



**Power on board**  
Klaus Marek, Hapag-Lloyd, on generator systems for shipbuilding

**PARTNERS**



**Reliable drives**  
Transport engineering places high demands on brake motors

**SPECIAL TOPIC**



**Customer orientation**  
Keulahütte raises sales efficiency

**SERVICE**

## EDITORIAL

Dear readers,

An eventful year 2004 is drawing to a close. A year which brought certain difficulties for the economy in Germany and the rest of Europe. The companies of the VEM Group,



however, are able to look forward optimistically to the coming year. The order books at Sachsenwerk are already well filled. During visits to the most varied regions around the world, the VEM management has been able to establish many valuable contacts, cornering new projects and signing contracts. Restructuring at Keulahütte has also progressed, enabling production to become more efficient and more flexible. Through the success-oriented work at our existing and newly founded sales offices, furthermore, the service network for our customers is becoming ever more closely meshed. And it has also been shown that we were right to maintain the successful strategy of the VEM Group – "Quality - a VEM trademark" – in both European and international competition, despite the strains placed on costs by price increases in the raw materials and energy sectors. We will continue to place the emphasis on top quality, innovation and service, with a broad range of high-performance special drives. In this way, we will remain able to satisfy our customers at the high technical levels they have come to expect.

I would here like to thank all our business partners for the excellent cooperation throughout 2004 and for the faith they have placed in our companies. Special thanks are also due to all the staff of VEM. After all, it is their commitment which has contributed essentially to the reputation enjoyed by the VEM Group. And through their work we have become a respected partner worldwide for demanding electric drive solutions and for high-quality castings.

Regards, Adolf Merckle

# Positioned on the world market

**MARKETS** VEM motors has strengthened and expanded international customer relations in 2004

**VEM motors.** Customer-specific solutions and a high level of technical demands placed on the product range, from major projects to series motors – these strengths have enabled VEM motors to defend its good position on the world market again in 2004. Intensive and successful business visits to the most varied regions of the world have contributed decisively.

VEM motors was able to consolidate previously established customer contacts above all in the Middle East. In January, local meetings served to strengthen relations with the United Arab Emirates. This was followed in June by a continuation of negotiations in Egypt. Both visits were able to build upon discussions conducted by managing director Jürgen Sander as a member of the economic delegation headed by Federal Chancellor Gerhard Schröder in 2003.

Particular mention is to be made of the company's involvement in Iran, which reached a first culmination with the laying of the foundation stone for a joint company in Shiraz in April. VEM motors was also present at the official talks between Germany and Iran which were led by State Secretary Dr. Tacke in October. The VEM Group presented its wares to customers from the region at the Teheran Industrial Fair.



Dynamic market: South Korea with its economic centre Seoul

Further projects in the steel industry, chemicals, the cement industry and general mechanical engineering are strengthening the overall development, especially in the Middle East. This is true for the product ranges of all the companies of the VEM Group. Contacts to China have also been intensified in 2004. In May, an agreement on cooperation in the field of customer service was sealed with a Chinese company based near Shanghai. Subsequently, three engineers from the Chinese partner have completed a programme of training at the VEM

factories in Wernigerode and Zwickau. This local service partnership is an important prerequisite above all for projects in the chemicals industry. To be able to demonstrate its capabilities to the growth market China, VEM for the first time attended the ACHEM-ASIA in Beijing, one of the leading trade fairs with a focus on the chemicals industry. The fair stand was managed by VEM S. E. Asia.

A tour of South Korea by entrepreneurs from Saxony-Anhalt, among them Jürgen Sander as the representative of

VEM motors, can also be booked as an absolute success. Accompanied by the Saxony-Anhalt Economics Minister Dr. Horst Rehberger, the delegation stopped off in the capital Seoul and in the industrial centre Ulsan in the south-east of the country. During this visit, VEM motors was able to sign a delivery contract worth over € 650,000 with the South Korean steel company POSCO, supplementing an existing contract for the modernisation of a steelworks, which itself already amounted to some € 1.6 million. "We only stand a chance on the demanding and dynamic South Korean market, if we are able to offer innovative products," said Jürgen Sander, summing up the results of the visit. "The next round of talks is already earmarked for the first quarter of 2005, and technical preparations have already begun."



