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## Success sowed

Cooperation in the Ukraine



**Bottles in** great shape With HANSA-FLEX by the side, production runs smooth



HANSA-FLEX ensures high standard at KIROVETS-tractors; The new force



#### Specialists for specialties

Germany's largest pump storage power station needed professional help

HANSA/FLEX



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### **Editorial**

#### Dear Readers,

"Time is money", three words — today more true than ever. Due to severe competition, our customers continuously face the challenge of lowering costs and increasing performance.

Therefore the time factor plays an important part in our strategy of local presence. With an extensive network of over 260 branches, HANSA-FLEX is always and everywhere in proximity to the customer: Be it near the numerous repair shops of the German Railways, in the proximity of the glassworks in Holzminden with round-the-clock production, or in the "German Dallas", the North Saxon city of Celle, where companies provide oil-drilling equipment throughout Europe. Wherever may be, HANSA-FLEX is quickly on the spot, since a branch is always nearby and — should it become necessary — can be reached day and night. Thus we are always in a position to quickly render help.

In his interview with HYDRAULIKPRESSE on pages 8 and 9, Heiko Richter presents the benefits our customers have from such a close cooperation with our branches. He informs you how the world around our system competence in the field of hydraulics opens up to you at once by opening the door to a HANSA-FLEX branch: Every branch is backed by the entire competence of the numerous specialised HANSA-FLEX operations.

On page 16 you will become acquainted with one of these special operations: Our Eisenberg seals specialists, who exclusively take care of seals technology. From the big seal with 1.000 mm diameter in a hydroelectric power plant all the way to the small seal with 5 mm diameter — they stay sealed. Same as every other HANSA-FLEX special operation, they cooperate efficiently with all HANSA-FLEX branches with the interest and benefit of the customer in mind.

At HANSA-FLEX everything is centered around satisfied customers. To enable staff members to provide the best possible service, HANSA-FLEX focuses on intensive training. On page 18 of this issue you can read how they are structured and what makes them so successful. There you will gain an insight into the modern HANSA-FLEX training facility located in Dresden-Weixdorf, which also offers interesting training and seminar sessions for our customers. The time invested in training is definitely worth it.

The managing directors

**Uwe Buschmann** 

Thomas Armerding



## Success sowed Cooperation in the Ukraine

In agriculture, there often is only a very narrow time window available to carry out sowing at the right moment. But then, everything must happen quickly. Last May, a world record in sowing was achieved by a HORSCH Agro-Soyuz-Airseeder in the Ukraine: Within only 24 hours, the corn was sowed on 740 hectare while fluid fertilizer was simultaneously applied with the seed. This corresponds to a sowing speed of almost 19 km/h and the record was only possible due to a combination of latest sowing technology and robust, dependable tractive force.

Such a robust tine drill of the newest generation – which was used for this record – is the HORSCH Agro Soyuz-Airseeder with 52 draft coulters and a working width of 18.20 meter. Pulled by a tractor with at least 500 PS, the 15-meter long air seeder handles seeding and fertilisation in one pass. Seeding and fertilisation can be performed at the same time by using seed wagons with up to 17.000 litre capacity. In regular agricultural establishments, the air seeder processes 400 hectare per day. Intelligent electronics support the farmer in his work. A virtual track indicator via DGPS prevents that the sowing line is driven twice.

HORSCH Maschinen GmbH in Schwandorf/Bavaria manufactures the air seeder machines. The family-owned enterprise, founded in 1984, is one of the leading European manufacturers of cultivation and seeding technology. Since four decades, the Horsch family has been involved in cultivation without a plough on their estate. Today, these experiences are incorporated into the designs of new high-quality machines. Continued emphasis is placed on an increase of agricultural production by lowering the technology costs, while simultaneously utilising the potential yield. As demonstrated by the world record, modern seeding technology can now handle even difficult climatic conditions, like for instance parts of extreme humid ground.

the long-time partner HANSA-FLEX supplies the Bavarian company with the required hydraulic hoses, couplings and fittings, ready-to-assemble.

HANSA-FLEX also provides HORSCH Pronto DC with hydraulics. Contrary to the air seeder, this universal drill machine plants the seed with disc-like coulters into the ground. At working widths between three and six meters, the machine functions on the principle of levelling-consolidating-seeding-pressing, which ensures precise seed placement at the exact required sowing depth under any condition.

#### It must be Pronto

To assure high quality standards, market leader HORSCH attaches great importance to the fact that Western countries supply all components for the technically high-quality seeding machines – even when made under license. Concerning initial equipment

#### Complete team

Since 1999, the HORSCH Maschinen GmbH collaborates closely with the Ukrainian agricultural production and trade group Agro-Soyuz. The partners work together in developing and producing technology for cultivation and seeding - especially for agricultural operations in the Ukraine, Russia and Kazakhstan and market these machines as a complete team with tractors, seeding machines and seed hoppers in the CIS States.





is a transport company with more than 500 trucks. Meanwhile approx. 300 employees work in production and sales of seeding machines. The company is not only active in the agricultural machine branch, but also supports customers with training and seminars concerning all aspects of modern agriculture: from cultivation to seeding, maintenance of seed and harvest all the way to logistics.

formation Technology), Agro-Soyuz provides customers with the necessary know-how on the correct handling of the technologically sophisticated machines, thereby tapping their full potential. In addition, seminars covering current agricultural topics are held and companies receive advice on the development of individual and location-specific cultivation concepts and procedures.

demand of hydraulic hoses, couplings and fittings can be met in the future. Thus, HANSA-FLEX will keep an adequate stock of all the hydraulic components required by Agro-Soyuz for the seeding machines, so that the parts can be obtained directly from Germany as needed.

#### Modern agricultural strategies

On an adjoining 10.000-hectare model plant with livestock husbandry, Agro-Soyuz applies its own publicised methods, thus gaining new insights concerning the cultivation of large agricultural areas under climatic and ground conditions prevailing in large parts of Eastern Europe. Naturally, the manufacturer applies its own seeding machines in this model plant and demonstrates how they can contribute to cost reduction in large agricultural operations.

