



## Stirred, not shaken after all

Whether for tasty breakfast jams, fruit yoghurt or milk-based drinks, the stirrers and special mixing systems used in the food industry must be carefully matched to the individual production process. VEM supplies corresponding compact drives to the plant manufacturers.

*Read more on page 2*

CUSTOMER INFORMATION

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# Impulse

SENSE EXPERIENCE  
EXPERIENCE VISION



## The end for IE1 motors

**Deadline 27<sup>th</sup> July 2014: EU tightens the provisions of Motor Regulation 640/2009 under new designation.**

The deadline is now final. New ecodesign regulations come into force for electric motors on 27<sup>th</sup> July 2014. The most important news: Manufacturers will then no longer be allowed to distribute non-classified or IE1 motors which are covered by the tightened regulations. VEM welcomes this step on the part of the European Union, which is intended to plug a number of loop-holes relating to energy-efficient motors.

The new regulations apply equally to running contracts. This means that even current orders must be suspended on the effective date insofar as the deliveries are not brought forward. We already reported in detail on the forthcoming amendments in Impulse 2/2013.

Important to know: The present Commission Regulation (EC) No. 640/2009 is not being withdrawn. The existing requirements are instead to be supplemented and will in future stand under the title Commission Regulation (EU) No. 4/2014.

### Stricter exemptions

Certain exemptions remain effective for IE1 motors and motors without efficiency classification. The limits from which these exemptions apply, however, will be shifted back as follows from 27<sup>th</sup> July 2014:

- Use at altitudes above 1000 m, then 4000 m
- Ambient temperature above +40 °C, then +60 °C
- Ambient temperature below -15 °C, then -30 °C, or below 0 °C for water-cooled motors
- Coolant temperature below +5 °C, then 0 °C, and above +25 °C, then +32 °C.

Products affected by the changes can no longer be supplied after the above deadline. The changes are furthermore independent of the planned expansion of the standard IEC/EN 60034-30, 2<sup>nd</sup> edition, which is currently in preparation.



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### HANNOVER FAIR 2014

## Innovative and service-oriented

With a whole raft of innovative solutions, VEM will be underlining its standing as a supplier of complete drive systems at this year's HANNOVER FAIR from 7<sup>th</sup> to 11<sup>th</sup> April 2014. We are already looking forward to interesting discussions on the VEM stand in Hall 14, Stand H10. VEM is also organising a service conference during the fair. The gathering in the Convention Centre, Room München, starts at 2 p.m. on 8<sup>th</sup> April 2014 and will illuminate topics such as the VEM service concept, energy-efficient drive systems and the new EU regulation.

Many of the machines used in the mixing, dispersing, emulsification, homogenisation or dust-free handling of food ingredients are based on the same principles as a kitchen mixer. Laboratory and production equipment from ystral (photo below) also operates with compact drives from VEM.



EDITORIAL

## Dear friends and colleagues,



2013 was a difficult year for our group, as for many other enterprises in Europe. VEM Dresden, in particular, still suffered noticeably under aftershocks of the worldwide financial crisis of 2008/2009. Under-utilisation was compensated with short-time working, so as to preserve competence and capacities for a hopefully better year in 2014. Enquiries and in-

coming orders have developed positively over the first few weeks of the year. On this basis, and through continuation of our cost-saving measures, we will find our way back to old strength.

One important aspect for a promising future is personnel development. As you know, the transition to the next generation at management level has been accomplished successfully. Preparations have also been made in Wernigerode and will be implemented shortly. The overall rejuvenation process, as a combination of in-house staff training on the one hand, and the well-earned retirement of older colleagues on the other, has been very harmonious. A high level of technical qualification, commitment and customer orientation is an important asset. This asset, which is expressed in innovation, quality and reliability, must be safeguarded and developed further. In the longer term, it is our only chance to stand up to newly emerging economic giants. The energy and vigour of our young employees must be coupled with the longstanding experience and broad technical know-how of their older colleagues. Retirements must not result in a loss of technical competence. The "old hands" must be able to pass their knowledge on to the next generations, to help them find their way around in the demanding field of electric machine engineering. When the youngsters then pair such boundless knowledge and experience with their youthful power and enthusiasm, the workforce as a whole can confidently live up to every arising challenge.

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SPECIAL: FOCUS ON THE FOOD INDUSTRY

## When precision counts

VEM supplies compact drives for the food industry.

As we all know, James Bond orders his martinis shaken, not stirred. In the food industry, on the other hand, stirring is one of the most important processes. And according to figures from the Federation of German Food and Drink Industries (BVE), this is the fourth-largest industrial branch in Germany, with a total of 556,000 employees. It supplies its products to 80 million domestic consumers and records an export quota of 31 per cent.

