



Putzmeister

Post



**New Guinness record:
Largest continuous
concrete delivery
in Los Angeles**

**Scotlands largest infra-
structure projekt:
Concreting under water
at the Firth of Forth**

**Congratulations!
40 years of
Putzmeister
South Africa**

**High-ranking visit
at Putzmeister:
Chinese delegation
accompanied by
Minister for Industry
and Information
Technology Miao in
Berlin subsidiary**

Title story	
High-ranking visit at Putzmeister Berlin	4
On site	
New Guinness record: Largest continuous concrete delivery in Los Angeles	8
Putzmeister involved in the largest infrastructure project in Scotland: Concreting under water for a new road bridge	12
Putzmeister and Simem work as a team at the Mall of the South construction site	27
Concrete pumps of the New Generation in Nigeria	28
News	
The Putzmeister vision	6
10 in one fell swoop - Happy Beton receives new fleet of truck mixers	17
Customer and dealership get-together at Putzmeister Concrete Pumps	18
Putzmeister Mortar Machines	
Only reliable quality can survive on the market long-term	19
Putzmeister South Africa	
Congratulations! 40 years of Putzmeister South Africa	22
The Long Road to Success	24
Putzmeister Industrial Technology	
Development and testing of sludge pump KOS 1060 DSC on crawler chassis	30
Putzmeister Services	
Textile delivery hoses - Complete flexibility for high loads	32
Imprint / Photo credits	2



8 World record in concrete pumping in Los Angeles



12 Concreting under water at Scotland's Firth of Forth

Imprint:

Published by:
Putzmeister Holding GmbH
Max-Eyth-Str. 10, 72631 Aichtal/D

Editing/layout/typesetting:
Petra Montag,
Putzmeister Holding GmbH

Printed by:
Offizin Scheufele GmbH & Co. KG
Tränkestr. 17, 70597 Stuttgart/D

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Printed in Germany (41408)

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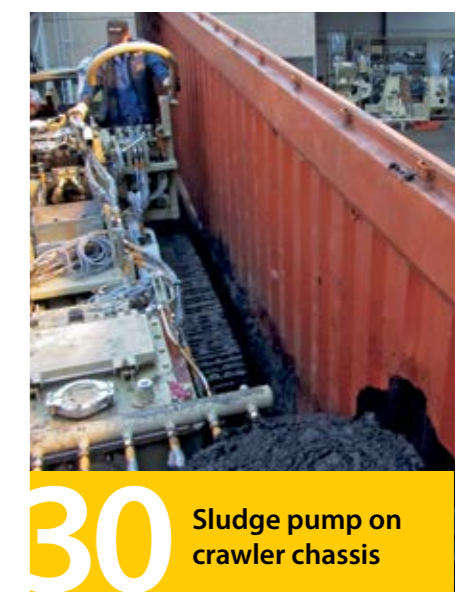
19 Mortar Machines: Reliable quality



17 10 truck mixers in one fell swoop



22 40 years of Putzmeister South Africa



30 Sludge pump on crawler chassis

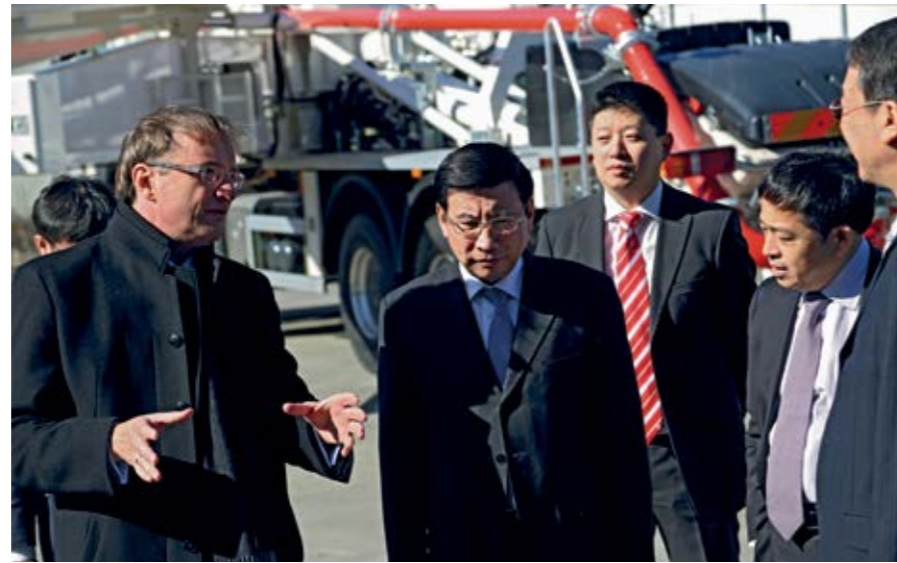


High-ranking visit at Putzmeister Berlin

The Chinese President Xi Jinping was on a state visit to Germany and Europe. His entourage included a large economic delegation.

Mr. Wei Miao, Minister for Industry and Information Technology, together with other representatives of the Chinese go-

vernment, visited the Berlin subsidiary on 27.03.2014. There he met for talks with the member of the Sany Group Executive Board and President of Sany Heavy Industries, Mr. Wenbo Xiang, as well as the CEO of Putzmeister Holding, Dr. Gerald Karch.



▼ High-ranking visit in the Berlin subsidiary: Mr. Miao, Minister for Industry and Information Technology of the People's Republic of China (3rd from right), Mr. Xiang, President, Sany Heavy Industries, (4th from right), Dr. Gerald Karch, CEO of Putzmeister Holding GmbH (2nd from right) and others



In his address the Minister went into details about the purchase of Putzmeister by Sany two years ago and praised the development made to date. "Putzmeister is the best company in this industry. Sany and Putzmeister are a good example for further cooperative ventures between German and Chinese companies." He was delighted with the optimal preparation for his visit at the Berlin subsidiary and soaked up comprehensive knowledge about the different machines on show. ■

◀ Dr. Karch explains the details of the machines to Mr. Miao



▲ ◀ Various truck-mounted concrete pumps, a PUMI, the stationary concrete pump BSA 14000 HP D, several mortar machines, as well as the mammoth pump KOS 25200 from the mining area were exhibited.

The Putzmeister vision

Managers from different departments together with corporate management developed a vision which represents Putzmeister as a company. This vision is currently communicated worldwide in all corporate divisions and sites of the Putzmeister Group.

The management of the company has committed itself to this vision. It is now up to all of us to support this vision.

Dr. Gerald Karch
CEO Putzmeister Holding GmbH

ENGINEERED FOR SUCCESS

Our machines and plants provide highest performance, quality and reliability.

SOLID PARTNERSHIP

The cornerstone of any collaboration is trust. Our promise is to take the best care of our customers and focus on their needs and requirements. We treat our partners with absolute respect and conduct our business with fairness and trust at all times.

EXPERIENCE PAVES THE WAY

Our global team of highly skilled and motivated people work continuously to improve our products and services. Setting the trend in our industry, we continue to significantly invest in research and development.

Putzmeister is a worldwide leading solution provider for pumping, mixing and placing concrete, mortar and industrial solids. With our parent company Sany Heavy Industries, we are amongst the world market leaders in our business.



Putzmeister

ENTWICKELT UM ERFOLGREICH ZU SEIN

Unsere Maschinen und Anlagen bieten höchste Leistungsfähigkeit, Qualität und Zuverlässigkeit.

EINE STARKE PARTNERSCHAFT

Zusammenarbeit basiert auf Vertrauen. Die Anforderungen und Bedürfnisse unserer Kunden stehen im Mittelpunkt unseres Tuns. Kundenorientierung ist unser Versprechen. Unseren Partnern begegnen wir mit höchstem Respekt. Wir verhalten uns stets fair und verantwortungsvoll.

ERFAHRUNG BEREITET DEN WEG

Unser weltumspannendes Team hoch qualifizierter und motivierter Menschen arbeitet beständig daran, unsere Produkte und Dienstleistungen zu verbessern. Um immer wieder neue Wege zu beschreiten und Maßstäbe zu setzen, investieren wir kontinuierlich in Forschung und Entwicklung.

Putzmeister ist ein führender Lösungsanbieter im Bereich Pumpen, Mischen und Transportieren von Beton, Mörtel und Dickstoffen. Mit unserem Mutterunternehmen Sany Heavy Industries sind wir einer der Weltmarktführer in unserer Branche.



Putzmeister

New Guinness record: Largest continuous concrete delivery in Los Angeles

The concreting of a 135 x 100 m large and 6 m thick base plate for the New Wilshire Grand Center in Los Angeles in February 2014 was not just a big challenge for all those involved, but also merited an entry in the Guinness Book of Records.

With the support of 12 truck-mounted concrete pumps, two stationary booms and two stationary concrete pumps from Putzmeister, 16,200 m³ of concrete was poured in just eighteen and a half hours.

The New Wilshire Grand in Los Angeles' popular financial district stretches 335 m high into the sky. Following the planned completion in 2017, it will become the tallest building in Los Angeles and along the entire west coast of the United States of America, thus competing with the skyscrapers in New York and Chicago. There is ample space for a luxury hotel, numerous office units and businesses on the 73 storeys. The owner of the building, Korean Air, a South-Korean airline company with its head office in Seoul, currently calculates the building costs at roughly 1 billion US dollars, which corresponds to approximately 720 million Euro. For decades now, the airline has been the most important Asian airline company established in Los Angeles.

