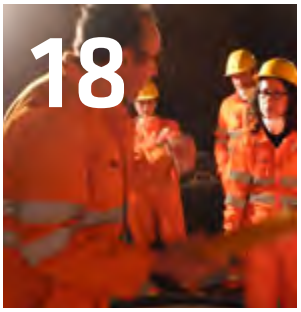
AMBITIONS

A DIVE INTO SIKA'S WORLD

AMBITIONS ISSUE #16

BUILDING TRUST

AMBITIONS #16 2014



IMPRINT

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MOVEMENT

What we understand about movement is simply the act, process or result of moving. There are also particular ways or styles of moving. All of us are moving at some time – to a new house or just dancing. Any action or activity performed by a person can be called a movement. To construct is also to move. Aside from the physical sense of moving thousands of tons of stones, rocks and soil, construction also implies moving forward and producing something better, more appealing, more practical than before. Or even producing something where there was nothing at all before. Furthermore, construction can move in sync with nature in order to protect it better. In recognition of this, US-based Excellence in Design Award (p. 26) is given to projects built with systems providing outstanding economic and environmental value as well as meeting established design, installation and maintenance criteria for sustainable roof systems. A company can also move its story a long way forward. The interview with Sika Hungary General Manager Johanna Kruchina (p. 10) shows how female power can move a business and its environment around in a non-typical way. Constructing a new major gathering point for a variety of activities is a routine move for any city. And the inhabitants of Swedish Malmö are doubtless grateful to have the breathtakingly designed Emporia (p. 5) in their midst. But people can also be moved emotionally. Sika provides support to enable sick children to experience dolphins in their natural environment (p. 38), which has very positive consequences on their lives afterwards. They too were moved – by these intelligent mammals.

Yours sincerely,

ASTRID SCHNEIDER

ASTRID SCHNEIDER

Marketing & Product Communications Manager
Sika Services

CONTRIBUTORS

APRIL LV

Marketing & Communications Officer, Sika China

I'm proud to have been working for Sika for 8 years. Sika is always present in the landmark buildings like the Suzhou Central Plaza.

MARIA RAPPOCCIO

Marketing Manager, Sika Sweden

Emporia is a very prestigious project and for Sika Sweden it was a great opportunity to show our expertise through the whole process.

KATARZYNA SPYRA

Marketing Coordinator, Sika Poland

I've been a part of the Sika family for more than two years now. It's a rewarding experience to work in a company that can share ambitious and challenging projects worldwide.

DOROTTYA WETTSTEIN

Marketing Assistant, Sika Hungary

I have been working for Sika since 1 year as a marketing assistant in the Business Support Team. It is a pleasure to be part of the ambitions project and to show a nice picture of Hungary.

This extraordinary shopping mall called "Emporia" has won numerous national and international prizes for its design and marketing, including the "World's Best Shopping Building" at the prestigious World Architecture Festival (WAF) in Singapore in 2013 and the "Best Shopping Center" at the 2014 Mipim Awards in Cannes.

ARCHITECTURAL DREAM OR SHOPPING QUEEN?

A gigantic golden chasm welcomes visitors to the Emporia shopping center, one of the biggest in Scandinavia. It is situated in the city of Malmö in Sweden, near the Malmö Arena and Hyllie railway station. Some 200 shops are located in Emporia, covering a total area of 93,000 m^2. The mall is three storeys high with a roof terrace on top measuring 27,000 m^2, or roughly the size of four soccer fields. The mall employs around 3,000 people. Emporia puts the number of visitors at around 25,000 a day.

TEXT: MARIA RAPPOCCIO
PHOTO: MYNEWSDESK, FOAP, CICCIDICCI, ANNSIS66

Glass, colors and very distinct wave-shaped entrances characterize the complex, which was designed by renowned Swedish architect firm Windgårdhs. The design reflects Emporia's role as a safe haven, a place full of surprises. It is very airy and at the same time enclosing. Colors guide shoppers through the shopping center, with each area featuring its own design and color scheme.

