



Follow-up order
VEM supplies drives for flue gas desulphurisation

NEWS



Bell ringers
Electric motors help sound the hour

PROJECTS



Surface protection
High-quality corrosion protection for castings

FACTS

Drive technology of the future

VIPS & EVENTS

3rd Technical Conference to be held in Wernigerode in September

VEM Group. On 15th and 16th September 2004, the VEM Group will be holding its 3rd Technical Conference in Wernigerode. This year's meeting has been placed under the banner "Drive technologies - Technologies for the future". The conference programme covers a broad spectrum of topics, from the current situation for electrical drive technologies in Europe, to the latest findings in research and development and new demands to be met by motors and drive solutions in numerous branches of industry. Customers, guests from the universities and research institutes, and representatives of other motor manufacturers are all invited to join the interesting discussions and to attend the 16 presentations and lectures.

One special highlight is certain to be the plenary address by the President of the Association of European Electrical Machine Manufacturers (CEMEP), Mr. Candell, who will be looking at topical questions facing European motor manufacturers and at the future development trends in an expanded Europe.



The 2nd Technical Conference in Wernigerode last year was already a great success

The conference is the continuation of a successful lecture series which began in 2002. Attracting extraordinary interest from our customers, the wide-

-ranging discussions signal to the motor branch, which changes are to be expected by manufacturers of motors and drive technologies in the future.

VEM sees its role above all as organiser of these meetings, but is nevertheless actively involved as a presenter of numerous specialist lectures. "The Technical Conference of the VEM Group will hopefully become a permanent entry in the diaries of our customers, suppliers and business partners for the coming years," says Jürgen Sander, managing director of VEM motors GmbH. "We will be presenting new technologies and their applications, addressing key issues regarding quality and standards, and discussing the current market demands - in other words, a broad range of topics which promises new knowledge and experience for all concerned."

More than 140 visitors from home and abroad are expected to attend the two-day event. And to ensure that it becomes a real success for all participants, two interpreters which be on hand to provide simultaneous translations for the foreign guests.

EDITORIAL

Dear readers,

Entrepreneurial virtues are returning to the fore, indeed it is imperative that they be revived and taken as an example, if we are to win the battle for growth and employment.



With visions, analytical minds and expert knowledge more and more industrial managers are proving that success remains possible even in difficult times.

The contents of this issue of "Impulse" are proof of this fact also for our company group. We mastered the years 1997 to 2002 without workforce cuts. Since 2003, we have been continuing along the road of success and are winning new market shares. The company owner has refrained from skimming off profits, and has thus enabled considerable investment in modernisation at all manufacturing locations. The labour savings this has produced have been utilised to realise turnover growth and enhanced asset creation, rather than serving as a justification for reductions in the workforce. Our competence centres, and likewise our six sales subsidiaries, have been tooled up with the necessary capabilities to achieve further success. The VEM Group is an innovative, internationally active manufacturer of sophisticated electric drive solutions and high-quality foundry products. With our trademarks "VEM" and "Keulahütte", we have established ourselves worldwide in many fields.

The difficulties arising from exchange rate fluctuations and from the increased costs for materials and energy will be clarified to a major degree through the efforts of our employees and with the aid of disciplined cost management, though we must still ask a small contribution from our customers in the form of moderate price increases. Our thanks go to all customers and employees for their support and their confidence in our work and our capabilities for sustainable further development in the future.

Yours, R. v. Rothkirch

New automatic wrapping machine - a milestone in winding manufacture

ON SITE

Economic and technical optimisation of coil insulation

VEM Sachsenwerk. The model 670 automatic wrapping machine which has been in operation at Sachsenwerk since March 2004 has optimised coil insulation from both an economic and technical point of view. The machine can be seen as a symbiosis of the latest wrapping technology, developed

by Heinrich Schümann GmbH & Co. from Lübeck, and an ABB industrial robot with Siemens control, all enriched with numerous special Sachsenwerk specifications.

The system serves above all to simplify manufacturing when insulating stator and rotor coils. Especially interest-

ing is the facility to handle also the eye of the coil. This was in the past necessarily a manual process.

Further enhancement of the insulation quality is achieved by the electronic tape tension regulation, which guarantees a practically constant tape tension throughout the whole insulation process. The combination of wrapping and robot technologies, furthermore, ensures optimum alignment and traversing of the ring alongside the coil. Transverse oscillation relative to the insulation axis is similarly eliminated.