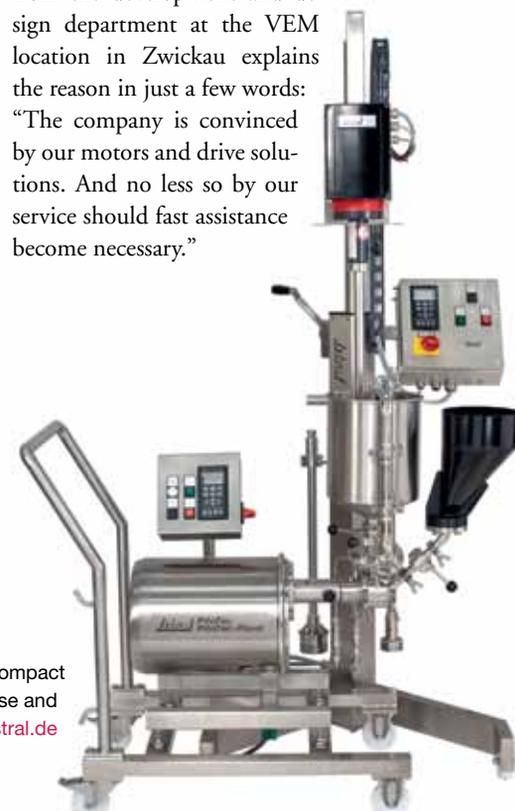
There can be hardly be a single jam, yoghurt or milk drink which does not undergo a physical-mechanical process such as mixing, crushing or separation in the course of its production. The most important thing is here the right intensity. Fruits, for example, should not be mashed beyond all recognition. For other products, constant metering and dispersion of the ingredients is decisive. The composition, consistency and taste which is expected to appeal most to the consumer is tested on laboratory batches of various sizes before transfer onto the full-scale production lines.

VEM supplies compact drives for both test and production equipment to plant manufacturer ystral. The latter's customers include numerous producers of foods such as jam and yoghurt. "Our special mixing systems must be matched precisely to the required process. The diversity of demands expressed by our global customers calls for a high degree of flexibility with regard to the drive technology, especially in connection with recipe modifications or changes

in production conditions," says Bernd Graf, product manager for drive and control technologies at ystral gmbh. "With VEM compact drives, we are able to satisfy such requirements perfectly, while at the same time ensuring the mobility of the plant and further reducing control outlay. That is a clear system advantage," he continues.

These purposes are served by variable-speed VEM drives with an output of up to 7.5 kW. The new compact drive presented at the HANNOVER FAIR 2014, comprising a PM motor and Danfoss frequency converter, is also ideally suited for use in the food industry.

ystral and VEM have shared many years of trustful cooperation. Dr. Jörg Tröltzsch from the development and design department at the VEM location in Zwickau explains the reason in just a few words: "The company is convinced by our motors and drive solutions. And no less so by our service should fast assistance become necessary."



"PiloTec" pilot plant with VEM compact drives for laboratory use and small-scale production. [www.ystral.de](http://www.ystral.de)



Variable-speed circulation pumps are an important field of application for VEM compact drives. Already today, there are demands from the EU Commission that all swimming pool pumps should be operated with variable-speed control in the future.

## VARIABLE SPEED DRIVES

# Energy-efficient with reduced mass and losses

Presented at the HANNOVER FAIR 2014: PM motors from VEM continue to demonstrate their benefits with a new generation of frequency converters.

The tighter statutory requirements relating to efficiency classification must not necessarily lead to motors becoming larger. VEM is taking a different route to enhanced energy efficiency.

### The problem:

The use of variable-speed drives seems certain to increase in the next few years. After all, they are a proven means to implement better and more economical control in technical processes. According to CMEP estimates, around 50% of all electric motors will be operated on a frequency converter by 2020.

Against this background, selection of the most suitable motor is becoming ever more important. EFF2 asynchronous motors have been the preferred choice since 2000. In accordance with EU regulation 640/2009/EC, however, the distribution of mains-operated IE1 motors has been forbidden in Europe since 16<sup>th</sup> June 2011. From 2015, mains-operated asynchronous motors with outputs >7.5 kW – and from 2017 also those with lesser outputs – must comply with energy efficiency class IE3.

Already from 2012 and 2013, therefore, IE2 asynchronous motors with enhanced efficiency have often been ordered also for compact drives. The particularly elegant design with the converter mounted directly on the motor offers the user a simple and reliable solution for variable-speed drives. Decisive benefits are achieved with regard to purchasing, installation, commissioning and not least service.

The stricter efficiency requirements necessitate considerable efforts on the part of the manufacturers to design motors in accordance with the IEC shaft heights and dimensions. This is usually accomplished by using better sheet metal qualities and by increasing the motor volume right up to the permissible maximum.

