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CONTENTS

EDITORIAL
Dr Peter Radina, Executive Board member Knorr-Bremse Systeme für Schienenfahrzeuge GmbH

03

CUSTOMERS + PARTNERS
Even more falcons
Expertise and technology are the key

16
18

NEWS
The latest information

04

PRODUCTS + SERVICES
Full of energy
Working together

20
22

COVER STORY
Building for the future
Door systems – the next generation
Promoting rail freight transportation - interview with Jürgen Mues, Head of Asset Management, SBB Cargo AG and a member of the Technical Innovation Circle for Rail Freight Transportation (TIS)

08
10
13
A few months ago, when representatives of the rail transportation sector met at the InnoTrans trade fair in Berlin, there was general agreement that our industry has an impressive track record of innovation and can look to the future with confidence. Both these concepts – innovation and future viability – are closely associated with Knorr-Bremse and the high levels of performance, reliability and safety offered by its products and services. These are subject to a continuous process of development and are geared as closely as possible to specific local market requirements in all parts of the globe. In the future, Knorr-Bremse will continue to offer all its customers – wherever they are located – high-quality, compact, lightweight and economical solutions based on increasingly efficient and environmentally friendly technologies.

However, none of this happens of its own accord. In recent years the company has invested some EUR 500 million in expanding, modernizing and maintaining its world-wide development and production facilities. EUR 80 million of this is currently being spent on building a test and development center at Knorr-Bremse’s Munich headquarters, the foundation stone of which was laid at the end of April 2014. Regular visitors to the site can follow the steady progress being made with the building, which is scheduled for opening at the end of 2015. The state-of-the-art center will bring together the developing and testing activities of the Group’s two divisions – Rail Vehicle Systems and Commercial Vehicle Systems – and will provide a basis for further developing Knorr-Bremse’s innovative strengths and securing the company’s technological lead and future viability – the central themes of this edition of the Informer.

In this context you can read an in-depth interview with a representative of the sector-wide Technical Innovation Circle for Rail Freight Transportation (TIS) about the organization’s objective of developing innovative freight wagons and launching them in the market. Another aspect of innovation is the braking system developed for the new double-traction Velaro RUS2 high-speed trains, which have now been homologated and are currently being delivered to the operator. Our subsidiary IFE has also set new standards with its fourth-generation generation entry system; and another impressive example of Knorr-Bremse’s innovative capabilities is the ICOM system, which monitors and analyzes vehicle subsystems and enables operators and fleet owners to reduce costs by optimizing vehicle operations and maintenance.

In a few days an interesting and exciting year will come to an end. I would like to use this opportunity to wish you a relaxing festive season and a successful start to the New Year!

And I hope that you will enjoy reading about the fascinating subjects covered by this edition of the Informer.

Best regards

Dr Peter Radina
TRAXX PARTNERSHIP WITH BOMBARDIER TRANSPORTATION EXTENDED

RailServices is to continue its involvement in the overhaul of European TRAXX locomotives being carried out by the Bombardier Transportation TRAXX Service Group under current fleet service contracts. Both partners have agreed to an early extension of their successful collaboration in recent years. The partnership will now run at least until the end of 2020, during which time more than 400 TRAXX locomotives throughout Europe will be overhauled.

CHANGES TO THE EXECUTIVE BOARD OF KNORR-BREMSE AG

With effect from January 1, 2015 the Supervisory Board of Knorr-Bremse AG has appointed Klaus Deller as Chairman of the Executive Board. Deller was a member of the Knorr-Bremse Executive Board for many years and until leaving the company at the end of June 2014 was in charge of the global activities of the Commercial Vehicle Systems division. The current Executive Board Chairman, Dr Michael Buscher, is resigning from his post for personal reasons with effect from the end of 2014. Dr Buscher will be leaving the company on the very best of terms in order to take up a new professional challenge.

The current Executive Board member responsible for the global activities of Knorr-Bremse Rail Vehicle Systems, Dr Dieter Wilhelm, is to leave the Board on June 30, 2015 on the very best of terms, having reached retirement age. His successor appointed by the Supervisory Board is Dr Henrik Thiele, who has been with the company since October 2005. 47-year-old Dr Thiele is currently responsible for the Asian business of Knorr-Bremse Asia-Pacific in Hong Kong, as one of three Managing Directors.
BOOST TO HIGH-SPEED TRAIN BUSINESS IN CHINA

Having already impressed Chinese rail technology company Sifang with the bogie equipment it has supplied for more than 5,000 high-speed trains, Knorr-Bremse has now been chosen to equip a further 100 CRH2 trains.

