



The Magazine

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Interesting articles, technical innovations, application examples from all around the world



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EDITORIAL

Dear Reader,

We have prepared this, the 19th issue of our popular customer magazine in exciting times: STAHL CraneSystems has found its feet and is now an established, important member of the Columbus McKinnon family. In recent months, which have been packed with activity, we have continued to supply our products to the usual high standards and have completed many attractive projects with our partners throughout the world. To give you few examples, we are presenting some of our global projects in this magazine. Whether it is in the heat of Africa or in icy Finland, our "Made in Germany" products bear witness to the quality and outstanding technical expertise of our staff, from distribution through manufacturing to shipping. We would like to thank you for the confidence you have shown in us and for our good working relationship!

Yours Dr. Thomas Peukert

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Interview

Mark Morelli



We asked Mark Morelli, the new President and Chief Executive Officer of Columbus McKinnon, about the current situation and about working with STAHL CraneSystems.

What is your assessment of STAHL CraneSystems following your visit to Germany?

I am very impressed with the STAHL CraneSystems employees. I believe their professionalism and expertise to solve customer problems has significant depth. I believe that they exemplify "partner of experts."

What have you learnt from this visit and, above all, your talks with staff?

I learned how STAHL CraneSystems creates value through providing engineered solutions and as integrated manufacturing process to deliver products.

What does the addition of STAHL CraneSystems mean for the CMCO group?

STAHL CraneSystems, having more engineered content fits my definition of an industrial technology company. Columbus McKinnon will evolve more towards industrial technology.

What position has, in your opinion, STAHL CraneSystems taken in the CMCO group?

STAHL CraneSystems will retain its global business model and is a key part of Columbus McKinnon.

Why is the European market interesting for your group?

STAHL CraneSystems provides a greater presence worldwide. The strength of STAHL CraneSystems in Europe is particularly helpful as this adds global balance to the Columbus McKinnon business.

What differences do you see between Germany and the USA as far as the crane and hoisting technology industry are concerned?

I see some achievements in the U.S. market such as variable speed electric controls in the U.S. market that has not gained traction in Europe.

What can German and American employees learn from each other?

There are best practices that can be shared on both sides, however, I believe there is a lot for our associates in Germany and America to learn from each other. Some things are obvious such as learning a new language and different cultural norms and values. But, over time as individuals work together and build trusting, respectful relationships, we will find ourselves learning to be more flexible and to look at our challenges in new ways. This happens because these new experiences and perspectives open us up to new ideas and thinking patterns that improve our creative problem solving skills and our ability to be more resilient and agile in the face of change. This diversity of thought and experience makes our company stronger, more innovative and enriches our work experiences. I encourage our associates to take the first step and reach out. I know that they will find it to be a rewarding experience.

There are best practices that can be shared on both sides, however, I believe there is a lot for our associates in Germany and America to learn from each other.

How do you see the future developments of your group? What role will STAHL CraneSystems play in them?

I see Columbus McKinnon pivoting to an industrial technology company. I define industrial technology companies as a business that solves tough customer problems. In doing so, they provide products and solutions that meet needs and normally involves some technical customer aspect. These products and solutions tend to have higher gross margins. From my perspective, STAHL CraneSystems is behaving like an industrial technology company.

There's more than





silkin Kashmir

STAHL CraneSystems supports major project in the Himalayas

“If there is paradise on Earth, it is here,” the Mughal emperor Jahangir once said four centuries ago in describing the landscape of the northern Indian state of Jammu and Kashmir. Lying at the foot of the Himalayan massif, the small region is host to a variety of climate zones: from temperate and Mediterranean to sub-tropical and high alpine. The diversity of the climate and soil conditions forms the basis for the existence of a wide range of different plant and animal life. The idyllic countryside attracts countless trekkers every year and even filmmakers from Bollywood use the splendid setting for their productions. To please the demands of guests for comfort and the like, a lot is being invested in India. One of the projects is the Kishanganga hydroelectric power plant that was built near the town of Bandipora on the fringes of the frontier between Pakistan and India. It is part of a large hydroelectric power station programme being implemented by the state-owned Indian power utility NHPC Ltd. (formerly National Hydroelectric Power Corporation). NHPC is being supported in its plans by the German engineering firms DSD NOELL GmbH and STAHL CraneSystems as well as by the Hindustan Construction Company from India.



A stationary SHW 8 winch with a safe working load of $2 \times 60,000$ kg consisting of two rope drums and a gearbox. After completion was 21.5 m at 2×150 m rope length.

The Kishanganga hydroelectric power plant lies 2,400 metres above sea level. At these altitudes, temperatures from November to May are icy cold. In the summer months, by contrast, landslides make the region difficult to access. Not least for these reasons, the customer NHPC Ltd. sought strong partners able to guarantee punctual delivery and reliable execution of the work. DSD NOELL GmbH from Würzburg and STAHL CraneSystems from Künzelsau stood the test of these high requirements.

To ensure continuous operation of the turbine generators of the Kishanganga hydroelectric power plant, which are meant to generate a total of 330 megawatts of electricity, it is vital that a continuous flow of water is ensured. The plan to guarantee this: to dam the Kishanganga River. As a specialist in the field of hydraulic steel structures in waterways, weirs and hydroelectric power stations, DSD NOELL GmbH planned and built a 37 m high weir. STAHL CraneSystems, a specialist in crane technology with the largest range of highquality hoisting technology available worldwide, developed and delivered the winch system to lower the 100 t sluice.