### The solution:

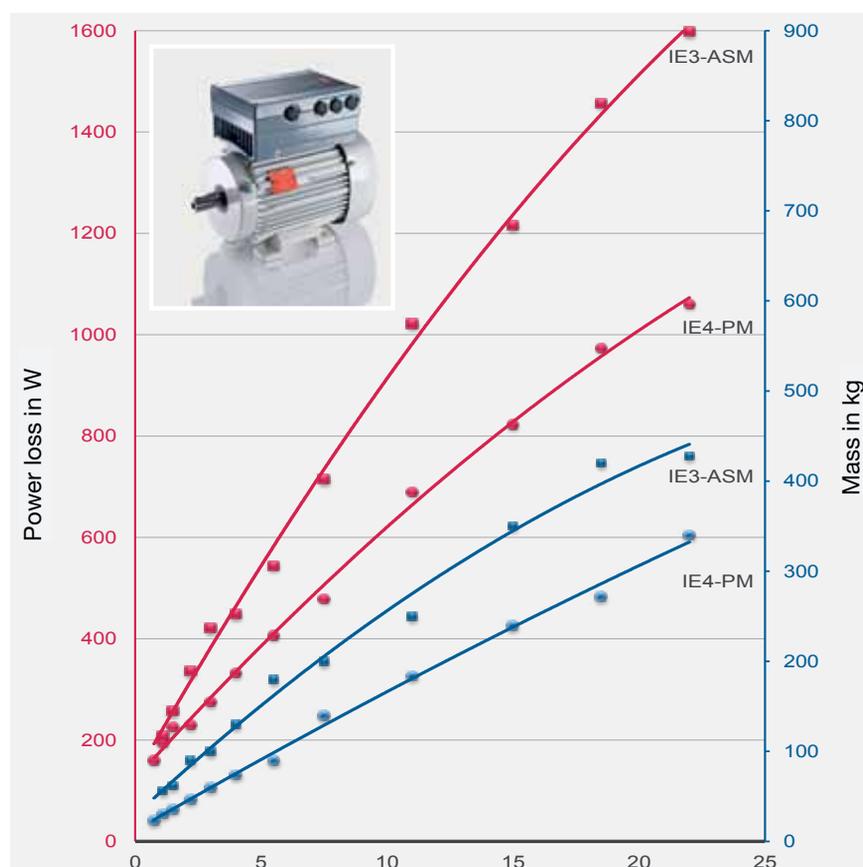
To counter this trend, VEM has already been manufacturing permanent-magnet synchronous motors (PM motors) for several years. These motors can be assigned to energy efficiency class IE4. The advantages of a significantly lower mass and reduced power losses form the basis for resource-sparing and energy-efficient drive solutions. The lower mass moment of inertia of the

rotor compared to IE3 asynchronous motors is combined with the high dynamic response of a PM motor and the very good efficiency both at full load and in the partial load range.

The difference to an asynchronous machine becomes even more evident from the comparison of an IE4-K11R112M2 asynchronous motor with a PM machine for the same output. The IE4 asynchronous motor weighs 59 kg and thus almost twice as much as the PM motor with

30 kg. The equivalent IE3 motor can be realised at a weight of 46 kg.

The converter manufacturers have also reacted accordingly. Danfoss, for example, offers a new generation of frequency converters (FCP106) which can control both asynchronous and PM motors. The new series of compact drives with the designation MPE2R...DAN, which incorporates the new converter, will be available for outputs up to 7.5 kW in 2014, and up to 22 kW in 2015.



IE4 PM motors promise lower mass and reduced losses compared to IE3 asynchronous motors



TEST STAND

## System tests for medium-voltage drives

Converters and motors for oil and gas applications on the test stand in Dresden.

Medium-voltage drives with outputs up to 12 MW are currently undergoing system testing together with their corresponding water-cooled converters at the VEM factory in Dresden. The drives are earmarked for various projects in the chemicals, oil and gas industries. VEM is paying particular attention to the 6.6 kV converter.

After successful completion of the tests, the various compressor and extruder components will be sent to their respective installation sites later this spring.

EDITORIAL

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Even in 2013, we were able to avoid a loss at group level, but we must still be better than our competitors from Asia or North and South America if we are to regain our previous standing. That applies equally with regard to quality, costs and punctual delivery. I am certain that this is another area where we can gather decisive points through active and targeted knowledge-sharing between young and old. On this note, I wish you every fulfilment in your work.