SERVICE PARTNERSHIP WITH FREIGHT CAR LEASING COMPANY AAE

Ahaus Alstätter Eisenbahn AG, Europe’s leading specialist leasing company for standard freight cars, is banking on the comprehensive expertise of Knorr-Bremse. The latest service partnership agreement signed by the two companies and involving a pioneering concept developed by RailServices – the specialist service specialist for the rail sector within the Knorr-Bremse Group – ensures secure supplies of remanufactured valves to AAE and further reduces maintenance downtimes for freight cars.

Within the scope of a strategic partnership between the two companies, Knorr-Bremse has now been commissioned to remanufacture the required braking components – control, load-proportional and weighing valves – and supply them to the appropriate AAE partner workshops just in time for the planned overhaul deadlines. The service partnership reflects the innovative concept behind the RailServices program, according to Rolf Härdi, member of the Board of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH and Frank Junghans, Head of RailServices Germany, Knorr-Bremse Systeme für Schienenfahrzeuge GmbH (l. to r.).

Knorr-Bremse’s strong local presence and extensive manufacturing capacity in China means the company is able to fulfill two important customer requirements: it can meet an extremely tight delivery schedule; and its engineers and field service teams can offer comprehensive technical support. Under this latest contract, all 100 trains are to be built during the course of 2015. In addition to wheel brake calipers and brake discs for the 800 vehicles involved, Knorr-Bremse is also supplying high-performance ISOBAR sintered brake pads that will safely bring the CRH2 to a halt from speeds of up to 380 km/h.

With eight production sites and more than 3,200 employees, Knorr-Bremse Rail Vehicle Systems is well established in the important Chinese rail market. The systems and components for the CRH2 order will be manufactured by the Knorr-Bremse LCRI joint venture in Daxing.

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INNOVATIVE STRENGTH AND FUTURE VIABILITY

WITH THEIR IMPRESSIVE LEVELS OF PERFORMANCE, RELIABILITY AND SAFETY, Knorr-Bremse’s products and services are subject to a continuous process of further development and are geared as closely as possible to customers’ requirements – in all parts of the globe.

The company is currently investing EUR 80 million in a new test and development center in Munich that will enable it to extend its technological lead in core elements of braking systems – particularly in the fields of friction pairing and brake control, including mechatronics. The center will enable Knorr-Bremse to continue its policy of innovation and will secure the company’s technological leadership and future viability.
KNORR-BREMSE IS INVESTING EUR 80 MILLION IN A TEST AND DEVELOPMENT CENTER for braking systems at its Munich headquarters. The state-of-the-art building will bring together the development and testing activities of the two Group divisions: Rail Vehicle Systems and Commercial Vehicle systems.

Knorr-Bremse is investing some EUR 80 million in the new test and development center in Munich. On a floor area of some 17,000 square meters, 350 modern workplaces for highly specialized engineers and technicians are being created, and 100 high-tech test rigs installed for technical testing and quality assurance of components for braking systems and their subsystems. The project represents a further important investment in extending the company’s market position as the global technology leader for rail and commercial vehicle braking systems. As part of an extensive investment program the Knorr-Bremse Group has spent some EUR 500 million over the last five years on expanding, modernizing and maintaining its production and development facilities worldwide. “The new test and development center will provide a basis for further developing Knorr-Bremse’s innovative strengths,” explains Dr Gert Fregien, Head of Innovation & Technology at Knorr-Bremse Rail Vehicle Systems.
Systems. “To remain innovative in this field you have to develop your ideas from first principles – in other words starting with the contact between the wheel and the rail. This we are in an ideal position to do.” This is why the Group is bringing together the testing and development functions of the two Group divisions – Rail Vehicle Systems and Commercial Vehicle Systems. “Our aim is to concentrate the company’s core competences under one roof so as to enable cross-sectional, interdisciplinary development work to take place and generate real synergies,” explains Fregien. The center is scheduled to open by the end of 2015.