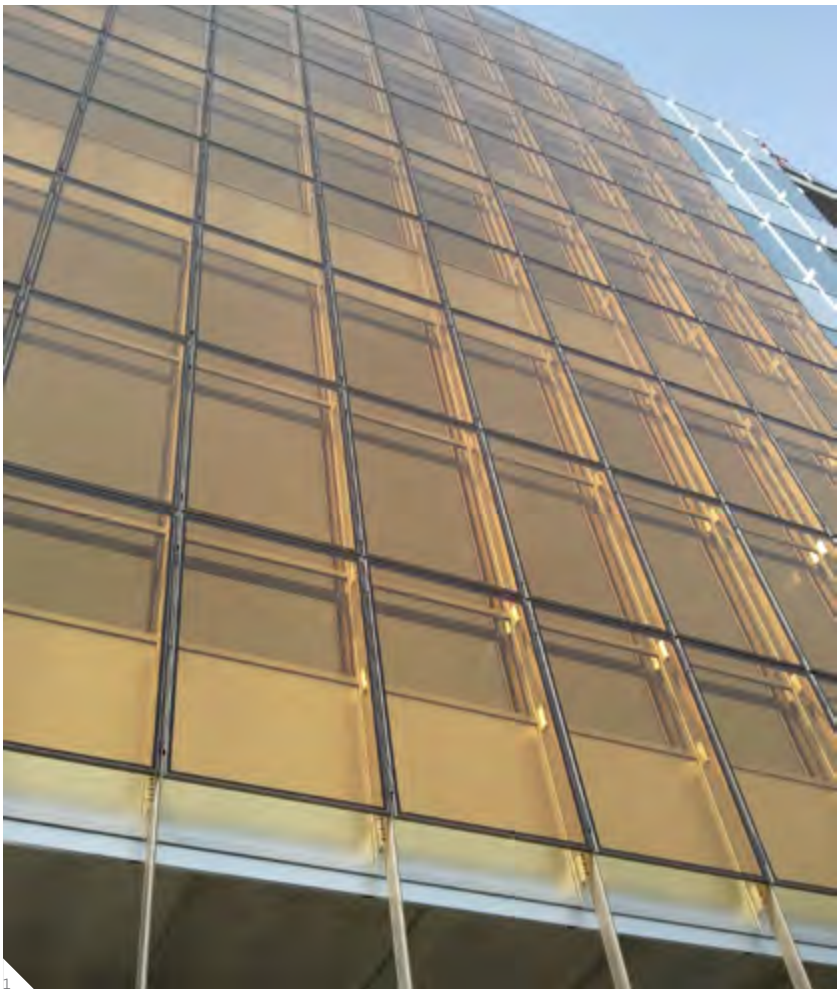
Completed in 2012, Emporia has won numerous national and international prizes for its design and marketing, including the "World's Best Shopping Building" at the prestigious World Architecture Festival (WAF) in Singapore in 2013 and the "Best Shopping Center" at the 2014 Mipim Awards in Cannes.

Emporia is the first shopping center in Sweden to be BREEAM (Building Research Establishment Environmental. Assessment Method) certified. This recognizes that the architects have put a lot of focus on sustainability in the design and building process. A key element is the 26,700 m^2 roof park, filled with walkways, sedum, trees, grass and perennials. The park is open to the public and on a clear day you have a fantastic view over the Öresund Sound and the city of Malmö.

The design of the shopping center is glass-based. One entrance is created in an amber wave-like formation, and the other represents a wave in marine blue glass. The curved glass was manufactured in Spain and transported to Sweden. The rest of the outside structural glazing, the sealant for the insulating glass, the inside weather sealant and the adhesive for the decorative glass and mirrors were supplied by Sika.

Sika's involvement began at the Glasstec Trade Fair in Germany, where 45 minutes was all that was needed to convince the Swedish glass contractor UBA to switch to Sika products. Sika's sales team came up with a new way to bond the glass to the frame which halved the production

One of the two entrances represents a wave in marine blue glass.