Yours, Freiherr von Rothkirch

METALLURGY

## Robust and dependable under load

VEM scores with longstanding experience and heavyweight references when it comes to complete drive solutions for steel and rolling mills

Whether for cold rolling or hot strip trains, whether for light-section or rod mills – VEM has probably manufactured drives for the whole spectrum of heavy industry plants. As a traditional supplier to the branch, the company has developed into a specialist for rolling mill drives over the past decades. Light- and heavy-duty roller table drives from the VEM factory in Wernigerode are in operation in rolling mills in many countries. Steelworks on several continents are equipped with VEM motors for all conceivable applications.

### VEM's Berlin location weighs in with sophisticated know-how

The product range covers twin drives and drives for roll stands, shears and reels, as well as roller table and auxiliary drives, all of which meet the highest standards. Hallmarks of these drives are their robustness, their reliability under tough mechanical stress, and the capacity to withstand overloads.

The VEM experts in Berlin support projects for new metallurgical plants with complete controlled drive systems and modern control and visualisation technologies. They are similarly sought-after for their know-how in connection with the modernisation of older rolling mills. Such projects generally involve complete electric drive installations comprising not only transformers, converters and motors with outputs in the range from 500 kW to 12 MW for both low and medium voltages, but also control solutions for technologically linked drives.

OUR PRODUCT RANGE

Three-phase roller table motors (IE2, IE3)	0.5 – 710 kW
Three-phase geared roller table motors (IE2, IE3)	0.4 – 450 kW
Three-phase motors for cranes in steelworks	4.8 – 315 kW
Three-phase asynchronous and synchronous motors	500 – 18,000 kW
VEMoDRIVE Multi (converters for multi-motor drives)	1.1 – 28,000 kW
VEMoDRIVE Single (converters for single drives)	0.06 – 28,000 kW
Subsynchronous converter cascades (SCC)	500 – 12,000 kW
Converters for DC motors	100 – 28,000 kW
Electrical systems and automation for complex industrial installations	

### Example of stand drives for cold-rolling mills

The VEM factory in Dresden took on reconstruction of the stand drives for a four-high tandem train at the cold-rolling mill of ArcelorMittal Eisenhüttenstadt GmbH. DC rolling motors of Soviet origin were replaced with high-quality dynamic synchronous motors of the latest generation. The challenge: Identical machines had to be matched to the various existing base frames. The work was completed to the full satisfaction of the customer.

### Example for the modernisation of rolling mill drives

A new coil box for a metallurgical plant in Ukraine was intended to improve the quality of the rolled strip. VEM's Berlin office was responsible for the controlled drive solution. The challenge: A high level of control system availability was to be guaranteed. Reserve converters with automatic switchover facilities contributed to successful fulfilment of the task.



VEM will be present at seven trade fairs this year. The largest stand is planned for the HANNOVER FAIR.

KNOWLEDGE TRANSFER

# From Efficiency to Systems – Through Systems to Efficiency



## 13<sup>th</sup> TECHNICAL CONFERENCE

13<sup>th</sup> VEM Technical Conference in Wernigerode from 30.09. to 01.10.2014.

How must drive components and drive systems be designed in future if they are to make a sustainable contribution to energy saving, cost reductions and competitiveness for their users? That is the question which representatives of motor and drive manufacturers, customers and technical research experts will be discussing at the 13<sup>th</sup> VEM Technical Conference on 30<sup>th</sup> September and 1<sup>st</sup> October 2014. The two-day event is to be held at its traditional venue at the Harzer Kultur- und Kongresshotel in Wernigerode. This year, too, the list of speakers will be packed with recognised branch experts from home and abroad.

As wished by numerous regular participants, the energy-saving potential of

complete drive systems is to be placed in the spotlight. The motto for the 2014 conference: “From Efficiency to Systems – Through Systems to Efficiency”. For further information, visit our website at [www.vem-group.com](http://www.vem-group.com).



Detailed information on the conference agenda can be found on our website.



The same location, a new topic: Wernigerode calls for the 13<sup>th</sup> Technical Conference in 2014.

FAIRS

## “VEM – Solutions with system”

Under this banner, VEM will also be present at numerous national and international fairs in 2014.

VEM will be presenting its intelligent system solutions and energy-efficient drive components at seven major trade fairs home and abroad during 2014. Highlights among the latest developments and innovations on show will be transnorm energy-saving motors, roller table motors and energy-saving motors for efficiency classes IE2, IE3 and IE4. Experts will also be on hand to answer questions concerning the function principles of traction generators or converter technologies. VEM has booked stands at the following trade fairs in 2014:

DATES	EVENT	TOPIC	VENUE
19. – 22.03	WIN: World of Industry	Automation	Istanbul
07. – 11.04	HANNOVER FAIR	Industrial automation	Hannover
09. – 12.09	SMM	Shipbuilding, machinery, marine technology	Hamburg
23. – 26.09	WindEnergy	Wind energy	Hamburg
23. – 26.09	InnoTrans	Transport engineering	Berlin
27. – 30.10	PTC Asia	Electric machines	Shanghai
25. – 27.11	SPS/IPC/Drives	Electrical automation	Nürnberg

Former managing director Dieter Bellstedt (left) has passed management responsibility on to colleague Michael Gruner (right)



PERSONNEL

## Change in management

Michael Gruner takes over the helm at VEM motors Thurm – Well-earned retirement for Dieter Bellstedt.