This insulation robot is able to handle coils up to 3300 mm in length, with inside diameters of approx. 1000 mm and with coil heights of up to approx. 53 mm. The coils are fixed during the insulation process by 10 pneumatically controlled coil holders. The whole system occupies a floor space of 10.0 m x 6.5 m.



Insulation robot 670

Lecture topics

1. Electrical drive technologies in Europe
2. Fundamentals and possibilities of RFID technologies
3. Drive control and diagnostics via the Internet
4. Memory motors - Applications for RFID technology in motor manufacture
5. Converter-fed operation of medium and high-voltage motors
6. Harmonic losses with converter-fed motors
7. New generation of traction machines for trams
8. Buried versus surface magnets for high-speed permanent magnet motors
9. Special copper wire
10. Integration of power modules
11. Integration of safety systems
12. Long-term stability of insulation systems in converter-fed operation
13. The new VIK recommendations
14. Motors for high-temperature applications
15. Demands on modern drives for the paper industry
16. Large-scale motors with closed-loop control - Aspects of plant design

Motors with electronic labels

SCIENCE & TECHNOLOGY

New applications for RFID technologies at VEM

VEM motors. VEM motors GmbH has opened up a new field of applications for RFID technologies. Such technologies were in the past concentrated almost exclusively on mass products in the foods and textiles branches. The use of RFID technologies with passive transponders brings numerous benefits for in-house organisation and logistics, the manufacturing process and quality. If the expected acceptance among potential users materialises, we will be able to exploit clear competitive advantages over other manufacturers.

Some of the most important benefits are explained below.

New possibilities

A transponder is an electronic data memory serving to identify the product to which it is attached. This so-called "tag" permits contactless read and write access to the data. The essence of the latest development is to supplement the documents and barcode which accompany a motor throughout the company with a tag in the motor housing. This permits not only unambiguous identification of the motor

at all stages of assembly, right up to packing and dispatch, but also the introduction of an additional "intelligent" rating plate, which is able to supply the customer extensive information far beyond the scope of its conventional counterpart.

The data stored on the tag can not only be recalled, they can also be supplemented or modified. The local storage of all relevant product data - and that throughout the service life of the motor - offers considerable potential to maximise the reliability and efficiency of the whole process chain.

A motor ID number is written to the tag in the motor housing during the initial manufacturing phase. Via the company data network, it is then possible to visualise parts lists and to perform plausibility checks both during manufacture and at the final inspection stage. Similarly, the installation of an incorrect component is thus practically excluded.

As part of the final inspection, further data are added to the original motor ID number. This data block contains



Michaela Möser of the overseas export department demonstrates the electronic label of a memory motor

additional important information for the customer, e.g. grease type and amount, lubrication intervals, wearing part designations, the designations of any built-on accessories such as brakes, external cooling fans or sensors, terminal diagram number and manufacturer Internet address.

An optional second data block can be used to import further details such as project number and designation, or a customer product identifier.

A third data block, finally, permits saving of the data records of a maintenance schedule.

General contracts with the German Railways

VEM Sachsenwerk. The long-standing good business relationships between DB AG and VEM Sachsenwerk have been reflected in the signing of general contracts for customer services over the business years 2004/2005. These services include the manufacturing of spares and modules for the traction motors of the electric locomotive 143, covering 40 traction motor rotors, 72 commutators, 120 stator cores, 120 rotor core renewals and various spare parts. In addition, Sachsenwerk is overhauling VEM generators for the on-board power systems of the tilting train VT612 for the specialised workshops of the German Railways. The converter substations of DB Energie GmbH Frankfurt/M. have also entrusted the inspection of three 10 MVA synchronous-synchronous supply converters with a weight of 145 t each to the specialists in Dresden. In total, these orders are worth over six million euros.