Successful ACHEM-ASIA: Jürgen Sander (left) with Yvonne Stew and Tony Martin of VEM S. E. Asia

## Luxury liner "Pride of America" taking to the seas

**PROJECTS** Special machines for shipbuilding have a long tradition at VEM

**VEM Sachsenwerk.** The demands of the ship owners are unambiguous: On 4th July 2005, Independence Day, the "Pride of America" is to lie moored in Honolulu on Hawaii. This whole project is quite unique, since a new ship which is to operate under the US flag can only be built outside the USA with special dispensation from the US government. The staff at VEM are also

called upon to demonstrate swiftness and flexibility, if the deadlines are to be met. Six new diesel generators with outputs of 10.21 MVA each are to be supplied to the shipyard in Bremerhaven by the turn of the year 2004/2005. The machines each weigh 48 tonnes and are to provide the necessary power for the drive motors and for the hotel services on board.

Besides the cabins, this means supplying eight restaurants, ten bars, three swimming pools, conference rooms, shops and all the other facilities which make a cruise as pleasant as possible for the passengers.

The general contractor for this major project is our longstanding system partner SAM Electronics. The Hamburg specialists place great store by the long tradition and renowned reliability of VEM. After all, contracts for special machines for shipbuilding have been contributing to the generously filled order books for many years. Shaft generators and propulsion, thruster, azimuth and propeller motors for container ships, chemical tankers and passenger liners are all established elements of the product range from VEM Sachsenwerk. Engineering competence, the excellent qualifications of the staff and the indisputably

important factory space and lifting equipment represent ideal prerequisites for further orders in the field. It is not only the tight schedule which makes the manufacturing of the six generators for the "Pride of America" such a challenge. It is necessary, namely, to incorporate components from generators which were already installed in the ship. Following an incident in Bremerhaven at the beginning of the year, the hull of the liner was flooded with seawater. The electrical windings of the rotors and exciter machines were so badly damaged that they had to be replaced. The whole electrical equipment of the generators, such as voltage and current transformers, monitoring systems and exciter machines, must similarly be renewed.



The liner will already be cruising the Pacific in summer 2005.

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## "Pride of America" taking to the seas

continued from page 1

A demanded voltage step-up from 6.6 kV to 11 kV also made it necessary to rebuild the stators from scratch.

Other components, such as base frames, slide bearings and housings, on the other hand, can be reconditioned and used again. At the request of the ship owners, however, the generator housings and the cooling hoods are to be redesigned to permit necessary maintenance and repair work at any time, despite the restricted space available on the machine deck. By incorporating joints into these components, it becomes a relatively simple matter to remove the covers also in extremely confined spaces. And it will thus also be possible to perform in-situ inspections of the generator heat exchangers and rotors.

All design and manufacturing specifications are furthermore subject to the special regulations of the marine classification societies. In this case, there are even two such sets of rules to be observed: those of the ABS (American Bureau of Shipping) and DNV (Det Norske Veritas).

Together with SAM Electronics, who are responsible for the energy distribution system and the whole electrical outfitting of the ship, VEM will be ensuring timely delivery of the generators, as our own small contribution to enabling the official naming ceremony for the "Pride of America" to take place in Honolulu as planned on Independence Day.

# Power on board

## PARTNERS

Interview with Klaus Marek, Hapag-Lloyd Container Line

**VEM Sachsenwerk.** Drives and generators for shipbuilding have a long tradition at VEM. The shipbuilding sector is today one of the most important customers for VEM machines. VEM Sachsenwerk handles its major marine projects in close cooperation with SAM Electronics. Impulse spoke to Klaus Marek from Hapag-Lloyd to gain the customers' view of this partnership and of the quality of the products.