The building has been designed according to the principles of the global Knorr-Bremse Production System (KPS) with its international standards of process organization, labor efficiency, logistics and quality. The architecture reflects the idea of a Knorr-Bremse Campus for Innovation Excellence by creating space for interdisciplinary exchange – from the test systems on the first floor via test preparation and laboratories on the second floor to engineering and development on the third and fourth floors.

In addition to countless function test rigs and endurance test rigs for load testing of braking systems and their materials, the center will also house four friction dynamometers, which are used to simulate emergency braking in order to test commercial vehicle brake discs’ resistance to distortion and cracking under extreme conditions. The test engineers are also able to use test rigs to simulate the braking behavior of entire freight trains with up to 100 freight cars. And it is also possible to reproduce for testing purposes the various different technical standards for brakes in Western Europe, the USA and Russia. A climate chamber enables testing to take place at temperatures ranging from -70° to +90° Celsius. This expansion of its development capacity at the Munich site will ensure that Knorr-Bremse can maintain its high standards of quality and meet customer requirements all over the globe.
Lighter, more compact and safer: the new IFE door system.
THE NEW GENERATION OF DOOR SYSTEMS FOR REGIONAL AND COMMUTER TRAINS.

MORE THAN 500,000 IFE ENTRANCE SYSTEMS ARE CURRENTLY IN DAILY USE ALL OVER THE WORLD. WITH IMPROVEMENTS TO THEIR FOUR CORE COMPONENTS, THE INNOVATIVE FOURTH-GENERATION GENERATION DOORS NOW OFFER SUPERIOR PERFORMANCE DESPITE BEING SMALLER AND LIGHTER THAN THEIR PREDECESSORS.

The moment when passengers enter and alight from a train is crucial for the punctuality, efficiency, reliability and value for money of any rail business. Technologically advanced entrance systems are the key to ensuring that operations run smoothly, but problems can be caused by snow, ice, sand and tropical rain – as well as oncoming trains, tunnels and dust.

Before going into service, the components for the latest generation of IFE entrance systems are exhaustively tested for their ability to cope with these challenges. The development engineers have introduced across-the-board design improvements to individual components that have significantly enhanced the overall system – while at the same time reducing life cycle costs.

IFE E4 DOOR DRIVE UNIT
At the heart of the fourth generation of IFE doors is the E4 drive unit, which operates the door leaves directly via a rack-and-pinion mechanism that is virtually backlash-free and enables highly sensitive and precise door control. The drive concept also ensures maintenance-free operation over the system’s entire service life, even for the bearings and gear unit. A deformation-tolerant linear guiding system means the unit is lighter and more compact, with the number of components reduced by 40% compared to its predecessor and its weight reduced by 20%. This also enables the system to adjust to any vehicle movements during operation.

The well-engineered, compact system allows for entrance widths of between 1300 and 2000 mm. The unit’s design means that adjustment is not necessary during initial installation and subsequent maintenance, saving time and avoiding the risk of faulty adjustment. Greater passenger safety is achieved by the use of over dead center locks at all four corners and an active floor locking device to prevent lift-off.

IFE AN/AI DOOR LEAVES
Increasing demand for sound and heat insulation for an entire vehicle can only be met with door leaves that have a technologically advanced design. The use of new insulation materials and optimized profiles has improved sound insulation by a factor of 3 to 4 compared to similar products on the market (AN, noise-insulated door leaf), despite the fact that the door leaves are lighter. In addition to the improved acoustic insulation, the heat transfer coefficient has been reduced by up to 50% (AI sound and heat-insulated door leaf), thus preventing any build-up of condensation. The torsion-resistant design removes the need for additional central locking. The IFE engineers have also substantially improved resistance to thermal and mechanical distortion.
First major market success

During the InnoTrans trade fair, Bombardier Transportation (BT) placed an order for 3,510 IFE Generation 4 door systems for delivery by mid-2015 for the 65 9-car Aventra trains due to go into operation as part of the London Crossrail project. One of the clinching factors was IFE’s new policy of carrying out intensive validation of its door system developments prior to sales and to serializing production before the launch of the first project. The agreement with Bombardier Transportation includes a long-term materials supply contract for the doors.