Michael Gruner (38) stepped up to the helm as managing director of VEM motors Thurm at the beginning of the year, having previously spent three years as head of design. “I worked in the design department for a total of 14 years, and they were very happy years,” says Gruner. “Not least for that reason, it is with a certain hint of sadness that I am moving on.” The direct contact, however, is sure to re-

main intact. After all, Michael Gruner describes the further development of VEM products as one of the focal points of his new responsibilities.

The change at management level had been prepared over a longer period and was from the beginning linked to the date of Dieter Bellstedt’s planned departure. The former managing director took his well-earned retirement at the beginning of

2014. During a moving farewell, superiors, colleagues and customers expressed their heart-felt gratitude and praised Dieter Bellstedt’s untiring commitment to the well-being of the company.

Looking ahead to the future, Michael Gruner has identified a further broad field of important work. “Standards, legislation and political decisions exert considerable external influence on our activities, and this carousel is spinning ever faster,” he explains. “It is thus decisive that we strengthen our contributions to various committees and ourselves help to shape the framework conditions for the industry.”



Back to her career roots: Sylvia Blankenhagen first joined VEM as a young graduate engineer. Her new sphere of responsibility as head of design at VEM in Zwickau includes also the test laboratory and the prototype department.

VEM – THE PEOPLE

## “I had to take a deep breath first”

Sylvia Blankenhagen in charge of design and development at VEM in Zwickau since the beginning of the year.

A woman in a supposed male domain – for Sylvia Blankenhagen, that is the most normal thing in the world. And she sees nothing so special in the fact that she has been in charge of a team of 20 employees in the development and design department at VEM’s Zwickau location since the beginning of the year.

Sylvia Blankenhagen has worked predominantly at or for companies of the VEM group ever since completing her studies in electrical engineering at the Dresden University of Technology. “Whether on the test stand, in the calculations office or with my own engineering consultancy, I have always been involved with asynchronous machines and standard motors,” she says. “Even during the past twelve years that I worked for a fan manufacturer in Baden-Württemberg.” It was there that she received a call from

VEM. When it was decided that the previous head of design Michael Gruner was to move up to managing director, a timely search began for his successor. Sylvia Blankenhagen was the first choice.

“A new career challenge at 50 is a big step. I had to take a deep breath first,” she remembers. But the chance to assume management responsibilities and to lead a team was very tempting. And everything fitted perfectly on the private side, too. Sylvia Blankenhagen accepted the offer and joined the development and design department in July 2013. “It was a great advantage that I had six months at the side of Michael Gruner to familiarise myself with the work.”

The company strategy is moving increasingly towards the development of drive systems rather than individual components. Sylvia Blankenhagen can contribute a wealth of experience in that respect. “Our objective is to be able to deliver customer-specific solutions in the shortest possible time,” she says.

Her next goal? “We must make even better use of the development and design potential at the individual VEM locations.” And she no doubt already has a long list of synergy effects in mind.



The new co-generation plant at the VEM location in Wernigerode

ENERGY GENERATION

# Both electricity and heat



Efficiency also in energy generation: A new co-generation plant has been taken into service at the VEM location in Wernigerode. It boasts a thermal output of 372 kW, alongside 239 kW of electricity. The electric power is in part used directly by the factory. The remainder is fed into the public grid.

PLASTICS PRODUCTION

# VEM machines for China

New petrochemical works receives drives from VEM in Dresden

VEM is manufacturing two synchronous motors with outputs of 21 and 16 MW, as well as asynchronous motors with outputs of 5.4 and 2.4 MW for a plastics processing plant in China. One synchronous and one asynchronous motor is to be installed on each of the two process lines concerned. The motors are to be delivered to

contractor Burckhardt Compression AG in 2015. The material produced at the Chinese plant is low-density polyethylene (LDPE), which is probably the most commonly produced plastic material in the world. It is used for foil sheeting, refuse sacks and a whole assortment of other plastic goods.

ENERGY GENERATION

# Rejuvenation

Replacement motors for the Jänschwalde Power Station supplied by VEM.

Jänschwalde Power Station, approx. 100 km south-east of Berlin, is an old acquaintance of VEM. Electric machines were already delivered to the heat and power generation complex in the 1970s. Today's operator Vattenfall recently awarded yet another contract to VEM in Dresden, this time for renewal of the drives. The order comprises three vertical pump motors with an output of 3.5 MW each, as well as two 630 kW oxidation fan motors as replacements for the ABB machines which are currently installed.