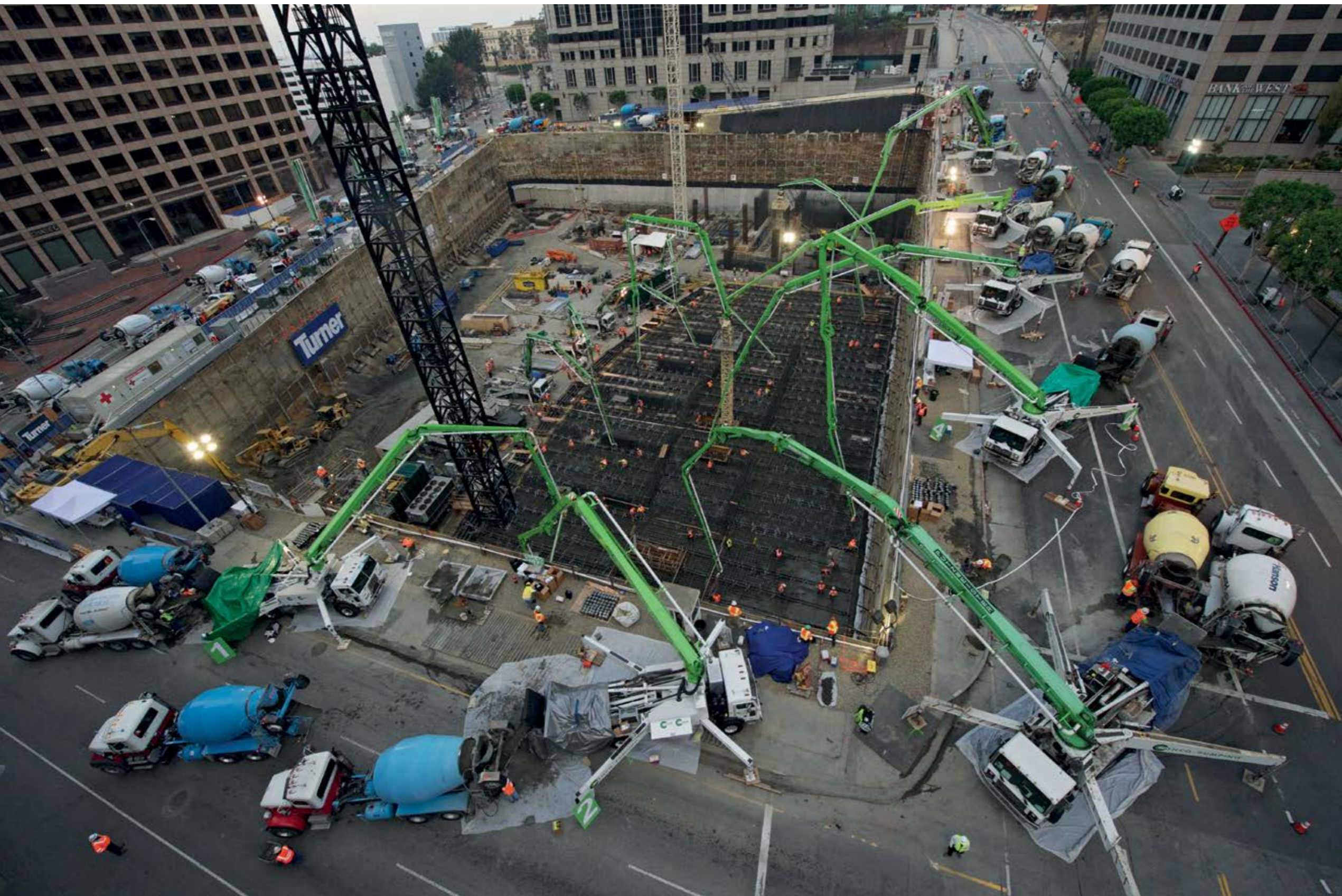
Korean Air commissioned the building firm Turner Construction, which has its head office in New York and is one of the largest building companies in the USA, as general contractor for the building project. The managers of the building giant had good reasons for mainly using Putzmeister equipment for the extensive concreting tasks: "We decided in favour of Putzmeister concrete pumps due to their well-known reliability and durability," states Michael Marchesano, Construction Manager of Turner Construction. "For concreting of this magnitude, one has to be able to rely on its equipment."

However, before the workers could commence the world-record concreting task, over the last two years the previous building had to be demolished, foundations had to be dug and 3,700 t of reinforced steel had to be installed. Then it's all hands to the pump!

Spectacular machinery and impressive logistics

The concrete for these types of base plates must be applied using a wet-on-wet technique. This means the next layer must be applied promptly to the fresh layer so that the layers bind. As a result, a very limited time window of maximum 90 minutes is open to the concreting teams from mixing the concrete to pouring. In order to observe this time

◀ During the concreting 12 truck-mounted concrete pumps with reaches between 32 and 47 m, two stationary booms, as well as two stationary concrete pumps from Putzmeister, were positioned around and within the foundations.





▲ In order to minimise interferences for businesses and residents, the concreting work started on Saturday evening and was completed on Sunday at midday.

slot in all circumstances, the project managers devised comprehensive plans in advance, which take into consideration all eventualities such as a traffic jam on the highway.

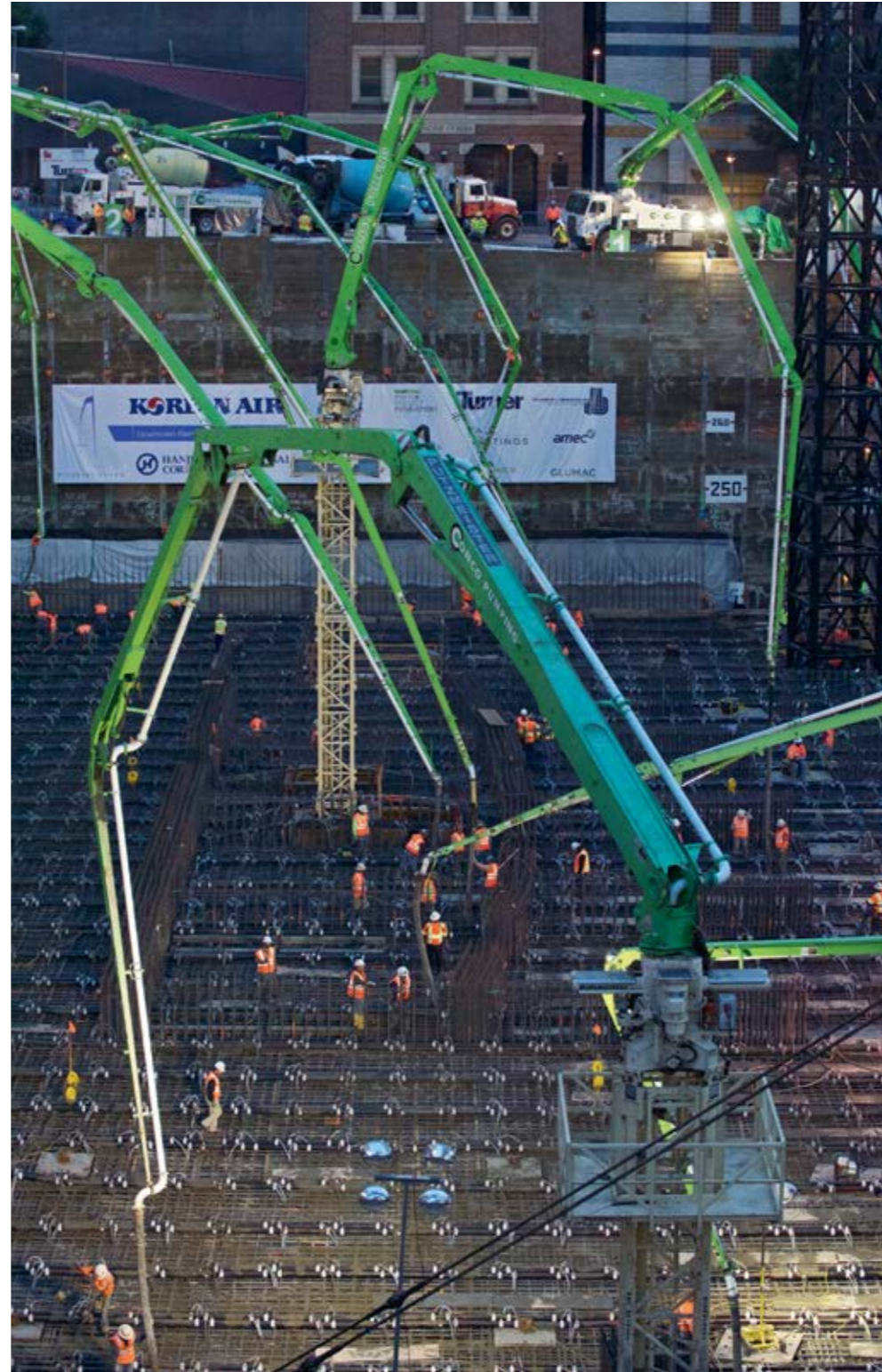
227 truck mixers were on the road 2,100 times in order to transport a total of 16,200 m³ of concrete to the construction site. A volume which even exceeded the previous record of 16,000 m³, created in 1999 during the construction of the Venetian Hotel in Las Vegas. Eight concrete mixing plants from Catalina Pacific Concrete Company were used for the manufacture of the concrete within a radius of 32 km. The concreting company had an additional mixing plant on standby in the event of a possible breakdown. 19 concrete pumps and placing booms, 16 of which were Putzmeister machines, were available on site to pour the concrete: Two truck-mounted concrete pumps M 47-5, one M 42-5, two M 38-5, five M 36-4 and two M 32-4, also two stationary booms with MXR 34-4 Multi and two stationary concrete pumps of type BSA 14000. The Conoco Construction Company from Concord provided the machinery.