The demands on the hoist were high as it had to work reliably in the adverse environmental conditions in the mountainous region. The first concepts for the custom solution were developed at the headquarters of STAHL CraneSystems in Künzelsau back in 2009: a stationary SHW 8 winch with a safe working load of $2 \times 60,000$ kg consisting of two rope drums and a gearbox. To ensure equal distribution of the weight, the hoist was designed in reeving of $2 \times 12/2-1$ and the drum manufactured in a length of L4. The final height of lift achieved after completion was 21.5 m at 2×150 m rope length. Thanks to double symmetrical arrangement of the reeving, it was possible to realise perfect synchronism of the two load hooks. The total length of the winch system covers almost 9 m. The rope drums are flanged to the gearbox with special couplings, thereby

compensating all tolerances between the machine and steel structure. Due to local conditions, the gear motor is mounted vertically. As a result of this unusual assembly, the hoist motor is mounted above one of the two rope drums.

To ensure safe lowering of the sluice, the engineers from STAHL CraneSystems implemented the rope with seven-fold safety. In addition to that, they included a second brake in the winch system as safety brake, flanged directly on to the gearbox. The hoist was equipped with an overload cut-off device for each of the two load hooks and placement of the load realised separately through slack rope cut-off for each of the two hooks. Both of the current hook positions are shown as optional extra on a display on the switch cabinet doors. In addition to that, the motor currents of the hoist motor are shown on ammeters. This hoist motor is additionally protected by motor circuit-breakers.

The hoist is designed for its application for an ambient temperature between -25°C and $+40^{\circ}\text{C}$. Robust, pole-changing technology with further tolerance ranges enables operation in unstable mains power supplies. An external ventilation with stopping control was implemented in the hoist motor to ensure a 15-minute duty for the hoisting technology with a subsequent cooling phase. The winch system was given a special finish of a $270\text{ }\mu\text{m}$ thick top coat of polyurethane to make it weatherproof. Due to the air humidity, STAHL CraneSystems also equipped the panel boxes and hoist motor of the individual hoists with a heater. A hoist brake with built-in brake venting lowers the load with pauses in the event of a power failure. The weight of the load is determined continuously by the SMC multi-controller via analogue measuring sensors. In the case of an overload, the lifting movement is switched off immediately. The multi-controller can, moreover, measure further data such as, for example, the load spectrum, the operating time, the full-load operating time and the motor switching operations and read them out with the help of a PC.

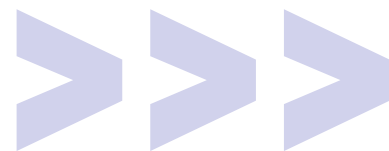


Test set-up of the SHW 8 special winch from STAHL CraneSystems: the gear motor was mounted vertically and the hoist motor above one of the two rope drums.

The performance of the winch was put to test at Haslinger GmbH Metallbau + Krantechnik, a certified partner of STAHL CraneSystems, at the end of September 2011. With its “partner of” concept, STAHL CraneSystems has been pursuing a strategy of separating crane building and crane technology from each other successfully since 2009. In this strategy, competent crane builders see to planning and production of the crane systems, while STAHL CraneSystems concentrates on the development and production of hoists and crane technology of world-class standard. Haslinger GmbH Metallbau + Krantechnik, one of the most important partners of STAHL CraneSystems in Germany, manufactured the steel portal including ladders, walkways, framework construction for the winch systems and the enclosure for the hoisting technology for the project in the Himalayas. Following successful testing, the hoisting technology with crane system was transported to the installation site more than 5.5 thousand kilometres away.



View of the river diversion and hoisting technology from STAHL CraneSystems.





The protective enclosure of the hoisting technology from STAHL CraneSystems was manufactured by its certified partner Haslinger GmbH Metallbau + Krantechnik.

Construction work on the Kishanganga River had almost been completed at this time: the weir, which passes a part of the river into a newly constructed riverbed, was built in autumn 2016. The remaining water is used to supply the hydroelectric power plant continuously. It is first collected from the reservoir in an equalizing reservoir through a 24-kilometre long tunnel before it is passed to the underground power station with three Pelton turbines. Each of the turbines generates a power of 110 MW. The crane system was commissioned on site by the STAHL CraneSystems factory service centre. Since the passes in the Himalayas are only passable for a few weeks in summer, the equipment had to be delivered in a finely defined period of time. The moment came at long last in mid-July this year: the sluice was lowered with the help of the special winch. Since then, the reservoir has been filling up day for day. The minimum draw down level (MDDL) was already reached in mid-August. The Kishanganga hydroelectric power plant is set to go online in 2018.

Despite delays due to the impassable terrain and unrest in the nearby border to Pakistan, all companies involved in the project and the customer NHPC Ltd. are satisfied with the progress in this project, which represents a further step in the development of the region Jammu and Kashmir.

*With the kind support of Uwe Trenkmann/DSD
NOELL GmbH, Robert Seibold/Haslinger GmbH Metallbau,
Gerhard Deitigsmann/STAHL CraneSystems GmbH*



The dam in August 2017: the water level rose to the minimum draw down level (MDDL) within a month.



Green power in Estonia

Utilitas, one of the biggest energy suppliers in Estonia, provides more than 2,600 households in the municipality of Keila in northern Estonia with heat, 90 % of which is generated with renewables. One of the 11 combined heat and power stations in the region uses wood chips to generate energy – a CO₂-neutral fuel because the wood only releases as much CO₂ during combustion as it absorbed during its growth. In 2003 Utilitas contracted Eesti Kranaavabrik OÜ, a crane-building partner of STAHL CraneSystems, to install its first crane system to charge the furnace. Built on the basis of a CraneKit from STAHL CraneSystems, this system served well – and after 13 years of continuous operation needed modernisation.