IFE FLEX CONTROL

Thanks to the reduction of internal interfaces and the use of new, highly stable external connectors, the reliability of these components has been further increased. Intelligent control of the energy supply to the connected components adapts their operation modes to the current operational situation and reduces overall energy consumption by a quarter. It works with all external voltages between 24 and 110 V DC while its internal operational voltage across the whole entrance system is set to 24 V. This allows for identical electric and electronic components to be used throughout, thus reducing the number of different parts. A flexible control system that can handle a wide range of motor technologies is combined with improved diagnostic capabilities covering a wide range of inputs and outputs, making an important contribution to enhancing passenger safety. A 20% height reduction and 50% weight reduction compared to the previous generation means that previously supplied access systems can also be retrofitted with this latest generation of control system.

IFE X4 SLIDING STEP

The new X4 sliding step is designed to meet increasing requirements for safety and unaided use – including for passengers with strollers and persons with reduced mobility. In order to ensure safe guidance of the sliding step at all times, the footboard is guided at three clearly defined points, which makes the system torsion-resistant. The sliding step is moved by a central, maintenance-free spindle drive with a non-jamming guidance system. This drive concept not only reduces the weight and number of components – the X4 also sets new standards with an installation height of a mere 50 mm for steps up to 1.4 meters wide and 350 mm depth when fully extended.

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PROMOTING RAIL FREIGHT TRANSPORTATION

THE INFORMER SPOKE TO JÜRGEN MUES, Head of Asset Management, SBB Cargo AG and a member of the Technical Innovation Circle for Rail Freight Transportation (TIS).
What are the main factors driving growth in the rail freight sector?

Jürgen Mues: In the white paper “Innovative Rail Freight Wagon 2030 – The ‘5L’ future initiative as a basis for growth in rail freight transportation” the Technical Innovation Circle for Rail Freight Transportation has described the main factors. The “5L” initiative provides the framework for five growth factors that have been identified as necessary for successful implementation of an innovative rail freight wagon: Low noise – Lightweight – Long-running – Logistics-capable – Life cycle cost-oriented.

It is also important to ensure that innovations don’t create compatibility problems – which means lengthy coordination and decision-making processes are needed at European level. Unfortunately the innovation requirements of wagon owners are not sufficiently defined and have never been formulated in a coordinated fashion. It also takes a long time for basic innovations to permeate the market, as freight wagons have such a long operating life. There also have to be economic advantages for the wagon owners themselves, as it is they who make investment decisions and actually introduce technical innovations. But the (economic) benefits of any innovation in this field do not necessarily accrue to the wagon owners. That is why there is a need for a sector-wide approach to the issue.

It is said that for basic innovations to be implemented successfully you need to have a complete paradigm change. What form would this take?

Jürgen Mues: In the past, basic innovations (such as a new design of bogie) were often developed by the industry itself, sometimes with external funding. But for a variety of reasons they failed to succeed in the market. In some cases they didn't...
fully meet the needs of the wagon owners, partly because these had not been drawn up and formulated in a coordinated fashion. But in many cases, technically sophisticated innovations were developed only to be rejected by the market because they turned out to involve higher life cycle costs. That is why the TIS is aiming to jointly define what is required of such innovations and to develop them in an ongoing dialogue with the industry. Amongst other things this involves developing migration concepts and – where required – transfer models so that a basic innovation can actually be introduced into the market successfully.

One focus of the work of the TIS is ‘innovative bogies’. What is that all about?
Jürgen Mues: The TIS has defined its requirements for innovative bogies and is currently talking to the industry about the topic. Basically the TIS is looking to reduce noise and life cycle costs through the use of an innovative bogie. Other aspects include cutting energy consumption through the use of radially steering running gear and reducing wear and tear of the rail infrastructure.

What is the likelihood of telematics and sensors being widely used in rail freight in the future?
Jürgen Mues: Here again the TIS has defined the requirements and launched a dialogue with suppliers of these technologies. We have identified five basic areas for the use of telematics and sensor technology: 1) Monitoring transport routes and registering distances covered (e.g. Track & Trace), 2) Monitoring the load carried (e.g. load measurement), 3) Improving operational processes (e.g. automatic brake checks), 4) Supporting maintenance processes (e.g. monitoring the technical condition of components) and 5) Integration into logistics and transport chains.

There are many applications that could contribute towards making rail transportation more attractive in the future. One current challenge is the power supply for freight car applications. There are already various tried-and-tested solutions on the market, but it would be ideal if we could have a single power supply throughout the train via an automatic coupling. Of course, the importance of sophisticated telematics and sensor systems varies according to the nature of the freight and the type of wagon involved. But over the next few years I am sure that such applications will be introduced, especially for wagons with a high annual mileage or for the transportation of fragile or high-value freight.

