Dear customers, dear staff and friends

After five years of strong growth, the worldwide demand for capital goods has slumped and the economies in virtually every country of the world are in decline. In our plants and subsidiaries, we too have felt the consequences of this economic slowdown, which has resulted in strong declines in sales in individual markets. While we still recorded positive growth for the first two quarters, the second half year has been more restrained. On the whole, the Wirtgen Group achieved growth of 5.6% and generated turnover of EUR 1.5 billion in 2008.

Looking to the future with confidence
It is precisely in such uncertain times that the strengths of the Wirtgen Group and the stable structure of our independent family enterprise come to bear. The Group is optimally positioned for the future thanks to its solid line-up of the brands Wirtgen, Vögele, Hamm and Kleemann. Indeed, strategic plant expansions have already been implemented at Wirtgen GmbH and Hamm AG. And the work has already commenced on constructing completely new plants for Joseph Vögele AG and Kleemann GmbH.

Decisive advantage through our strategy of sustainability
Of course, we face challenges. However, we have an outstanding baseline position and clear strategies and concepts. We are geared towards the long term. We are investing consistently in our headquarters in Germany. Indeed, strategic plant expansions have already been implemented at Wirtgen GmbH and Hamm AG. And the work has already commenced on constructing completely new plants for Joseph Vögele AG and Kleemann GmbH.

Continuity also means that we are further strengthening our own sales and service companies. In this respect, we have implemented new construction projects in Poland, Ireland, Turkey and Australia, for instance.

All of this is possible because we have a healthy financial situation with a high equity ratio.

Closeness to our customers is an indispensable strength, now especially
The pledge of the Wirtgen Group – “Close to our customers” – hits the nail on the head. This is because being truly close to our customers is decisive, especially when every order counts. Now, we can once again prove that we undertake everything to support our customers as a partner. And it is thanks to this strong customer orientation – which every employee at every workplace throughout our global organization lives up to – that we will be able to stand out. And we will fare very well with this strategy, too.

Let us continue pursuing this clear company strategy together! Let us move directly and unswervingly towards the goals we believe in. It is precisely this attitude which distinguishes our strategy of sustainability and our family business, today – and which will continue to do so in the future.

Our sincerest best wishes

Stefan Wirtgen  Jürgen Wirtgen

HIGHLIGHTS

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16  “Children in need”: A priest with a cause
Hamm had prepared a programme full of innovations, attractions and information for the 2008 Technology Days. The Tirschenreuth-based roller manufacturer seemed predestined to host this year’s event for three excellent reasons: the 130th anniversary of the company, the world premiere of its new HD+ series of tandem rollers and the opening of the most advanced drum production plant in the world.

More than 2,400 construction professionals from over 50 countries accepted the invitation and travelled to Bavaria on 25 and 26 September 2008 to learn about the latest developments in road construction at first-hand. Roughly half of the visitors came from non-European countries.

Successful world premiere of the HD+ series

Hamm already had an extraordinary highlight to offer for the first evening: after a fast-paced animation, two of the new tandem rollers of the HD+ series were unveiled: a HD+ 120 and a HD+ 140. Interest in these heavyweights was enormous and the guests immediately flocked to the brand new machines after the presentation to take a closer look at all of the details. This enthusiasm was not surprising, as the tandem rollers with an operating width of 12 t and 14 t respectively set new standards with a hitherto unheard of amount of cabin space, perfect viewing conditions for the driver and impressive performance data. You can find out more about the new rollers on Page 4 of this issue.

25 machines and 6 construction processes: unbeatable live demonstrations

The highlight of the second day was without doubt the exciting live demonstrations of the numerous new developments from Wirtgen, Vögele and Hamm. Focussing on application technology, the Wirtgen Group really made it big with the visitors. They experienced 25 different machines in operation, using six very different construction processes.

For instance, the paving of compact asphalt “hot to hot” with an InLine pave set from Vögele and the subsequent compaction of the asphalt layers with the new heavy duty HD+ tandem rollers from Hamm made a great future. Another impressive sight was the removal of an asphalt wearing course using a Wirtgen cold milling machine W 2200 with a 4-m-wide milling unit.

The international guests were captivated by the tremendous scope of application possibilities, by the quality and precision made possible by modern systems, such as Level Pro, HCQ Navigator for asphalt works and earthworks and ErgoPlus, as well as by the informative explanations of the application technology. After the live demonstrations, there was ample opportunity to inspect the machines and the newly paved or milled road surfaces, and to talk to the experts from the respective manufacturing plants.

Opening of the most advanced drum plant in the world

In the time between the demonstrations, the visitors took the opportunity to take a look into the new drum production plant – the most advanced of its kind in the world (see also Page 4). On the tour through the workshops, the visitors experienced how accurately the bending machines, welding robots and processing centres operate and were amazed at the high-tech machinery with which Hamm produces its drums.

Well over 80 machines on display

In addition to the works tour and demonstrations, the impressive exhibition of over 80 machines also offered a new experience. While testing the comfort of the driver’s seat, the customers wasted no time learning first-hand about the technologies and their special technical characteristics from the sales staff and product managers.

130 years of Hamm: performance, design and innovation

On the occasion of the 130th company anniversary, Hamm also provided an insight into its history. True to the slogan “130 years of Hamm: performance, design and innovation”, the Tirschenreuth-based company demonstrated the ties between its own history and the technical development of road rollers and road construction materials. It soon became evident that Hamm has provided trailblazing impetus to compaction technology over the decades as the world’s oldest surviving roller manufacturer.
Customers from the world over attend the event

**Norway**
Together with their customers, Rune Gulli and Eddie Engenbroten of Wirtgen Norway climbed to the top of the demonstration hill for a group photo: "We've just climbed up this steep hill. You can really see what the Hammtronic single-drum compactors are capable of when you compact earthwork inclines of up to 70%.

**Japan**
The customers of Gaku Watanabe (5th from left) of Wirtgen Japan were astonished at the performance of the XXL milling machine: "There are eight of us standing here in the working lane of the 4 m wide milling drum. The milling output of this large milling machine is impressive. Japan is densely developed, so there aren't many applications for these XXL milling machines here. Nevertheless, the demonstration showed us just how productive the high-performance milling machines are. And they also produce neatly milled surfaces and precisely milled edges."

**China**
A little piece of home in Bavarian Tirschenreuth: the guests from China were distinctly impressed by the variety of the offering and the latest freshly printed edition of Vögele RoadNews with the Beijing Olympic Stadium on the front cover.

**Brazil**
Delegation from South America: "We've experienced a lot of technology in a very pleasant atmosphere here," remarked the customers of Ciber Sales Managers Claudio Mortari and Luis Zoch from Brazil in praise of the joint event of the Wirtgen Group.

**Italy**
From South Tyrol to Sicily, over 100 guests from all regions of Italy came and were amazed at what they saw: "We'd never imagined that so much high-tech would be involved in the production of drums. But it makes sense with the Wirtgen Group – building highly advanced and highly productive road construction machines with top quality equipment and a vast pool of know-how.

First-hand expert information

In a presentation tent, the application specialists of Wirtgen, Vögele and Hamm imparted a wealth of practical know how. The first set of presentations covered the operating costs of cold milling and provided an overview of the fields of application for cold recycling. The second set of presentations was dedicated to asphalt paving, while the third dealt with every aspect of compaction.

Customer statements

Martin Hofstatter, a cold recycling expert from Switzerland, has used the advantages of this eco-friendly construction method for years: "The Wirtgen Group offers outstanding equipment. This exhibition clearly demonstrates the high quality of their range of cold recycling machines. Of course, quality and precision are very important to us Swiss. And these machines meet our stringent requirements in full. This is really high-class workmanship."