Keulahütte invests in a new machining centre

PROJECTS

Customer orders can be handled even more effectively from September

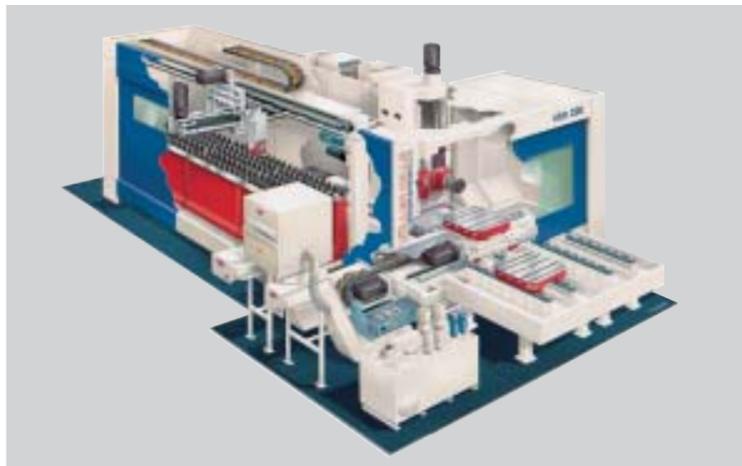
Keulahütte. The preparations for installation of the new nbh 290-3 horizontal machining centre are currently in full swing at Keulahütte GmbH. The machine is to be taken into operation in September. Supplied by Hüller Hille,

it is to replace two 15-year-old machining centres of the types CW 800 and CW 1000.

As already reported in the last issue of "VEM-Impulse", the new horizontal machining centre with a table size of

1000 x 1000 mm is to be used in particular for the machining of hydrant components, general fittings and large-scale moulded parts. Increasingly, however, Keulahütte is handling customer orders which entail not only the actual casting, but also machining steps. For this reason, the machine incorporates a pallet magazine system, comprising three pallet buffer places and a load-unload station, to maximise flexibility.

The machining centre investment is another aspect of the wider project to concentrate production processes at Keulahütte. The new location is the last step towards achieving full separation of the casting and machining departments. At the same time, it guarantees the necessary building clearance for the new Patterns Store II - predominantly for the hand moulding shop - including also a new foundry prototype workshop.



Horizontal machining centre nbh 290-3

Follow-up order for Cottam Power Station

NEWS

Drives for induced draughts and pumps in flue gas desulphurisation

VEM Sachsenwerk. The 2000 MW coal-fired power station in Cottam, on the banks of the River Trent in Nottinghamshire, supplies up to 4% of the power

required by the English electricity market. The operators attach great importance to minimising ecological impact. They are certified to ISO 14001 and

are working constantly to reduce burdens for the environment. It was thus only natural that the power station should be retrofitted with a flue gas desulphurisation system, which was integrated by RWE

Industrie-Lösungen GmbH Duisburg as a specialist for complete industrial solutions.

Sachsenwerk supplied all the necessary line-commutated high-voltage motors for the new system at the beginning of 2004. Water-cooled versions were chosen to meet the specified demands regarding quiet operation. Special mention must be made of the drives for the induced draught fans. Each block is assigned an induced draught system, which draws the emission-laden flue gases from the combustion chamber and forces them through the absorber. VEM supplied water-cooled three-phase asynchronous motors of type DKKES 1040-8WE in IM B3 design with sleeve bearings. They deliver a shaft output of 8 MW at 11 kV and a running speed

of 745 rpm. The motors are connected directly to the mains supply.

With a shaft height of 1000 mm, a weight of 31 t and overall dimensions of 3760 x 2100 x 2800 mm (length x height x width), these drives belong to the mid-range of machines from Sachsenwerk.

The successful completion of the project to the full satisfaction of the customer led to Sachsenwerk receiving a follow-up order from RWE Industrie-Lösungen GmbH in May 2004. A further 13 motors have been requested for the Cottam power station. The order covers two more 8 MW motors in 11 kV versions for the induced draughts, ten 800 kW motors for suspension pumps and a 250 kW motor for a vacuum pump. Delivery to the power station is scheduled for 2005.



Induced draught fan drive with 8 MW, 11 kV asynchronous motor for Cottam Power Station (UK)

NEWS

Expansion of winding capacities

VEM motors. A new level of quality was reached in the manufacturing of coils at VEM motors with the acquisition of a new coil winding machine in March 2004. It is now possible to produce all coils for shaft height 355 in a single process. In fact, it was the introduction of the 355 shaft height which made this investment necessary. The existing coil winding machines had already come up against their performance limits in the face of the number of parallel wires required and the corresponding wire diameters. Once the decision to purchase a new machine was taken, there were various quotations to be considered and technical details to be clarified before the renowned German suppliers F. W. Scheiing KG and Schleich GmbH were asked to manufacture the new coil winding and the necessary fixtures.