By employing the seeding machines — each covering a distance of ca. 6.300 kilometers per year on these fields - the fuel consumption on the 10.000 hectares of the model plant is reduced by approx. 300.000 dollar. Using conventional machines for the application of the seed on the same area, results in a diesel consumption of 800.000 dollar. Thus, the use of the popular seeding machine promises a noticeable cost reduction and meaningful profits. In the attached HORSCH FITZentrum (Research In-

Group advantage

The steadily increasing demand of HORSCH Agro-Soyuz seeding machines has encouraged the Ukrainian company to increase the current annual production of 120 units by fivefold. The resulting high demands are an additional challenge for the suppliers. In order to secure this consignment, HANSA-FLEX Key-Account Manager Matthias Henke visited the Ukrainian company on the occasion of a supplier day. Both partners determine now, within the scope of a basic agreement, how the increased

In doing so, the advantages of the international HANSA-FLEX group are fully utilised. The HANSA-FLEX branch in Schwandorf, up to now already the supplier of HORSCH Maschinen GmbH, remains the supplier for they hydraulic components. The HANSA-FLEX Export Department in Bremen and its Schwandorf branch attend to the Agro-Soyuz series production. Frank Dahms, Team Leader of HANSA-FLEX in Nuremberg, coordinates the precise operations. For unscheduled actions and requirements, the HANSA-FLEX branch in Kiev, under the management of Mr. and Mrs. Byschek, is available.





## Round or not round? Bottles in great shape

The moulds of the large IS-machines in the Holzminden glassworks open and close in second intervals and continuously bring forth new bottles. In this process, all machine components are under utmost stress. This applies especially to those hydraulic hose lines that are under stress by continuous pressure passages, cooling emulsions and dust exposure. When it comes to connectors for fluid technology, HANSA-FLEX Boffzen has been attending to the glassworks, founded in 1837, since more than 30 years.

Meanwhile part of the internationally active American Ol-Group (Owens — Illinois), the Holzminden glassworks specialises in the production of bottles. However, not all bottles are alike. Beer or wine bottles are made in mass production; the machines often produce the identical form for years, without any changeover. In Holzminden, though, 90 percent of the production consists of special liquor bottles in round and other shapes. Such bottles are the adornment of every bar and the ideal packaging for good drinks.

The glassworks concentrates on individual, light-weight bottles made of special white glass that are without any tarnish in terms of colour. In addition, this glass brings out the purity of the product — for instance the clarity of premium vodka. Accordingly thorough is the quality control of the finished bottles. The finished bottles undergo a visual inspection, which is carried out manually. The threads are tested and then each bottle is carefully wrapped and separated by a cardboard from the others. The certification of the glassworks according to DIN ISO 9001/2000 also documents the quality. Furthermore, the facility is in possession of the food-related permit according to HACCP, as well as the environment certificate according to DIN EN ISO 14001.

The Holzminden glassworks has moulding sets for approx. 1200 different bottle shapes, with a content range of 20 ml to 2.000 ml. It is mainly concerns very special and sophisticated bottle shapes, which are produced in small quantities. Perfect surfaces are of great importance for further enhance-



ment of the bottles by high-quality adhesive labels or decors in screen printing technique. In its own design centre with adjoining mould construction, the customers of the glassworks receive advice and support, including the area of feasible technical implementation.

#### Keep the rhythm

The IS (Individual Section)-machines are continuously employed round-the-clock, 365 days per year. These computer-controlled machines form the core of the production, which takes place in four shifts. The liquid blend of quartz sand, lime, soda and feldspar flows from the melting tank to the IS-machines. They operate in press-blow and blowblow method. When using the BB-method, all processing steps of the bottle are performed in blow techniques, while in the press-blow method the pressure of a mandrel first shapes the bottleneck. Every machine, for instance, is equipped with ten blow sections, each of which produces a finished bottle. During an elaborate procedure, the red-hot glass gobs are preformed and finally, in a second step, blown into the required shape. Small series of special bottles in all possible shapes originate from so-called combination jobs with single and double gobs; however, the gobs must weigh the same.











Boffzen, in the rural district of Holzminden, looks back on 500 years of glass making tradition. The 'Glasmuseum Boffzen' confines itself to the last 150 years, thus the time of industrialisation. The first Industrialised glasswork in Boffzen was founded in 1872

Visitors can get a picture of the glass making trade on site, where mainly utility and household glass for the commercial and industrial field was manufactured. The museum informs on the production processes of the mouth-blown and pressed glass all the way to the latest fully automatic production.

In way of a permanent exhibition, the museum shows almost the complete German beer glass production of the 50's and 60's, in addition to carafes, vases and particularly exquisite and delicate individual pieces. It's worth a visit.

Information at: www.boffzen.de

The work rhythm in both methods is the same: The moulds of the IS-machines are opening and closing in second rhythm. Thus, per minute 120 gobs are distributed on ten sections. Each section produces a bottle every five seconds. The glassworks can produce up to 1,5 million bottles per day.

This places high demands on the hydraulics of the machines, which HANSA-FLEX Boffzen attends to since over 30 years. HANSA-FLEX supplies metal and PTFE hoses for the high-stress areas relating to IS-machines, where extremely high ambient temperatures prevail. The material for the control hose lines and for the line system for the cooling air, covering all aspects of blow moulding, is subject to great demands. Employing large-sized metal hose lines to cool the shell of the melting tank — where approx. 1.600 °C prevail — extends their durability up to two years.

The temperature resistant metal and PTFE hoses are manufactured in Boffzen, where HANSA-FLEX with its decades' worth of expertise can develop special solutions - together with their customers - to optimise the processes and characteristics. Each metal and PTFE hose line is produced with a certificate, following intensive quality inspections.

#### **Avoid downtime**

Due to the numerous bottle shapes, of which 700 are continuously alternating, and small lot sizes, the daily production routine at the glassworks is subject to frequent conversions. A conversion of moulding sets on an IS-machine must be completed within two and a half hours. Each conversion requires detailed planning and preparation for the assembly team of the glassworks. Mishaps during

the conversion can result in failures that affect even the production line of the liquor manufacturers, since everything is coordinated with just-in-time deliveries. Missing bottles for the filling process result in costs.

Therefore, the HANSA-FLEX specialists support the assembly team of the glass works. There, Axel Engelhardt is responsible for the repair and maintenance of the production lines. He expects of HANSA-FLEX that "when he calls, the man stands at the door". HANSA-FLEX Boffzen successfully complies with this since more than 30 years and will continue to do so in the future. To render quick help in case of an emergency, the staff members in Boffzen are available on weekends and holidays as well.

In addition to the supply of hydraulic hose lines, including accessories like valves, fittings and components for the IS-machines, HANSA-FLEX also takes care of the hydraulic spare parts for the forklift fleet. HANSA-FLEX Boffzen supplies special pipes and fittings in close collaboration with the specialists in Dresden/Weixdorf.





## Interview with Heiko Richter: "Looking at the big picture beyond the boundaries of the branch"

16 years ago, today's HANSA-FLEX shareholder Jürgen Böttger founded the first branch of the New Laender in Demitz-Thumitz. At that time, Heiko Richter was one of the first staff members. When in 2004 the steadily growing group in the Saxony/Brandenburg region included already 14 operations, Jürgen Böttger established a broader management base in order to create more space for the strategic development.