The bio-heating plant in Keila needs a continuous supply of fuel. The hoist picks up the wood chips from the fuel store with the help of a gripper and transports them to the furnace. The crane and hydraulic scoop work fully automatically. A special computer program monitors and controls the sequences as the plant is not manned round the clock. The modernisation entailed replacement of both crane bridges and hoists with grippers as well as electrical systems and trolleys. The software was also updated. The short time allowed and limited space in the plant represented special challenges in planning and realisation. Thanks to the smooth collaboration between all companies concerned, it was possible to hand over the new plant to the customer after just half a year of its initial inquiry. A frequency-controlled SHF 60 wire rope hoist from STAHL CraneSystems with a top-flange electric trolley and a lifting capacity of 6,300 kg was mounted on a double girder overhead travelling crane with a span of 14.9 m.

A special frequency inverter makes it possible to feed energy back into the power grid, which makes the plant particularly economical and environment friendly. Utilitas is very satisfied with this individual and modern solution and plans further projects with Eesti Kranaavabrik OÜ.

Eesti Kranaavabrik OÜ is a subsidiary of the Finnish crane builder ERIKKILA and has been using high-quality hoisting and crane technology from STAHL CraneSystems since 2001. It has been a certified partner of STAHL CraneSystems since 2017.

With the kind support of Jaanus Unssalu and Keio Klaar/ Eesti Kranaavabrik OÜ, Sabine Kracht/ STAHL CraneSystems GmbH





Even in the cold a blast can happen

Explosion-proof hoisting technology on the coast of Finland

As one of the first and for a long time also one of the only manufacturers to do so, STAHL CraneSystems has been developing explosion-proof hoisting technology since the end of the 1920s. Much has happened since then technically – but nothing has changed regarding the mode of action and importance of explosion protection. With its roots in mining, the explosion-proof technology from STAHL CraneSystems is used in many branches of industry nowadays: among others in the chemical and petrochemical industries, the shipbuilding and offshore industries as well as the power supply industry. In explosive atmospheres, the electrical devices used here are potential sources of ignition. Inflammable gaseous substances can in combination with oxygen cause a sudden chemical reaction – or explosion – when exposed to a single spark. If the risk of explosion is very high, only explosion-proof equipment may, according to international safety guidelines, be used. STAHL CraneSystems offers one of the world's most comprehensive product portfolios in explosion-proof hoisting and crane technology.

Use in Finland: explosion protection in icy cold

In 2015 the experienced engineers of STAHL CraneSystems took on the challenge of developing an LNG maintenance crane for use on the icy coast of Finland. The first Finnish LNG tank began service in the port and industrial city of Pori in March 2016. The slewing crane on the tank comes into use whenever the pump needs to be lifted out of the LNG tank and serviced. This happens up to five times a year. The pump, which pumps the cold liquefied natural gas (–164 to –161 °C) in a pipe system, must then be lifted out of the approximately 35 metre high tank into the open for maintenance work. In view of the extreme conditions in the tank, special ropes, which are fastened permanently to the

liquefied natural gas pump and therefore spend their lives in the tank, are needed for this. When maintenance work needs to be carried out, these ropes are fastened to the rope drum and hoist. STAHL CraneSystems uses a slewing crane of the type “Boss Exn 32–16” (Vetter Krantechnik) for this. A modified SH 50 ex wire rope hoist with a lift of 46 metres is used as hoist. The “light LNG slewing crane” is a development by STAHL CraneSystems Spain, which can under certain circumstances (as in the LNG terminal in Pori) represent an alternative to the classical LNG hoists. The subsidiary has built four such cranes together with Vetter since 2005 – in addition to the numerous smaller slewing cranes that Vetter delivers to Spain every year.



Intelligent gearbox layout in the safety zones

The area above the LNG tank is divided into various safety zones in dependence on the estimation of the explosion risk. In Pori the most hazardous Zone 1 was limited to two metres above the top of the tank. After this delineation, there were certain elements of the crane inside and others outside this zone. The technicians and engineers used this classification to their advantage and devised a special solution for the crane technology: They installed all electrical components of the wire rope hoist in the main junction box outside Zone 1. As a result it was possible to locate the crane operation and power supply line in Zone 2 according to EC Directive 94/9/EC (ATEX 95). In this way it was possible to dispense with an explosion-proof control box and implement the necessary protection with a single enclosure. Although the solution involved considerably more cabling work between the panel box and wire rope hoist, it saved the customer costs. The lower weight of the wire rope hoist also had a positive influence on the design of the slewing crane. In the icy Finnish winter, the interior of the explosion-proof enclosure and the motors need to be monitored by thermistors. In outdoor temperatures to -29°C , the enclosure is heated and the crane can work without restrictions. However, should the temperature drop below this point, the system switches itself off automatically for safety reasons. The system is further protected by housing prevents harm by the moist sea air and its high salt content.

Safety, quality and reliability of technology and equipment are of uttermost importance when it comes to potentially explosive industrial areas such as LNG plants. Hoists and crane systems that are used on the tanks for maintenance purposes only must work reliably and safely even after long periods of non-use. Every country prescribes its own certificates and documents that are needed in order to install cranes and hoists in LNG environments. They guarantee an essential necessary degree of safety – but at the same time pose a serious challenge for many manufacturers. A wealth of experience, know-how and time is needed for complete documentation of all certificates and verifications. STAHL CraneSystems is one of the world market leaders in this field. Decades of experience and the possibility to manufacture custom solutions on a case by case basis have made the long-standing company a leading player in this field.

With the kind support of our subsidiary from Spain



Report from Künzelsau

Training and studying with the **world market leader**

Interview with Natalie Müller,
Training & Development Officer
at STAHL CraneSystems



Do you remember starting at STAHL CraneSystems?

How did your training work and which departments did you get to know?