The new coil winding machine

To maximise the utilisation of the machine, it is planned to gradually transfer coils for other shaft heights, parallel to decommissioning a coil winding machine which has reached the end of its useful life.

First generator for mining trucks shipped to the USA

VEM Sachsenwerk. Representatives of customer Siemens USA came to the test centre at Sachsenwerk in April to attend the type testing for the first mining truck generator DRLDZ 5013-8L. The test programme was accomplished successfully and the generator was released punctually for shipping to the USA following its completion and final painting.



Test passed: Powerful machine for dumper trucks

The next step is thorough on-board system testing over a period of several weeks, which is to provide proof of the generator's serviceability under the harsh conditions of mining environments. The mining truck is a gigantic dumper which is able to carry over 350 t of ore and rock.

"Atop spires and towers"

PROJECTS VEM drives set the bells ringing



The four-bell peal in Dohna was equipped with motors with shaft heights between 71 and 90 mm.

Photo: Fa. Heidenauer Glockenläute- und Elektroanlagen

Thurm has been a trusted supplier to several renowned customers since the nineties. Leading manufacturers of bell-ringing systems order their drives from Thurm, where they are convinced not only by the quality of the products, but also by the flexibility with which special customer wishes are addressed.

The drives for such applications are predominantly 6 or 8-pole - in Germany also 10 and 12-pole - non-ventilated standard motors suitable for short-time duty and with shaft heights between 71 and 112.

VEM motors Thurm. The traditional craft of bell-founding has changed little over the centuries, despite all industrial revolutions. Not so bell-ringing: As almost everywhere that movement is required, electric motors have also found their way into the belfries. And that with good reason, as they are stronger, more reliable, more punctual and less expensive than any manual ringer could ever be. As a single bell-ringer is only able to set small to medium bells of up to around 1500 kg in motion, it is always necessary for several persons to hang on the ropes of larger peals with weights of several tonnes. A motor, on the other hand, has no difficulty handling a 2-tonne bell.

Electric motors have already been setting bells ringing since the end of the 19th century. On this small, but nonetheless exquisite market, VEM mo-

Even so, it is rarely possible to take a product straight from the shelf. To meet the numerous individual requirements, various modifications are generally necessary. This includes, for example, the mounting of special shaft ends and flanges or special shielding. Many motors are also fitted with cus-



Bell drive in a Czech church

Photo: Fa. Perner

tomers-specific actuators or with a brake to shorten the reverberation after the motor is switched off.

But VEM has not only built up a reputation in the branch for its special product adaptations. Once installed in the belfry, the drives are subjected to harsh weather conditions, not to mention the dirt caused by pigeons and other tower residents. The machines must therefore be reliable, low in maintenance requirements and above all robust - all properties for which motors bearing the VEM trademark are known on the international market. And so the electric motors from Thurm are in worldwide use to ensure that bells continue to sound the hour punctually, ring in high days



Photo: Fa. Clock-O-Matic

The cathedral in Seville with the Giralda Tower - the historical bells were restored by Clock-O-Matic

and holidays, call congregations to services and herald all manner of other important events.

SPOTLIGHTED

Perner Bell Foundry

One of the largest German customers using VEM drives for bell-ringing machines is the Perner Bell Foundry in Passau. The family business has been producing ever new generations of master craftsmen for centuries, having founded its worldwide reputation in the Bohemian city of Ceske Budejovice. The business was lost as a consequence of the Second World War, but a new home was soon found in Passau.

The company today counts some 40 employees, and its bells are to be found not only in the best known churches in Bavaria, but indeed worldwide. The heaviest bell in Hungary, a 9.5-tonne bell in Budapest, was cast in the Perner foundry, as were further peals in Chile, Florida, Moscow and Bethlehem.

"We choose VEM motors above all on account of their reliability. The competent advice we receive and the excellent value for money from VEM are also greatly appreciated. Our running orders are more than enough proof of the fact that we are very satisfied with the drives from Thurm."

Rudolf Perner GmbH & Co.
94034 Passau
www.glocke.com

For over four decades now, the company has also been supplying its own electronic ringing systems. One of the best known recent projects incorporating drives from Thurm was the Frauenkirche church in the centre of Munich.