As a pioneering staff member, Heiko Richter was entrusted with the management of the branches in Bautzen, Cottbus, Dresden-Weixdorf, Freiwalde, Görlitz, Pirna and Zittau, as well as the corresponding FLEXXPRESSk-vehicles. HYDRAULIKPRESSE interviewed Heiko Richter on his philosophy.

Heiko Richter: The acquisition of new customers is of priority. For that purpose, our actions must always centre on customer satisfaction. This is what we convey to our staff members. However, in order to meet this demand we also empower them to utilise the complete HANSA-FLEX system. The staff members are destined to secure the well-known service commitment and HANSA-FLEX quality standard. In doing so, they receive help from the experiences gained by their colleagues in

other branches, for instance with new products like X-CODE, X-CODEplus and X-CODE OEM. They can use these experiences to benefit their customers.

HYDRAULIKE 274511: How does the customer structure look in the branches of your group?

Heiko Richter: We have a very broad customer spectrum. It reaches from the local agriculture and forestry industry, which has always been of great importance to this region, leading companies from the machine and railcar building sectors, communal technology and plastic industry with its sophisticated tool and mould making, all the way to the paper industry and aviation. To support these customers we demonstrate our growing system competence on a daily basis. Thus, we meet exactly the requirements of our customers here in the East: It is not so much a matter of mere spare parts, rather a system capacity that provides all the hydraulic system tasks from one source. This is the reason for our growth. The specialised HANSA-FLEX operations provide us with the competence, capacities, specialists and technicians to meet exactly the expectations our customers have in us.

HYDRAULIC 27年513: Does this mean that your willingness to provide services, which exceed the standard program, opens new doors for you?

Heiko Richter: That is correct. Of course, the HANSA-FLEX standard products range of ca. 60.000 items that are available short-term remains the basis of our fast spare parts service and of the ability to support original equipment manufacturer customers. However, since the foundation of the operations in Saxony/Brandenburg, customers have continuously required tailor-made solutions from us. This could concern a special fitting or a small assembly. Little by little, we were able to offer these customised solutions, with success!

HYDRAULIKi 2:145511: Is the normal spare parts business at the counter still of any significance at all?

Heiko Richter: The fast spare parts service at the counter is still very important to our business. With X-CODE, HANS-FLEX has given an important impulse to expedite the spare parts procurement and make it even more reliable.

However, the individual HANSA-FLEX branch is more than that: it is the decisive interface between the customer and the HANSA-FLEX system. If a cus-









tomer enters our branch, the complete hydraulics service world opens to him. This ranges from the standard program to complex services like aggregate assembly; from small inspection and maintenance tasks with FLEXXPRESS to extensive industrial installations. In order to find the proper solution for each customer, the staff members of our branches have access to many resources. Not only catalogues, brochures and the Intranet, but also the nearest specialist is only a call away. All HANSA-FLEX special units, like engineering/aggregate assembly or the hydraulics component department, are always ready to help. Hence, it is possible to clarify the technical background for the application of valves, pumps or cylinders and simultaneously order the correct part in an expeditious manner.

HYDRAULIKI 2:14511: Your area contains many specialised HANSA-FLEX operations. Is this of advantage to you?

Heiko Richter: The system capacity and proximity of our special operations alone in view of competition with other suppliers is of help. Naturally, we use the presence of these operations particularly to convince customers of our efficiency, mainly in the field of original equipment manufacturing. Here absolute reliability during the development of technical solutions is demanded, as well as secure delivery in agreed upon quality and time. Taking our customers to visit our special operations to clarify specific questions further strengthens their trust in our performance. We use this offensively and thus been able to win original equipment manufacturers in numerous branches.

We supply complete components in small batches directly to their assembly line, whereat the hose lines usually already have X-CODE for later spare parts procurement.

Heiko Richter: The system is of great interest for some of our customers, because they recognise the advantage to place the complete service, concerning all aspects of hydraulics, into our hands. We will conclude the first OEM-agreements shortly. Based on the FLEXXPRESS service vehicles and the 24-hemergency service, HANSA-FLEX guarantees fast help. This sales argument appeals especially to medium-sized original equipment manufacturers. The improved service helps them to gain advantages over competitors, reduce their spare parts stock and thus considerably minimise their costs.

HYDRAULIKE 27:451: Back to ready to use solutions from one source. How do you comply with these customer requests?

**Heiko Richter:** In the meantime the market demands more than system competence; it expects service from assembly to start-up. The customer wants to take over the installation in ready to use condition and only have his personnel instructed accordingly.

For the customer it is important to minimise interfaces and, in case of warranty, to know who is responsible. Here we can provide a well-balanced proposal. We employ FLEXXPRESS for smaller assembly jobs, which the machines on board can handle. If heavy machines are necessary, we use our well-equipped workshop vehicle. In partnership with ThyssenKrupp Industrieservice, we offer complex industrial assemblies, like for instance the complete installation of a production line. In doing so, we take care of all aspects concerning hydraulics.

**HYDRAULIKE** 27.459.1: Looking ahead. What is your particular focus in the near future as group leader?

Heiko Richter: At this stage, team spirit is of great importance to me and we want to develop it further. In doing so, we attempt to strengthen the ability of each individual to better utilise the HANSA-FLEX system to the benefit of our customers. Our apprentices receive our special attention, because detailed knowledge of future hydraulic technologies provides them with all the opportunities for their further career. We all must try to look at the big picture beyond the boundaries of our own branch. If a customer visits our branch to buy a spare hose, it provides a good opportunity to familiarise him with our broad range of services. However, if he has a requirement that the branch cannot meet, we immediately establish contact to those departments that can help him. To act in the interest of the HANSA-FLEX Group and of our customer is what counts. Thus, we use the market potentials in a committed and motivated manner,



## HANSA-FLEX ensures high standard KIROVETS-tractors — The new force

A tractor from St. Petersburg rushes to the market. It consists mainly of European assemblies, among them Deutz-motors, Carraro-front axles and Boschhydraulics. HANSA-FLEX provides the piping. The Kirow-Plant in St. Petersburg is one of the largest and most experienced Russian tractor manufacturers. As of 2006, the tractor model Kirovets "K 3000 ATM" is expected to conquer also the European market. In order to ensure the high hydraulic standard the manufacturer has chosen HANSA-FLEX as his partner.

From the beginning, Kirovets tractors stand for robust, solid and extremely dependable quality. The first models of the reliable Legend series produced by the Russian agricultural equipment manufacturer left the St. Petersburg assembly line in 1962. Since then more than 460.000 tractors of the legendary K-series with up to 500 PS have been produced. Due to their enormous tractive force, they have always been in great demand by agriculture. Now the tractors, tested in Russia under the hardest operating conditions, rush also to the Western market.