Kleemann customer Christian Pitsch (right) from France, with Mark Hezinger of Kleemann's Marketing department: "I really enjoyed the combination of demonstration, exhibition and expert presentations. As an operator of mobile and stationary systems from Kleemann, it's interesting for me to observe the latest trends in road construction. After all, it's our job to produce the raw materials for the mixers."

Like his colleague Edmunds Zonbergs (right), Aris Smats (centre) from Riga is responsible for road construction projects in a construction firm: "This is now the third time I've attended the Technology Days – and I always find it fascinating. The live demonstrations and the exhibition have once again shown me new and economical road construction processes. I'm very impressed by the high potential for innovation that this company embodies."
Roller drums “just in time”:
Hamm AG opens world’s most advanced drum plant

Manufacturing drums of the highest quality with maximum flexibility in production was the premise for the construction of the new drum plant. Yet there’s more to it than that: as part of the integration of the drum production process in the overall workflow, the production planners also optimized the upstream and downstream processes.

Tirschenreuth is now home to the most advanced drum production facility in the world. And that’s unlikely to change for a long time to come, as the high standard of the entire fleet of machines will be very difficult to trump. Instead of shying away from investments in the present climate of economic uncertainty, Hamm has purposefully optimized production processes and relied on quality, among other things in the form of superior production systems from renowned manufacturers.

The drums roll out “just in time”

The Hamm personnel are happy. “They’re proud that a key component of the rollers is again being produced in-house,” reports Production Manager Jürgen Geyer, going on to explain that “The drums are finished ‘just in time’. In other words, not until they’re needed in the assembly plant. This means we can avoid surplus production and reduce stock on hand.”

Handling processes minimized and simplified

Other aspects of production were also optimized strictly in line with the principle of “minimizing and simplifying the handling processes”. One example of this is that the drums are manufactured in accordance with the flow principle and standardized load carriers are used for the provisioning of material. This achieves a higher quality of stock. Changes have also been implemented in the painting of the drums: instead of painting many individual parts individually as in the past, the protective paint coating is now applied to the completely assembled drum. In other words, only a single component is conveyed through the eco-friendly painting system. This streamlining is also to the benefit of many employees, whose workplaces have been ergonomically further optimized in numerous places.

Flexible production

“Before building the drum plant, the production team analysed all of the individual manufacturing steps and redesigned a number of them. On the whole, our production process today is more flexible than before and we have better control over production thanks to the greater manufacturing depth and the successful streamlining of the processes. In future, the drums will arrive on the assembly lines ‘just in time’, allowing us to realise shorter delivery times. I’m sure our customers will be pleased about that!”

“More HD” – HD+ tandem rollers set new standards

The HD Series of articulated tandem rollers has been successful on the market now for years. Hamm has now elevated the product range of articulated tandem rollers with the world debut of its HD+ Series.

Once again, the developers focused not only on productivity, but also on user-friendliness. No wonder, then, that Hamm has set new standards with its HD+ Series in terms of comfort and visibility. Indeed, the name of the new series says it all, as the HD+ Series certainly offers a “plus” in all respects. “It was our goal to build heavy duty tandem rollers with outstanding visibility. Despite the size of these compact machines, the driver always has a perfect view of the drum and surrounding area, not to mention a very comfortable workplace.”

Together with the new technical developments, we’re presenting a high-performance model line-up that offers the best prerequisites for high quality and productive compaction,” says Marketing Manager Gottfried Beer.

More comfort – more quality – more performance

Even from outside, it’s readily apparent that the XXL cabin provides an ergonomically ideal workplace with hitherto unattained freedom of movement. The cabin itself contains a clearly laid out and self-explanatory control panel similar to that in the small tandem rollers of the Compact-Line.

The HD+ Series also offers new developments in driving and steering characteristics: a more favourable distribution of weight has been achieved thanks to the revised design of the articulated joint. This provides for greater driving stability and improved paving quality. Furthermore, the offset during crab steering has been almost doubled. This lends the HD+ Series excellent manoeuvrability and provides plenty of clearance for accurate edge processing. Many functions and details contribute to improved productivity. For instance, the frequency and amplitude of the vibratory drives in both drums can be adjusted independently. What’s more, the overall height of the heavy duty rollers has been reduced to 3 m. The new design also reduces the access height by 25 cm, making it easier for the driver to get in and out. And last but not least, by permitting compaction without stopping for refills, the larger water tank which now has a capacity of almost 1,200 l, boosts productivity.

“Compaction”: the manual for compaction technology and techniques

With the new manual “Compaction – in asphalt construction and earthworks”, Hamm has created a comprehensive elementary work on this subject. Not only is the machine technology described, but the work also imparts a knowledge of physics and soil mechanics. Furthermore, the manual provides information on the layers in road construction and earthworks and has handy tips for practical work on the job site.

The descriptively illustrated manual is suitable both for the interested layman and for advanced users. The German and English versions can be requested by E-mail to: compaction@hamm.eu.

Operators and construction firms alike were impressed by the HD+ Series, greatly appreciating its ease of operation, generous cabin dimensions and productivity. On this night-time job site on a German motorway, the almost 14 t heavy HD+ 140 with oscillation compacted the road surface behind an InLine paving set. Both the site manager and the independent material tester were extremely satisfied with the compaction results.

Steel plates are processed by CNC-controlled 4-roller round binding machines to produce the drum blanks. The binding machines shape the steel plate with a pressure of up to 280 bar. Almost 90% of the shaping process is fully automatic. The machine operator subsequently gives the drum the finishing touch by hand, until the blank is perfectly round and the remaining seam displays the correct gap dimension.

The circular blanks are heavy steel plates on which the traction and vibratory drives are secured in the drum, among other things. High-tech welding robots with 13 or 15 axes then weld the circular blanks with the drum bodies in a gas-shielded welding process. A fully automated processing centre subsequently makes up to 100 holes and fittings per drum, cuts threads and mills plane surfaces.

The circular blank is conveyed through the eco-friendly painting system. This streamlining is also to the benefit of many employees, whose workplaces have been ergonomically further optimized in numerous places.

Flexible production

Jürgen Geyer, Production Manager at Hamm AG

“Before building the drum plant, the production team analysed all of the individual manufacturing steps and redesigned a number of them. On the whole, our production process today is more flexible than before and we have better control over production thanks to the greater manufacturing depth and the successful streamlining of the processes. In future, the drums will arrive on the assembly lines ‘just in time’, allowing us to realise shorter delivery times. I’m sure our customers will be pleased about that!”

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2008 Olympic Games: The 1,000 m sprint by the Wirtgen Group
City motorway in front of the “Bird’s Nest” rehabilitated

In the run up to the 29th Olympic Games, Beijing made massive investments in its infrastructure. In addition to new sports facilities for the 302 competitions in 28 different sporting disciplines, the investments also financed the rehabilitation of public roads. A team of Wirtgen cold milling machines, Vögele pavers and Hamm rollers carried out resurfacing work in the immediate vicinity of the National Stadium, a number of roads in the inner rings of the Chinese capital during the night. Job sites on one of the immense-ly busy ring roads would threaten to cause mile-long traffic jams. The reason for this is that more than 3 million vehicles already use Beijing’s roads and 1,000 new vehicle registrations are made every single day.

Wirtgen cold milling machine
mills 6 cm of asphalt paving
After meticulous planning of the job site, the resurfacing work was started with a cold milling machine that milled off the asphalt wearing course down to a depth of 6 cm. This task was handled by a Wirtgen W 1900 Cold milling machine with a working width of 2 m. All told, 6 to 7 working lanes were necessary in each direction in order to remove all of the damaged section of the 4th Ring Road. The Cold milling machine W 1900 dumped a total of 4,200 tonnes of milled asphalt granulate onto trucks.