Heidenauer Glockenläute- und Elektroanlagen GmbH

This specialist company for electrical installations, bell systems and tower clocks, based in Heidenau near Dresden, is especially strongly represented on the Eastern German market. Only recently, the probably oldest bell in Saxony, dating from 1390, was brought back to life with a Thurm drive in the small town of Dohna. And the bells in the tower of the Petrikirche church in Freiberg, too, will soon be ringing out once more thanks to electric motors from Thurm.

For projects such as these, the company orders VEM motors to match the size of the bells in question,

"What counts for us is the robust design and the improved smoothness of running compared to other drives. The uncomplicated and prompt availability of spare parts is also important. And last but not least, we benefit from the good reputation and awareness factor of the name VEM among customers."

Heidenauer Glockenläute- und Elektroanlagen GmbH
01809 Heidenau

and complements these motors with a Clock-O-Matic control system and its own wheels and drive chains to make up a complete ringing machine.

Clock-O-Matic

At the recommendation of Heidenauer Glockenläute- und Elektroanlagen GmbH, Belgian specialists Clock-O-Matic are also now purchasing the drives for their ringing systems from the VEM works in Thurm. When it comes to bell installations, clock systems and carillons, the Belgian company enjoys an excellent international reputation. In the Benelux countries, literally thousands of churches and other buildings have been equipped by Clock-O-Matic and the list of references in the fields of newly installed systems, automation and restoration is long. Fifty years of experience are brought to bear when Clock-O-Matic realises and optimises the most varied bell combinations.

"We are very happy with the electric motors from VEM. We are regularly amazed at the existing reputation and popularity of VEM motors, especially when we do business in Eastern Europe. For us, they are a German product which sells well together with our ringing systems from Belgium."

Clock-O-Matic
B-3220 Holsbeek (Leuven)
www.clock-o-matic.com

Fálkinn completes its century

PARTNER Icelandic sales partner celebrates jubilee

VEM motors. The company Fálkinn (in English: "falcon"), the Icelandic trading partner of VEM in Reykjavik, celebrated the centenary of its founding on 18th August 2004. The business was opened in 1904 as a bicycle shop and workshop. The product range was soon expanded to include the most varied consumer goods, such as household appliances, hi-fi systems, records and sports equipment. Trading with electrical machinery began in the mid-1950s, and today represents the majority of turnover.

VEM has already been cooperating with Fálkinn for several decades. The

electric motors from Germany are used on the island above all in the various processing industries, whereby fishery accounts for the lion's share.

The declared company philosophy of Fálkinn, namely to offer its customers only the best products from the world's leading manufacturers, aligns well with the quality orientation at VEM. This symbiosis has formed the basis for decades of successful cooperation. The VEM Group sends its congratulations on the centenary and looks forward to a continuation of the longstanding partnership.



Photo: Inge Gerdes

Fishing and fish processing dominate the Icelandic economy

NEWS

QMS certificate confirmed until 2005

VEM Group. The prescribed monitoring audits for certification of the installed quality management system (QMS) have been completed successfully at the VEM locations VEM motors in Wernigerode, VEM motors Thurm in Zwickau and VEM Slovakia in Piestany, as well as at the competence centres in Munich, Düsseldorf, Siegen, Hanover, Leipzig and Berlin. During their 5-day audit in May, the inspectors from Germanischer Lloyd Certifications GmbH confirmed that the quality management system complies with the provisions of the DIN EN ISO 9001:2000 standard. The corresponding certificate thus remains valid until 19.03.2005.

The parallel audits carried out in Wernigerode and Thurm on the basis of the European directive 94/9/EC demonstrated that the quality assurance demands applicable in areas subject to explosion hazards, as described in the DIN EN 13980:2003 standard, are met in full and that the relevant certification remains valid.

Commitment in the Near and Middle East

VEM motors. Jürgen Sander, managing director of VEM motors GmbH, Wernigerode, has been elected chairman of the Near and Middle East Association, which brings together predominantly high-ranking representatives of major German industrial companies. With headquarters in Berlin, the association has already been promoting bilateral economic relations between Germany and the countries of the Near and Middle East for some 70 years. As an independent service provider, it offers its members information and advice, as well as arranging contacts and organising seminars, conferences and delegation visits.