Therefore, it was imperative that the new Kirovets tractor complies with Western standards. The appendix ATM in the type designation of the tractor signals that ATM United Technologies in Germany handled the design and development of the 3.000 series. ATM stands for "AgroTechMash" — the gen-



eral distribution company for Kirovets tractors operates under this name in the CIS States, but also in Germany.

In addition, ATM is responsible for the component purchase, logistics and development of new tractor models. Within the scope of this task, the ATM-branch located in Berlin assigned the West German engineering company with headquarters in Rhineland to develop modern tractors according to Western standards by including dependable assemblies. This engineering company not only supports its customers in product planning, development, design and production, but in procurement as well and supplies expeditiously samples, prototype parts and prototype vehicles in collaboration with efficient, flexible partners.

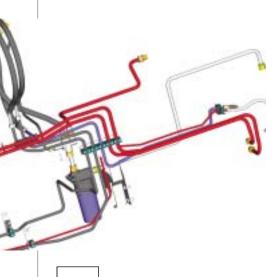


The tractor "K 3000 ATM" with almost 180 PS and six cylinders, draws his power from six litre cubic capacity. It is equipped with 7.500 daN lifting force, rapid action coupling, four hydraulic control units,

and one cross-lever and is controlled by a Bosch-EHR (electronic hitch control). A gear pump with 75 l/min and 190 bar pressure drives lifting unit and high-performance hydraulics. The oil charge is adjustable. Three levers provided at the lateral console of the ergonomic workstation in the clearly arranged driver cab control the hydraulics.

First impressions of the technical press concerning the tractor line "K 3000 ATM" are consistently positive. Thus, the "Profi" magazine states that the tractor from the Kirow-Plant is not only in flawless condition, but also offers a very good driving comfort. "Smart, solid, robust and with a sturdy motor" is the conclusion of the driving report. The magazine attests that the tractor — also concerning price — is an interesting choice and predicts good market chances for the tractor from St. Petersburg.

Besides the assemblies, motors from Deutz, front axles from Carraro and the hydraulic components from Bosch, ATM and its engineering partner selected HANSA-FLEX as supplier for the pipe and hose technology to ensure the high hydraulics standard. The cooperation between the ATM engineering partner and HANSA-FLEX specialist was off to a



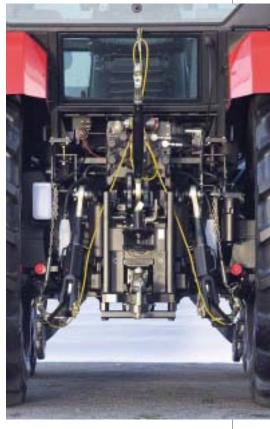


good start. The Pipe Bending Centre in Schönebeck reacted very flexible to the high demands of the tractor manufacturer. First, HANSA-FLEX produced on behalf of ATM pipe sets according to specified 3D-data and drawings for the tractor type "K 3000 ATM"; delivery took place directly to St. Petersburg and within Germany. In addition to the pipe sets, ATM also purchases hose lines for the Kirovets-tractors from HANSA-FLEX. For the assembly of the K 3000-series a new assembly line was installed in the Kirow-Plant. This is to ensure that the tractor enters the market in best quality.

#### The next step

As a result of the perfect collaboration on the new series between ATM engineering partner and the HANSA-FLEX Pipe Bending Centre in Schönebeck, HANSA-FLEX has been asked to supply short-term samples for the piping of the prototype of the follow-up model "K 5000 ATM". These newly developed tractors expand the product range of the manufacturer's medium-class models "K 3000 ATM" and implement uncompromising design specifications for global application and best economic efficiency.

A prototype of the K 5000 series, for which HANSA-FLEX provided the samples, was introduced last October at the "Agritechnica 2005" in Hanover. The complete piping of this prototype was carried out on site by a FLEXXPRESS service vehicle. At the time of finishing, all components have already their established place in the vehicle. Prior to this the tractor engineers and the specialists in the Pipe Bending Centre in Schönebeck worked together to design the most optimal piping in the tractors. This has been a success and meanwhile the piping is approved for the series. Currently preparations are made for the series production. The Pipe Bending Centre in Schönebeck supplies all pipelines for the series production of the new, super-strong tractor.



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## HANSA-FLEX in China Early market presence

The start is made. With a representation in Shanghai, HANSA-FLEX established a strategic base in China three years ago in order to have an early market presence and tap the growth potential.

Shanghai is the most developed city in China and at the same time the country's principal industrial, trade and financial centre. At the instigation of the HANSA-FLEX Executive Board, the first representation of the HANSA-FLEX Group in the People's Republic of China was founded in 2003, under the management of Mrs. Fang Wang. In 2004, this was followed by a branch in Chan Zhou.

There is plenty of work in these regions and the potential is great. Special attention is placed on numerous large projects in and around Shanghai. Worth mentioning are a bridge construction over the Huangpu-River, as well as two tunnel sites and the construction of another subway line, all of which require hydraulic services. The gigantic deepwater harbour, created in front of the coast, could also provide an interesting opportunity. There a 30 kilometre long bridge connects the harbour, which is located on a small group of islands, with the mainland.

The harbour, which handles already 5,6 million TEU container (twenty feet container equivalent unit) annually, is China's largest harbour and upon its completion, worldwide the third largest. Beside these large projects, many small companies are potential HANSA-FLEX customers in Shanghai. This city, located south of the Yangtze-estuary, has been the leading centre of Chinese textile productions for many years. The chemical and pharmaceutical industries, as well as machine, vehicle and ship constructions are further important production areas.

Due to its size, the Chinese market offers an enormous growth potential, which is manifest in a very promising acquisition of new customer for HANSA-FLEX. Since 1991, Shanghai alone achieves a two-digit economical growth. As "opened" city, Shanghai is not subject to any provincial government, but is under the direct leadership of the

central government in Peking. The economical revitalisation following the Cultural Revolution began in Shanghai already in the mid 80's of the previous century.

The key element of the industrial reform is the economic zone of Pudong. It was established in 1990, encompasses 522 square kilometres and is financially and economically supported by the central government. This economic zone forms the "dragon head" of the strategic economical development along the Yangtze-River, all the way to the deep backcountry of Central and West China. This close connection to the Chinese backcountry is an advantage that Shanghai has over its rival Hong Kong. Pudong is a giant zone of free trade, export processing, finances and trade, with adjoining high-tech Park. When the HANSA-FLEX representation was founded in Shanghai, more than 6.600 companies had already settled in Pudong. Among them also the German, big players" like Volkswagen, Siemens, BASF and Bayer. In form of a joint venture, Volkswagen built the first foreign car automobile plant already in 1984. The headquarters of approximately one third of all German companies are located in Shanghai and its vicinity.