With a capacity of 3,000 MW, Jänschwalde is one of the largest lignite-fired power stations in Germany. A full programme of environmental protection technologies was retrofitted during the 1990s to reduce emissions and to enable more efficient operation.

# Manufacturers draw up new ranks – VEM takes on responsibility



Against the background of the applicable European legislation, the European Committee of Manufacturers of Electric Machines and Power Electronics (CEMEP) adopted a motion to restructure its activities at a plenary meeting on 14<sup>th</sup> and 15<sup>th</sup> November 2013. Jürgen Sander, managing director of VEM motors, was elected new CEMEP president. He now represents the fields low-voltage motors, high-voltage motors, variable-speed drives and uninterruptible power supplies, with a total workforce of 130.000.

Painter Frank Gräser at the new dry spraying wall in the VEM factory in Zwickau.



PRODUCTION

# Painting all but the skies

New painting and drying systems prepare VEM Zwickau for the manufacturing of motors with multiple-coat finishes.



Production engineer Kevin Lein presents the new drying system

The growing demand for products such as auxiliary drives for offshore installation poses a particular challenge in respect of corrosion protection. As a result, more and more motors must be given several paint coatings. To expand its factory capacity to handle the additional production steps, the VEM factory in Zwickau has invested some € 700,000 in new equipment. The heart of the project is a painting and drying system, including dry spraying booth and circular chain conveyor. It is to be taken into service in the next few days as an extension of the existing line.

The process sequence has remained essentially the same. Following assembly, the motors are transported in front of the wet spraying wall by the conveyor. They here receive their first paint coat, and are subsequently dried and cooled.

With the second spray booth and conveyor, it will in future be possible to pro-

duce more drives in the same time. Motors which require a second coating are detected by way of an electronic code and can be merged into the new system by the workers on the line. The drives here receive all further paint layers in front of the new dry spraying wall. They are then only passed on once all the specified layers have been applied and the required minimum thickness is achieved. "The dry spraying booth is based on the new Edrizzi filter technology," explains VEM production engineer Kevin Lein. "The paint mist is retained in boxes which function as filters. After this filtering, only clean air is expelled into the environment."

Air and water – the two painting systems in Zwickau operate on the basis of different filter technologies. In terms of environment protection and occupational health and safety, however, they are absolute equals.

TRANSPORTATION

# Still plenty of power for rail transport

Over the course of 50 years, some 100 railway converters left the VEM production halls in Dresden. After regular inspections, they are still in service today.

Synchronous-synchronous converter substation is perhaps a more precise designation for these railway converters. Five wagon-size converters were subjected to a thorough revision at the VEM factory in Dresden this year. Four of them were rebuilt from the pole cores up.

The 100 railway converters were built at VEM Sachsenwerk between 1968 and 1991. Almost all of them have remained in active service to this day.

The decentralised substations transform electricity from the 110 kV/50 Hz grid to the 15 kV/16 2/3 Hz current required for the railway network. This is done with the aid of mobile converters, which are mounted on a seven-axle wagon chassis.

The original customer for the 146-tonne converters was Deutsche Reichsbahn, the state railways of the GDR and as such the local predecessor of today's Deutsche Bahn AG.



This railway converter is now ready to leave the Dresden VEM factory after inspection.



If you are wondering what makes such a carpet of bubbles so special, it is all explained in a short video clip at: [www.aida.de/neue-generation/nachhaltigkeit.26517.html](http://www.aida.de/neue-generation/nachhaltigkeit.26517.html)

SHIPBUILDING

## On a carpet of bubbles

The new AIDA cruise liner generation will be the first in the world to implement the so-called MALS technology. The drives are being supplied by VEM.



Two views of Nagasaki (above and bottom): The new generation of AIDA cruise liners is being built at the city's shipyard. The maiden voyage of the AIDAprima is scheduled for 22<sup>nd</sup> March 2015.

When the first of two cruise liners of a new AIDA generation sets off on its maiden voyage in 2015, it will be gliding along on a carpet of bubbles. The film of air under the hull reduces the friction resistance, saves drive energy and reduces fuel consumption by at least 7 per cent. The bubble carpet is produced by a so-called MALS blower. The drive for this unit is a size 355 motor from VEM. Together with numerous other drives for the AIDAprima,

the motor was delivered to the shipyard in Nagasaki at the end of 2013 – right on schedule. The first part of this order for a further ocean liner of the latest generation had already been fulfilled a year earlier. The VEM motors are fitted with transponders to enable the motor data to be retrieved and evaluated with an RFID reader. With the chosen drives, VEM also satisfied the customer's stipulation of energy-efficient IE3 motors. AIDA attaches great importance to sustainability, even though the use of such motors is not a statutory requirement aboard ships.