Handling concrete requires a great deal of know-how and expertise

For the plate, the pumps delivered concrete with strength category C40 and a special composition of the additive. Approx. 875 m³ of concrete was poured into the formwork every hour at a pump delivery rate of on average 46 m³/h.

Then the concrete was cooled in order to prevent cracks. For this purpose, the workers laid approx. almost 30 km of hose lines in the foundations beforehand, through which cold water at a temperature of 7 °C flowed during the 2-week hardening phase. Sensors installed in the base plate communicated the internal temperature on an hourly basis, which should ideally be between 50 °C and 70 °C.

After the completion of the work on the foundations, the construction of the underground parking level now follows. Both stationary booms, as well as the stationary concrete pumps BSA 14000, will remain on the construction site for this work. As construction progresses, the placing booms will raise with the building.



▲ The concreting of the base plate for the New Wilshire Grand Center in February 2014 in Los Angeles was entered as the largest continuous concreting task in the Guinness Book of Records.

Project details:

Building owner: Korean Air Lines Co., Ltd. – Seoul, South Korea

General contractor: Turner Construction Company – New York, NY

Architects: AC Martins & Partner

Concrete pump service provider: The Conco Construction Companies – Concord, CA

Concrete manufacturer: Catalina Pacific Concrete Company – Glendora, CA

Putzmeister equipment:

Truck-mounted concrete pumps

2 x M 47-5

1 x M 42-5

2 x M 38-5

5 x M 36-4

2 x M 32-4

2 x MXR 34-4 Multi stationary boom

Stationary concrete pumps:

1 x BSA 14000 HP D

1 x BSA 14000 HP E

The New Wilshire Grand

At 335 m the New Wilshire Grand Center will be the tallest building in the skyline of Los Angeles. With this project the project developers are expecting a cultural revival and economic recovery of the inner city. Situated in the heart of downtown Los Angeles, the building with 73 storeys will offer space for a hotel with 900 luxury rooms, numerous congress rooms and office units, as well as an outdoor terrace and a swimming pool. Modern restaurants, businesses and an attractive nightlife will round off the offering for visitors. The opening is planned for 2017. 2,000 new jobs are to be created in the entire complex.

Before work on the new building could be started, first of all the traditional Wilshire Grand Hotel, which was opened in 1952, had to be demolished. Prominent figures such as John F. Kennedy and Pope John Paul II stayed in this luxury hotel.

➔ www.wilshiregrandcenter.com



Putzmeister involved in the largest infrastructure project in Scotland: Concreting under water for a new road bridge



Forth Road Bridge – the most important link between the Lowlands and Highlands

The Forth Road Bridge is a dual carriageway bridge with a steel design. This suspension bridge was erected between 1958 and 1964, and was the largest bridge of its kind in Europe at the time. It is 2.5 kilometres long, and alongside the famous Forth Rail Bridge, spans the Forth Estuary between North Queensferry and South Queensferry. It represents the most important link between the Scottish Lowlands and Highlands.

A total of almost 47,000 t steel was put in place, including a total of almost 50,000 kilometres of wire cable for the supporting structure. In 1964, HM the Queen presided at the bridge opening ceremony. Since 2001, the Forth Road Bridge has been a listed structure. From 2017, it will be closed to the majority of traffic, but will remain open to buses, taxis and cyclists as a public transport corridor.



© Greg Barbier (CC BY-SA 3.0)



Construction of a new road bridge over the Firth of Forth is currently Scotland's largest infrastructure project, and is intended to largely replace the current Forth Road Bridge. In July 2013, after a lengthy preparation period, the concreting work got underway on the foundations of the bridge's three towers. Across all three towers, a total of 28,669 m³ was poured forming giant plugs on which to base each tower's foundation. On the South Tower within a period of 15 days, 16,869 m³ of concrete was poured – the longest continuous concrete placement under water to date. 7,400 m³ and 4,400 m³ of concrete were poured on the North and Centre Towers respectively. This was a task in which not only Putzmeister equipment, but also the expertise of our engineers was needed.

Edinburgh. In December 2010, the Scottish Parliament decided to have a new bridge built over the Firth of Forth. This sea loch situated on the east coast of Scotland between Edinburgh and Fife, the estuary of the River Forth flows into the North Sea. It separates the Scottish Lowlands from the Highlands. Due to corrosion damage to the suspension cables, it is likely that the heavily-used, dual carriageway Forth Road Bridge (opened in 1964) would have had to be partially closed to traffic from 2017. Directly beside it, the new Queensferry Crossing bridge will carry the majority of the daily road traffic in future. A stable steel cable design with a total length of 2.7 km will enable uninterrupted traffic flow, even in high winds thanks to modern wind shielding installations. The project client is Transport Scotland, the

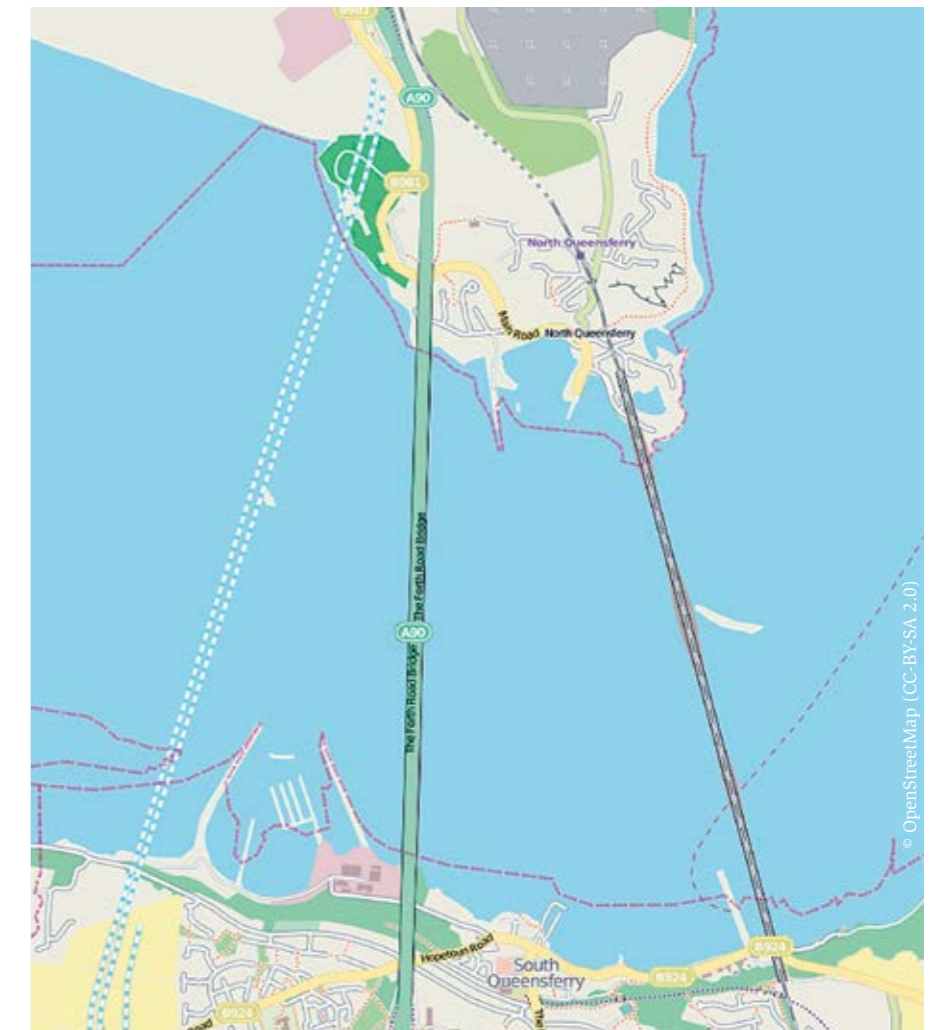
◀ Stationary boom MX 32-4 and concrete pump BSA 2110 HP D at one of the bridge towers

Scottish Government's transport agency. The client awarded the construction contract to a Joint Venture called Forth Crossing Bridge Constructors (FCBC). The new bridge is scheduled to be open to traffic by the end of 2016. The value of the project order is around 950 million Euro (£ 790 million) for FCBC.

Preliminary work for construction of the bridge towers

Before concreting the foundations, there were comprehensive preparations to be made. As early as summer 2012, work started on towing three caissons (up to 1,200 t) to the planned locations of the bridge towers, in order to sink them approximately 40 m deep into the waters of the Forth, until they sank into the seabed. Not an easy task at a maximum total height of 30 m and a diameter of 32 m. With a top section which is meant to serve as a temporary bulkhead until the lower bridge tower segments are finished, these protrude approximately 4 m out of the water.

▶ The new bridge Queensferry Crossing (dashed) will relieve the 50-year-old Forth Road Bridge (centre, green) of the majority of traffic.