Innovations and new developments must, above all, generate customer benefits. How does the TIS propose to ensure that this happens?
Jürgen Mues: That is clearly one of the major challenges for the TIS. Often the benefits of an innovation don’t accrue to the wagon owner who is expected to make the investment in the first place. What we need here is incentives to transfer the economic benefits to those who have to bear the additional cost of an innovation. We can only achieve this in collaboration with sectoral associations and policymakers.

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**Low noise – Lightweight – Long-running – Logistics-capable – Life cycle cost-oriented**

The critical growth factors for success include the following essential properties:

**Low noise**: significant reduction of noise emissions towards the current levels of rail passenger vehicles

**Lightweight**: higher payload, less net mass

**Long-running**: reduction of downtimes and unproductive times, increased average annual mileages, very high / higher levels of reliability

**Logistics-capable**: possibility of integration into supply chains

**Life cycle cost-oriented**: integration of LCC-oriented components, with procurement costs rapidly amortized over product lifetime and more than compensated for by cost reductions in operation and maintenance – with the effect of reducing overall cost over lifetime.
EVEN MORE FALCONS

IN RUSSIA THE NEW VELARO RUS2 TRAINS HAVE PASSED THE OFFICIAL CERTIFICATION PROCESS WITH FLYING COLORS – thanks in no small part to the Knorr-Bremse service team in St. Petersburg, which has been helping Siemens ensure the smooth running of the braking, door and HVAC systems.

’Sapsan’ – ‘peregrine falcon’ in Russian – is the name given to the Siemens high-speed train, resplendent in the Russian national colors of white, blue and red, which has been operating between Moscow and St. Petersburg for some five years now. The journey time between the two cities has been reduced to less than four hours, and with its 8000 kW power unit the train currently has a top speed of 250 km/h – though this can be raised to 300 km/h.

State railway operator RZD initially ordered eight trainsets, but added a further eight towards the end of 2011. The tight schedule for commissioning and homologation was met last summer – despite some of the processes taking place during the harsh Russian winter – and the trains are now being phased into full operation. Each Velaro RUS2 consists of two ten-section trains coupled together to create the world’s longest high-speed train – 500 meters in length.

OUTSTANDING TRACK RECORD OF RELIABILITY

The ‘Sapsan’ is popular amongst travelers, and the trains are filled to capacity. Despite some extremely harsh weather conditions, they also have a 99% availability record – thanks partly to Knorr-Bremse. The braking system had to meet a new requirement for double traction capability, and the braking, door and HVAC systems had to be capable of operating at temperatures down to minus 50° Celsius. “The company can offer systems competence combined with a comprehensive product portfolio that includes aftersales service,” says Michail Gecht, project leader for the Sapsan’s braking system at Knorr-Bremse Rail Vehicle Systems. “As they are supplied from a single source, the brakes, doors and air-conditioning are perfectly matched,
and there is a contact person for all three systems at the Siemens depot in St. Petersburg.

RAPID-RESPONSE LOCAL SERVICE
Deploying Knorr-Bremse employees at the Siemens depot has considerably reduced the overall turnaround time for maintenance and repair jobs, thanks to the immediate availability of specialist technicians at all times. “Our employees are there to ensure the Knorr-Bremse systems are always in working order.” Furthermore, in order to improve the service even further and to be able to carry out the full range of maintenance operations on the braking system of the Velaro RUS, Knorr-Bremse is currently constructing its own service center based on the latest version of the KPS production system and equipped with state-of-the-art test rigs.

The existing Velaro RUS1 trains are currently being upgraded to Velaro RUS2 standards – including double traction capability. This not only gives the operator greater flexibility: “It also establishes a platform for further vehicles,” explains Gecht – a necessary step, as the latest batch of Velaro RUS2 trains will not be enough to meet the future need for high-speed trains in the rapidly expanding Russian market.
EXPERTISE AND TECHNOLOGY ARE THE KEY

A JAPANESE CONSORTIUM IS CURRENTLY MODERNIZING 95 CARS FOR KIEV METRO. Knorr-Bremse is the only foreign major equipment supplier involved in the project.