I still remember starting here in Künzelsau very well. When I started my dual study course in Industrial Business Administration in September 2009, the traditional introductory days were held first. We spent three days camping together in Kocherstetten so that we could get to know each other better and grow together as a team. This type of introduction to a new phase in life has proved successful, which is why we have continued this at STAHL CraneSystems until today.

How did things continue after the training for you?

We were able to concentrate on focal areas while we were still studying. After talking with the personnel and training manager, I was pleased to be able to choose "Organisation and Personnel", which has potential for the future. After graduating in 2012, I was then taken on as a personnel officer initially. Since 2014, I have been working as a training and development officer, dealing with training and professional development at STAHL CraneSystems.

Women are mostly in the minority in the technical professions.

What attracted you to the crane industry?

It was my family that drew my attention to STAHL CraneSystems. Like me, my brother also did his dual study here a few years ago, although his course was in mechanical engineering. The things that he talked about also awakened my interest in STAHL CraneSystems as a company and in the crane industry.

STAHL CraneSystems has a long tradition as a training company.

Why is the training considered to be so valuable?

For us, training in the Künzelsau plant has a good reputation and a long tradition. It is important for us to be able to train qualified, motivated new recruits so that we can continue to operate successfully in the market now and in the future and



so that we are well equipped to deal with demographic change. We are pleased if we can continue to employ our junior employees successfully after their training.

In which areas does STAHL CraneSystems offer training?

We train industrial mechanics, electronics engineers for operating technology and industrial electricians for operating technology. In addition, we offer a dual study course in mechanical engineering – design and development in cooperation with the Baden-Württemberg Cooperative University. Students can also study electrical engineering with us in a cooperative study model. This starts with a shortened training course in electronics for devices and systems. This is followed by a degree course at Heilbronn University at the Künzelsau site. Within five years, graduates have thus completed a professional training and a bachelor's degree.

What is so special about training with STAHL CraneSystems?

Because the teams and departments here are relatively small and because people stay with us a long time, being here feels like being in a family. All our junior employees can be integrated very well and have the chance early on to make their own contribution and tackle demanding tasks. We feel that it is important to challenge and support our trainees as best we can. Whether it's our sports day, trips for trainees, bowling with the directors or our week of social projects: At STAHL CraneSystems, the training is varied and highly important.

Which departments do the trainees get to know and what are their main tasks?

Alongside basic skills in the metals and electrical sectors, which are taught in the training workshop, our trainees are deployed in all the departments that are relevant for them. In this way, they are provided with a comprehensive insight into how our products are manufactured. In addition, our students, for example, learn about our industrial sector so that enhance their understanding of our products and processes.

Do lots of new employees join STAHL CraneSystems through the training programme or via a dual study/cooperative degree?

We train between 8 and 12 trainees and students each year. Naturally, it is important for us to keep these well trained junior employees in the company and to open up promising future prospects for them. The career opportunities at STAHL CraneSystems are very good. And professional development measures are also welcomed and supported by the company after training has finished.



Report from Künzelsau

Starting work with curiosity

Training at STAHL CraneSystems

At STAHL CraneSystems in Künzelsau, between 5 and 10 young people a year start training to become electronics technicians, industrial electricians or industrial mechanics. In the dual training system, which is recognised worldwide, STAHL CraneSystems provides both practical and theoretical training for the young people. Application-based phases in the company are supplemented by academic teaching, thus creating a sound knowledge base. The company has been reaping the benefits of the successful training of these young employees for a while: the most of the trainees at STAHL CraneSystems start their career here.

Training marks the start of a new phase in life. This is the case for a number of young people at STAHL CraneSystems every September. Successfully training young employees is extremely relevant in the Künzelsau plant. Particular attention has been paid for many years to making the training period as interesting and varied as possible. This year, on 4 September 2017, 8 new trainees and students were once again welcomed to STAHL CraneSystems.

It isn't easy deciding on a future career after school. Everyone has to select from the many options available and find their own individual path. As a medium-sized company and international specialist in explosion-proof crane technology, STAHL CraneSystems supports young adults in making this decision. With a wide range of apprenticeship and study options, the company offers the possibility of trying out and learning a variety of careers.

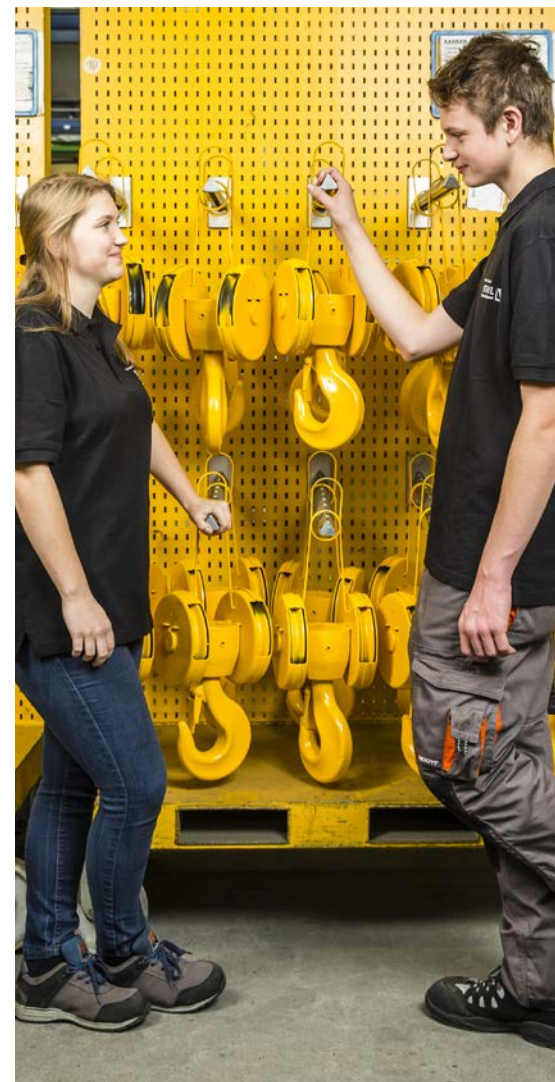
By completing a placement at STAHL CraneSystems, school pupils and students can gain initial career experience and an insight into the work of a globally operating company. Placements are possible here in all the careers requiring training: industrial mechanics, electronics and industrial electrical systems. For some years now, STAHL CraneSystems, together with five nearby companies, has been involved in the joint training initiative known as the "GABI Initiative". GABI (from the German "Gemeinsame AusBildungsInitiative") networks the apprentices in the participating companies, so that premises, machinery and equipment can be shared. This means that the apprentices can tackle interesting tasks together in inter-company project teams and expand their knowledge and experience beyond the bounds of the individual company.