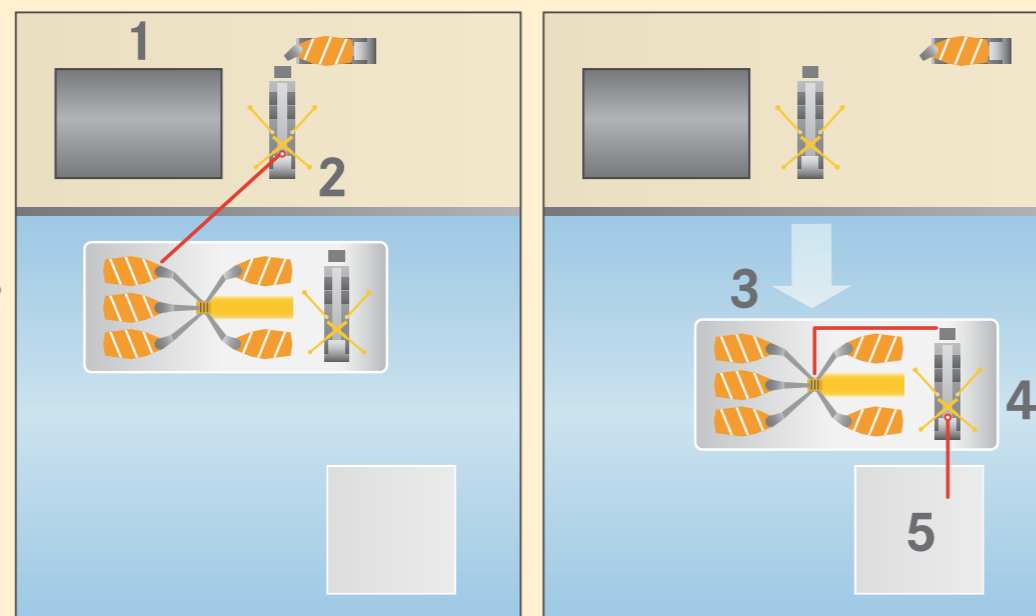
© OpenStreetMap (CC-BY-SA 2.0)



▲ The day passes...the concrete pump arrives: Concrete was poured around the clock for 15 days at the south pillar of the Firth of Forth bridge.

◀ The barge with mixer drums and a truck-mounted concrete pump on the road for concreting at the caisson.

- 1 Mixing plant
- 2 Truck-mounted concrete pump fills the mixer drums secured on the barge
- 3 Barge with mixer drums, stationary concrete pump BSA 2110 HP D and truck-mounted concrete pump transports the concrete to the bridge pillar
- 4 Truck-mounted concrete pump or stationary placing boom places concrete into the caisson
- 5 Caisson



Starting the longest continuous concrete placement under water

August 2013 saw the start of work on the longest continuous under water concrete placement and the third-largest concreting project worldwide. The concrete for the bridge tower foundations was brought on-site from one of the most modern mixing systems (operated by FCBC) in Britain situated in Rosyth Docks near the new bridge. The concrete operation at the South Tower, the last of the three tower foundations to be completed, was the largest underwater concrete pour in the world.

Four barges, each containing six mixer drums (each of which had a capacity of 12 m³), transported the material first to the location of the southern bridge tower. The barges chalked up a total of 273 journeys and a total distance of 1,800 km. From a land-based site, Putzmeister truck-mounted concrete pumps had transported the concrete to the mixer drums. Once arrived at their destination, a stationary BSA 2110 HP D concrete pump fastened in the middle of each barge pumped the concrete into another truck-mounted concrete pump that was also transported.

This was then used to concrete the foundation. For concreting the pylons, a BSA 2110 HP D stationed at the bridge tower foundation is charged from the truck-mounted concrete pump. The BSA 2110 HP D in turn pumps the concrete via a pipeline to an MX 32-4 type stationary boom mounted on the bridge tower itself.

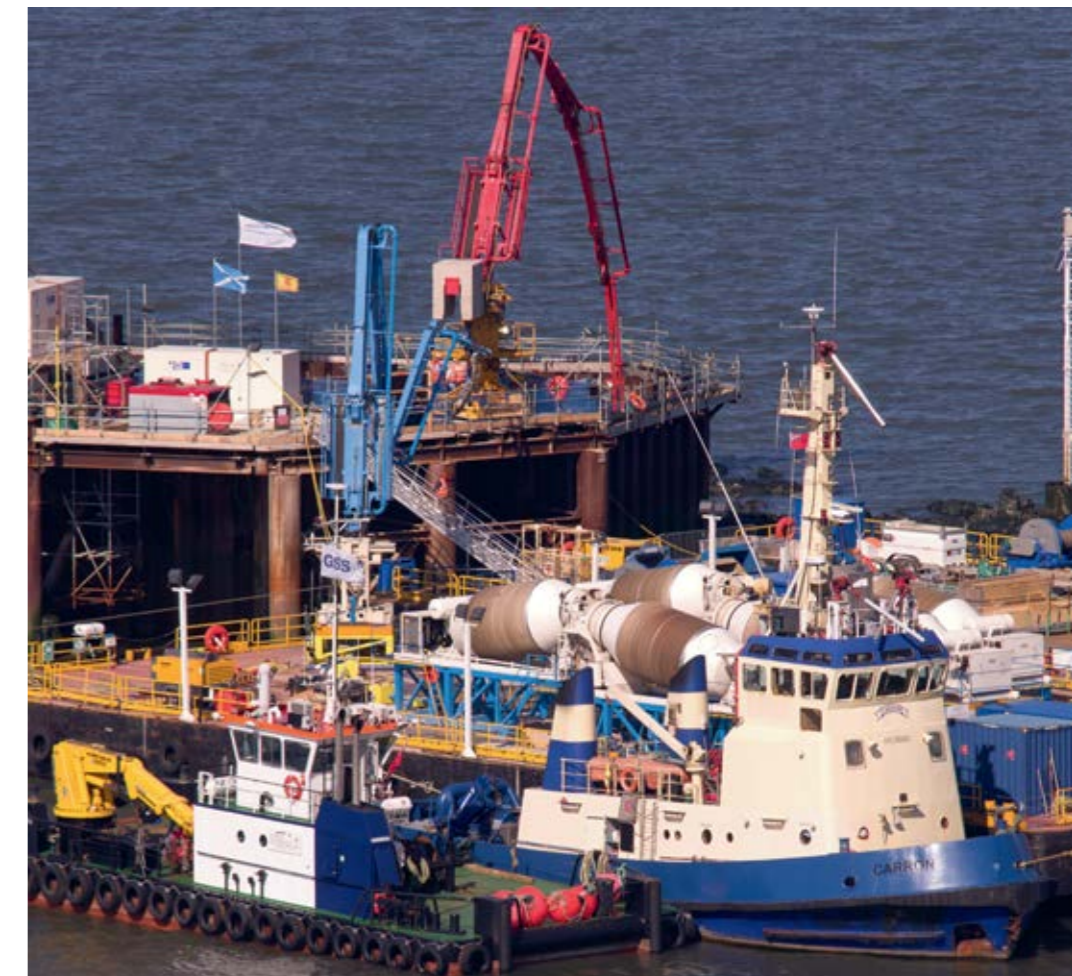
It follows that the success of the concreting decisively depended on the problem-free operation of the six Putzmeister truck-mounted concrete pumps of the types M 36-4, M 42-5 and M 47-5. The machines reliably met all expectations: With an average delivery rate of 47 m³/h, they placed up to 720 m³ of concrete per day.

For the production of the 25 m thick foundations of the southern bridge tower, this method was used to pump a total of 16,869 m³ of concrete non-stop over 15 days. The concrete was set to free-flowing at a water-cement value of 0.36, so that it did not need to be compacted. The same method was used to construct the foundation of the northern bridge tower. Not so with the centre tower, which will be erected on a rock halfway across the river.



▲ A stationary concrete pump BSA 2110 HP D is loaded by the six truck mixer drums and delivers the concrete to a truck-mounted concrete pump or a stationary boom on the barge.

▼ This in turn supplies another BSA 2110 HP D mounted at the construction with concrete. This stationary pump is connected to the MX 32-4 at the bridge pillar, which ultimately pours the concrete.





▲ Test of the flow consistency during the pumping tests: The pumpability of different types of concrete was determined.

Simultaneous construction of the actual towers is now underway in 4 m sections, using self-climbing formwork, and small rotary distributors fitted in the formwork. The BSA 2110 HP D, stationed at the bridge towers, supplies the them with concrete. By the end, 72,000 m³ of concrete will have been poured for the foundations of the three bridge towers alone, and by the time the two-way bridge is finished, a total of approximately 150,000 m³ of concrete will have been poured.

Pump tests determine the optimum pumpability of the concrete

For the upcoming concreting of the bridge towers, Putzmeister project engineers organized and were present at a pump test at the start of 2014. The aim was to determine the pumpability of different concretes and the design of suitable concrete pumps and pipelines on site. 165 m of pipeline was erected for this purpose, in order to simulate the maximum height of the highest pylons (210 m). A BSA 2110 HP D pumped the different types of concrete through the pipeline and then through a truck-mounted concrete pump. In this way, the engineers were able to simulate different delivery rates (10, 20 and 30 m³/h), and the effects on the pressure requirements of the concrete. In parallel, the Sliding Pipe Rheometer, or "Sliper" for short (developed by Putzmeister), measures the coefficients of friction of the concrete.