**Your most modern ships around the world are equipped with shaft generator systems from SAM Electronics, Hamburg, and VEM Sachsenwerk, Dresden. How did you come to choose these companies as suppliers?**

SAM Electronics is the system house with whom we have been building our power, automation, navigation and communication systems for many years. When SAM proposed VEM as a manufacturer of shaft generators, we paid a visit to the works and were immediately glad to follow this proposal. Shaft generators simplify machine room operations, because the auxiliary diesels then run less. The main motor can be operated with unlimited fuels which are less suitable for the auxiliary diesels, which need marine diesel oil. The maintenance requirements are also significantly lower.

**How do you rate the VEM shaft generators in terms of operational reliability, availability and maintenance requirements?**



Klaus Marek, Chief Superintendent Engineer at Hapag-Lloyd Container Line

**Your company uses the 5 MW systems, the most powerful shaft generators available. Will the trend to ever more powerful systems continue in the future?**

As far as we are concerned, we believe that the limit will be reached at around 6 MW, because such a system would be able to cover the energy demands of even the larger vessels.

**How do you view the future for generator systems in general?**

We are currently following the discussions within the framework of an EU research project aimed at using the waste heat from the main motor for

power generation. The excess electrical power would then drive also the shaft via a "power take-in" function, with the shaft generator being replaced by a synchronous motor.

**Which aspects play a central role when building a new ship?**

Our direct partner for a new ship is always the shipyard. Our role is to have the systems designed and approved within the framework of the project contracts and the makers list. The aim is to incorporate German or European equipment wherever possible. Potential suppliers, however, must be able to guarantee absolute deadline reliability, quality and after-sales service.

**VEM Sachsenwerk is working on the first shaft generators to be controlled via an IGBT converter (PWM technology). Is this an interesting proposition for Hapag-Lloyd?**

If the pulse-controlled systems become available for medium voltage and in our power ranges, then we will use this technology, because it enables us to save the reactive power generator.

**Will we continue to be able to recognise Hapag-Lloyd machine room equipment by its striking green finish?**

The "frog-green" colour has naturally become something of a tradition, and so we are unlikely to be changing things in the foreseeable future.

## Special series complete

### NEWS

Die-cast aluminium housing available as special version

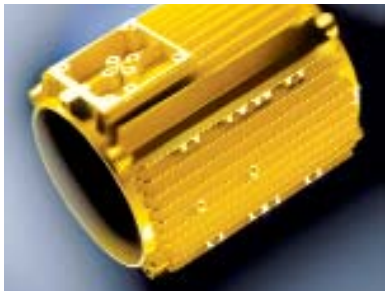


Photo: Mikro Herrel

Aluminium housings – for universal application

**VEM motors Thurm.** With the new die-cast aluminium housings in sizes 63 to 100, VEM motors Thurm has set up a whole output range in a common design. In future, it will thus be possible for the VEM Group to satisfy also customer requests for special aluminium-design versions, alongside its "traditional" grey-cast motors. The aluminium

housings offer customers particular benefits in respect of their reduced weight. Comprehensive modification possibilities and mounting options for additional components ensure universal application. The terminal box, for example, can be fitted on the top, left or right sides, as well as at the D and N ends. And in the case of single-phase motors, a capacitor can be mounted.

This development has aimed to combine the advantages of the grey-cast iron series, such as the proven insulation and terminal systems, with those of a die-cast aluminium housing. Grey-cast iron end shields at the D and N ends guarantee good running properties and a long service life for the bearings. Having one die-cast aluminium housing per shaft height helps to reduce the range of different components.

## Service partner China

### PARTNERS

Chinese engineers attend training at VEM

**VEM motors.** Three engineers from the Chinese partner in the worldwide VEM service network were recently in Wernigerode and Thurm to attend special training. Tours of the factories with subsequent rounds of questions and answers gave a first overview of the VEM production facilities, before attention was turned to the technical details.

The training agenda included an introduction to our technical documentation, such as spare parts lists, drawings and industry standards, as well as instruction regarding test methods and troubleshooting, assembly processes and modification work, repairs and the fitting of third-party components.