Alongside the apprenticeships, STAHL CraneSystems, in cooperation with the Mosbach Cooperative State University, offers university study places in the field of mechanical engineering. In addition, the company also works with the Reinhold Würth University in Künzelsau: In a cooperative study programme, the students can gain practical experience in the STAHL CraneSystems production, acquire a qualification as an electronics technician for equipment and systems and subsequently round off their knowledge with a bachelor's degree in electrical engineering.

Both apprentices and students go through various production work stages at STAHL CraneSystems. They get to know the entire gamut of manufacturing at the traditional company, ranging from production of the smallest gear wheel to the rope drum and the controls. "At STAHL CraneSystems, I'm constantly being stretched, and I have the opportunity to train further. I can get to know the latest technologies and working methods directly and can be present at all the stages in production", reports 18-year-old apprentice Selim Benderdour, who started training to become an industrial mechanic in 2016.

Another important aspect of the training at STAHL CraneSystems is strengthening the community of apprentices and students. At the beginning of every new training year, three-day familiarisation sessions are held in Kocherstetten. Camping out in the open breaks the ice between the young people immediately. The positive atmosphere and the trust within the group of young people are important for STAHL CraneSystems. Various excursions or shared sporting activities weld the young adults closer together outside the world of work.

The career opportunities in the crane technology industry are good. As a solid company with innovative products and a global distribution network, STAHL CraneSystems is in a stable position to offer trainees very good chances of being taken on after completing their training.



To continue to attract motivated and committed school students to STAHL CraneSystems, we started a campaign for our training and degree courses this autumn for the first time.



In the wider Künzelsau area, four different large-scale posters advertising the training and degree courses were published over two months at 14 locations. Within this period, we also placed advertisements on Facebook and Instagram for two weeks so that we could appeal to the students in their own social media environments. The campaign was rounded off with three press articles on the subject of training and degree courses at STAHL CraneSystems in Künzelsau which were published in regional newspapers.

STAHL CraneSystems publishes its current apprenticeships and places on degree courses at: www.stahlcranes.com/ausbildung