The right pipeline range from Putzmeister for every application

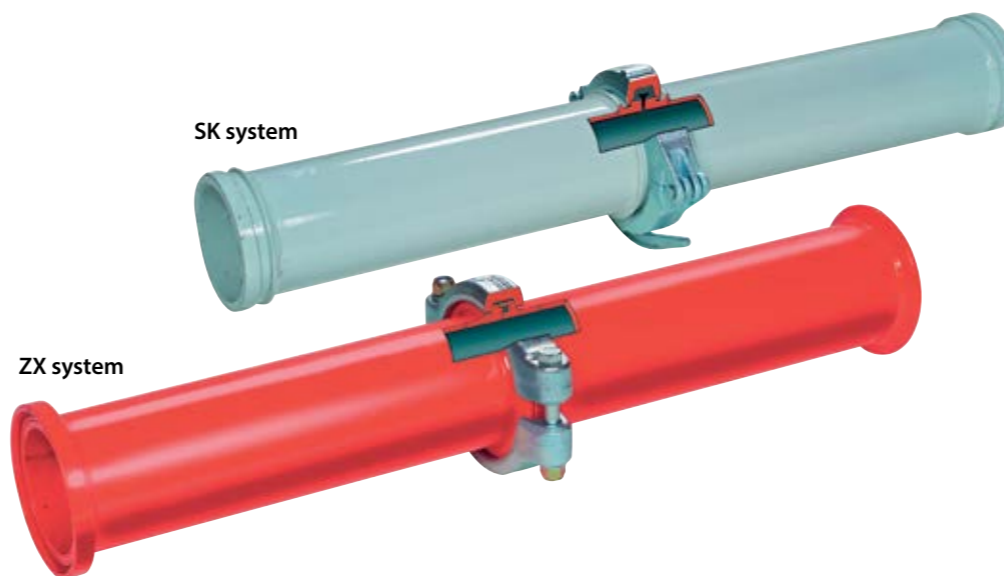
Predicting the expected concrete pressures and wear behaviour of concrete using pump tests and Sliper tests enables economic composition of the pipelines, among other things. The aim is to only plan for high-pressure resistant pipes in locations where they are absolutely necessary. This minimizes costs for pipelines. At the same time, they should be designed so that they need not be replaced due to wear during the construction phase.

Putzmeister supplies pipelines for many different uses and applications. On the one hand, they differ in terms of their connection system, and on the other

in their wall thickness and therefore in their attainable concrete pressure level. On truck-mounted concrete pumps, the pipes must be moveable and the couplings easy to open, for example. The SK coupling system, with its maximum pressure level of 85 bars, is recommended here.

For vertical and horizontal pumping, the pipelines are generally fitted with the coupling system ZX. ZX pipes are available in pressure levels 85 bar, 130 bars and 200 bars. With wall thicknesses of up to 11 mm, these pipes provide a very good wear reserve.

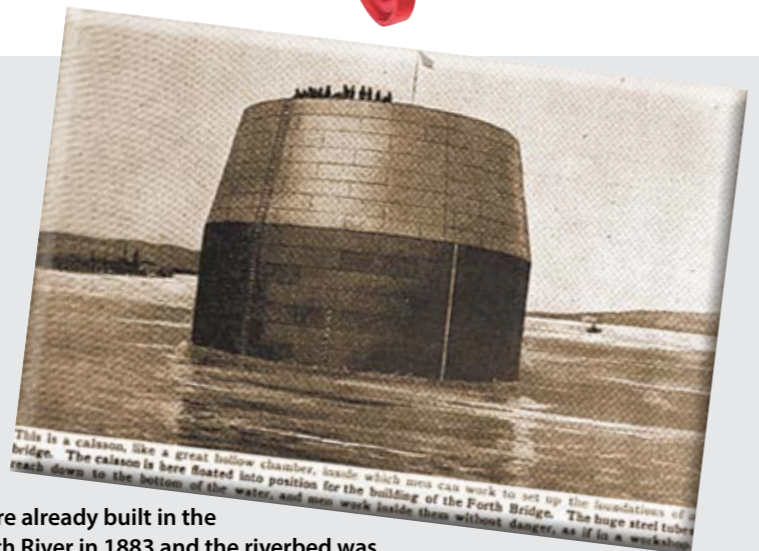
In addition, the ZX system guarantees the absolute leak tightness of the system, and minimizes wear at the join, as well as the risk of blockages. ■



What is a caisson?

A caisson (also called a drop shaft) has a hollow, cylindrical or square design, and serves as a foundation or working space under water.

It is therefore called a drop shaft, because it is usually constructed on land and then "dropped" under water for certain types of work and concreting under water. The hollow structure is lowered to the bed of a body of water under gravity, and the ground material contained within the space is removed by surface, barge-mounted excavators. In this way, the caisson can be brought ever lower, until it reaches the required depth. The cavity (e.g. in the case of bridge towers) is filled with concrete.



Caissons were already built in the Scottish Forth River in 1883 and the riverbed was excavated, in order to be able to position the foundations for the future bridge pillar on solid rock.

The image is from an edition of the "The Children's Encyclopedia" from 1910.

10 in one fell swoop – Happy Beton receives new fleet of truck mixers

Based in Volkstorf, Seehausen and Stäbelow, Happy Beton is one of the largest suppliers of ready-mix concrete in Germany, operating 29 concrete mixing plants spread across the north and northeast of Berlin all the way up to the Baltic coast.

Partners of Happy Beton include the Manzke group of companies based in Volkstorf near Lüneburg and Holcim AG based in Hamburg, Germany.

Mr Zietz from Happy Beton: "We decided to purchase IMI 9.1 truck mixers from Putzmeister because the price/performance ratio was right and the payload of the truck mixers is perfect due to the low unladen weight. With the delivery of 10 of a total of 15 new Putzmeister truck mixers, we have already started modernising our fleet so that we can supply concrete to our customers even more efficiently."

Manfred Wachsmann, responsible for the distribution of Putzmeister concrete pumps, special machines and truck mixers in north and northeast Germany: "Happy Beton has been a satisfied Putzmeister customer for many years, so it was a logical step to choose truck mixers from Putzmeister again."

A customer-specific solution was developed in collaboration with the Intermix sales team. According to H. Schmidt, Head of Truck Mixer Sales, professionalism and close collaboration with Putzmeister come as standard with orders of this type.

Wachsmann continues: "The Putzmeister Service branches in Seevetal near Hamburg, Kemme near Hanover and Basdorf near Berlin are easily accessible for after-sales services and the quick procurement of spare parts. If the need arises, Putzmeister can also quickly send a qualified service technician directly to the construction site to provide on-site assistance." ■



Customer and dealership get-together at Putzmeister Concrete Pumps

In March and April two customer and dealership get-togethers took place at Putzmeister. Our concrete pump dealers and customers from all over Europe were invited to the first event. The next customer event was for our customers and dealers from the Middle East.

In each of the two-day training courses the dealers became familiar with the new products at Putzmeister and the Putzmeister concrete pump range.

The two following days were dedicated to customer care. Lively discussions developed straight away between customers, dealers and sales and product managers at the machines set up outdoors.

The attractive accompanying programme, which included an exclusive factory tour of Mercedes Benz in Sindelfingen, rounded off the event. ■



“Only reliable quality can survive on the market long-term”

For 45 years, Putzmeister has been making mortar machines which stand for durability, reliable quality and excellent value retention. In fact, the Mixokret M 740 was awarded Product of the Year for 2012 and is the most successful screed conveyor in Europe.

Now, the construction machinery manufacturer launched a new generation of the Mixokret pneumatic conveyor. The magazine "FussbodenTechnik" spoke to Gabriel Muffler, Technical Manager at Putzmeister Mörtelmaschinen GmbH, about the latest developments and an old proven recipe for success.

FussbodenTechnik:

Let us begin with a provocative question from the outset: Is the impact of the hammer seen in your new promotional film on the Putzmeister product tests faked?

Gabriel Muffler:

(Laughs) It is difficult to believe when you see the scene but it is actually real. The hood, which is a normal hood used on standard models, survived the impact undamaged. The hammer weighed about 1.5 kg and fell from a height of 10 metres above the machine.

FussbodenTechnik:

What material is the hood made from? Or is that a closely guarded secret?

Gabriel Muffler:

No, not at all. We use a plastic in the same way as, for example, premium vehicles in the automotive industry. It is a two-component material, which is extremely impact-resistant, robust and durable. Shock and scratch-resistance are also important factors in maintaining the value of these machines.

FussbodenTechnik:

That sounds promising. What other surprises do the new generation machines have in store for us?

Gabriel Muffler:

Our main focus was to optimise the design of the machines, improve serviceability and maintainability, and maximise efficiency.

FussbodenTechnik:

That is quite vague. Can you give us a couple of specific examples?

Gabriel Muffler:

Of course. For example, we have integrated a completely new compressor unit – our own development. Advantages compared to earlier models include a durably higher performance level and improved service and maintenance properties, particularly with respect to the provision of spare parts.

FussbodenTechnik:

The service concept appears to play a central role at Putzmeister.

Gabriel Muffler:

It certainly does. For this reason, we also relieve the customer, for example, of the need to obtain an MOT certificate for the machine. As of now, we are providing all pneumatic conveyors in the Mixokret and Estrichboy ranges with a pressure tank check as required by law, according to §14 of the Ordinance on Industrial Safety and Health. This means customers can purchase machines that are ready for operation immediately. However, this only applies to machines operated in Germany.

FussbodenTechnik:

Your customers are surely happy to take



Gabriel Muffler (51) has been the Technical Manager of Putzmeister Mörtelmaschinen GmbH since the beginning of 2012.