Major order for marine generators

VEM Sachsenwerk. With a request for six diesel generators each producing 10,210 kVA at 11,000 V and 514 rpm, Sachsenwerk recently received a truly weighty order: each machine tips the scales at around 48 tonnes. The customer is a longstanding system partner, namely SAM Electronics in Hamburg. The generators are earmarked for the passenger liner "Pride of America", which is currently being built at the Lloyd shipyards in Bremerhaven, and will be providing power for the drive motors and for hotel services. They are to replace the machines which were lost to water damage in an incident at the beginning of the year, when water found its way into the hull during a January storm, and the listing ship tipped against its pier. Due to the advanced state of the work on the ship, the generators must already be delivered in December 2004 and January 2005.

Durable corrosion protection with epoxy powder coating

FACTS Solvent-free alternative meets highest demands

Keulahütte. Customers are today placing ever greater demands on the corrosion protection for fittings, moulds, machine components and architectural castings. For Keulahütte, this means moving away from traditional paint systems, towards solvent-free alternatives with ultimate corrosion protection properties. Where castings are used in especially aggressive media, epoxy powder coating is a useful option.

The pre-blasted castings are heated to approx. 200°C and coated with an epoxide powder from a spray gun or by immersion in a fluidised bed.

The coating reacts fully by polycondensation onto the hot surface within just a few minutes and forms a solid, 250-700 µm thick coating layer. It displays an extremely smooth surface, and can also be machined if necessary. The coating process is very environment-friendly, as no solvents are used and any left-over powder can be disposed of together with household waste. Compared to previously used paints, the powder coating achieves better cross-linking due to its longer



High-quality, environment-friendly surface treatment for castings

molecule chains, which in turn guarantees a higher degree of corrosion protection. Thanks to the possible automation of the process, this coating is also less expensive to produce than other high-quality coatings. Practically any colour from the RAL table can be applied. The integral coating (identical interior and exterior protection), furthermore, eliminates possible corrosion attacks.

The problem of chalking from epoxy coatings, which impairs the appearance of the surface in case of long-time exposure to UV light, has similarly been solved at Keulahütte, in cooperation with the powder manufacturer: While still hot, the epoxy resin film receives an additional 100 µm layer of polyester powder and is then cured in a gelling cabin at 240°C. This protective film guarantees not

only high corrosion resistance, but also durable light-fastness. Parts coated in this way can be used outdoors without reservations. Since the corrosion protection is fully cured, whereby later deterioration due to oils and greases is reliably excluded, interesting applications are to be found in mechanical engineering. The absence of silicone is here an important aspect. Epoxy powder coatings are furthermore suitable without restrictions in connection with drinking water and foods, and are certified accordingly in all European countries.

Corrosion protection and film properties are monitored and documented continuously in an in-house laboratory. As a member of the quality association for heavy-duty corrosion protection, Keulahütte is able to guarantee continuous independent monitoring of both the coating and its products. The customer can thus rest assured that he will receive high-quality corrosion protection.

Passenger ship casts off

VEM motors Thurm. At the end of June, the Indonesian passenger ship "Labobar" left Germany and set course for Jakarta, the capital of its future home country. Equipped with 70 drives from the VEM works in Thurm and Wernigerode, the ship has been designed and fitted out to carry 3,000 passengers. One special feature of the "Labobar", alongside the two-level sleeping cabins, is the on-board mosque,



The "Labobar" before her maiden voyage

with a pointer in the ceiling which acts like a compass and shows the direction of Mecca.

New terminal boxes for Ex motors and special drives

SCIENCE & TECHNOLOGY Streamlined range permits more cost-effective solutions

VEM motors Thurm. With a design for a terminal box suitable for all motor sizes, VEM motors Thurm has succeeded in reducing the number of different terminal boxes for EExe and special drives from around 100 to just six variants. At the same time, a more cost-effective solution has been implemented for the additional terminals in the Ex range and the currently eight different rectifiers have been replaced with just two equivalent new models.

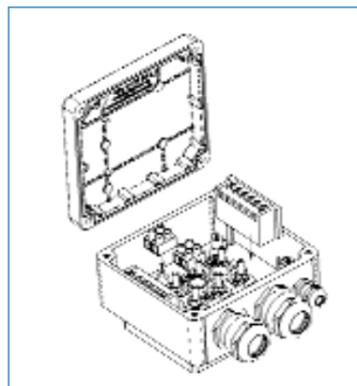
An adapter is used with all grey-cast housings to be able to mount the same terminal box to motor sizes IEC 56 ... IEC 132, despite the widely varying geometries and flange types. Brake connections and capacitor cables can be introduced via the permanently mounted adapter. No adapter is re-

quired in the case of die-cast aluminium housings. Each modification of the six terminal boxes can be rotated by 90 degrees.