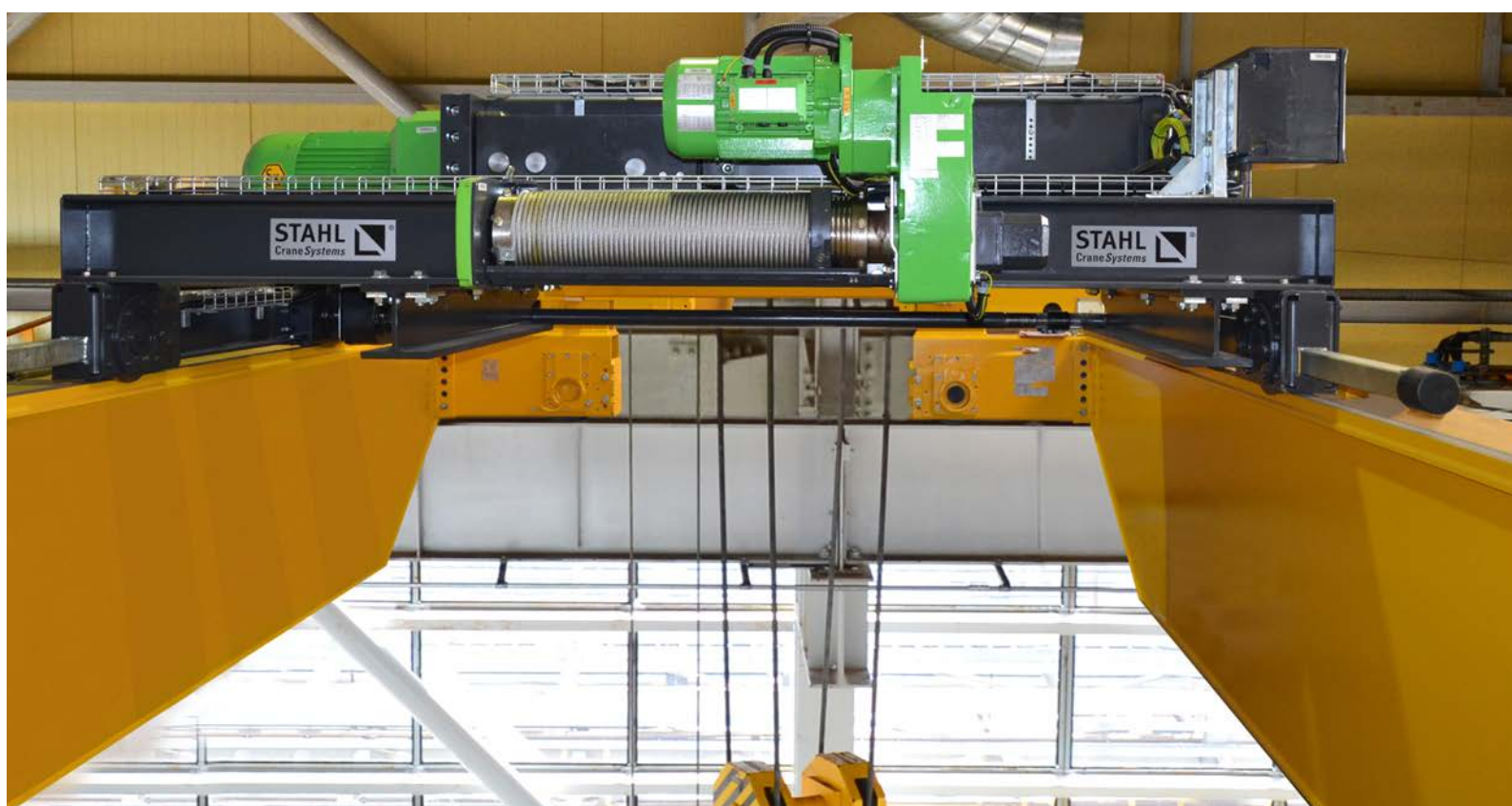
RUSSIA

Moscow

Mendeleyevsk

Natural Gas for nutrition

Hoists from STAHL CraneSystems in the world's third-largest fertiliser factory



At Mendeleyevsk in the Russian Republic of Tatarstan, 1,000 kilometres east of Moscow, the new AO industrial complex “Ammonium” was inaugurated in early 2016. The chemical plant produces urea, ammonium nitrate and nitrogen fertiliser for industrial agriculture as well as methanol as a raw material for the petrochemical industry. Companies from Russia, Japan and China were involved in the design and construction of the plant. The crane technology for maintenance of the plant stems from STAHL CraneSystems in Künzelsau.

Not everyone immediately thinks of food when talking of energy from natural gas. Methane, however, is not only used as a fuel gas, but is also an important raw material for the synthetic production of ammonia – from which, in turn, most fertilisers are made. Without them, a large part of today's world population could not be fed. Russia, next to the USA, has the largest gas deposits worldwide and a growing interest in diverse exploitation of its natural resources. It was therefore decided in 2010 to build the

thirdlargest fertiliser plant in the world – the largest construction project of its kind in Russia for 20 years. The plant has the capacity to manufacture 717,000 t of ammonia, 717,000 t of urea, 238,000 t of methanol and 300,000 t of ammonium nitrate per year, which makes up around 5 % of the Russian fertiliser market.

To ensure smooth operation of the plant, there are a total of 11 cranes, 6 electric wire rope hoists SH and AS and 30 manual chain hoists from STAHL CraneSystems in use. Together with the experienced engineers and specialists from the department International Projects (IP) at STAHL CraneSystems, the certified partner of STAHL CraneSystems – Elektrotjzhkran in St. Petersburg – found a technically and economically viable solution, thereby prevailing over Russian, Bulgarian and German competitors. Elektrotjzhkran's brief covered the engineering, procurement and construction (EPC). The contract was signed at the beginning of 2013, and the cranes and hoists delivered at the end of 2013. "Since the plant was to be installed in Russia, the requirements for the technical documentation were very high. We already started sending drawings, assembly plans and many other information and certificates to the responsible engineering company for approval soon after the contract was signed. Particularly when it came to the necessary certification for Russia, we maintained close contact with our colleagues in Russia," says Thomas Wöhrle, project manager in the IP department at STAHL CraneSystems. "We have experience as EPC contractors in the processing of international projects and the related national and international requirements. We were able to make full use of our know-how in this project and support our partner actively." As a result it was possible to deliver the crane technology on time and to the full satisfaction of the end customer.

Apart from the requirements of the business side of the international project, the demands on the technology itself were also very high: the aggressive ammonia atmosphere and the risk of explosion in some areas of the factory (Ex Zone II C T4) were decisive factors during the design of the hoists and crane components. The equipment was therefore coated with a special, zinc-bearing paint – the three-layer coating is a total of 240 µm thick. The cranes and hoists were implemented in part in explosion-proof design for Zone 1. In addition to this, the requirements of Russian standards had to be fulfilled, which were discussed with the companies concerned at a two-day clarification meeting in Moscow.

The equipment was assembled and installed on site by the companies involved in the consortium with the support of Elektrotjzhkran as supervisor.

With the kind support of Thomas Wöhrle and Viktor Stoll/STAHL CraneSystems GmbH, Anton Bespalov/ Elektrotjzhkran

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Advanced technology

brings

success

Maintenance
cranes for dusty
environments

In 2012, large cement plants were built in the cities of Obajana and Ibese in the south of Nigeria. Both were equipped with crane systems and hoisting equipment which, however, can no longer guarantee safe processing capability just two years after installations. The maintenance cranes, like the entire production plant, were not reliable enough for the regular maintenance of the cement plants, resulting in constant delays. On the search for a reliable partner for the replacement of the crane system, the Nigerian cement manufacturer came across STAHL Crane-Systems in Künzelsau.



The African manufacturer approached STAHL CraneSystems with its request at the beginning of 2014: Ensuring the reliable long-term function of the hoisting equipment and compliance with the parameters of the existing systems would determine the construction of the new maintenance cranes. Another special feature of the project was the requirement to continue using the existing crane endcarriages.