The nine-day training for the engineers was agreed in the cooperation con-

tract signed between VEM and a Chinese company in 2003. Since 2004, the Chinese partners have taken on the task of organising and coordinating service for VEM products in China. The company counts 3,000 employees and is based near Shanghai.



Training: Wang Chang Jun, Yin Qi Quiang and Wang Wie Feng

## Restructuring in full swing

### PROJECTS

Start signal for interior work on the new model workshop at Keulahütte

**Keulahütte.** Anyone who visited Keulahütte this year, cannot have failed to notice the unusual hustle and bustle on the factory grounds in Krauschwitz. After all, there are numerous construction and installation firms involved in the major project for complex restructuring of the company. Work began in 2003, and when the process is completed at the end of 2005, optimised production organisation will enable the staff to react even more flexibly to special customer wishes than they already do today.

We were already able to report on one important stage of the project in our last issue. The successful start-up of the nbH 290-3 horizontal machining centre has permitted full separation of the foundry and ma-



Restored facades for the new foundry model workshop

chining processes. The start signal has now been given for interior work at the old site of the mechanical workshops. They are in future to accommodate the foundry model workshop and

a significantly enlarged model store, which is to be assigned exclusively to the hand moulding section. Completion is already scheduled for the first quarter of 2005.

Building work is similarly approaching its conclusion on the new finished product store for moulded parts, hydrants and fittings. This in turn establishes the preconditions for reorganisation of the assembly section for hydrants and fittings in one area of the former product stores. The space freed up in the extensive complex of four production halls can then be utilised for the planned fluidised-bed coating plant, which will enable more efficient powder-coating of the cast parts.

The restructuring measures and investments to raise the efficiency of production processes are being flanked by improvements in the social conditions for the staff. The completion of new shower and changing-room facilities this year, for example, will mark the fulfilment of a longstanding wish.

## NEWS

### HeidelbergCement at VEM

**VEM Sachsenwerk.** A tour of the works enabled the members of the supervisory board from HeidelbergCement AG to gain a first-hand insight into the product range, manufacturing processes and high demands on quality at VEM in Dresden. Dr. Adolf Merckle, one of the major shareholders in the company, had invited the board members to visit VEM Sachsenwerk during their supervisory board meeting in Dresden on 17th September.

"How does a pharmaceuticals entrepreneur come to be involved in an industrial company like VEM?" Dr. Merckle welcomed the guests with this unexpected question – and also supplied the simple answer: The entrepreneur family Merckle from Blaubeuren acquired the companies of today's VEM group from the government privatisation agency in 1997. The challenge this entailed was to preserve existing industrial structures in Eastern Germany and in this way to prevent the closure of four traditional manufacturers. With its 1,400 employees, the VEM Group today achieves a turnover of € 215 million and is returning a bottom-line profit.



Managing director Gerhard Freymuth shows the visitors the press room.

## FAIRS

### Success at InnoTrans

**VEM Group.** Under the banner "Rail Innovation Centre Saxony", VEM was one of 16 Saxon companies presenting their capabilities at the InnoTrans fair in Berlin in September. The leading German fair for rail-vehicle technologies was able to take a closer look at two new products from VEM. The first was a 125 kW version of the modular traction motor series for low-floor urban rail vehicles, whose installation height of just 350 mm sets new worldwide standards. A further highlight was the first public presentation of the traction motor for the electric train system "Talent", which is to be operated by the Austrian Federal Railways (ÖBB). The fair visitors from home and abroad also took the opportunity to obtain more detailed information on the range of rail generators and auxiliary drives manufactured by the VEM Group.

"Despite the difficult situation in the branch, the fair results exceeded our expectations," says Wernfried Kühnel, sales manager for traffic engineering at VEM Sachsenwerk, expressing his satisfaction. "All our important customers were present and we were able to establish many interesting new contacts."

# Reliability possesses ultimate priority



Driven by VEM motors: Port cranes in Oakland (USA)

**VEM Group.** Passenger lifts and cable cars, stage systems in theatres, conveyors in mining and all kinds of cranes, winches and other hoisting systems all have one thing in common: they belong to a field of engineering in which the technical demands with regard to safety, reliability, precision and durability are especially high. The same applies naturally to their drives.