At the time of the original order, the incorporation of IE3 motors into the standard VEM product range was still in full swing in Wernigerode. It was thus quite a challenge to match the design and all electrical parameters of the motors to the stipulations of the EU regulation in such a short time. But the effort was crowned with success ... and future holidaymakers are already able to book the first cruises.

ON AN INTERNAL NOTE

## VEM newsletter in sight

Regular information for customers with the latest news from VEM

Many customers have expressed a wish to receive information on the latest events and activities at VEM at shorter intervals. In response, we have decided to publish a regular electronic newsletter for customers, partners and everyone else who is interested in VEM. The first issue is planned for the middle of the year.

If you would like to receive such a newsletter, you can already add your name to the subscription list: On the VEM website, there is a new input box with the heading "Subscribe to VEM newsletter" at the bottom right of the page. Simply enter your e-mail address and confirm your subscription with "OK".





20 years of type testing in the laboratory and his extensive work with measuring systems have helped Hans-Joachim Gottschlich to build up seemingly boundless knowledge – knowledge which he can put to good use in service.

## SERVICE

## With a finger on the pulse

Flat hierarchies, high competence and fast reactions characterise service activities at the VEM location in Berlin. Hans-Joachim Gottschlich gives these activities a face.

When Hans-Joachim Gottschlich's mobile phone rings, he can usually recognise the customer from the displayed number. And you will never see a grudging glance at the clock, however long the day has been so far. It is rather the case that he is already going through the customer's installation and its converter-fed drives in his mind. In many cases, Hans-Joachim Gottschlich can almost foresee the coming question. Thanks to his sheer endless technical knowledge, it is often possible to find the answer by remote diagnosis. If not, then he will turn up at the site in a few hours to solve the problem in person. In this way, he has travelled to practically every corner of Europe.

### Makeover for veteran systems

"It's a great benefit that I have experienced the developments in electrical engineering not only over decades, but also with one and the same company," says VEM Berlin's service expert. "As a result, I know even a few indestructible 40-year-old installations, for example systems with mercury converters, which of course

need to be maintained, repaired or even restored." Excavators at the Reichwalde open-cast mine, for instance, which were taken back into service after a break of several years to enable relocation. Hans-Joachim Gottschlich and his service colleagues brought the converters for around 200 DC motors back to life.

A team of ten colleagues is current responsible for service, the commissioning of variable-speed drive systems, spare parts supplies, maintenance and repair work at the VEM location in Berlin. The flat hierarchies, direct communication with customers and the fast response to service calls are characteristic for their work.

"One of us is always available on the hotline, even at weekends, and can initiate problem-solving for the customer without

delay," says Hans-Joachim Gottschlich. That is corporate philosophy at VEM also in Berlin. This immediate contact, with no time wasted on hold, is a valuable benefit compared to the service departments of many larger companies.

### The icing on the cake

The fact that Hans-Joachim Gottschlich lives for his job and his customers is the icing on the cake. His calm, unruffled and thorough approach to problems is not only appreciated by the customers. His younger colleagues, too, are always keen to learn from his experience. And there will thus be no need for users to lower their sights when Hans-Joachim Gottschlich one day hands over to the next generation.

## TRANSPORTATION

## Major order for Moscow tram system

Traction motors like these from the VEM location in Dresden will soon be driving new trams on the streets of Moscow. The order comprises a total of 492 motors for the Russian capital.

The responsible contractor is PESA Bydgoszcz SA from Poland. PESA is a specialised manufacturer of trains and other rail vehicles. The traction motors are to be delivered over the period up to January 2015.



Traction motors from VEM in Dresden



The Saudi Arabian capital Riyadh with the distinctive Kingdom Tower as eye-catcher

## INFRASTRUCTURE

# “Let the water flow” – even in the desert

High-performance SCCs from VEM Berlin help to safeguard water supplies in Saudi Arabia



The Independent Water and Power Project (IWPP) in the north-east of Saudi Arabia delivers 800,000 cubic metres of drinking water per day. Pipelines equipped with SCCs from VEM take care of the transport to Riyadh.

Water supplies to the Saudi Arabian capital Riyadh will in future also be safeguarded with the aid of equipment from VEM. The Berlin VEM company transresch is delivering and installing a total of 27 subsynchronous converter cascades (SCC). They are to be incorporated into the six pump stations along the three pipelines

which transport drinking water for the city of Riyadh. The contract for replacement of the more than 25-year-old drive systems was awarded by the state corporation SWCC and is worth several million Euros. The project is intended to ensure trouble-free operation and to maximise the capabilities of the pump drives for the coming years.