Mr Muffler began his career in the automotive industry, where he spent over 12 years working in various roles within the development department

of a well-known automotive manufacturer. He then worked for almost three years as the Head of Development at a company connected to the automotive industry. Finally, he was employed for more than six years as the Head of Technology at a mid-sized mechanical engineering company, before joining Putzmeister.

up the offer. Are there any other ways in which the new Mixokret machines make daily work easier?

Gabriel Muffler:
We have further improved accessibility to all the components. This greatly improves servicing and maintenance work. Also, thanks to a new operating panel layout, on which we have reduced the displays and switches to the absolute minimum, the machine is more ergonomic and easier to operate. The switches and display unit, which is only required for setting up the machine at a new construction site, are protected by a flap during operation. In addition, we were able to make the components even more finely coordinated with one another and thereby achieve that the material flows more evenly. Last but not least, we have minimised damaging heat impacts in many areas.

FussbodenTechnik:
Were these new developments tested in-house before being released onto the market?

Gabriel Muffler:
Yes, of course. Before our machines are released onto the market, they must pass a general examination consisting of a series of tests.

FussbodenTechnik:
Do you really subject your products to endurance tests as shown in the film, or is anything exaggerated?

Gabriel Muffler:
We are convinced that only reliable quality can survive on the market long-term. We owe that to our customers. Sometimes, we may exaggerate slightly but the daily work on a construction site is by no means a walk in the park.

FussbodenTechnik:
Can you please explain to our readers what tests are carried out?

Gabriel Muffler:
It would be too much to name them all but, among others, we subject our machines to a continuous operation test, which also runs across very uneven terrain. Then of course, we have the hood impact test, noise tests and a range of consumption and wear measurements.

FussbodenTechnik:
What happens if a product fails the test?

Gabriel Muffler:
It is then reworked until everything is in full working order. You see, we have placed particular importance on our success factors, quality and durability, for the new Mixokret generation. This is because we know that customers expect reliability from us and because we are convinced that you can only be successful with reliability.

FussbodenTechnik:
Is this the type of quality which is renowned around the world for products "Made in Germany"?

Gabriel Muffler:
Exactly. This value is regarded in many European countries as the absolute quality assurance. And we have made it our maxim, not simply to talk about it, but to always meet this benchmark.

FussbodenTechnik:
Now, you do not produce all the components for the Mixokret and other machines yourselves. How can you guarantee that your suppliers meet the same high requirements that you set yourselves?

Gabriel Muffler:
Firstly, we select our suppliers very carefully. Then we carry out stringent receiving inspections. We subject all production, replacement and wear parts to very precise incoming goods controls immediately after we take delivery of them. This is because we are acutely aware of the fact that purchased parts have a large impact on the quality of our products.

FussbodenTechnik:
It sounds like you assess yourselves and your partners against very strict criteria.

Gabriel Muffler:
Indeed we do. Otherwise, we would not be as competitive or as successful.

FussbodenTechnik:
Then we also wish you every success with the new Mixokret and thank you for taking the time for this interview. ■



The most important innovations of the Mixokret M 740 new Generation:

- Efficient drive unit with new compressor
- Optimised maintenance and service features for reduced operating costs
- Two-year warranty on engine and compressor for additional investment security

- Innovative exhaust air system and improved cooling capacity
- Completely new control panel with modern control system
- Consistent implementation of applicable safety standards
- Automatic engine speed control for greater economy and resistance to wear
- New, stronger hood shape and design

- New, more reliable radio remote control for scraper
- Low noise levels – only 83 dB(A) at distance of 1 m
- High finishing quality – high resale value
- Pressure tank check ex works incl. (for machines which are operated in Germany)



It can happen:
A 1.5-kg hammer falls from a height of 10 metres above the machine. The robust plastic hood can handle that without a problem.



Congratulations! 40 years of Putzmeister South Africa

In 2013 the team of Ludwig Geysler looked back on 40 economically and politically eventful years since the foundation in 1973.

Today the South-African subsidiary offers the entire range of Putzmeister products. Putzmeister South Africa (PMSA) thus always has a goal in sight: Provide optimal support to the customer for its work, with high-quality machine technology and direct on-site service.

A word from CEO, Ludwig Geysler:

Our customer's confidence in Putzmeister is a special obligation for us. Many of our customers have been loyal to our company for years, some even for a few

decades. A special salute to all of you and look forward to the next few decades.

Over the past few years, our company has undergone necessary and extensive corrections and these has been a return to fundamental values. Integrity and decency are not relics of the past. They are still the cornerstone of responsible conduct. A company can only be successful if it understands its customers well. The path to customers must be shorter, and local support is more direct.

Profit is not about greed or craving recognition rather it's about meeting the basic requirements for maintaining and improving our competitiveness. ■



Ludwig Geysler – since 2007 CEO of PMSA – has started his work in the company as Sales Manager in 1999



The professional team of Putzmeister South Africa today



2013 The plant in the year of the anniversary 2013

The long road to success

→ Part One: 1973 – 2001

When elephants fight, it is the grass that suffers.
(African Proverb)

In 1967/68, Putzmeister entered into a partnership with Elba, Ettlingen/Germany for the export of concrete pumps to South Africa, to be marketed by their local agent IMC Engineering. One of the early Putzmeister customers was Ital Service, and Putzmeister was aware that the Managing Director Felice Garbini was not altogether satisfied with the performance of his Putzmeister pumps. However, when KS inspected those pumps during his first visit to Johannesburg in 1972, all he found was an obvious lack of regular maintenance and repair.

In the early years 1973 under the management of MD Mr. Felice Garbini, the manufacturing facility employed a crew of nearly 40 black and white mechanics and was managed by Vittorio Lorenzato. Activities included the production of the Putzmeister range of truckmixers, the adaptation of standard PM pumps to customers' requirements as well as the manufacture of delivery line systems as well as after-sales service and repairs.



1997 PMSA under construction in Honeydew

On 27 May 1985, PMSA signed an exclusive agency agreement with Concrete Pumps (Pty) Ltd for the marketing and sales of Putzmeister products in the Province of Natal. The Durban-based company is owned and managed by Tore Lilleby who likes to tell the story of how his association with Putzmeister came about. It was a chance meeting with KS at Thomson Concrete Pumps in Los Angeles/USA. KS had just taken over the company and, with his shirt sleeves rolled up, was busy with the stock-count when Tore Lilleby was introduced to him. Tore Lilleby remembers that KS recommended to forget about the sidewinder concrete pumps he was involved with at the time, and to take a closer look at Putzmeister instead.

During the 1987 financial year, local production was expanded and in July Hans Schweizer joined the company as Works/Stores Manager. PMSA achieved a growth in turnover of 7 % resulting mainly from the increase in concrete pump sales. Severe



1999 A BRF 22.09 that was locally assembled

cost cutting measures led to an improvement in the operational result, but even so, a loss was unavoidable.

In 1988, PMSA suffered a 54% decline in turnover. The slight recovery of the building industry could not boost sales of new machines; builders made use of their existing equipment. In the mining sector, the plummeting gold price severely frustrated investment activity. Overall, there was nothing but gloom and doom.

The elections in April 1994 did not bring an instant turnaround, with both the building industry and mining adopting a wait-and-see stance with regard to new investment. In real terms, i.e. eliminating the inflation factor.

In 1996, PMSA again profited from the gradual economic recovery, even though the deteriorating Rand and escalating crime rate as well as the critical "brain-drain" continued to take their toll. During that year, Aichtal injected the funds for the purchase of the Honeydew property and the building of the new PMSA offices.

In PMSA, much of 1997 was taken up with organizing the Honeydew building activities and the subsequent relocation to the new company premises. Overall turnover decreased by 14.9% and PMSA was heavily in debt.



2007 A Telebelt TB 130 was used for the hydropower scheme in Lady-Smith, Kwa-Zulu Natal Province



2000 This was the very first Turkish (Tatmak) BSF 32 sold in South Africa

In July 1999, Ludwig Geyser joined the company as Sales Manager (and by all accounts, he has come to stay).

For several years in a row, PMSA had shown quite substantial losses. Nevertheless, at the beginning of 2001, PM AG had decided to grant their South African daughter company one final opportunity of turning the tide. It was understood that the outcome of the next twelve months would have a direct bearing on the continued existence of the company in South Africa.

→ **Part Two: 2002 – 2005**

Things change when ordinary people come together in a common purpose. (Kofi Annan)

When the dust settled, Lothar Urlberger had been appointed the new Managing Director. The Operational Management consisted of Lothar Urlberger (Finance / Administration), Ludwig Geyser (Marketing / Sales), and Hans Schweizer (Technical / Buying / Workshop). The staff complement had been reduced to 11.

In 2002, for the first time in years, PMSA achieved the planned turnover. Already in September, PMSA had been making waves



2007 MX 24 at the Precast yard for the Gautrain project



2003 This BSF 32.09 was used for a housing project in Johannesburg, South Africa

on the local market and the shareholders felt that congratulations were in order.

On 19 December 2003, PMSA celebrated 30 years in South Africa. To mark the occasion and to thank the growing number of loyal customers for their patronage and support, PMSA offered a comprehensive technical seminar on all aspects of concrete pumping in construction engineering, which was held at the Honeydew premises on four consecutive days in March 2004.

In January 2005, Tony Robins joined PMSA as Managing Director and responsible for the PAT marketing and sales side of the business.

During the month of October, PMSA were privileged to have Mr. Karl Schlecht visit. Not only did we share with him his 73rd birthday, but also introduced him to some of our key customers. During Mr. Karl Schlecht's visit we had the privilege of handing out long service awards to some of our very loyal employers ranging from 25 years to 11 years.