STAHL CraneSystems worked with the African crane construction company Fawel Engineering to develop a special solution that met all the customer requirements. The trolleys, lifting heights and other important data were recorded on site and forwarded by STAHL CraneSystems sales employee Achim Müller to the project planning and order handling units in Künzelsau. "We had to bear the need to transport the equipment to Africa even at the design stage. We therefore designed the trolley with screen connections so that we could ship the CraneKits in the 40-foot standard container – a method that has proved reliable in the past", says Achim Müller.



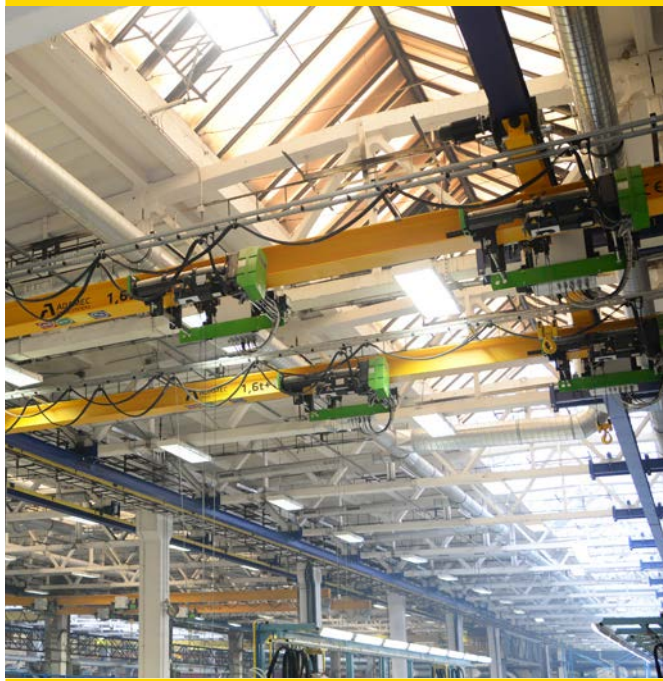
In total, STAHL CraneSystems supplied four CraneKits with a 50-t/10-t wire rope combination on a double rail crab and five SH wire rope hoists with monorail trolleys to Obajana and Ibese. Fawel Engineering, STAHL CraneSystems' African crane building partner, provided technical support for the installation on site.

Achim Müller was delighted that the company's collaboration with Fawel Engineering had run so smoothly. "Fawel is a reliable partner for us in Nigeria, on whom we can depend even with demanding projects such as this special design." The customer is also very satisfied with the handling of the project and has already mentioned the possibility of further follow-on projects.

*With the kind support of Achim Müller/
STAHL CraneSystems GmbH*

Synchronised movement

Adamec Crane Systems, Czech Republic



The IVECO BUS factory in Vysoké Mýto is the largest bus factory in the Czech Republic, with over 3,100 employees. In the welding plant, 10 cranes with lifting capacities of 2 x 1,600 kg each are used in various manufacturing areas. Two cranes, each with two SHF wire rope hoists are used in tandem to lift and move a complete bus. The four hoists are fitted with an intelligent crane control system to ensure synchronised lifting of the load.



The fastest STAHLites

STAHL CraneSystems FZE, Dubai



The 30,000 participants in the Dubai Marathon included some of the staff from STAHL CraneSystems FZE along the 10 km course once again this year. The fastest runner was Awad Ibrahim with a fantastic time

of 01:00:06 hours, shortly followed by Managing Director Werner Wagner, who finished in 01:04:09 hours. Congratulations on this sporting achievement!

I want to ride my bicycle!

STAHL CraneSystems GmbH, Germany

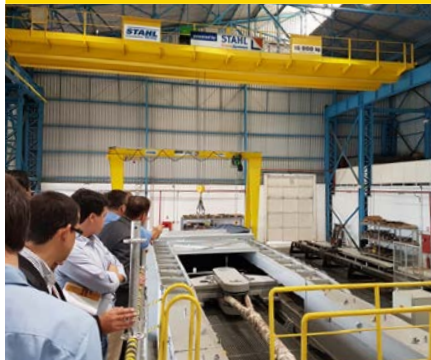
In August, 8 employees of STAHL CraneSystems in Künzelsau made use of the lovely summer weather to take a little exercise. From the meeting point at Waldenburg Station, they set off on mountain bikes for a 30 km tour at a height of 410 m. Guaranteed biking fun for all!



From around the world

Unique test centre

STAHL Talhas, Brazil



In December 2016, the Brazilian Institute of Technology Research opened a test centre in the state of São Paulo which can test anchor elements for floating production facilities such as ships or offshore platforms. Our partner, STAHL Talhas, installed a portal crane with an ST chain hoist and a safe working load

of 5 t plus a walk-on double girder overhead travelling crane with an SH wire rope hoist and a SWL of 16 t. The structure also has a machine room housing the entire hydraulic system, a transformer station and the control room. An overhead travelling crane with a capacity of 1 t was installed here. The laboratory system is designed for a capacity of up to 2,600 tf (ton-force) static load and 1,300 tf dynamic load – making it unique in the southern hemisphere. Worldwide, there are only two other systems of this type in the world – in Houston and in Bergen.

LogiMAT 2017

STAHL CraneSystems exhibited at LogiMAT, the International Fair for Distribution, Materials Handling and Information Flow in Stuttgart, for the first time in 2017. With more than 50,000 trade visitors, LogiMAT counts among the largest annual logistics fairs held in Europe. STAHL CraneSystems had a 40 square metre stand at the exhibition and presented five hoists which were all connected and could be operated on the stand. Apart from its product presentation, the stand concept also addressed the high level of vertical integration in Künzelsau. STAHL CraneSystems manufactures all parts from gearbox and rope drum to control equipment and the smallest toothed wheel itself in its plant. The stand attracted interested visitors from all over the world for the entire three days – a very positive result!