Night shift for the Vögele pavers
Once the surface had been milled off, it was the turn of the Vögele pavers. Two SUPER 1800-2s proved to be just the ticket for this task. Both pavers were equipped with AB 600-2 TV Extending Screeds featuring a basic paved width of 3 m. The sturdy single-tube telescoping system of the screed allows infinite variation in width up to 6 m. By mounting bolt-on extensions, a maximum width of 9.5 m can be paved without joints. On the job site in Beijing, two 0.75 cm bolt-on extensions were fitted to each of the screeds building them up to 7.5 m. On the busy road, the pavers placed a 6 cm wearing course of stone mastic asphalt (SMA). The paving work had to be completed in just two night shifts. Every delay, be it caused by bottlenecks in the mix logistics or the failure of a machine, would have had far-reaching consequences. Therefore, the service engineers of Wirtgen China were always on site to intervene in the event of an emergency.

Hamm tandem rollers compact the wearing course
Two Hamm HD O 120 V rollers came into their own in the subsequent compaction of the new wearing course on the 4th Ring Road. These machines operate with both vibration and oscillation. Thanks to the combination of the two technologies, the stone mastic asphalt, which requires a high compactive effort, was easily transformed into a pavement with a durably high load-bearing capacity and optimum grain interlocking.

Close to our customers
The reason why machines from three Wirtgen Group members came into play in Beijing was due not only to the innovative machine technology. “The overall package offered by Wirtgen China was very impressive,” explains Mr. Luo, Deputy General Director of BUCG. “With the service centre in Langfang, not far away from Beijing, the Wirtgen Group is always close at hand.” A 24-hour on-site service is also included in the customer service offering. “We don’t usually have to call, but knowing they are around gives us peace of mind. On the job site in Beijing, nothing could be allowed to go wrong. Therefore, Wirtgen immediately delegated their service engineers who provided us with their expert advice. It’s things like this that make Wirtgen China a true partner for us.”
Fourteen surface miners bite their way through Down Under
Iron ore mining in Western Australia is in full swing

**The largest order for miners – a milestone in the company history**

Fortescue, in the project planning stage, to consider the use of Wirtgen surface miners instead of conventional mining methods involving drilling and blasting. The high performance of these large machines was an important criterion in the decision-making process: A 2500 SM weighs more than 100 tons, offering an engine output of 1,065 HP. The final decision in favour of Wirtgen miners is ore mining which has not only been entirely planned but is also being run on the basis of using the surface mining technology.

**The four major advantages of the surface mining technology**

- Drilling, blasting and crushing is eliminated
- Clean pit floors result in less damage to vehicles and tyres
- Required pit faces of the flat-lying deposit can be mined simultaneously
- High quality of the end product through selective mining, and simultaneous reduction of the costs and effort involved in the mining process

**Customer service: New Wirtgen Australia service centre in Perth**

A comprehensive customer service infrastructure has of course been set up parallel to the successful commissioning of the surface miners in order to ensure the best possible coverage of all requirements by FMG directly on the job site. For both man and machine are facing tremendous challenges: The 14 surface miners need to be kept ready for operation at any time of day or night. The material to be mined is demanding, and conditions in the mine are harsh. The high temperatures do their bit as well.

**The future: cooperation to be intensified**

An important conclusion after the first project phase for everyone involved in the project: The specified performance is achieved, and the tonnages looked for by FMG can be realized. But that’s not all. Bernhard Schimm has new ideas on how to support the project further: “We will now concentrate on continuous customer support with all our strength, and invest our know-how in optimizing the operation of the machines even further and in application-related aspects of the cutting technology. Our goal is to support the customer even better in the optimum use of our machines and in achieving additional productivity increases.”

John Geary, the Managing Director of Wirtgen Australia, sees great potential also for deepening the customer relationship: “FMG and Wirtgen are working as partners in the ongoing development of the technology for both can now rely on a great wealth of experience. We are planning to cooperate in this field on a long-term basis.”

**Fortescue Metals Group: Pioneer in the development of new iron ore deposit**

The demand for iron ore has grown tremendously, which is not least due to the high demand for steel in China and other rapidly developing industrial countries. The supply of iron ore on the world market is, however, barely able to meet the increased demand. The Australian company Fortescue Metals Group has seized this opportunity, and has opened up new iron ore deposits in the Pilbara region in Western Australia.

FMG has succeeded, within two years, to set up an entirely new infrastructure for the huge project, including a railway line and an own port of transhipment. The first consignment of iron ore was shipped on May 15, 2008.

A large parts inventory in Perth guarantees the high availability of spare parts and wearing parts, which can be transported directly on the job site. For both man and vehicle at any time of day or night. The fleet includes a truck with complete welding equipment, enabling welding operations to be carried out directly at the machines.

**Service around the clock: Wirtgen Australia gives its best, having an experienced team of service technicians on the job site all the time. The teams change shifts after one working week in the mine camp.**

www.fmgl.com.au

To learn more about this project, visit

http://www.fmgl.com.au
Azerbaijan expands infrastructure using technologies “made in Germany”

**Biggest slipform paver project for Wirtgen**

Azerbaijan is a country in the process of change: As a result of the oil boom and increasing revenues from the natural gas business, the southern Caucasian republic at the Caspian Sea counts among the fastest growing economies in the world. Commissioned by the country’s national government, a private group of construction companies and major customer of Wirtgen International GmbH – Akkord – is currently building an almost 200 km long motorway from the capital city of Baku with its major industrial port to the city of Quba in the North of the Asian republic. The project involves the use of Wirtgen slipform pavers.

The goal is to optimize the transport network between the country’s economic regions, and to also strengthen the motor transport routes for heavy goods traffic into the neighboring states of Russia, Georgia, Iran and Armenia.

Other family members of the Wirtgen Group are playing a part in the extensive earthing operations as well: 40 single-drum compactors type 3516 from Hamm are involved in the required preliminary work in earth construction on the various construction sections, efficiently compacting the subsoil for the concrete pavement to be built.

Four complete paving trains in action

The dimensions of the construction site are truly enormous. This is confirmed by Werner Aeschlimann, Product Manager Slipform Paving at Wirtgen GmbH: “It’s the biggest construction project in our product division so far. Four complete paving trains type SP 1500 L and SP 1600 are operated simultaneously by one single customer, each comprising a bottom-layer paver, top-layer paver and TCM 1800 texture curing machine. The machines have been paving a new, dual-lane concrete motorway since the end of April 2008. Two additional SP 250 slipform pavers are in operation carrying out offset work, such as safety barriers, gutters and kerbs.”

The motorway has been designed for high traffic loads and a long service life. The concrete pavement has a total thickness of 28 cm. 20 cm are paved for the bottom-layer concrete, 8 cm for the top-layer concrete. On the various construction sections, the largest machines in the Wirtgen slipform paver division are working at paving widths of 9 m and 12 m respectively. Paving crews of around 25 men each are working on each construction lot, operating the machines – which are geared for high precision and automatic concrete paving – around the clock.

24-hour job for Wirtgen customer service

A customer service team from the Windhagen main plant provided extensive support to the customer and his brand new machines during the first project stage. Teams of two service technicians for each paving train supported the slipform pavers on the various construction lots for almost three months – a highly demanding job that gave impressive proof every day of the efficiency of the Wirtgen customer service. Their range of responsibilities was a challenge, indeed. Setting up the paving trains, familiarizing the operating crew with the new machines, and supporting the machines during the first phase of the large construction project were part of their comprehensive service package.