→ **Part Three: 2006**

This year saw a slight increase in the sales of truck mounted units that were acquired from Tatmak in Istanbul, Turkey. The success was attributed to offering the clients a simpler, more robust and more cost effective truck mounted pump ideally suited for the African region. Sales were on the increase having been awarded the 2010 World Cup which boasted foreign investment as well as government infrastructure spending.

→ **Part Four: 2007**

The building of 9 new soccer stadiums throughout South Africa, the Gautrain (high speed train) project with 20 km of tunnels, resulted in the dramatic increase of sales in general. For the tunneling there was 10 Robot Shotcrete units (7 x PM 407 and 3 x PM 560) sold. We had great support for our sister company PM Spain. The first MX 24 stationary boom supplied to the precast industry, saw 2,437 bridge segments each consisting of 7.3 m³



2007 SPM 500 in the Gautrain tunnel



2010 The Moses Mabhida Stadium in Durban was built with the help of Putzmeister machinery



2010 Project – Green Point Stadium in the Western Cape Province



2010 BSF 36-4.16 H, Afrisam, Cape Town

of concrete being casted. The sales of trailer mounted units also more than doubled compared to previous years and our truck mounted boom pump sales also increase 4 fold year on year.

In August MD Tony Robins resigned and Ludwig Geysler took over as CEO the 1st of September 2007.

PMSA underwent the very first internal audit undertaken by Mr. Udo Pfeilsticker and passed this with flying colours.

This year was also the year that PMSA achieved the long awaited milestone of reaching the 100 million South African Rand turnover; which was welcomed by the board.

→ Part Five: 2008

With the success of 2007 fresh in our minds the effects of the world banking crisis hit our shores. Although all the preparation for the 2010 World Cup was on-going the sales in 2008 dropped by 50%. Despite this, PMSA where able to remain profitable throughout these lean years (2008-2009) by providing excellent services to the industry.

→ Part Six: 2010

In 2010 Rudy Myburgh joined as regional sales representative with the mammoth task of developing the Sub-Sahara African region. With his new African client business relationships success was achieved by introducing the very simple, robust and ever reliable trailer mounted concrete pumps, sourced from PM India. These "Africa Spec" units were what the African market needed.

The events leading up to and during the 2010 Soccer World Cup where internationally seen as a triumphant success with no incidents and South Africa was seen as a new favorite travel destination.

→ Part Seven: 2011

After the long awaited global economic upturn 2011 saw a positive chance in the construction industry, locally and within Africa, which was a relief for most companies affected and it was back to business as usual.

→ Part Eight: 2012 - 2013

With the continuous growth over this period we saw an increase in office and workshop staff which led to the increase of sales with again achieving record levels in local turnover in 2013 to commemorate our 40 years in South Africa.



2011 2 x MX 47 were used for the Madupi Power station project in Limpopo Province .



2011 A fine concrete pump P 715 was used for the Lusaka Housing Estate project in Lusaka, Zambia



2013 Putzmeister South Africa started supplying Intermix mixers to their region



2014 The 1st Simem batch plant sold by the Putzmeister group to Lafarge South Africa



Putzmeister and Simem join forces to construct the Mall of the South

A new large shopping mall has been under construction in south Johannesburg since January 2014. With estimated construction costs of around 70 m euro (1 bn rand) and a surface area of 150,000 m², the Mall of the South is scheduled to open in autumn 2015 and will be one of the largest regional shopping centres in Johannesburg. Shops from many globally recognised luxury brands that are predominantly aimed at the Johannesburg upper class will offer an extraordinary shopping experience.

Zenprop, one of the largest South African real estate companies appointed Aveng Group to construct the mall - a company that is just as well known across South Africa. Aveng Grinaker Ltd. is working together with Lafarge South Africa to manufacture of a total of 75,000 m³ of concrete. The companies have purchased and are now operating a Simem Eagle 4000 mixing plant.

The company's own Putzmeister M 36-4 truck-mounted concrete pumps are used for concrete placement.

Following the conclusion of a cooperation agreement with Simem, Putzmeister South Africa has now become a Simem dealer in South Africa that also offers an after-sales service and supplies spare parts across South Africa. ■



Simem Eagle 4000 mixing plant:

Concrete mixing plants from the Eagle series are designed for use on large construction sites because they can be transported in individual modular components on standard trucks, assembled quickly without requiring foundations and then started up. The range of models includes mixing plants with production outputs between 50 m³/h (Eagle 2000) and 135 m³/h (Eagle 5000).

The Eagle 4000 series is equipped with a 2.5 m³ twin-shaft batch mixer MSO 4000 that produces concrete at a max. of 100 m³/h. Depending on the concrete mixed, 4-6 aggregate chambers and a maximum of 4 cement silos for storing the required cement types can be combined into one plant. The twin-shaft mixer can mix all standard types of ready-mix concrete.

Lafarge Nigeria concentrates on Putzmeister concrete pumps of the New Generation

Like many African states, the oil-rich country of Nigeria suffers from political instability, has an excess of births over deaths and insufficient infrastructure. The country requires an estimated 17 million new buildings, with current construction activity of only 400,000 new buildings.

Patrick Reichel, Regional Sales Manager at Putzmeister shares his opinion: "I have been working for Putzmeister in Nigeria just under two years now. It is a difficult country to sell capital goods. The Nigerian construction companies want to use high-quality machines, but often do not possess the necessary funds."

Construction companies in Nigeria generally use stationary concrete pumps for cost reasons. However, some truck-mounted concrete pumps are also in use in addition to the many stationary concrete pumps. They are mostly used machines from the 1980s and 1990s.

Lafarge Readymix is represented in Nigeria with 6 subsidiaries. Lafarge recently ordered 4 new truck-mounted concrete pumps of types M 36-4 and M 42-5, in order to be able to provide the service of concrete placement, in addition to the manufacture and delivery of concrete. Following their arrival in Lagos, Putzmeister together with its Nigerian

PM dealer Sehnaoui Plant Nigeria Ltd. organised a training and familiarisation tour for Lafarge Readymix' operators and service engineers. Together with service technicians from Putzmeister Concrete Pumps GmbH and Sehnaoui Plant, both the operating personnel of concrete pumps and the service engineers received training on handling the machines. In addition to the communication of theory and practice of concrete pump technology, the focus was also on the safe handling of the concrete pump, as well as the communication of knowledge for the elimination of typical faults (e.g. clearing blockages, proper cleaning, etc.).

▼ Right after the training the M 42-5 went to the first site.



Patrick Reichel has been responsible for the West African countries at Putzmeister Concrete Pumps GmbH since 2012. He previously worked for 2 years at Putzmeister Solid Pumps and was involved in sales and marketing for industrial plants. He regularly visits the different countries, and is on site at customers with the respective Putzmeister dealers. He speaks perfect German, English and French and is familiar with the cultural differences between Africa and Europe.



▲ Handover and instruction of one of the new M 42-5 new generation pumps at the concrete pump service provider Lafarge: Avo Derounian, Sales Engineer Sehnaoui Plant (3rd from left), Naim Irani, GArea Manager at Sehnaoui Plant (4th from left), Dikran Oulikian, After-Sales Manager (5th from left), William Ozuanu, Service Engineer (3rd from left, front), Omar Maaliki, After-Sales Manager (4th from left, front) and the participants of the training

Putzmeister dealer Sehnaoui Plant Nigeria Ltd.

Sehnaoui Plant Nigeria Ltd. (SPNL) is the Putzmeister dealer for concrete pumps in Nigeria. SPNL was founded in 2005 and sells concrete pumps and spare parts for Putzmeister. In addition, SPNL offers a comprehensive service such as repairs, pylon inspections, maintenance, etc. for all Putzmeister concrete pumps in Nigeria. SPNL is part of the Sehnaoui Plant Group of Companies located in the Lebanon and as a dealer sells the full product range of construction machines for the areas concrete (concrete pumps, mixers, truck mixers, formwork, concrete block factories, etc.), crushers and asphalt plants.

Sehnaoui Plant looks after ready-mix concrete manufacturers, concrete pump service providers, as well as companies from the Nigerian prefabricated parts industry and construction companies. Besides Nigeria, Sehnaoui Plant is also a Putzmeister service partner in the West African countries Togo, Ghana, Cameroon and the Ivory Coast.

Lafarge Cement

Lafarge Cement has been active in Africa for over 50 years. As a result of constant investment in new concrete mixers, today Lafarge produces millions of cubic metres of high-quality concrete in its subsidiaries in six of the 36 Nigerian states. The Lafarge Group employs over 10,000 people in Africa. An average of over 200 employees work at each site for Lafarge located in the cities Abuja, Lagos, Ibadan, Ogun, Port-Harcourt and Kaduna. In addition to the 4 newly purchased truck-mounted concrete pumps, Lafarge also has a M 36-4 truck-mounted concrete pump from 2007. Immediately after commissioning and training, the pumps are dispatched to their respective assigned sites and put in service. Lafarge has so far pumped thousands of cubic metres of concrete and growing. ■

→ Nigeria

Nigeria is located in West Africa north of the equator. Neighbouring states include Benin, Niger, Chad and Cameroon. Nigeria is by far the most populated country in Africa with approx. 174 million inhabitants. Over 500 different languages and dialects are spoken in Nigeria.

