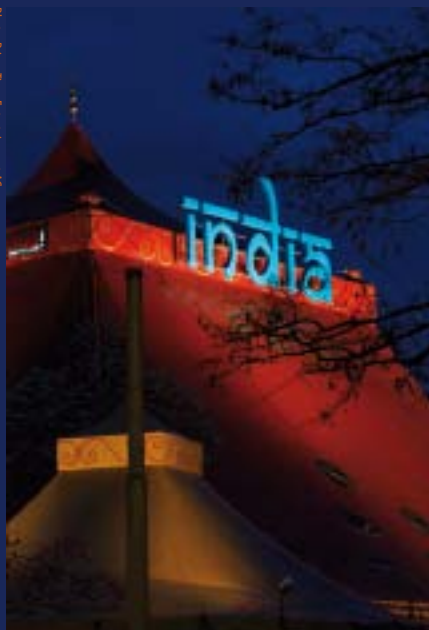
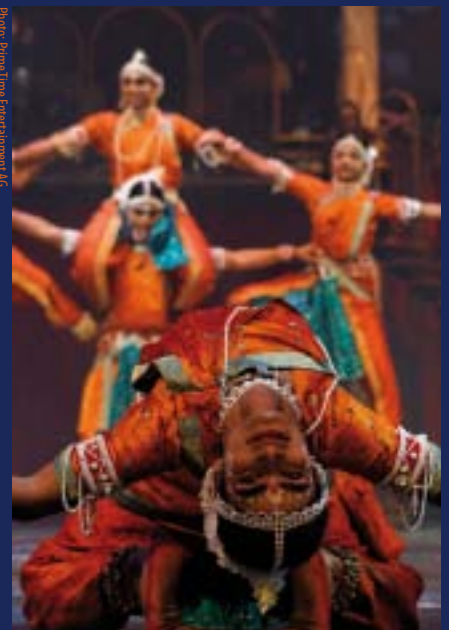


Photo: Prime Time Entertainment AG



# WIN A TOMTOM »XL LIVE«

SIMPLY ANSWER THE FOLLOWING QUESTION



In this issue, you have the chance to win a TomTom "XL Live" navigation system. Please send your answer by email to [ma@hansa-flex.com](mailto:ma@hansa-flex.com) or by normal post. Don't forget to include your name and address. Einsendeschluss ist der 15. März 2010. The deadline for receipt of entries is March 15, 2010. Only one en-

try per participant will be accepted. Legal recourse is precluded, the organizers will accept no liability, within the limit of the law. Cash payment in lieu of prize is not possible. Good luck!

Mobile Navigation System, 10.9 cm (4.3 inches) widescreen colour display, TMC: HD TRAFFIC™, lane guide, speed information, text-to-speech, maps of Europe and parts of the Russian Federation and Byelorussia, smart route planning with IQ Routes™, very compact due to foldable EasyPort™ holder, continuous real-time information with LIVE Services, incl. USB cable, on-board charger, documentation, voucher for a free TMC receiver, dimensions: 12.2 x 8.0 x 2.5 cm, colour: black, weight 182 g.

**QUESTION:**

What is the magnitude of the force that acts on the cooling units in the X-ray tube generated by its rotating speed?

- A: 50 g (50 times gravitational acceleration)
- B: 10 g (10 times gravitational acceleration)
- C: 30 g (30 times gravitational acceleration)

ANSWER EDITION 12|2009

Answer A: October 1911

(December would have been more accurate)

Winner 1: C. Mohn, Sindelfingen

Winner 2: K. Mrose, Glauchau

Winner 3: U. Dorres, Berlin

## FACTS & FIGURES

### ANNIVERSARY

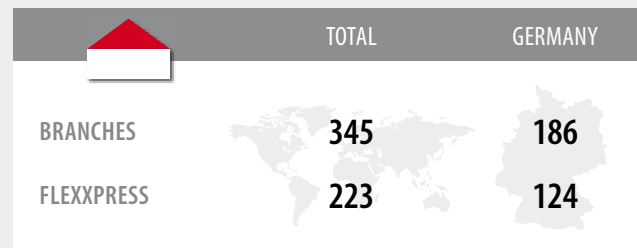
**March:**

|                           |          |          |
|---------------------------|----------|----------|
| Köln Rath/Heumar, Germany | Mar 2000 | 10 years |
| Minden, Germany           | Mar 2000 | 10 years |

### OPENINGS

**January:**

|                               |  |               |       |
|-------------------------------|--|---------------|-------|
| HANSA-FLEX Centro Norte, S.L. | Pol.Ind. Ugaldeguren, Parcela 14 I, nave 1 | 48170 Zamudio | Spain |
|-------------------------------|--|---------------|-------|



## PREVIEW 04|2010

THE FOLLOWING TOPICS WILL APPEAR IN THE NEXT EDITION

**COVER STORY**

TRADE FAIRS & EVENTS

PRACTICAL

WORK & LIVE

FASCINATION TECHNOLOGY

PEOPLE AT HANSA-FLEX

EDUCATION & TRAINING

PRACTICAL

Tunnel construction project in Linthal, Switzerland

HANSA-FLEX at BAUMA 2010

Flight simulator at Frankfurt Airport

Preventive medical checkups improve quality of life

Cladding technology in high-rise construction

Peter Stütz – An actor at HANSA-FLEX

Experience report by a HANSA-FLEX trainee

Hydraulics in spraying and asphaltting machines



There is only one thing more expensive than education.  
No education.



**IHA**

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