Conditions on the construction site were extremely tough even for the internationally experienced service technicians: During the peak period of the construction project in the hot summer months, the scorching heat of the steppe climate took its toll on everyone involved. Mario Weber describes the additional machine-related challenges that the customer service teams were facing on site: “In some construction sections, the machines needed to be repositioned several times within an extremely short period of time because the earthing operations were delayed. Yet concrete paving was to continue 24 hours a day and seven days a week, which meant that the Wirtgen customer service needed to be available 24 hours a day as well.” As a result, the three8-machine teams on which work progressed simultaneously entailed great logistical efforts under tremendous pressure of time.

To be able to manage the large volumes and rapid speed, the construction lots were supported by four mixing plants which had been set up along the Baku to Quba stretch especially for this purpose. For each paving train, containers holding not only emergency kits but also spare parts and wearing parts for the first 1,500 operating hours were stored in the immediate vicinity to cater for any emergencies.

Challenges in applications technology bring “Slipform Paving Support Managers” to the scene

The slipform paver product specialists from all Wirtgen Group subsidiaries and dealers worldwide meet with the product management of the Wirtgen Slipform Paving Division for the first time in October. The new position of “Slipform Paving Support Manager” was established at this meeting. These technology experts are focused on the slipform paver business in their respective markets. The newly created panel for the international product specialists serves the transnational exchange of experiences and information in applications technology. In addition, it is the stated aim to provide customers of the Wirtgen Group with even faster and more comprehensive local advice on all aspects relating to concrete paving.

The slipform paver product line, in particular, requires intensive consulting: The pavers are order-specific special machines which require a great deal of know-how in applications technology. Wirtgen GmbH has reputable experts at its disposal on an international basis who are fully familiar with their product portfolio and details of application. This unique network of specialists gives expert advice on everything related to the purchase of machines, aspects of customer service and applications technology. If required, the experts in the various countries will obtain support from the product management at the main plant. A complete support chain is thus ensured for everyone concerned, and projects involving the use of concrete pavers can be undertaken in an even more professional way in the future. This includes the active communication of all quality aspects of the Wirtgen slipform paver technology during consultations and sales negotiations.
The airport of Akureyri was planning to expand in order to attract a larger number of tourists to Iceland. To achieve this goal, the airport runway needed to be extended, and the existing part to be rehabilitated in order to enable larger aircraft to land. In a first step, the old runway was rehabilitated by Hladbaer-Colas, an Iceland-based construction company. Corrugations had formed over the years, resulting in level differences of up to 20 cm that needed to be equalized in the course of the rehabilitation project. In order to ensure maximum evenness of the new pavement surface, Hladbaer-Colas decided to use the NAVITRONIC Plus® 3D control system from Vögele.

With a population of 17,000, the city of Akureyri is the fourth largest municipality in Iceland and the most important business centre in the north of the country. The city’s numerous wool and fish processing companies are of tremendous economic importance. The airport of Akureyri plays a vital role, however, not only for the economy but to an increasing extent also for the tourism industry. To account for this fact, the runway was rehabilitated successfully in a first step, and will be extended next year.

**Levelling course ensures uniform levels**

Before paving with the Vögele paver of the dash-2 generation could begin, a W-350 cold milling machine from Wirtgen milled off the upper 10 cm of the corrugations that had formed. The paving crew and their SUPER 1800-2, which was equipped with an AB 500-2 TV extending screed, then paved a levelling course using a binder mix of grain size 0 to 16 mm.

**Paving nine strips of 2,000 m length each**

The surface course was paved at working widths ranging from 4 to 5 m. The varying widths were chosen in order to not create the longitudinal joints at the same positions as those of the levelling course. The surface course consisted of a mix of grain size 0 to 11 mm. The mineral aggregate mix came from Norway, and is characterized by particularly high resistance and durability. The paving crew paved nine strips altogether, always working their way from the periphery towards the centre so that the centremost strip was the last to be paved. Each of the 2,000 m long paving strips needed to be completed in one day to make sure that the runway was open to air traffic again the following morning.

**NAVITRONIC Plus® dispenses with stringlines**

Evenness requirements were ± 5 to 6 mm. In order to precisely adhere to the specified level, Hladbaer-Colas relied on Vögele’s 3D control system combined with an SBG positioning system and surveying equipment from Leica. Using the NAVITRONIC Plus® system on the job site in Iceland offered big advantages: Without the 3D control system, stringlines would have had to be installed. This would not only have been more cost-intensive but extremely difficult and time-consuming as well. Air traffic would not have permitted installation of the stringlines in advance but only prior to commencing the paving operation. At least 18 km of stringlines would have been required, which would have entailed costs of around 50,000 euro.

**Super 1800-2 and Hamm DV 70 VO ensure paving according to plan**

The runway has a total width of 45 m with 7.5 m wide shoulders on each side, resulting in an overall width of 60 m. The SUPER 1800-2 paved the surface course at a thickness of 5 cm, immediately followed by a DV 70 VO tandem roller from Hamm. The 8-ton roller equipped with oscillation technology compacted the asphalt package to perfection. Thanks to the NAVITRONIC Plus®, the requirements placed on paving alignment and evenness were fully met. The NAVITRONIC Plus® control system offers yet another unique advantage: Being a thoroughbred 3D system, it permits not only the paving thickness but also the paving alignment and paving direction to be governed fully automatically.

**Job site details**

Rehabilitation of the runway at Akureyri Airport:
- Project length: 2,000 m
- Paving width: 4 to 5 m
- Layer thickness: Levelling course: up to 10 cm
- Paving material of surface course: 0–16 mm mix
- Paving material of levelling course: 0–11 mm mix

**User-friendliness right down to the smallest detail**

The operating crew of the Vögele paver counts on ErgoPlus.

**Use of the NAVITRONIC Plus® system ensured that the high requirements placed on evenness were fully met.**

**Short work: Each strip had to be completed in just one day as the runway needed to be open to air traffic again in the morning.**

**Working in a reliable team with the Vögele paver, a DV 70 VO from Hamm compacted the pavement quickly and precisely using vibration and oscillation.**

**Current airport rehabilitation including future extension: Preparation of the runway for a larger number of international flight connections with bigger passenger aircraft will be completed in 2009.**
The milling job was a typical application with the 3D control system delivering the desired terrain using 3D control face at the same time. It works independently of references on the ground, instead using a digital terrain model as specified parameter for the milling depth. In addition, the Wirtgen milling machine equipped with the 3D control system delivers the desired milling accuracy within the millimetre range. Requirements on the testing ground near Wolfsburg were extremely high: The milling accuracy in the millimetre range was required. The measured level deviates from the specified tolerance range.

Remodel terrain using 3D control

The milling job was a typical application of the 3D control system as the existing surface deviated from the specified plane in all three directions. Rehabilitation using the 3D control system was the only method that would allow reshaping of the surface at the same time. It works independently of references on the ground, instead using a digital terrain model as specified parameter for the milling depth. In addition, the Wirtgen milling machine equipped with the 3D control system delivers the desired milling accuracy within the millimetre range. Requirements on the testing ground near Wolfsburg were extremely high: The horizontal position of the milled area was allowed to deviate from the specified level by a maximum of ±2 mm.

SAT Straßen-sanierung GmbH was awarded the contract for carrying out this highly demanding job. “For the job in Wolfsburg, two of our W 2200 cold milling machines, which usually work with wire-rope sensors or ultrasonic sensors, were converted to the 3D control system,” says site manageress Aleksandra Rompa, explaining the setup of the machines. This is possible because the hardware and software of the Wirtgen levelling systems include a standard pre-installation for the 3D systems of common manufacturers.

Success factor W 2200

Several reasons were speaking in favour of using the W 2200 in this large project. From a technical viewpoint, the machine impresses with its high weight, which ensures an extremely smooth operation and minimizes vibrations at the prism. The W 2200 was the prime choice also because of its high economic efficiency. In this case, its milling width of 2.2 m was a particularly valuable asset: It minimized the time needed for reversing the machine and helped to speed up completion of the project.