The companies of the VEM Group have been supplying electric motors for the most varied applications in transport engineering for many decades. In view of the special demands and the strict safety standards, however, it is not possible simply to select such motors from a catalogue. They are instead always special versions, which VEM tailors exactly to the individual requirements of the user. Windings, mechanical design and shaft loads must be calculated and matched for each new application. A few typical examples are described more closely on this page.

## Safe and precise on the way to the top

Hardly any other means of transport is as safe as a passenger lift. Nevertheless, even the slightest jolt or jerk

is immediately registered as threatening. But that is not surprising, because the buildings are becoming ever higher and the lifts are becoming ever faster. In the currently highest building in the world, the high-speed lifts are catapulted upwards at a record-breaking 17 metres per second.



Semper Opera House in Dresden: No disturbances from the stage systems

To make the ride as pleasant as possible for the passengers, the rails must be extremely straight and smooth, and the drives must be reliable and preferably silent. The high switching frequency calls for robust motors which not only run safely, but can also be brought to a standstill just as safely and precisely. To ensure this, the motors are fitted with double brakes. Should the

main brake fail, the safety brake is activated automatically. And the combination of motor and modern control technology permits highly accurate positioning. After all, no-one wants to negotiate challenging jumps when entering or leaving a lift.

## Unspoilt pleasure in the Semper Opera House

Stage equipment is one application where motors must naturally operate very quietly. After all, whether the curtain is being raised or scenery shifted – the only things which move in a theatre without drive technology are the actors and actresses.

In the Semper Opera House in Dresden, the rear wagon stage will in future be shifted by VEM drives. The 16 x 17 m construction possesses an integrated turntable with a diameter of 15.5 m and can be rolled out onto the stage itself on 500 carriage wheels. The company SBS Bühnentechnik incorporated 24 VEM motors for the travel and turntable drive, in part with noise-dampened single and double brakes and absolute-value encoders. The noise level of the whole system can thus be kept below 60 dB (A) (at 1 metre).

In this way, VEM is helping to ensure that no profane running noise from electric motors and no clicking of a brake switch is able to deter from the cultural experience. Brake motors are offered in a theatre version with double brakes, integrated mechanical brake lifting and incremental encoders. The motor components such as end

shields, rotors and stators are manufactured to enhanced accuracy to ensure the required quiet operation.

## Stamina under the toughest conditions

A wide variety of lifting equipment is used for dockside cargo handling. Quayside cranes, container gantries and all manner of other hoisting systems are called upon to ensure that the individual cargo can be loaded and unloaded both quickly and reliably, because (idle) time is money. Drives for such applications must display above all robustness and reliability. During the turnaround of a cargo ship, the motors are subjected to a continual switching between acceleration and braking, between forward and reverse operation, and between light and heavy loads. And this is aggravated further by the tough environmental conditions, and especially by the salt-laden air, which immediately attacks all exposed materials.

The drives from VEM, however, stand up to such challenges and are praised for their reliability. Major European crane manufacturers place their trust in the quality and experience of VEM when it comes to brake motors. And so the cranes in many large ports around the world are operating with drives

from Wernigerode or Thurm. These drives comprise a three-phase squirrel-cage VEM motor with built-on brake. The brakes, which are designed as twin-disc fail-to-safety brakes, deliver their holding torque in the power-off state.

Heavy loads must also be handled by the conveyor systems in underground and open-cast mining. Standard mo-

tors "off-the-shelf" are practically useless for the drives of bucket-wheel and chain excavators or for conveyor belts. As in all areas of transport engineering, the motors and brakes must be matched exactly to the application concerned.

Only in this way are the renowned VEM qualities brought to the fore – reliable, safe, robust and innovative.

## PARTNERS

### Proven partnership with gearing manufacturer



Smallest version of the "whisper gear"

GFC AntriebsSysteme GmbH is a longstanding partner of VEM, also in the fields of theatre systems and lifts. Famous opera houses worldwide are equipped with low-noise stage equipment from GFC.