Three metro lines form the backbone of the public transport system in the Ukrainian capital of Kiev. However, passenger numbers are rapidly outstripping the network’s capacity. Kiev Metro already carries more than half a billion passengers every year, and the number is on the increase. Most of the trains consist of Type 81-717/714 cars such as are also used in other metro systems in the former Soviet Union. They are decorated in the Ukrainian national colors – blue with a yellow stripe under the windows and on the doors.

NEW BRAKING SYSTEM AIMS TO REDUCE LIFE CYCLE COSTS

In addition to expanding the system’s capacity – Russian manufacturer Metrovagonmash delivered the last batch of a total of 40 new metro vehicles at the end of 2013, and a new section of line with three stations is also being built over the next five years as a link across the Dnieper River – the metro operator is determined to improve efficiency: “A decision was made to launch a modernization project aimed above all at reducing energy consumption and CO₂ emissions,” explains Dr Jonathan Paddison, Vice-President Sales & Systems at Knorr-Bremse Rail Vehicle Systems.

The contract signed between Kryukovsky Railway Car Building Works and the Japanese Consortium led by Itochu Corporation supported by Mitsubishi, Fuji and J-TREC covered not just a fleet upgrade but also financing via CO₂ emissions certificates. The initial focus of the project was on drive systems and infrastructure, with a view to achieving energy savings of up to 35 per cent and reducing CO₂ emissions. Modernization of the braking system was then also included in the project in order to improve safety and availability and reduce life cycle costs. “In continuation of our successful business relations with Itochu we really appreciate their help in involving us in this project, based on their experience with...”
Knorr-Bremse as a reliable brake system supplier.
Knorr-Bremse is developing the entire braking system, including the control system, air supply using oil-free compressors, and bogie equipment in the form of brake discs and calipers. The installation of brake discs in a metro vehicle from the CIS region is a first, according to Paddison.

**TOP-LEVEL EXPERTISE REQUIRED TO MEET DEMANDING SPECIFICATIONS**

“It is highly unusual for a foreign partner to become involved in a project like this in Japan.” On the other hand the decision to involve Knorr-Bremse was perhaps not so surprising: the company has already made a name for itself in the Japanese rail market by supplying equipment for large numbers of Shinkansen high-speed trains. “We have an excellent reputation. People know we have a very strong team and the necessary expertise to deliver to the specifications required,” says Paddison. Knorr-Bremse also already operates successfully in Ukraine. “We have been working with the Ukrainian vehicle manufacturer ‘Kryukovsky Railway Car Building Works’ – KVSZ – since 2005, and in 2010 we delivered a new braking system for a metro prototype. Knorr-Bremse was also able to use its experience with metro systems in the CIS region to help overcome many obstacles in joint talks with the Japanese consortium, KVSZ and the operator ‘Kiev Metropolitan’. Collaboration by KB Japan as a contractual partner of Itochu and KB Moscow with the Berlin sales team – which specializes in metro vehicles for the CIS region – is a good example of the motto ‘Think global – act local’ in action.” Modernization of the first 95 metro cars is nearing completion, and an option for further cars is currently under discussion.
FULL OF ENERGY

KNORR-BREMSE RAIL VEHICLE SYSTEMS HAS A GROWING REPUTATION AS A SUPPLIER OF COMPLETE SYSTEMS. In September a new brand was officially presented at the InnoTrans trade fair: Knorr-Bremse PowerTech supplies auxiliary power systems for all types of rail vehicle as well as for other industries.

If you look down on a streetcar or LRV from a bridge, you may wonder about the purpose of the large rectangular boxes installed on the vehicle’s roof. These are the so-called on-board power converter units, whose purpose is to convert high-voltage current from the overhead line into power for operating on-board systems like the lighting, display monitors and air-conditioning. Knorr-Bremse now has a share in this market.

At the start of the year, Knorr-Bremse acquired two companies: Trastechnik GmbH & Co. KG in Holzkirchen, Bavaria and PCS Power Converter Solutions GmbH in Berlin. The portfolios of the two companies complement each other and contain rail vehicle electrical systems that are marketed and in operation all over the world.

Despite their compact appearance, power converters are highly complex pieces of equipment that are designed and developed to meet the specific needs of each vehicle builder. There can be important differences, for example, in the voltages involved, the type of cooling system and the installation location on top of, underneath or – more rarely – inside the vehicle. The latter option is used above all for the battery charging equipment used mainly in long-distance and high-speed trains. In all cases the converters have to have three qualities – they should require as small an installation envelope as possible, they should be lightweight and should offer maximum efficiency.