500,000 m² in just seven weeks

At the client’s request, the asphalt pavement on the 250,000m² large area was removed in two separate layers. In actual fact, the two high-performance milling machines therefore needed to work a total area of 500,000m². They needed seven weeks altogether to complete this job. Holger Ol-dach, manager of the milling division at SAT in Hamburg, is “highly satisfied with both the progress and the outcome of the project. The two W 2200ds did an excellent job, and with the 3D control system produced a new profile which precisely adheres to the parameters specified by the digital terrain model. On the whole, this technology isn’t any more complicated than other levelling methods. Know-how and experience in surveying are important, however, in order to be able to solve demanding tasks like this one.”

Fast and easy setup

To get the cold milling machine ready for operation, a prism is mounted on a mast on the machine. In addition, the system computer of the 3D control system is plugged into the Wirtgen automatic levelling system and connected to a radio transmitter. The modules are connected quickly and easily by plugs. The specified profile of the completed area needs to be defined prior to commencement of the milling operation. Planners or surveyors establish these data and install them on the system computer of the 3D control system.

Precision milling with automatic target recognition

During the milling operation, the prism is tracked by a total station with automatic target recognition, a so-called tachymeter. The prism serves as a reference for the specified level of the milled surface. As soon as the milling machine begins to move, the total station keeps tracking the prism automatically, continuously locating its position in space. The measuring data are transmitted by radio to the system computer on the machine. If the measured level deviates from the specified value, the system computer forwards the information to the machine control system. The cold milling machine responds in a split second by correcting the milling depth.

The operating principle of 3D control

The Wirtgen 3D control system comprises four main components:

- a prism on the cold milling machine,
- a total station which tracks the prism automatically,
- a radio connection between the total station and the cold milling machine, and
- a system computer on the machine.

It is particularly suitable for milling large surfaces which are to be given a new profile, for example, on airports or special areas as described above. The technology can also be used, however, for the highly precise modelling of complicated profiles on other traffic areas.
Processing “impure” limestone in mobile Kleemann plants:  
Pre-screening as key driver to an efficient overall process

Limestone is considered by the construction industry and the construction materials industry to be one of the most important raw materials. Its many different characteristics enable it to be used in a variety of ways. Quarrying limestone can prove to be very difficult when contaminated. Economically efficient quarrying and high product quality can be realized, however, through the use of Kleemann plants and their mature screening technology.

Spain: Crushing limestone with a high percentage of clay and earth
Limestone is quarried and crushed at Can-teras Foj Quarry near the Spanish city of Barcelona. A special characteristic: The feed material is contaminated by an extremely high percentage of clay, which is particularly difficult to remove by screening.

As tricky tasks require special equipment, it is no surprise that quarry owner Juan Manuel Foj decided to use a MOBI-REX MR 122 RR from German plant manu-facturer Kleemann. “This special plant is based on the tried and tested MR 122 Z, which has been equipped with roll screening type RRS 12.5/8 and RRS 12.5/6 mounted behind one another in a graded arrange-ment for this special pre-screening applica-tion. So, the plant is not operated with the well-known and highly effective double-deck heavy-duty screen,” explains Michael Schwarz, Sales Manager Europe at Kleemann. This arrangement not only ensures successful screening of the fines but also enables the plant to achieve an impressive feed capacity of up to 350 t/h.

Screening plant ensures “fine tuning”
Such top performance obviously requires an appropriate screening plant for the high-quality and highly productive final grading in the second step. Four final aggregate fractions of 0–4 mm, 4 to 12 mm, 12 to 22 mm and +22 mm need to be produced, serv-ing as aggregate for asphalt and concrete production. No problem at all for the mobile triple-deck screening plant type MOBISCREEN MS 20 D. It has an impressive screening surface of 2,095 m² x 6,000 mm in “banana geometry”, enabling it to achieve a discharge capacity of up to 650 t/h.

Like the MR 122 RR, the MS 20 D is equipped with a diesel-electric drive sys-tem. Operation is therefore economical in terms of fuel consumption, and enables interlocking of the control systems of both plants. As an option, both plants can be op-erated with on-site electric power, which can significantly reduce the operating cost even further.

Russia: Two crushing stages, two pre-screening stages and four final aggregate fractions for top quality
The LSR Group counts among the biggest companies in the Russian building industry. The company’s subsidiary OOO Zement LSR is currently building a modern cement factory near St. Petersburg. Once completed, it will produce 1.85 million tons of cement per year. The required limestone is quarried in Slanzy, a small town near the Estonian-Russian border, and is processed in an efficient combination of mobile Kleem-an crushing and screening plants.

Active double-deck pre-screens in operation
Around 240 tons per hour of grain size 0– 70 mm are produced in two crushing stages – separated into three final aggregate frac-tions. As the feed material contains significant amounts of fines, OOO Zement LSR decided to use plants equipped with active pre-screens in both crushing stages. “Not least for that reason, we chose two mobile plants from Kleemann,” explains Mr. Putjata, the chief mechanic at OOO Zement LSR.

A mobile jaw crusher type MOBICAT MC 120 Z is in operation in the first crush-ing stage. “This plant is of extremely robust design and pre-crushes the rock, which has a feed size of 0–800 mm, to a size of 0–250 mm. The feed material is cleaned very effectively even in this stage by the active double-deck pre-screen. Via a ‘bypass’, the pre-screened material is sent past the crusher and directly onto the discharge con-voyeur, which enhances the productive oper-ation of the plant even more,” explains Mr. Komatschew, the Director of OOO Zement LSR.

In the second crushing stage, the mate-rial is crushed to grain size 0–70 mm. This

Kleemann opens up new markets
But “Road and Mineral Technologies” from January 1, 2009. Wirtgen Denmark, Wirtgen Finnland, Wirtgen Norway, Wirtgen Sweden, Wirtgen South Africa, Wirtgen Australia and Wirtgen Austria will then begin marketing Kleemann products – always abiding by the Kleemann Group’s value proposition of being “Close to our customers”.

For another seven Wirtgen Group subsidiaries, the slogan will not read “Road Technologies” but “Road and Mineral Technologies” from January 1, 2009. Wirtgen Denmark, Wirtgen Finnland, Wirtgen Norway, Wirtgen Sweden, Wirtgen South Africa, Wirtgen Australia and Wirtgen Austria will then begin marketing Kleemann products – always abiding by the Kleemann Group’s value proposition of being “Close to our customers”.

the advantages of our products to the custom-ers. The mining boom in Australia and South Africa is of great interest to us in particular with regard to our customized, extremely powerful large crushing plants – we need to seize the opportunity here and gain a firm foothold quickly. Including Austria in our sales and service territory is self-evident because of the country’s proximity to our German loca-tion. In all other neighbouring countries, we have been successfully represented for a long time. The Wirtgen Group subsidiaries are fully geared to marketing our products, their customer service has undergone in-depth training – we’re all set to go.”

Kleemann launches company website
The Wirtgen Group is putting on a united demonstration of strength now also on the Internet. Following the successful launch of the new Kleemann homepage, all four Wirtgen Group brands are now online in the fresh corporate design. The sections About us, Products, Technologies, Customer serv-ice and News and media, which are the same for all four brands, offer comprehensive infor-mation on the powerful screening and screen-ing plants. The web presence impresses not only with its appealing design – its depth of content also ensures that no questions will remain unanswered with regard to recycling and natural stone processing.