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## HANSA-FLEX branch in Celle Drilling deep

Hard to believe, but true. The German Dallas is in Celle. The small North Saxon town is the city of the drilling industry. Companies like Halliburton, ITAG-Bohrtechnik, Wellco Drill, AGBO or M-I-Drilling Fluids have their headquarters in this region. The HANSA-FLEX branch Celle is in the thick of it as partner of these specialists for deep drilling equipment. These companies rely on HANSA-FLEX in Celle as their one-source contact to meet their different requirements concerning fluid technology. Same as all the other HANSA-FLEX branches, Celle has access to the complete HANSA-FLEX program at any time.

The HANSA-FLEX branch in Celle was founded on October 1, 1997 and is part of the Hanover Group. In addition to numerous industrial, trade and agricultural customers, the branch manager Hans-Jürgen Luckard and his team attend to the drilling industry. HANSA-FLEX Celle provides answers to drilling questions.

ITAG

For the ITAG Tiefbohr GmbH & Co. KG, HANSA-FLEX Celle supplies the complete spectrum of hydraulic parts and hydraulic hoses. ITAG refurbishes, maintains and operates drilling equipment for natural gas, crude oil and geothermal energy — e.g. utilisation of geothermal heat. The focus is on the so-called work over, the clearing-out of existing producing wells. In doing so, existing wells are updated and rebored. This includes wells that have been closed several years ago, because they were no longer considered profitable enough. In times of oil shortage and with new technology, the reopening of the oil production can be quite profitable. Thus, clearing-out has meanwhile become an important aspect of the oil production.

ITAG is active throughout Europe, mainly in Germany, France, Austria and the Netherlands. HANSA-FLEX Celle supplies hydraulic hoses in all nominal widths, as well as custom-made hoses, like preventer hoses with special VA-fittings. All hose lines are equipped with X-CODE to ensure quick and trouble-free spare parts supply. HANSA-FLEX Celle advises ITAG, helps with problem solutions and measures hoses on site.

## Continuously changing requirements

In contrast to this, the AGBO (Allgemeine Gesellschaft für Bohrtechnik und Anlagenbau) prepares the required hydraulic hose lines supplied by HANSA-FLEX on their own pressing and peeling machine. The company supplies its customers with mobile hydraulic drills and systems, which - installed on vehicles - are employed around the globe. Water drills with a drilling depth between 1.000 and 2.000 metres are mainly used in Arabian countries. In other locations, the equipment is used for geothermic drillings for warm water production. AGBO appreciates the HANSA-FLEX branch in Celle as reliable supplier of all components.

The M-I-Drilling Fluids Deutschland GmbH places completely different demands on the hydraulic service provider. M-I-Drilling, a supplier to the drill-

ing industry, produces for instance robust centrifuges with hydraulic drives, which split solids from fluids and are applied in oil fields; here they separate the drilling mud. In addition to hosing and piping with flared fittings for the complete product range, HANSA-FLEX Celle supplies MI-Drilling with hydraulic components, cylinders and filter elements. This shows the advantage of being part of the HANSA-FLEX Group.

As all other HANSA-FLEX staff members, Joachim Ebeling, shop manager in Celle, has direct access to all the services HANSA-FLEX provides in the field of fluid technology. M-I-Drilling appreciates this fact.

The Halliburton Company Germany deals mainly with borehole quality, seal inspection, and drill pipes for gas drilling, as well as pressure and temperature measurements. With a mobile shop vehicle, HANSA-FLEX Celle was at the customer's site in September 2005 and produced hydraulic hoses. They were, among others, for a cementation installation on a truck, which was completely equipped with new hoses by HANSA-FLEX staffmember Siegmund Zydek. Naturally X-Code was used for this installation, with which drill holes up to a depth of 3.000 metres can be sealed.











## Railway-partner with quality certificate Branch-network creates good connections

"Everybody talks about the weather …" Even today this catchy slogan stands for the reliability of the German Railways (DB). Day by day, it transports thousands of passengers and tons of freight — approx. 300 million tons per year — under almost all weather conditions safe and dependable to their destination. Be it on latest high-speed routes in an ICE (Inter City Express) at up to 250 km/h, in a regional express in urban traffic or in freight trains: The railway sets things in motion, since more than 20 years with the support of HANSA-FLEX.

To ensure the degree of dependability required by a highly engineered transport system like the railways, all wagons and locomotives of the German Railway are maintained in systematic intervals and regularly overhauled in railway-owned repair shops. All spare parts used here must be clearly specified and approved by the railway prior to delivery permission. The hydraulic area concerning HANSA-FLEX, for instance, defines exactly what hose can be combined with what fitting. In addition, numerous applications require a flammabil-

ity test according DIN 54837 as prerequisite for delivery permission. As ISO-certified operation, HANSA-FLEX Hydraulik GmbH has secured these requirements in clearly defined processes.

This relationship between the railway and HANSA-FLEX started more than 20 years ago with the supply of hose line replacements. Today HANSA-FLEX supplies the complete spectrum of hydraulic connectors; meanwhile the railways has also metal and PTFE hoses listed.

The railway operates repair shops throughout Germany. Thus, lengthy travel distances of the train can be avoided. This is important because sometimes there are only a few hours available to inspect and possibly overhaul a complete train, locomotive or wagon. In order to comply with this narrow period, the railway relies on the HANSA-FLEX system. Thus, the local branches attend directly to the repair shops and ensure dependable spare parts availability. This proximity is of special value in case – despite of all advanced planning – quick reaction without loss of time is required due to unexpected problems on hose lines. In such times, HANSA-FLEX makes every effort to provide quick help.

To ensure a smooth cooperation between the large operation of the German Railway and HANSA-FLEX, Reiner Plöger, manager of the Oyten branch, has been taking care of the coordination for many years. He organises the collaboration of the HANSA-FLEX branches with the according repair shops of the railway, attends to customer enquiries, draws up proposals and basic agreements, and makes sure that the customer is completely satisfied.



#### Valued as Q1-supplier

When supplying the railway, HANSA-FLEX deals exclusively with spare parts service and is listed as supplier with quality capability. In this function, standard hose lines and specially designed hose lines with custom-made fittings, couplings



and prepared pipes for immediate installation are supplied. Just recently, the Q1-certificate, which is issued always for one year, has been renewed by the railway and extended to metal and PTFE hoses. More precisely, this applies to "connection elements made of elastomer, metal, PTFE (e.g. hose lines, compensators, hydraulic pipes, fittings and couplings), as well as components/systems prepared thereof. Thus, the railway has the advantage of receiving an expanded spare parts spectrum from one source. In doing so, HANSA-FLEX supports the effort to optimise suppliers, i.e. not only to find the suitable suppliers for the requested quality, but also to limit their number.