Electric motors from VEM have been used in GFC drive solutions for many years now, and also play an important role in new developments. Only recently, GFC presented the "whisper gear", a new gear concept for use in theatres and lifts. Through an ideal combination of gearing, electric motor, brake and incremental encoder, it has been possible to achieve a noise level of less than 55 dB (A) at a distance of 1 metre. The motor, needless to say, is supplied by VEM: a non-ventilated brake motor B 210 112M 4, in which standard and special components have been combined. A special mounting flange

has been fitted for the encoder, for instance. The demand of extremely quiet running is a particular challenge and calls for extreme accuracy in manufacture.

The "whisper gear" with VEM drive has already been sold in considerable numbers, for example to the new National Theatre in Beijing. Lift manufacturers, too, are showing great interest in such low-noise drives.

GFC has been supplying lift drives for 50 years. The components for this technology include not only worm gears and driving pulleys with pulley shafts and incremental encoders, but also motors from VEM with noise-dampened double brakes and manual release. This drive configuration is especially quiet and practically vibration-free, and thus ensures a smooth and pleasant ride for the lift passengers.



Under the boards: Wagon stage drive at the Semper Opera House

### Plant manufacturer convinced by VEM drives

As a manufacturer of conveyor systems, FAM Magdeburger Förderanlagen und Baumaschinen GmbH (formerly TAKRAF) is able to point to longstanding traditions. FAM is today an independent company planning and manufacturing transport installations for applications ranging from open-cast mining and dockyards to storage systems and materials handling.

FAM and VEM look back over many decades of business cooperation and have many joint customers in the fields of conveyor systems and dockyards. The Magdeburg plant manufacturer places faith in drives from VEM for many of its projects. The list includes quayside cargo handling for Vietnam and

Rotterdam, excavators for Eastern Europe, breakers for Latin America and belt conveyors for Russia. After all, VEM offers high-quality products with exceptional availability at a reasonable price. It is above all the quality of the products and the confidence that these products comply with the relevant international and national standards which make VEM an attractive partner for FAM.

The whole VEM product range is to be found in the plants supplied by FAM. The motors are either sold directly or else provided by the final customer. The basis for joint projects is the continued expansion of a worldwide VEM service network to support and assist the final user.



## 80-year-old sails overhead with VEM motors

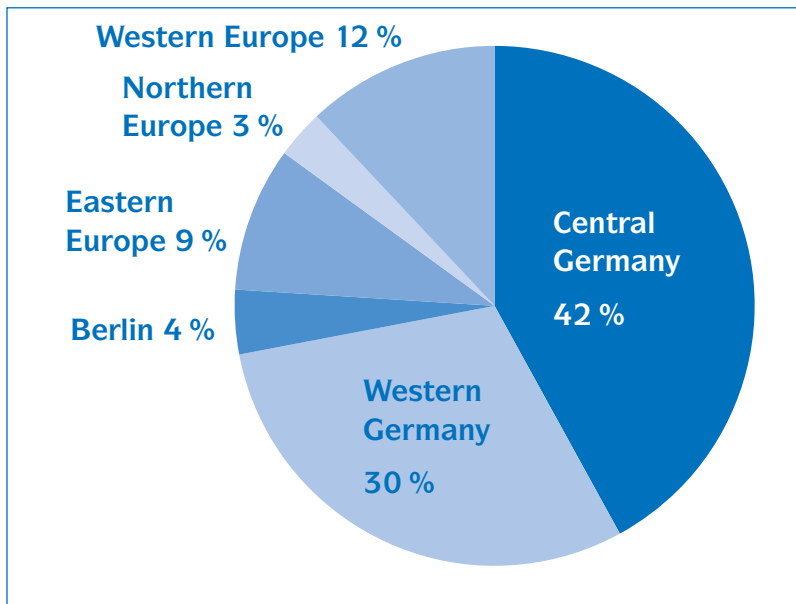
At 80 years, the Fichtelberg cable-car in Oberwiesenthal is the oldest mountain cable-car in Germany. The two cars, with their total weight of 6.6 tonnes, travel the 1,100 metres between the valley and summit stations up to 100 times a day. VEM motors are used both for the main drive and for the fan and auxiliary drives. Since, quite naturally, safety is here the top priority, the motors must pass an annual technical inspection.