Visit Kleemann’s new web presence at www.kleemann.info
Three construction consortiums are in charge of the "Autoroute Transmaghrébine", the biggest road construction project in Africa and currently also in the world. The motorway will link the Maghreb states of Morocco, Algeria and Tunisia over a total length of more than 3,010 km. Construction work has made good progress in Algeria, where three construction consortiums are building around 1,200 km of motorway: The construction gangs include 36 road pavers from Vögele and several Wirtgen slipform pavers.

High quality requirements
High traffic volumes are expected on the motorway. Therefore the road structure is made up of several layers: the base layer, the binder course of bitumen gravel, the layer thickness of 20 cm. It is followed by a 14 cm binder course of bitumen gravel. The layer structure is combined with a surface course consisting of asphalt concrete (0–14 mm) which has a layer thickness of between 6 to 8 cm.

Japanese consortium: 15 SUPER pavers on the job
On its 365-km long stretch of the motorway, COJAAL is relying on twelve SUPER 2100-2 pavers fitted with AB 600-2 TP2 paving screeds, and four additional SUPER 1900-2 pavers equipped with AB 500-2 paving screeds. The three traffic lanes are produced at working widths of 6.25 m each using the "hot-to-hot" paving method. For precise levelling, COJAAL relies on the NIVELTRONIC Plus® automatic levelling system. The high-tech system works on an electro-optical basis: Data collected by means of optical instruments are processed electronically. In the process, RoadScan® emits laser signals that are reflected by the subgrade and subsequently received by the laser head. The electronic system uses these data to determine the actual elevation of the screed.

Compaction: Hamm tandem and pneumatic-tyred rollers
Compaction of the separate layers is effected by a veritable armada of Hamm rollers. Among others, 12-ton tandem rollers type HD 120 and 18-ton pneumatic-tyred rollers type GRW 18 are in operation, and can be relied on to produce the specified density.

Paving at a working width of 12.5 mm
The Chinese consortium CITIC-CRCC is operating 13 pavers type SUPER 2100-2 on its stretch of the motorway. In contrast to COJAAL, paving is effected across the full width. The paving screeds have been set up to an impressive working width of 12.5 m. Each paver is equipped with high-compaction standard screeds type SB 250 TP2. The SB 250 has a basic width of 2.5 m, and can be extended to a maximum paving width of 13 m by means of bolt-on extensions and hydraulically extending attachment parts.

Three compact-class pavers type SUPER 1300-2 are taking care of any additional surfaces along the road, for example, the hard shoulders. The Chinese paving teams are relying on Vögele’s Big-MultiPlex-Ski sensors in combination with the NIVELTRONIC Plus®. This system consists of three ultrasonic sensors fitted to a carrier, which are capable of scanning an area of up to 13 m. Like any ultrasonic sensor, the Big-MultiPlex-Ski is flexible in use and is suitable for equalizing any ground irregularities. The mean values calculated from the readings of several sensors enable even extensive irregularities to be equalized that would otherwise not be recognized as a defect when using one single sensor. The track layout is thus precisely adhered to even without using stringlines.

The SUPER 2100-2 is a real workhorse: The machine design of the state-of-the-art paver enables it to manage even the biggest construction projects with superior ease, maximum economic efficiency and effortlessness. It has a paving capacity of up to 1,100 tons of mix per hour. Offering a maximum paving width of up to 13 m, the SUPER 2100 is the ideal paver for the seamless paving of motorways.

The motorway will link 55 cities with 50 million inhabitants, 22 international airports, the biggest seaports and the major industrial and tourist regions of the Maghreb states. It crosses the country from east to west. Once completed, it will be a ten-hour journey to cover the distance from the Tunisian border with Libya all the way to Morocco. Libya and Mauritania are also included in the project. Plans are that, in the medium term, the "Transmaghrébine" will lead across the whole of North Africa. Considerations have even been given to building a tunnel across the Strait of Gibraltar between Morocco and Spain in order to create a link to Europe.
A strong group, four specialized brands, a network of subsidiaries and dealers – the structure of the Wirtgen Group is designed for long-term sustainability.

The Wirtgen Group maintains a presence as a strong local partner for its customers. More than 55 Wirtgen subsidiaries and over 100 selected dealers throughout the world uphold the pledge of being “Close to our customers”, be it through professional application consulting, exemplary spare parts service or reliable on-site service directly on the job site.

To us at the Wirtgen Group, being close to our customers also means the continuous expansion of our global sales and service organization, so that we can be a partner that supports its customers everywhere in the world.

The number of Wirtgen Group sales and service companies has been expanded with the establishment of the new subsidiaries Wirtgen Budapest, Wirtgen Ireland and Wirtgen Ankara. Wirtgen Polska has moved into completely new premises in Czapury. A new building has also been erected in Australia, while the existing subsidiary in France has been expanded. More than 4,500 Wirtgen Group employees the world over live up to our pledge of being “Close to our customers” everyday. Around the world, around the clock – for totally satisfied customers.

**Facts and figures on the Wirtgen Group subsidiaries**

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<tr>
<th><strong>WIRTGEN ANKARA</strong></th>
<th><strong>WIRTGEN AUSTRALIA</strong></th>
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<td><strong>Next trade fair:</strong> INTERMAT in Paris from 20 to 25 April 2009</td>
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<td><strong>Next trade fair:</strong> INTERMAT in Paris from 20 to 25 April 2009</td>
<td><strong>Next trade fair:</strong> AUTOESTRADA in Klace from 12 to 15 May 2009</td>
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Positive mood impresses head of state

German President Köhler visits Wirtgen family business

A top-level visit to Wirtgen GmbH from Berlin and Mainz was announced for 17 November: German President Horst Köhler and Minister President Kurt Beck visited the headquarters at Windhagen for more than two hours during their tour of Rhineland-Palatinate.

The high-ranking delegation was accompanied by political representatives from the national, state and local levels of the federal state of Rhineland-Palatinate. In addition to the topic of training, the discussions naturally touched on current affairs, such as the effects of globalization and the financial crisis on the machine construction company and its workforce.

Look to the future with confidence, especially in troubled times

Stefan Wirtgen and Jürgen Wirtgen presented the key facts and figures of the Wirtgen Group in a brief company presentation. In keeping with the theme “A German family business on the road to success”, the state visitors were given an impressive insight into the individual companies and their market-leading position in the industry and the worldwide market. Mr Köhler was so impressed by the appealing presentation of the independent family business that a long discussion was launched on the strengths of the tradition-stepped company in times of a weakening economy. The positive spirit of the Wirtgen family, the respect of the company leaders for their qualified employees and the numerous new investments in the four main plants of the Wirtgen Group in Germany visibly impressed President Köhler.

Finally, Gisela Wirtgen summarized the impending challenges of the coming years: “I’ve been in business for 45 years now and have experienced a number of recessions. In such times, we’ve always said that we have to step up our efforts even more and in that way, we’ve overcome those difficult times together!” The Federal President was also quick to confirm that, with her exemplary attitude, Mrs Wirtgen would be invaluable to the company for a long time to come.

Enthusiastic tour of the works fosters personal contact with the workforce

During the subsequent works tour, the delegation visited numerous core areas of the final assembly plant: the assembly lines for large milling machines, the milling drum construction plant, the recyclers and slipform pavers and small milling machines were all on the tight agenda. As could only be expected, the massive Wirtgen milling drums enthralled the visitors from Berlin and Mainz. The size and range of the core elements of Wirtgen’s cutting technology fascinated everyone in attendance and Stefan Wirtgen and Jürgen Wirtgen had no choice but to explain the milling process in detail.

Meeting the workforce was particularly important to Federal President Horst Köhler during his tour of the works and he himself sought contact with the personnel of the final assembly plant. He established many ties during the entire visit with his friendly, open manner: ultimately, what most impressed the Wirtgen family, the employees and apprentices about the German President was his likeable and natural demeanour and the many questions he asked the participants directly. Indeed, he could not be persuaded out of this, despite having exceeded the scheduled timeframe.