Only suppliers that undergo regular intensive audits by the railway receive the Q1-certificate. In December, Jörg Hartmann, responsible at HANSA-FLEX Hydraulik GmbH for quality management, conducted the annual audit of the German Railway at the Oyten branch. Since the operation is already in possession of the permit as inspection organisation for the German Federal Armed Forces, thus the assurance of highest quality requirements being part of the daily routine of the staff members, the good audit result was of no surprise.

For the first time the Q1-certificate was expanded to include metal and PTFE hoses, and therefore the operation of HANSA-FLEX metal hoses in Boffzen was subject to an audit as well. There Reinhard Wiegers was in charge of supplying the railway auditor with the extensive information. With good results, since meanwhile the metal and PTFE hoses of HANSA-FLEX can also be supplied to the DB-repair shops for the areas of hydraulic circuits, filling stations, exhaust and compressed air systems, transformers and tank wagons, or as shock absorption in gas turbines.

#### **Background work**

The hydraulic - mostly invisible to the human eye — makes a significant contribution to the safety of the German Railway, for instance when opening and closing the doors, or when braking. In order to shorten the brake distance during full braking, and to support the retarding effort, the railway spreads sand on the rails. The sand delivery pipes employed for this purpose are precisely tailored in the Pipe Bending Centre in Schönebeck, according to the specified bending program.

The close interaction of the HANSA-FLEX Group is convincing, especially in the spare parts service as spare parts supplier for the railway. For instance, the specialists in the Pipe Bending Centre in Schönebeck manufacture the required pipes based on drawings of the German Railway, and the department for special fittings in Dresden/Weixdorf ensures the timely availability of the finished spare parts. All this takes place in close collaboration with the according HANSA-FLEX branches. Complying with clear guidelines and classifying each spare part applies here as well; this is the only way the railway can ensure that its high quality specifications and safety standards are met.

## Setting the points for the railway

As partner of the repair shops HANSA-FLEX ensures a trouble-free operation. All the employed equipment - forklifts, lifting platforms, presses and test stands — works with hydraulics. Especially the motor test stands must continuously be adapted to meet new requirements. The performance of every motor employed by the railway — be it a diesel engine for a shunter, or hp-strong aggregate for the traction engine of heavy freight trains, or an ICE-power head — is regularly checked. This inspection is subject to stringent criteria on the

test stands, on which the locomotive engines are mounted. To lower costs, these test stands are designed to accommodate different motor types. Here HANSA-FLEX provides the according hosing and the preparation of the correct quick coupler systems for fast motor change.

Recently HANSA-FLEX received the assignment to replace the hoses on the setting points in the railroad shunting yards of Bremerhaven, Hamburg and Mannheim on behalf of the German Railway. In the shunting yards, thousands of wagons are combined into new trains every day, mainly on an automatic basis. The quick motion of the remotely controlled points, carried out by high-performance signal boxes, is assumed by hydraulic systems. Equipping the points with new hoses was a demanding task, since only little time was available due to continuously moving trains and busy railway operations. HANSA-FLEX performed this assignment accurately and on time.

In addition, HANSA-FLEX assists in the clean appearance of the railway. The DB-train washing bays use hose lines that, due to their base-resistance, have an especially long durability. For this purpose, HANSA-FLEX supplies industrial hoses with fabric inlay.

Photo: DB AG/Heinrich





## Specialists for specialties The seal experts from Eisenberg

VATTENFALL EUROPE GENERATION AG, Goldisthal pump storage power station — in Germany's largest pump storage power station located in the Thuringian Slate Mountains, leakages occurred in the 1000mm diameter pivots of the ball valves, which function as a plug between the pump turbines and the works water lines. Now HANSA-FLEX was in great demand; more specifically, the seal experts from Eisenberg.

## Inventory program for quick help

The specialised HANSA-FLEX operation for sealing technology in Eisenberg has been in operation since 2001. The modern facility provides standard seals for hydraulics from its extensive stock. Alone 8.000 seal variations in different executions are always available on stock and the inventory is continuously adjusted to meet the latest requirements. This puts HANSA-FLEX in a position to render quick help, in most cases from stock. If a seal becomes unexpectedly defective — as is the case most of the time - and possibly paralyses the complete production line or significantly interrupts the work flow, this is of great advantage.



#### Solutions for special cases

Customers value especially the ability of the specialised operation to supply custom-made seals in a quick manner. For this purpose, a large warehouse with elastomer and other half-finished products, as well as a CNC-controlled production centre is available. Here it is possible to produce individual seals with an inner diameter of 5 mm to an outer diameter of 520 mm — from the individual piece to the small series — in an expedient manner. Seals with a diameter up to 2.500 mm are available on a short-term basis. Especially persons in charge of maintenance in industrial operations, but also service providers, who expect fast and competent action, appreciate this dependable spare parts business.

The trained and committed team of HANSA-FLEX sealing technology offers both, as became evident in the case of the pump storage power station Goldisthal VATTENFALL EUROPE GENERATION AG, which started its operation in 2003. First, the summoned HANSA-FLEX specialists analysed the application situation on site. It quickly was determined that the form and material of the existing seals did not meet the operational conditions. In coordination with the Vattenfall engineers, HANSA-FLEX developed a solution that did not require a modification of the existing components. This is a great benefit, since a disassembly and overhaul would have been very extensive and costly. The application of new seal geometry and new materials created a sealing system that proved itself in turbines.

#### Early integration of expertise

However, this quick ad-hoc assistance is only one pillar of the company. A second talent of the seal experts from Eisenberg is increasingly in demand: namely their roll as partner to find solutions for individual sealing problems. Thus, longtime experience and daily practice in handling such specific problems benefit the customers. Technicians and engineers exceedingly rely on the experts' advice already at the beginning of a new development. They attend to the customers from a design point of view by integrating their current expertise on sealing technology and include this knowledge from the beginning. In doing so, the customers avoid getting on the wrong track; they find quick solutions and can determine the technical feasibility at an early stage, thus reducing costs.

As example serves the machine tool manufacturer TRUMPF Maschinen Austria GmbH & Co KG in Pasching, a worldwide leader in the production of hydraulically supported press brakes and systems for sheet metal deformation. The customer has been searching for quite some time to find a reliable solution for ducts in integrated units. The HANSA-FLEX branch in Linz and the seal experts collaborated intensively with the TRUMPF specialists and developed a previously little known duct with a V-seal made of polyurethane. It makes it possible to fix and loosen the pipe in any required position and reliably absorbs any possible vibrations. After a successful test phase, the customer is now employing this system in his machines in nominal widths of 25 to 75.

When handling a development for the Tridelta GmbH, a completely different problem and a special medium faced the seal experts. The company with its headquarters in Hermsdorf/Thuringia is one of the leading magnet manufacturers in Europe. Here HANSA-FLEX developed a seal solution to conquer abrasive media. In this case it is ferrite slip, used for

#### SEALING TECHNOLOGY

the production of permanent magnets. This ferrite slip has a solids content of ca. 65 percent in water, which develops a high abrasive effect on all systems, as well as undesirable deposit behaviour. This results in increasing problems on the seals of the conveyor unit. Results: Frequent exchange of seals with corresponding machine downtimes. A specially developed sealing system and a slight design change on the metallic components, resulting in three times the durability, proved to be a success.