OFFICIAL PRESENTATION AT INNOTRANS 2014

Following intensive preparations the new brand – Knorr-Bremse PowerTech – was presented to the public at the InnoTrans trade fair in Berlin in September. The link-up between two specialist SMEs and Knorr-Bremse’s global network has created powerful synergies: Knorr-Bremse PowerTech can now offer customers all over the world a wide range of tried-and-tested products. The innovative capabilities and systems competence of the Knorr-Bremse Group mean that in future, development, production and delivery processes will be especially efficient, there will be synergies between various vehicle systems – e.g. the HVAC and power supply systems – and special local requirements will be met.
What were the motives behind Knorr-Bremse’s acquisition of PCS and Transtechnik?
This was our first move into a new market segment as part of a comprehensive growth strategy for the Group. On-board power supply systems have enormous market potential for a number of reasons: rail vehicle manufacturers are increasingly outsourcing their production; the market is relatively fragmented; and the increased desire for comfort and on-board information means we can expect considerable growth in this segment. By acquiring the two leading companies in Europe we have got off to a flying start in terms of market share.

What are the medium and long-term goals of the new Knorr-Bremse PowerTech division?
First we have to successfully complete the integration process. Both companies are currently merging, stabilizing and improving their processes and operations. At the same time we are expanding our market presence with the help of a new global sales network. We are expecting to grow in both the medium and long term – our aim is to double or even treble our revenues and increase our global market share from the current 8-10% to 25%.

How have customers reacted to the new brand, particularly at InnoTrans?
People are very interested in KB PowerTech – and so far the feedback has been highly positive. Customers want to find out more, and we are convinced that once the process of merging the two companies has been successfully completed, we will be able to offer them products and services they will not find anywhere else in the world!

Can you tell us anything about current projects and developments at Knorr-Bremse PowerTech?
We are, of course, trying to establish a foothold in new markets – China for example, which is the biggest rail market in the world. Knorr-Bremse has always been very successful in China, but so far KB PowerTech does not have a presence there. We are also developing products that are not just better but can also be delivered more rapidly. Our aim is to launch a new product catalogue at InnoTrans 2016 which will include special solutions, for example, combining power converters with Knorr-Bremse HVAC systems and compressors – integrated units offering significant value-added compared to individual conventional products. These are exciting times for everyone involved, with a lot of changes to cope with. It’s not always easy, but we have a superb team and I am really looking forward to the future.
NedTrain is a highly reputed specialist in the inspection and overhaul of rail vehicles. The same applies to Knorr-Bremse RailServices when it comes to the maintenance, overhaul and repair of braking and on-board systems. So it is hardly surprising that these two companies have decided to work together in the future.

The cooperative venture involves jointly overhauling Knorr-Bremse compressors in the NedTrain repair shop at the company’s site in Berkel-Enschot, near Tilburg in the Netherlands. “Colleagues from Knorr-Bremse will supervise the work on site at the customer’s premises,” explains Andreas Hefti, Managing Director Knorr-Bremse Rail Systems Switzerland and responsible at Knorr-Bremse for development of the shop-in-shop concept. “We are currently working on how the idea will be implemented in practice.”

LOCAL OVERHAUL OF SUBSYSTEMS
It has already been agreed that in a new departure for the company the Knorr-Bremse specialists will be directly integrated into processes at the NedTrain shop. “The main advantage is that this will shorten the distances involved and enable us to communicate more directly,” explains Hefti. Training sessions will be held
in which the Knorr-Bremse colleagues will pass on the specialist skills required for the work. At the same time they will be involved in auditing the processes to ensure that the entire range of Knorr-Bremse standards and quality requirements are implemented.

NedTrain and Knorr-Bremse will benefit equally from this cooperative venture. “Knorr-Bremse will help NedTrain strengthen its reputation as an innovative company,” says Hefti. And NedTrain will be in a position to carry out local inspection of increasingly complex Knorr-Bremse subsystems.

The framework agreement signed at InnoTrans 2014 goes well beyond inspection and overhaul of Knorr-Bremse compressors and also covers spare parts logistics, various other repair and overhaul services and collaboration on modernization projects.
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