90 apprentices welcome the head of state

Training Manager Helmut Hecking and the 90 apprentices currently at Wirtgen GmbH awaited Mr Köhler after the works tour for lunch in the works canteen. Wirtgen is currently training young men and women in eight professions in commercial-technical and business fields and invests heavily in the trainees who will safeguard the future of the company. At 7.5%, the trainee ratio is well above the national average – a fact of which both the Wirtgen family and the instructors are very proud.

Horst Köhler was excited to hear about the training philosophy and, once again, immediately addressed the apprentices personally: Carina Frings (draughtswoman), Wolfgang Oever (industrial mechanic), Daniel Hoss (hybrid apprenticeship), Isabelle Chapel (industrial business management assistant) and Marc Koch (construction mechanic) explained their different vocational disciplines to the head of state. Training Manager Helmut Hecking emphasized that Wirtgen accepts apprentices from all types of school and that the area provides very good schools and motivated young people who are very eager to learn. Mrs Köhler was also visibly impressed by the exemplary approach and huge commitment to training and paid tribute to this.

Important political officials from the region represented

Members of the Bundestag and the state parliaments of all parliamentary parties, Mayors Josef Rüddel (Windhagen) and Siegfried Schmid (Asbach Municipalities Association) likewise took the opportunity to welcome the high-ranking delegation in Windhagen and accompanied them on their tour of the works.

The two mayors were extremely pleased with the entries in their town visitors’ books by Federal President Horst Köhler, his wife Eva Luise Köhler and Minister President Kurt Beck on this unique occasion. Within two years, the municipality of Windhagen has been able to collect the signatures of the two most important representatives of the Federal Republic of Germany, as Federal Chancellor Angela Merkel also left her mark in Windhagen’s town visitors’ book during her visit in March 2006.

The visitors bestowed a special honour on the mayors of Windhagen and Asbach by signing their town visitors’ books.

The President is especially interested in the topic of training: there were also one or two discussions with the young trainees during lunch with Wirtgen’s 90 apprentices.
The KMA 220 cold recycling mixing plant for the production of high-quality cold mixtures effectively processes reclaimed road construction materials. Further enhancements include the KMA 220 mobile mixing plant and WLB 10 S laboratory plant.

Mobile plant design on the road of success

The KMA 220 cold recycling mixing plant focuses on the complete reuse and cost-effective processing of reclaimed road construction materials. With its mature functionality, the KMA 220 offers construction companies an attractive opportunity to successfully open up the potentials inherent in this line of business.

The KMA 220 impresses with an outstanding mixing capacity of up to 220 t/h for the production of high-quality cold mixes from recycling construction materials. The mixing performance surpasses even that of many large stationary plants. The compact plant carries a powerful 6-cylinder diesel engine with an output of 131 kW, ensuring an appropriate performance capacity. The KMA 220 achieves high daily production rates at a consistently high mix quality. Homogeneous mixing of the construction materials is guaranteed by a twin-shaft continuous mixer.

The KMA 220 is capable of producing cold mix either in batch mode or in continuous mode. The mix is then directly loaded into trucks or stockpiled via the plant’s slwing discharge conveyor. The mobile plant design offers easy setup and economical mix production close to the construction site. Time-consuming truck transports between mix production and construction site are reduced to a minimum, which has a very positive effect on fuel costs. In addition, the source materials for mix production need neither be dried nor heated, which reduces CO₂ emission even further.

Full range of mixing options

A clear advantage of the KMA 220 is its versatility in processing various unbound construction materials. With the addition of binding agents, cold mixes of superior quality, e.g., virgin aggregate mixtures and reclaimed recycling materials. Recycling materials suitable for processing include milled material and any construction materials from the upper road pavement.

The KMA 220 offers a full range of options also with regard to binding agents. Using cement and/or bitumen emulsion and/or foamed bitumen, and adding water in addition to any of these, the mobile plant is capable of processing the source material into a cold mix suitable for use as a bound base layer. The formula for binding agents and aggregate is determined by pre-laboratory testing. Using the innovative foamed bitumen is particularly efficient as the quantities to be added are typically very small. Precise weighing and metering of the binding agents is effected via a load cell and microprocessor control.

The new WLB 10 S and WLM 30 laboratory plants: Carrying out foamed bitumen mix designs quickly and reliably

Many construction companies are today offering the cold recycling process together with an in-depth analysis of the condition of the existing road pavement, and a design of the future pavement structure. In cold recycling, the suitability of the construction materials and construction material mixes used needs to be confirmed in detail for each project. The quality of the mixes to be produced for the construction project can be precisely defined by preliminary investigations carried out with a mobile foamed bitumen laboratory plant, such as the WLB 10 S. The results allow conclusions to be drawn on the material properties that can be achieved, such as the bearing capacity.

Feedback from the field: More setting options for greater accuracy

The WLB 10 S is widely used by universi- ty research institutes and specialist labora- tories around the globe. Professor Kim Jenkins, cold recycling expert at Stellenbosch University in South Africa, has ex- amined the new laboratory plant very thor- oughly: “Our institute makes extensive use of the new WLB 10 S for foamed bitumen mix designs. Enhancements made to the new model include an improved control panel with temperature monitoring, and continuous setting options for the entire binder circulation. Temperature has a con- siderable influence on bitumen properties, so it is important to control the settings accurately. The control panel is also more user-friendly as it permits both the targeted and the actual settings to be displayed. Variable settings for the bitumen pump deliv- ery rate have also been added, which also allows for greater accuracy in the applica- tion of the binding agent.”

High-performance recycler WR 4200: Technology keeps gaining ground

Eastern Europe increasingly banks on high-quality, economical cold recycling

Eastern European countries like the Czech Republic, Romania and Ukraine also rely on the proven and established cold recycling process for the rehabilitation of their traffic infrastructure. Four WR 4200 cold recyclers are in operation in these countries. Near the Ukrainian cities of Novograd and Zytynzor, around 150 km to the west of Kiev, two WR 4200 machines are currently recycling a 60 km section of a dual-lane arterial road with emulsion and cement, working at a recycling depth of 20 cm.

In Ukraine, two large WR 4200 machines are recycling the carriageways of a dual-lane arterial road in one single machine pass.

Rehabilitation projects in Germany completed successfully

The cost-effective process for the structural rehabilitation of damaged roads is applied in Germany as well. The German state of Rheinland Palatinate completed several sections of a heavily trafficked road in the vicinity of Trier using emulsion and cement in series, and the economical binding agent foamed bi- tumen respectively in other sections. In addi- tion to the great savings potential offered by this method in terms of material and operat- ing costs incurred by the machines and vehi- cles involved, cold recycling offers the added advantage of reducing the construction time. Even in small-scale projects, construction times can be reduced by fifty percent com- pared to conventional road rehabilitation methods.

In Ukraine, two large WR 4200 machines are recycling the carriageways of a dual-lane arterial road in one single machine pass.
Vögele apprentices report on their 2008 Paving Days

Wirtgen Group apprentices meet in Mannheim to face new challenge

The Apprentice Paving Days took place once again this year. While the event’s premiere last year took place in Windhagen, this year the apprentices, instructors and fitters were invited to Joseph Vögele AG in Mannheim to participate in the project.

The event was initiated by Stefan Wirtgen and Jürgen Wirtgen. They want their apprentices to not only know how a road construction machine is built, but also how it works in practice. Plus: the apprentices should be familiar not only with their own machines, but also with those of the partner companies. A good opportunity to make new contacts and maintain existing ones with other employees of the Wirtgen Group.