Sealing made easy

The customer can obtain solutions for sealing problems at each of the more than 260 HANSA-FLEX branches in Germany and abroad. Each branch can take advantage of the services provided by the Eisenberg seal experts. They not only have access to replacement hoses and parts supplied from the HANSA-FLEX inventory program, which includes 60.000 different items, but simultaneously to 8.000 seal types in various executions. Within the scope of sales support, Björn Kettmann shows all staff members how to handle the comprehensive catalogues for hydraulic seals, static

and friction bearings, as well as the measuring equipment to determine the installation space and the interaction between customer - branch - sealing technology.

In addition to this support, which the branches provide on site, Klaus Schieferdecker, who is the manager of the special sealing technology operations, conveys his extensive knowledge to customers and staff members in the HANSA-FLEX training facility. The staff members of the sealing technology also visit seminars at reputable manufacturers to stay informed on the latest developments in the area of sealing technology.

Structured resources, like measuring equipment, assembly tools and order and inquiry sheets for data acquisition enable the HANSA-FLEX branch staff members to give their customers quick and competent support in all aspects of sealing technology. In case of very tricky problem, often all it takes is a short call

to Eisenberg to provide specific solutions for even unusual enquiries. Thus, the customer or branch can order the appropriate seal with the required information. Besides specifying pressure, temperature, medium and operation, most of the time, the indication of three metal dimensions is sufficient to supply a seal from the standard program, or to manufacture a functional seal. It cannot get much simpler for the customer and branch staff members.





## It's worth taking a look Training facility Dresden-Weixdorf

To be professionally up-to-date in today's work environment it is essential to continuously learn and train. Thus, HANSA-FLEX not only provides its staff members with an opportunity to do so, but also its customers. In its very modern equipped training facility in Dresden-Weixdorf, HANSA-FLEX offers a complete seminar program on all aspects of fluid technology. A training staff of five experienced hydraulic experts covers the various aspects of hydraulics in form of seminars. HANSA-FLEX conducts these training programs successfully since five years.

The seminar structure in the HANSA-FLEX training facility is such that individual seminar modules, which are based on each other, can be combined. They address personnel in the fields of operation, maintenance, assembly and planning, but also field staff, technical inside sales and design engineers. According to this, the seminars are conducted in an application-oriented method. There is no teachercentred teaching. "We do not consider ourselves as teachers that bore the participants with long lectures, but prepare the seminars in such a way that someone who has finished school a long time ago, can guickly familiarise himself with the topic again", says trainer Wolf-Rüdiger Schmidt. The mechanical engineer works in the hydraulic field and maintenance since 1979 and holds the position of training manager for hydraulics/fluid technology at HANSA-FLEX since 2001.

According to this self-conception, the seminars are supported by many - also animated - models and concrete samples. The introduction of each valve, for instance, takes place by coloured animations. The trainer developed all presentations himself, thus these unique training models are only applied in HANSA-FLEX seminars. This concept makes it possible to work out and present even complex connections in such a simple manner as is done in educational TV shows for children. Necessary formulas and calculations, which naturally are the foundation of the training, are presented in such a way that every participant will easily find his way back to the subject matter.

#### Practically well trained

Of course, practical experience also receives adequate attention. In special practice booths, the seminar participants can develop layouts of hydraulic circuits together and subsequently test their functionality. The particular subject is conveyed in a clear and concise manner.

In the training facility in Dresden-Weixdorf, learning is based on the latest technical models: Pumps, cylinders, valves and filter, all current products from the HANSA-FLEX sales program, simplify the practical exercises. Likewise, the practice booths are equipped with programmed SPS controls, which help the participants to construct the electrical practice controls.

The focus-seminar of the training program is on "basics of fluid technology". It is divided into three one-week courses that are based on each other. The first training block addresses the theoretical fundamentals, like exercises to calculate the pressure of volume flow and the function and applications of valves. The two following courses increase the share of practical exercises, for instance in the field of maintaining and troubleshooting hydraulic installations, and provide further extensive exercises in the practice booth. The concluding third part of fundamentals enhances the knowledge gathered during the first two parts of the course. In addition to practical exercises, like disassembly of accumulators, the seminar introduces the field of proportional hydraulics. Other programs include fluid technology, sealing and line technology, as well as basics of metal hoses. The seminars concerning fluid and line technology are offered in single modules, which address for example the topics of valve technology, layout of hydraulic aggregates or repair and maintenance. They can be used in any combination. Another aspect of the instruction program is

a product training based on comprehensive HANSA-FLEX product catalogues. For the staff members this course provides help in the proper use of the catalogue, so that they can assist the customer with specific advice. Designers and engineers benefit from the offered seminars in the layout of new planned installations, which can be better realised with the knowledge of existing and suitable parts.



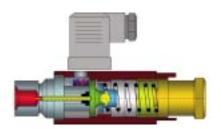


#### Knowledge pays off

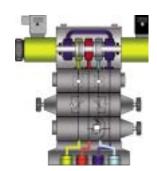
In the HANSA-FLEX training centre, staff members, but also personnel of HANSA-FLEX customers can participate in the seminars individually or in groups. In coordination with the individual companies, HANSA-FLEX also develops tailor-made seminar programs to meet the requirements of the specific customer. The training team also performs in combination and conducts seminars on site at the customer. In doing so, they provide specific training on the customer's hydraulic installations.





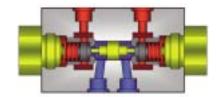






For group training, HANSA-FLEX offers discounts on the already moderate seminar fees. Thus, for example, four staff members of a company pay only the fee for three participants. Apprentices also receive discount fees. Over and above, the training facility volunteers to familiarise complete classes at technical or vocational schools with the practice of hydraulic in two-day courses. Naturally, all HANSA-FLEX apprentices receive three-day training in Dresden-Weixdorf. Following this course, they have to develop a complete aggregate, from calculation to implementation. For this purpose, a separate training room has been set up in Weixdorf, with much help from Jürgen Böttger.

Learning must be fun as well. In addition to the HANSA-FLEX seminars, the corresponding support program is also based on this principle. Thus, after a hard day of training in Dresden, the participants can also enjoy a light and entertaining support program in form of culture, sightseeing or a boat tour on the Elbe River. The "good fairy" of the training facility, Silvana Wagner, handles this. She attends to the complete organisation of all HANSA-FLEX seminars, from application to implementation.