ЭЛЕКТРОТЯЖКРАН

Elektrotaschkran



Crane exhibition
17. – 21. 04. 2017
in Moscow



Professional development worldwide

STAHL CraneSystems GmbH



A technology training course was held in the Künzelsau plant in September for our partner Eastern Morris Cranes Company Ltd from Saudi Arabia and other partners from Kuwait. Our trainers Frank Pfeiffer and Ricky Pickup explained the latest technological developments to participants and provided a comprehensive overview of the STAHL CraneSystems product portfolio. This means that our partners can advise their customers perfectly.

STAHL CraneSystems GmbH, Germany



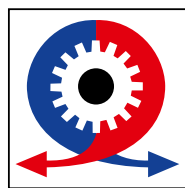
Visit us at
LogiMAT 2018
13-15 March 2018

SLT components s.r.o.

Czech Republic



The International Mechanical Engineering Fair in Brno, Czech Republic, is the leading industrial trade fair in Central Europe. All the key areas of the mechanical engineering industry are represented, divided into nine specialist product areas.



MSV 2017

9-13 October 2017

Reliable for the US motor industry

Mt. Clemens Crane, USA



The Faurecia automotive supply company in Fraser, Michigan, supplies motor manufacturers in the Detroit area on a just-in-time, 24/7 basis. Several double and single girder overhead travelling cranes are used here for equipping and maintaining the

presses for stamped sheet metal parts. Our partner, Mt. Clemens Crane, supplied the cranes with AS7 wire rope hoists with varying lifting capacities which work reliably and durably in tough operating conditions.

Piecework exchange

STAHL CRANES AND HOISTS, South Africa



Two AS wire rope hoists worked reliably for 22 years on a ThyssenKrupp portal scrape in the Goedeboom mine in the province of Mpumalanga, South Africa. As part of the modernisation of the plant, the two AS wire rope hoists were to be replaced in autumn 2016 by new SH wire rope hoists – without any break in production. Together with ThyssenKrupp and Anglo American Coal, the operating of the plant, our partner, STAHL CRANES AND HOISTS (Pty) Ltd agreed on the best time for the installation of the new wire rope hoists. The installation team worked continually day and night one weekend and, despite one or two challenges, completed the entire alteration of the plant within just three days. Both the installation devices on the portal scrape and the electronics for the new wire rope hoists had to be replaced and adjusted. After testing and commissioning, the modernised system was handed over to the satisfied customer and was fully function again on the Monday. Each of the two wire rope hoists is installed on one of the arms of the portal scraper, with a lifting capacity of 6.3 t. The new SH wire rope hoists will also be constantly exposed to the effects of the environment and have to withstand rain, wind, dust and heat – until they are next modernised.

Customer Sales Meeting

Charleston, USA

This year, the Customer Sales Meeting in Charleston took place in a relaxed beach atmosphere. At the customer event held by our subsidiary, interested US crane building partners were able to find out about the latest product developments. The programme of fringe events for spouses was very popular again too.



...more from around
the world

Professional development worldwide

EXELLIFT, Malaysia

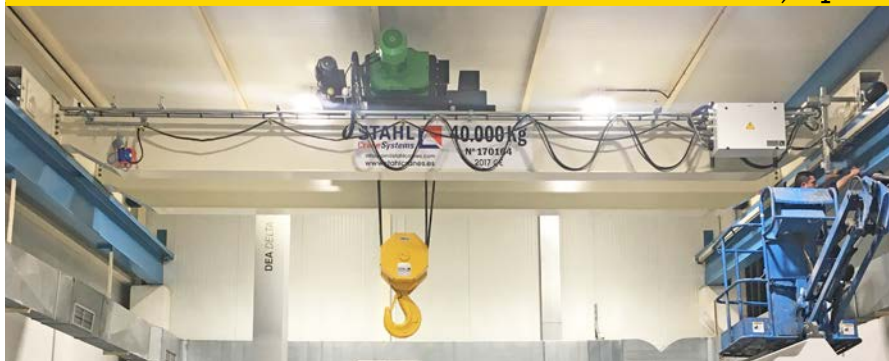


In June, our partner EXELLIFT in Malaysia organised a training course informing interested participants about the latest developments in hoisting technology.

The Spanish company Ondozabal S.A. specialises in high-precision manufacturing in the areas of mechanical engineering and operating technology. As part of the modernisation of their production facilities in 2017, STAHL CraneSystems, S.L. provided a crane for the plants in Ohio and Aduna, each of which needed to meet particular requirements. A double girder overhead travelling crane with an AS 7 wire rope hoist and a lifting capacity of 40 t was installed in Ohio. This plant is responsible for standard machines and small to medium-sized projects. The crane is used to move manufactured parts into a 3D measuring device, and so slow, very precise control is necessary. The customised white paint also means that the crane fits perfectly into the production hall visually. Small production hall dimensions meant that the second double girder overhead travelling crane had to be especially compact; this was installed in Aduna in just one day. Large special orders are produced at this plant. Two SHR and ASR wire rope hoists with a lifting capacity of 32 t are used to lift machine parts. Ondozabal S.A. has been relying on STAHL CraneSystems, S.L. for the planning, installation and maintenance of crane systems for over 15 years.

STAHL CraneSystems

S.L., Spain



Information literature

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Department _____

Address _____

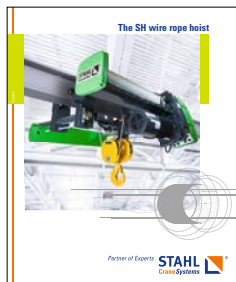
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We will gladly also send them to you by post.



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Presented by

→ www.stahlcranes.com

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