Reliable and robust: Brake motor B110 180L 4 PIN MT HB KL

# Customer-orientation in sales

**SERVICE** Orders can now be processed even more efficiently at Keulahütte



Current turnover shares by sales region

**Keulahütte.** The VEM company in Krauschwitz has invested a great deal in recent years to ensure high-performance manufacturing facilities and well-trained personnel. To enable the castings, fittings and hydrants to find their way to the right customers, the sales department has also been purposefully re-organised. Five in-house staff and six field representatives take care of sales of the most varied foundry products in Germany and in many other countries of Europe.

70 per cent of the products are sold as "catalogue business". Flexibility thus plays an important role - from order receipt and processing through to market-oriented stores management. Besides consolidating domestic sales, Keulahütte attaches great importance to increasing both export

business and the proportion of turnover attributable to customer castings. Modern data processing systems for the sales department are a decisive prerequisite.

Following successful introduction of the SAP system in 2001, the company is now preparing a system for Internet-based order processing. This offers customers the benefit of even faster and more reliable handling of their orders.

The inauguration of the new finished product stores in November, furthermore, has also boosted efficiency in the dispatch section. At the same time, it helps the company to answer the current trend towards epoxy-coated moulded parts over the whole product range.

## Technical Conference

**EVENTS** Participants confirm the high standard of the meeting

**VEM Group.** With 155 guests from 11 countries, the response to the 3rd Technical Conference held in Wernigerode on 15th and 16th September exceeded all expectations. Alongside recognised scientists and electrical machine manufacturers, users from the most varied branches of industry accepted the invitation from VEM. They were rewarded with an opportunity to gather information on research results and new developments in the branch, and to discuss the future demands of the market. Representatives of university institutes and trade associations, as well as design engineers from the R&D departments of leading manufacturers, presented novelties and solution approaches for the various topics - all under the motto: "Drive Technology - Technologies for the Future". The standing enjoyed by the forum was illustrated also in the attendance of Mr. Jean Candel, President of the Eu-

ropean Committee of Manufacturers of Electrical Machines (CEMEP), whose lecture opened the meeting. On the user side, the spokesman of the Association of Industrial Energy and Power Generation (VIK), Dr. Hans Linnenbrink, was also in Wernigerode and presented the latest VIK recommendations. Other key themes were digital communication systems in automation plant, high-speed and servo motors, and improved materials.

The participants confirmed the high technical level of the lectures. In his closing summary, the managing director of VEM motors, Jürgen Sander, emphasised the diversity of the contributions and the commitment of the many young engineers who had presented their results. The constantly growing number of participants is an indication of the quality and acceptance of the event initiated by VEM. The 4th Technical Conference is already a definite entry for the 2005 calendar.

## Ambassador of Kazakhstan pays visit

**VEM motors.** The Kazakhstan ambassador Kairat Sarybay was especially impressed by the quality of the products during a visit to the Wernigerode factory of VEM motors. The name "VEM" traditionally enjoys a good reputation in the republics of the former Soviet Union, and so the Repub-

lic of Kazakhstan will no doubt remain an important customer for VEM drives. The country offers outstanding potential as a trading partner. With its 15 million inhabitants, it is the second-largest oil producer among the CIS states, after Russia.

## Stendal cellulose plant starts up production

**PROJECTS** VEM supplies 900 electric motors for major project



VEM drives will be contributing to a future annual cellulose production of 550,000 tonnes.

**VEM Group.** The opening of the cellulose plant in Arneburg near Stendal at the end of October marked the completion of one of the largest industrial projects of recent years in Eastern Germany. The VEM Group supplied a whole assortment of some 900 motors worth a total of € 2 million, for the most part pump, fan and roll drives. They are in use throughout the production process, from the de-barking and crushing of the wood, through boiling down of the lignin to washing and bleaching of the cellulose fibres. The recovery plant and auxiliary systems are also equipped with electric motors from VEM.