#### No idea, don't worry

Knowledge brings confidence. Hydraulik bears risks, for which sensitisation cannot take place soon enough. HANSA-FLEX wants to sharpen the view for possible risks. Increased pressure is not visible! Here it is important to know the consequences if, for instance, a valve is not maintained or oil discharges have not been considered. Physics is not to be trifled with, and a "that's okay" has not prevented any pipe or hose from busting. Thus, the operators of hydraulic installations have a great responsibility since they are liable in case of an accident.

Providing the training to become a so-called "competent person", which is required according to the guidelines for pressure equipment 97/23/EG must therefore be seen in this connection. In order to provide the customers throughout Germany with appropriate contacts, HANSA-FLEX has trained its own staff in Dresden-Weixdorf to "competent persons" according to the requirements of the Technical Inspection Agency.







## **Reinhard Wiegers** 25-year anniversary



Just recently, Reinhard Wiegers celebrated his 25year anniversary. After starting in 1981 as staff member in the workshop of the then HANSA-FLEX Hydraulikschläuche Höxter GmbH, he established already 5 years later for HANSA-FLEX the new area of all-metal hoses. Due to his unfailing commitment, the HANSA-FLEX Ganzmetallschläuche GmbH was able to successfully establish itself and expand. In addition to taking care of apprentices, he is also active in the sector of product training for the areas of metal and PTFE hoses since 1992, and is currently a sought-after trainer in the team of the HANSA-FLEX training facility.

Due to the long-standing committed and successful cooperation, the Management of the HANSA-FLEX Group appointed Reinhard Wiegers at the occasion of his anniversary to the overall authorised signatory of the HANSA-FLEX Metallschläuche GmbH.

#### Further Anniversaries 2006

April 2006

BAU/XO Bautzen

June 2006

AWI/YO Ludwigsfelde

September 2006

LUE/G7 Rumia

October 2006

November 2006

LUE/G7 Düsseldorf



### Trade fair announcement

# **ACHEMA 2006**

#### We'll be there!

Visit us from 15 to 19 May, 2006 at Stand F8 (Hall 9.1). We look forward to your visit.





#### Frankfurt am Main,

Premises of the Messe Frankfurt GmbH, Ludwig-Erhard-Anlage

Date:

Monday, 15 May to Friday, 19 May '06

Opening times:

Monday to Friday, 09:00 to 18:00 h

Hall/Stand:

9.1/F8





## Directory 2006 – With a facelift



The directory 2007 will be available at the time of the Hanover trade fair in April 2007, reports HYDRAULIKPRESSE.

ISSUE APRIL 2006 HYDRAULIKI⊇R ★\$1‡ 21

#### QUIZ | TRAINING SESSIONS | TRADE FAIRS

### **Ouiz**

#### Where can you get the 2006 directory?

A: at each post office B: in the supermarket C: in each HANSA-FLEX branch



### 10 original HANSA-FLEX Zippo lighters to be won!

Simply answer the competition questions and you can win an original HANSA-FLEX Zippo lighter.

Answer edition 02/06:

B: 5.000 Metres

Please send your replies by e-mail to info@hansa-flex.com, or by mail. Please don't forget to include your name and address. Entry deadline is 30th April. One reply only per participant. Any recourse to legal action and any liability shall be excluded to the extent permitted by law. The prize may not be paid out in cash.

Winner edition 02/06: Mr Reim - Schrobenhausen

Mrs Matthias - Nettgau

Mr Weber - Veitshöchheim

## Training seminar schedule April – May – June in german only

03.4. bis 07.4.	Grundlagen der Fluidtechnik (FTG01)	Weixdorf	
10.4. bis 10.4.	Dichtungstechnik (DTG01)	Eisenberg	
24.4. bis 28.4.	Grundlagen der Fluidtechnik (FTG02)	Weixdorf	Training process
03.5. bis 05.5.	Grundlagen Metallschläuche (MTG01)	Boffzen	as from now available
08.5. bis 12.5.	Grundlagen der Fluidtechnik (FTG01)	Weixdorf	in every branch
15.5. bis 19.5.	Grundlagen der Fluidtechnik (FTG02)	Weixdorf	every branch
31.5. bis 02.6.	Grundlagen Metallschläuche (MTG01)	Boffzen	
20.6. bis 23.6.	Grundlagen der Fluidtechnik (FTG03)	Weixdorf	
21.6. bis 21.6.	Grundlagen der Leitungstechnik (LTG01)	Bremen	
26.6. bis 30.6.	Grundlagen der Fluidtechnik (FTG01)	Weixdorf	

For further information please contact Mrs. Silvana Wagner (Training center Weixdorf): +49 - 351 - 4139719.

### Trade fair announcements

05.4. to 09.4.	PRIMUS Maschinenbau 2006	Kiev, Ukraina	16.5. to 19.5.	Maschinenbau Metallurgie 2006	Zaporizzja, Ukraina
10.5. to 14.5.	INTERMACH 2006	Bitek, Bangkok, Thailand	23.5. to 26.5.	Intern. Maschinenbaumesse Nitra	Nitra, Slovakai
15.5. to 19.5.	ACHEMA 2006	Frankfurt on the Main	13.6. to 15.6.	WAMPE	Accra, Ghana
16.5. to 19.5.	TEROTECH — Maintenance Celje	Celje, Slovenia			

#### RECOMMENDED READING | CARTOON | OUTLOOK

## Recommended reading



#### Wörterbuch der Dichtungstechnik | approx 38,00 EUR \*

by Karl-Friedrich Berger, Sandra Kiefer 143 p. | Published by: Hüthig | ISBN: 3778529730



#### Schulungsbuch "Fluidtechnik" | 25,00 EUR \*\*

by Wolf-Rüdiger Schmidt, Helmut Wetteborn, Ulrich Hielscher 2nd edition | 292 p. | internal publication: HANSA-FLEX



#### Jahrbuch der Dichtungstechnik 2006 | approx. 46,00 EUR\*

by Karl-Friedrich Berger, Sandra Kiefer 609 p. | Published by: Hüthig | ISBN: 3778529617

- \* Books are available in all bookshops
- \*\* Training manual is available at your nearest HANSA-FLEX branch



#### DIN-Taschenbuch 174 | ca. 90,50 EUR \*

Schlauchleitungen für die Fluidtechnik 4th edition | 472 p. | Published by: Beuth | ISBN: 3410145451

#### Cartoon





## **Outlook**

More interesting topics in our next issue...

06/06

Schörling Brock GmbH Interview with ... Forklifts HANSA-FLEX branches Schenker Logistics Guidelines With railcars on the right track Ralf Gräf, Manager of the Berlin Group

HANSA-FLEX equips forklifts of the Jungheinrich company

Gent (Belgium) and Regensburg A cooperation with drive

Valuable tips concernig professional organisation

Editorial deadline: 1st May 2006