The country stretches roughly 1,200 km from east to west and around 1,100 km from north to south. The highest peak in Nigeria is the Chappal Waddi mountain near the border of Cameroon at a height of 2,419 metres.

Nigeria is influenced by two climate zones: tropical hot and humid climate in the south with heavy rainfall, which lasts from April to October. In contrast, a desert climate prevails in northern Nigeria.

[Source: © de.wikipedia.org]

Development and testing of sludge pump KOS 1060 DSC on crawler chassis

In Russia underground coal mining mostly happens in longwall mining with help of roller loaders. The extracted coal is then delivered above ground via belt conveyor systems. The fine coal accrued during the extraction is transported away with the water by the inflow of ground-water and collected in specially created clear water lines. The fine coal content sediments and a coal sludge layer forms in the clear water line, which is covered by clear water and increasingly blocks the lines. The centrifugal pumps installed for the water retention can therefore only deliver inadequately clean mine water over ground. The result is increased wear and costly maintenance of the pumps.

Russian coal mines have been looking for a solution for years in order to directly collect the coal sludge from the lines using pump technology and remove it.

The Russian company SUEK (Siberian Coal Energy Company) approached the industrial pump area of Putzmeister Russia with this task. Following clarification of the necessary initial parameters, Putzmeister Solid Pumps developed the crawler-mounted KOS 1060 DSC, as well as a special hydraulic unit.

The KOS 1060 DCS is a hydraulically driven S-tube pump with a 1,000 mm long delivery cylinder with a diameter of 200 mm. The hopper is designed with the opening facing downwards and has an infeed coil. The KOS pump is lifted into the coal sludge using the crawler chassis, the infeed coil whirls up the coal sludge and feeds it to the delivery piston. The pump is designed for 30 m³/h at a conveying pressure of 50 bar.

The downstream hydraulic unit, equipped with a 132 kW electric motor, was installed in a special frame. The unit is secured to a double T support (EHB rail) at the line ceiling and guided and follows the pump. The pump and hydraulic unit are connected via approx. 20 m of hydraulic hoses.

The coal sludge from the clear water line is pumped directly onto an existing coal belt conveyor via a delivery line and delivered over ground together with the extracted coal.

The disassembly of the individual components was important during the design and arrangement of the entire unit, as they have to be used underground via chutes. The final assembly is effected directly at the operational site. Another important factor was the explosion protection problem. We have succeeded in developing a fully hydraulic pump unit

with a drive, which satisfies the requirements of the ATEX Directive, Group 1, Device category M2.

The SUEK Group has now ordered four KOS 1060 DSC pumps from Putzmeister Solid Pumps. The first pump started operating in Tschegdomyn (Chabarowsk region in the far east of Russia), two other pumps are en route to their operational site in the Kemerovo region (West Siberia). The fourth KOS 1060 DSC is also being sent to Tschegdomyn.

Putzmeister Solid Pumps has already received other requests with a similar task from the mining of iron ores. Here diesel-operated engines are to be used in place of electric motors and the hydraulic unit is also track-mounted.

Based on the findings from the discussions and the visit to the customer, there was a trial phase to test out the machine technology. The pump is housed in a 40" container at a 10° slanting position, which simulates the running in of the machine to the conveyed medium at the operational site. The hydraulic unit was located outside the container. An approx. 30 m long delivery line enabled the delivery of the medium in the cycle. A mixture of coal as coarse grit and fly ash as fine grain was created as the test

medium, similar to the "real" conveyed medium at the operational site.

In addition to the pumping and suction performance, the tests also included the inspection of the newly developed components, such as the crawler track unit, the auger, as well as their height adjustment.

An excavator delivered the dry material to the container where it was mixed. The tests initially began with the dry material mixture. In the course of the test series it was increasingly saturated with water in order to test individual components, such as the function of the auger and the switching behaviour of the S-transfer tube – at different consistencies.

The tests revealed at what consistency the material to be conveyed is automatically suctioned and pumped by the pump system and what effect different material mixtures and the addition of water have on the filling level of the delivery cylinder.

A measuring system records all data calculated in the test in order to perform subsequent evaluations and thus draw conclusions on the performance of the newly developed system.

During the initial start-up of the pump, a comparison measurement is also performed at the customer's coal mine – in "real" conditions in the tough underground operation.

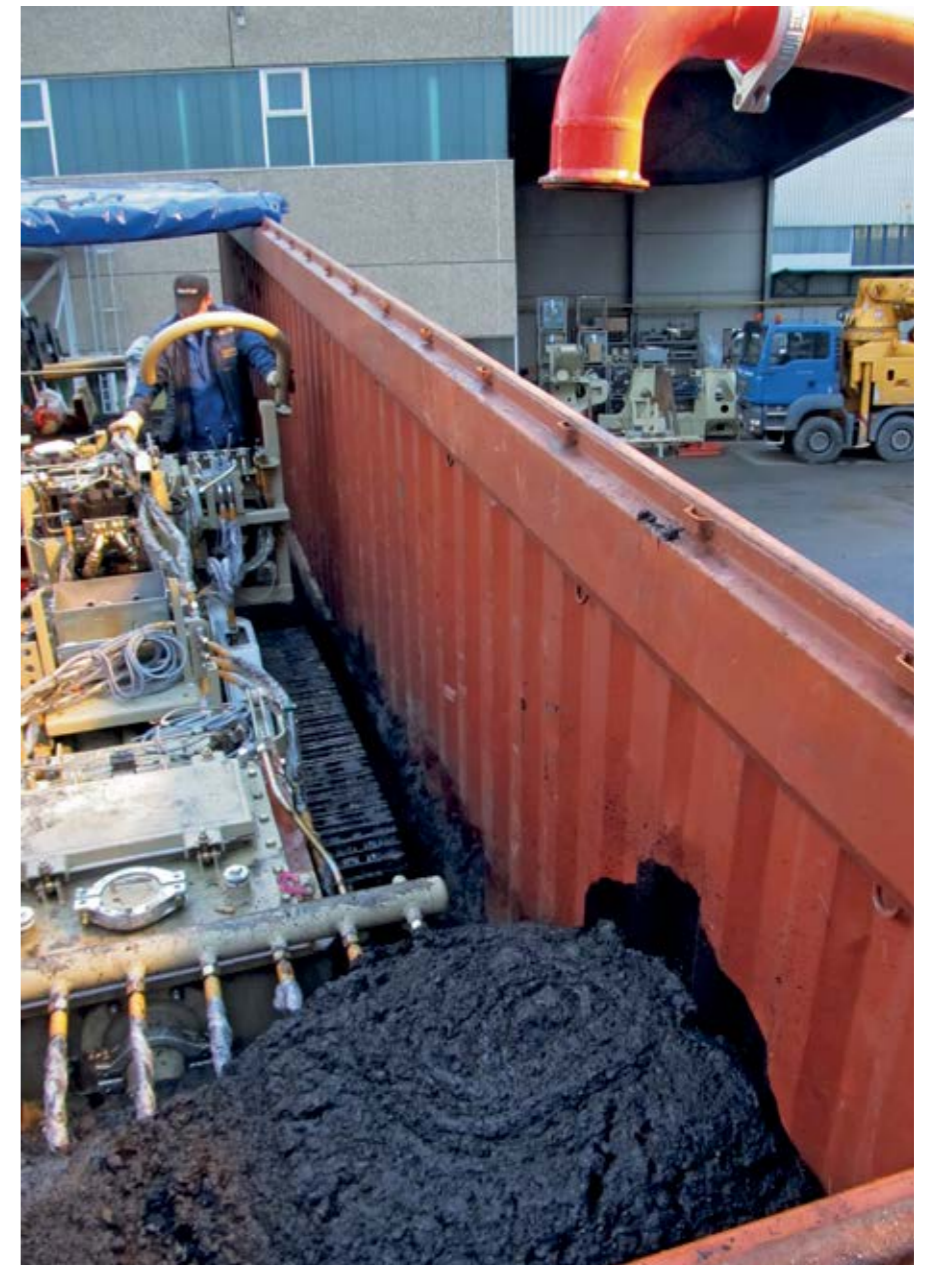
The test results and experiences in this special field of application are used for future tasks with other applications and different conveyed media.

For Putzmeister it is necessary to develop customer-oriented solutions in the area of the delivery of diverse and difficult materials.



▲ The conditions at the planned operational site were simulated in the container positioned at a 10° slant.

▼ The KOS 1060 DSC runs into the coal-fly ash mixture.



Textile delivery hoses – Complete flexibility for high loads

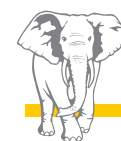
- Maximum flexibility
- Up to 15 % less weight
- Dual safety factor
- Up to 85 bar operating pressure

The new delivery hoses with a casing made from tear-resistant textile yarn combine the stability and advantages of the tried-and-tested Putzmeister delivery hoses with up to 15 % reduction in weight. Less weight not only pays off for the handling by the operators on the construction site, but also during transportation: Textile hoses reduce effectively the weight in terms of payload.

At 85 bar operating pressure, as well as a dual safety factor, our concrete delivery hoses satisfy the legal requirements from DIN EN 12001, thus ensuring safety in practical utilisation.

Textile delivery hose	Product No.
SK50/2" X 5000	580471
SK50/2" X 10000	580472
SK50/3" X 5000	580567
SK50/3" X 10000	580570
SK65/3" X 5000	580468
SK65/3" X 10000	580467
SK75/3" X 5000	580469
SK75/3" X 10000	580470

Other dimensions are available on request.



Putzmeister

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