Another step towards standardisation is the use of a one-way or bridge rectifier for all brake motors. In explosion-protected motors, an inexpensive ATEX-approved Wago terminal block is taken for the thermal winding protection and anti-condensation heating. All additional terminals and the rectifier are no longer glued, but instead mounted onto support domes or plug-in modules - with the exception of the ATEX modification, where screw connections are prescribed.

The new terminal box has already been registered successfully with all Ex test institutes and testing of the degree of protection has also been completed.

The works standard documentation on use of the previous "EExe" and "SPEZ" terminal boxes has been replaced by the corresponding new version.



New terminal boxes: versatile and cost-effective

Major order from Austria

VEM Sachsenwerk. Sachsenwerk is to supply a further 248 traction motors of type DKLBZ 0911-4 for the "Talent" motor coaches of the Austrian Railways. The order was issued in mid-April by Elin EBG Traction of Vienna, redeeming an option agreed back in 2001. It raises the scope of the overall deliveries to 454 motors. The Austrian Railways (ÖBB) have so far ordered 111 "E-Talent" motor coaches from the consortium made up by Bombardier Transportation and Elin EBG Traction. They are to be used both for local and long-distance services.

Complete machining of bearing covers

VEM motors. At the beginning of the year, VEM motors completed an investment in new bearing cover machining centres. Replacement of the existing equipment with modern machinery has enabled the complete machining of bearing covers and various other small components. Turning and drilling,



Quality thanks to complete machining

which were in the past separate processes, are now realised together. Various machining stages are eliminated, and intermediate transportation and storage is spared. The faster throughput frees up additional capacity. Clamping in two steps, furthermore, permits more exact and thus higher-quality production. Steel parts are now also possible thanks to the wet machining option.

New head of overseas sales

VEM motors. We are able to report a change at the helm of the overseas sales department at VEM motors. After almost 24 years of hard and successful work on behalf of VEM, Wolfgang Wagner was at last able to take his well-earned retirement on 1st July. The overseas desk has now been handed over to Wolfgang Klammer, who is similarly able to look back on many years of experience in Wernigerode.

Rainer Kowalski: Export manager at VEM motors GmbH

PEOPLE An open ear for new ideas

"I only have one permanent office, and that is everywhere!" says Rainer Kowalski with a smile whenever he is asked where he can be reached. Not surprising really, since he is responsible first and foremost for the work of the subsidiary companies in the VEM Group. And so it is quite normal that he boards a plane four to six times a week and flies back and forth between Sweden, Norway, Finland, Austria and England several times each month.

Having learned the trade as an electrical machine engineer, later going on to graduate in telecommunications, he began his job as export manager at VEM at the end of 2002. "The VEM Group is successful on the international market. My job is to ensure that no-one rests on their laurels ... and

that we instead continue to raise the bar higher and higher," he says. For the work with the subsidiaries, this means evaluating the development of VEM in Germany, and then adapting the best results to suit the individual countries. Rainer Kowalski conducts thorough discussions with the local teams to decide on the most appropriate measures to enable the customer to experience VEM as a service-oriented company with high-quality products and sophisticated know-how.

From longstanding experience, he knows where the key to success lies for a manager in the international arena. "I must understand how the people in other countries live and work, what kind of humour they appreciate, and where social and cultural pitfalls

lurk." Despite his broad spectrum of responsibilities, Rainer Kowalski is not at all the high-flyer who dictates solu-



Rainer Kowalski is 58 years old, married and has 2 children.

tions before jetting off to his next appointment. He is guided by firm respect for his partners and colleagues, trusts in the strength of teamwork and has an open ear for all new ideas.

In May, he acquired yet another new responsibility - as general manager for the Norwegian subsidiary VEM motors Norge AS. He can usually be found there for one or two days practically every week. For the time being, at least, as Rainer Kowalski emphasises. As soon as he has completed the duties which call for his frequent presence, then he will be dividing his time more equally once more. But in the meantime, he can often be seen in his hotel with a dictionary in his hand, adding a few words of Norwegian to his language skills.

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