After all, it’s always possible that apprentices will meet an old face later on in their careers, be it as a fitter on a job site, or in another role somewhere around the world.

Day one:
New road, new luck

This year’s Paving Days were held from 9 to 11 July. The road that was earmarked for joint rehabilitation by apprentices from throughout the Wirtgen Group is in Brühl-Rohrholz. The job site on the Rhine road was 400 m long and 5.80 m wide and provided optimum conditions for the apprentices to familiarize themselves with the equipment.

We welcomed our guests from Wirtgen and Hamm at the works of Joseph Vögele AG at approx. 11 am on Wednesday, 9 July 2008. After the welcoming address and an explanation of the day’s schedule by instructors Uwe Deutsch and Stefan Bayer, everybody set off on a tour of the works before having lunch together in the works canteen. After lunch, Member of the Board Responsible for the Technical Sector Dr. Christian Pawlik and the Production Manager also attended the party. Furthermore, the Mayor of Brühl, Dr. Ralf Göck, also paid a visit and made it clear that he was extremely pleased to be able to support such a unique project for apprentices in his community. As a small token of his gratitude, Dr. Göck presented the instructors Uwe Deutsch and Thomas Bayer with a chronicle in commemoration of the community’s anniversary.

Day three:
Paving and compaction—a challenging day

Early on Friday, 11 July 2008, the apprentices from Vögele prepared everything for the paving work: this included aligning the machines and performing final checks of all measuring instruments and sensors. At this time, the Hamm apprentices filled the water tanks of their rollers so that they could commence with the compaction directly behind the pavers.

At about 8 am, the first truck bearing the ordered mix arrived at the job site and filled the hopper of the Vögele pave. Now the actual paving work could start! With a pave speed of approx. 5 m/min and a crown of 3%, the Vögele apprentices paved the 400 m stretch of road with a SUPER 1800-2 paver. Asphalt had to be placed with the help of shovels at the lateral joints, with everybody vigorously mucking in.

Directly behind the paver, the apprentices from Hamm compacted the 150°C hot asphalt to its final compaction with two HD Series rollers. Once all of the work was finished, the machines were cleaned and made ready for transportation, as the trucks were already waiting to take the construction machines to their next job site.

Heavy rainfall and “Till the next time!”

Finally, we bade our guests from Wirtgen and Hamm farewell. And then the heavens opened up and the heavy rainfall we’d luckily been spared up to this time started. Somewhat soaked, the Vögele personnel cleared up, transported surplus mix away and properly secured the job site.

This event was an informative experience for all of us. It’s great that companies still exist that attach so much importance to the training of their apprentices. The next Apprentice Paving Days are planned to be held at Hamm AG in Tirschenreuth.

The editorial team

Front (from left to right): Claudio Paludetto, Michael Panthen and Marc Denda; Rear (from left to right): Patrick Schmidt, Tobias Viebke and Joachim Müller
“Children in Need” charity commits itself on behalf of needy children in the Philippines

Every year, almost eleven million children around the world die before even reaching the age of five. The most frequent causes for these mortalities are infectious diseases, poor hygiene, polluted drinking water, a lack of medical care and malnutrition.

A committed Father

"On the Philippine island of Cebu, we met Father Heinz Kulüke, who is battling against these catastrophic conditions. He belongs to the Steyler Missionaries in Sankt Augustin/Germany and has been working in the Philippines since 1986. Father Kulüke is an extraordinary man. In the mornings, he lectures as a professor at St. Carlos University in Cebu City. In his free time, he takes personal care of the poorest families and children in the port city. He works in the most appalling slums, where virtually no one else dares to venture. The people there love him and see him as a ray of hope for a better future.

“Development aid”: Nursery schools and pre-schools

The biggest problem in these faces is finding financial aid so that he can realise additional projects. The “Children in Need” charity has supported two of his nursery schools for a number of months now. Both nursery schools and preschools are located near rubbish dumps in Mandaue City and Cebu City. They are attended by some 50 and 130 children respectively, aged from three to six years. Up until a few months ago, these children were still playing on the rubbish dumps during the daytime. Sometimes they had to help their mothers sift through the rubbish for anything usable. There was no nearby nursery school that they could have attended. Indeed, the parents weren’t particularly interested in this situation. However, Father Kulüke was usually able to convince the mothers of the absolute necessity of preschool education for their children. Yet of more decisive importance for the mothers was primarily the fact that the girls and boys attending nursery school received a daily meal.

Teaching the basics

Umapped nursery school is little more than a rudimentary shack. Chairs, desks, a large blackboard and two large cupboards for storing the textbooks, exercise books, pencils, crayons and a few games and craftwork materials make up the complete inventory. Great importance is given to clean toilets and a permanently spotless kitchen. However, the most important factor is that the children actually enjoy going to the nursery school. The teachers understand precisely how to motivate the little ones. At first, they learn in a playful way all of the things that their parents neglected to teach them.

The mothers themselves are frequently invited to attend a lesson. The topics then are cleanliness, vitamin-rich nutrition, diseases and parenting. Father Kulüke even makes personal calls on those mothers who find this course too troublesome and motivates them to accept suggestions. The fathers are day labourers, many of them working in the port. However, after waiting a long time for a call to work, they frequently return home without a single peso. Not all applicants for the day jobs are accepted: The life of the families living around the rubbish dump is quite simply degrading.

Gradual change

Father Kulüke knows that he’ll need years to change the situation. “But if nothing’s done, it will take even longer,” he says with a smile. He works on changes every day, even if only little progress is apparent. This gives the families that live there hope and confidence.

A ray of hope for Mahayahay

The slum of Mahayahay is located not very far from one of these rubbish dumps. The first time I visited Mahayahay together with Franciscan Sisters I was appalled. Never before in my life had I witnessed such poverty and misery. At temperatures of 35 degrees in the shade, the stench was overpowering. Families with as many as 12 children live there in cramped conditions in their dilapidated huts, which also provide sanctuary for rats and other vermin during heavy rainfall. These dwellings were virtually unfurnished and had neither a water connection nor sanitary facilities. Due to the lack of hygiene, infectious diseases and epidemics spread like wildfire. Many children were suffering from malnutrition and covered with rashes. Their large, bulging eyes regarded me with sorrow. Some 70 families lived there. None of the fathers had permanent work. They all tried to earn a little something as day labourers, so that their families could survive.

The Sisters explained to me that an estimated 40 percent of these families came to Cebu City years ago because they couldn’t find work in the countryside. So in despair, they sought work in Cebu City. However, their savings were quickly exhausted and because they couldn’t pay the rent, they had to leave their apartments. Finally, in total desperation, they ended up in the slum of Mahayahay: a catastrophe for the families. Fathers who couldn’t come to terms with their decline turned to alcohol. Mothers who at first still fought against poverty were soon overcome by apathy. How on Earth could anybody help here?

Together with the Franciscan Sisters, we helped out where we could. The sewage was rerouted. Children received medical treatment. Sacks of rice were handed out to those families with malnourished children. And every Christmas, the children were given a Christmas parcel with sweets and new clothes. Alas, we were only able to change the situation a little.

“Journeying with the poor”

Father Kulüke promised to help us. “This is a process that will take several years, but which has always led to success in the past,” he said. “We call it Journeying with the poor.” This process involves the poor becoming partners in their own development. I’ve applied the same model with other organizations in other slums over many years. Among other things, it includes the following components: nourishing the children, medical care, educating the children in nursery schools, attending primary and middle school, vocational training for the youths, educating the adults and teaching them values, creating alternative sources of income and, if possible, relocating them to decent residential areas.

In cooperation with Father Kulüke, we have decided to undergo this journey. It won’t be easy. We’re aware of that, but it’s worth it simply for the many babies, children and youths in Mahayahay.”