In Saudi Arabia, reliable water supplies pose an enormous challenge for government and population alike. The face of the city is characterised by its water cisterns. Countless tankers come and go to fill the tanks beside the buildings. The biggest problem, however, is to transport the priceless resource to Riyadh from the desalination plants on the coast, which is around 500 kilometres away. Other cities are similarly dependent on improved water

availability – and the demand is increasing incessantly as the population booms.

Eighteen projects are currently under construction, involving pipelines with a total length of 4,359 kilometres and diameters between 200 and 2,000 millimetres. The installations include 29 pump stations and 181 water tanks with a capacity of around 55,000 cubic metres. The SCCs modernised by VEM control the speed of pumps with outputs of 6.6 kV/850 kW, 9.5 MW and 11.5 MW. The systems for the higher outputs from 9.5 MW are water-cooled. Subsynchronous converter cascades are used wherever very high drive outputs are combined with a limited speed setting range. Besides water and wastewater pump stations, this applies above all to drives for power stations and in the cement and chemical industries.

## VEM INTERNATIONAL

# Business delegation visits the Middle East

Qatar, Dubai and Saudi Arabia were the destinations for a German business delegation in mid-January 2014. The objective was to explore possibilities to expand economic cooperation with the three countries. VEM was represented by Jürgen Sander, managing director at the Wernigerode location. The visit was organised by the German Near and Middle East Association (NuMOV), whose honorary chairman, former Federal Chancellor Gerhard Schröder, headed the delegation. “VEM is already quite a well-known name in the region. Given the countries’ plans to cover energy needs from renewable sources and to promote sparing energy use, this background forms an interesting basis for future project partnerships,” said Jürgen Sander at the end of the trip.



The business delegation to the Middle East with Jürgen Sander, VEM managing director in Wernigerode (5<sup>th</sup> from right).

VEM motors Finland supplied motors for this crushing and conveyor system for an open-cast copper mine in Kazakhstan to contractor Metso. A total of 24 VEM IE2 motors in sizes 160 to 315 and an IEC400 AEM slipping motor with an output of 1.9 MW were sent on their way.



VEM INTERNATIONAL

## New service partner in Asia

To be able to offer even faster competent service to customers in the Southeast Asian region, VEM has signed a service agreement with the company Plutotech in Thailand.

With over 200 engineers and technicians, Plutotech is specialised on repairs and service for low- and high-voltage motors, generators, and technical auxiliaries such as transformers, pumps and gearboxes. Own workshops, local service capabilities and a network of partners throughout Thailand are excellent prerequisites for the role as service partner.

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SALES NETWORK

## Congratulations on jubilee

VEM motors has been represented by a sales subsidiary in Finland since 1993.

The jubilee proper is already a few months back, but we would nevertheless like to take this opportunity to congratulate one of VEM's most successful sales subsidiaries. The subsidiary we are talking about is the traditional Finnish company which in the meantime operates under the name VEM motors Finland.

The trading company Konemyynti Oy has changed its name several times over the years and was still listed as Esmac Oy well into the 1990s. It was under this name that the company became the first foreign subsidiary of VEM motors in 1993. Electric motors from VEM had already been exported to Finland through Esmac before 1990. The import agreement was at the time the first contract which the GDR had concluded with a Western country.

VEM motors Finland is today the second-largest supplier on the Finnish market. As a VEM subsidiary, it naturally concentrates on sales of VEM products, but at the same time also works together with converter and gearbox manufacturers.

The broad spectrum in all three product groups is complemented with a diversity of engineering services. A portfolio which has contributed significantly to the success of VEM's Finnish subsidiary. It supplies drives to customers throughout the branch – from energy generation

and power plants, to industrial installations and machinery manufacturers. The list of references at VEM motors Finland includes not only Finnish companies, but also customers in Asia and the Middle East, among others.

The company headquarters in Marsala near Helsinki includes a large warehouse and own workshop facilities, where motors can also be modified to the customer's individual specifications for special applications.



The sales subsidiary VEM motors Finland has its headquarters in Marsala, close to the Finnish capital Helsinki.

VEM INTERNATIONAL

## Get-together with sales partners

Service conference in Shanghai underlines the importance of the Southeast Asian region for VEM.

A get-together with sales partners from China and Southeast Asia has confirmed the importance which VEM attaches to the region. At a service conference organised by VEM on the fringes of the PTC ASIA trade fair in Shanghai, managing director Jürgen Sander from VEM Wernigerode met up with local sales experts. The topics included possibilities to ex-

pand technical support for the dealership networks in Southeast Asia and China. The idea is to facilitate access to a common and broadened range of VEM products and services for customers in the region. The event in Shanghai was the follow-up to a similar service conference in Hannover, which was extremely well received in 2013.