The overall investment of € 1 billion is to bring over 1,500 jobs to the region in the north of Saxony-Anhalt, with

580 at the plant itself. Three million cubic metres of coniferous timber are to be processed into bleached long-fibre cellulose each year. The principal customer is the paper industry, which uses the cellulose to produce writing and printing papers, and high-quality cardboard. Federal Chancellor Gerhard Schröder also attended the official inauguration of the plant.



## Petra Klingebiel: Head of sales at Keulahütte GmbH

**PEOPLE** At home in a male domain for 25 years



Petra Klingebiel is married with one child

ject of "Independence from imports" she already in 1979 laid foundations for the decision to invest in a pulse moulding plant in Krauschwitz ten years later. "This investment, which was initiated on a green-field site in 1989, proved to be one of our biggest assets in tackling the market economy after German unification," she explains. "The introduction of DIN standards closed the book on our existing product range and manufacturing technologies practically overnight, but the new plant secured our entry into the new market."

Petra Klingebiel has been responsible for the sales department ever since the mid-1980s. "During the GDR years, we were the only foundry with our production profile and so the customers were literally queuing up outside," she recalls. She is still one of the few

women in the branch, and can tell a thing or two about the fierceness of competition on the market today. Keulahütte being traditionally concentrated on moulded parts, hydrants and fittings for the water supply and waste water sectors, the passing of the boom in the branch has naturally led to a significant decline in demand.

But for the committed sales manager Petra Klingebiel, for whom 12-hour days are by no means rare, and who spends more than half her working time travelling both in Germany and abroad, "every crisis is at the same time an opportunity." With her team of 12, she is working successfully to place her high-quality foundry products on the market. Whereas the company only exported sporadically in the past, the share of products shipped abroad

to Eastern, Western and Northern Europe has in the meantime reached 24%. With first deliveries to mechanical engineering companies, most recently also for wind turbine generators, a new field of business has been opened up. "We are constantly investing in new technology to serve our program customers and are expanding our product range to meet the demands of the market. These investments at the same time bring new opportunities to offer specially treated castings to our clients in customer castings business. Today, the company is already supplying 30% of its production as customer castings, including deliveries to other VEM companies. With this double-headed strategy we are proving that it is indeed possible to be successful in more than one speciality," says Petra Klingebiel, not without a little pride.

## TRAINING

### Apprenticeships and practicals

**VEM Group.** To be able to guarantee the customers of the VEM Group the quality they rightly expect in the future, too, the company has for many years itself looked after vocational training



Future generations of specialists at VEM Sachsenwerk

for new generations of employees. A total of 25 young people commenced their training in the four VEM companies this autumn - in metalworking, machine and drive electronics, industrial business administration, toolmaking and foundry machines. In this way, the VEM Group is at the same time playing its part to improve the general youth employment situation in the regions concerned.

Students and school pupils, furthermore, are offered diverse opportunities to complete periods of practical experience in industry - from 2-week practicals for school pupils to full-year training units for college students, including supervision for dissertations. All in all, around 180 young people are able to get to know the VEM Group and its employees every year.

## NEWS

### Forced ventilation unit replaced

**VEM motors Thurm.** The current "RiK" ventilation fans from supplier Maier Motor-Press are to be replaced by the new "RBK" series. The forced ventilation units are now generally suitable for the voltage ranges 230-303/400-525 V, 50 Hz and 230-333/400-575 V, 60 Hz. The running capacitor supplied in the terminal box of the fan permits operation on a single-phase system in the voltage range 230-303 V, 50 Hz; 230-333 V, 60 Hz, if necessary (Steinmetz connection with CB). VEM offers the motors with protection up to IP66.

## IMPRINT

**Publisher:**

VEM Group

**Editor:**

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**Art:**

Kommunikation Schnell GmbH, Dresden

**Editorial deadline:**

15 November 2004

**Print:**

Druckerei Vettors GmbH

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