1 Golden glass facade's perspective from below

2 This entrance is created in a golden amber wave-like formation

3 Application of weather resistant Sikasil® for insulating glass on site

4 Waterfall-like, blue elevator, constructed on Sika's expertise of weather sealing in structural glazing solutions

5 The 26,700 m² roof park is filled with walkways, sedum, trees, grass and perennials

> time. Instead of applying the structural joint, curing, then applying the weather sealant and curing again, Sika suggested a customized application process which comprises applying the structural joint and weather sealant in one step using Sikasil®. And this could be achieved with less than 1% waste even though the joints were fully filled.

The glass systems were produced in a manufacturing plant close to the building site and delivered on demand, which made production very efficient.

It is common to use a mechanical safety edge between the shop windows, but after testing different sealants the architects were convinced to opt for a black Sikasil®. This provides very safe solutions as it flexes with the movements of the glass.

The mall's interior boasts colored glass features and a very spectacular waterfall-like elevator, all designed and constructed drawing on Sika's knowhow and expertise of weather sealing in structural glazing solutions.

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The Szabadság bridge or Liberty Bridge was originally built in 1896.

WHAT ABOUT HUNGARY?

Budapest is a city of breathtaking architecture and culture. Anyone standing on one of the bridges crossing the Danube, pausing in front of Hungary's Parliament Building, sauntering next to the Opera House or just walking through the old city center will agree: Budapest is captivating. When you simply can't walk anymore, you can take a break in one of the magnificent old coffee houses and breathe in the air of the 19th century. But Budapest has grown into a modern metropolis fast. To get to know more about Hungary and its vibrant capital, we met up with the General Manager of Sika Hungary, Johanna Kruchina, in the heart of Budapest.

TEXT: DOROTTYA WETTSTEIN, ASTRID SCHNEIDER
PHOTO: MISC.

> **How does a woman at the top feel in this male-dominated world of construction? You seem to be doing very well! Are there any advantages?**
I have been working with Sika Hungary since the beginning. I started out with Sika products through a service agency, and later, when the headquarters in Budapest were established, I was appointed General Manager at Sika Hungária Kft. in 1995, the first female GM in Europe.

Moving up the ladder rung by rung and seeing everyday workflows gave me a very clear insight of the market. I think – partly thanks to this – accepting me as a woman, civil engineer and leader all in one was never an issue.

What is your personal secret?
Being open-minded, up-to-date, choosing the right, reliable professional employees, and also clearly conveying top management instructions to my team – I think this is my and our key to success.

Hungary has made the transition from a centrally planned to a market economy, with a per capital income nearly two-thirds that of the EU27 average. The private sector accounts for more than 80% of GDP. Is everything on track?
Even though Hungary's present political leadership has come in for a lot of criticism lately, for instance, because of extra taxes on multinational companies, banks and the energy and telecommunication sectors – more and more EU countries are adopting similar rules and laws. The increase in GDP seen in 2013 is above the EU average, and the outlook for 2014 is also looking good.

Hungary and the surrounding Eastern European States offer a very challenging environment for multinational companies. Where do you see the opportunities?
Those countries familiar with Sika products will be much more open to meeting us, not only because we are a dependable company, but also because we are present in all local European countries. What is more, the EU partners have succeeded in combatting part of the black economy.

How about the construction market? Where does Hungary need Sika?
In order to build quality projects, you need quality products and systems. Sika has been proving this for more than 100 years.

Any extraordinary Sika projects you would like to tell us about?
We have had a number of attractive projects lately, and some of them are still running: An underground garage beneath Budapest's Kossuth Square – which is where the Parliament Building is located (waterproofing), FTC Football Stadium, Budapest (flooring, refurbishment, waterproofing), embedded railway track, Budapest (refurbishment) and phase 3 of the Hangkook Tire Manufacturing plant in Dunaújváros (80 000 m^2 of roofing).

Where is Sika Hungary heading? What are the targets?
Sika Hungary is celebrating its 20th Anniversary this year. From a marketing point of view, this occasion also brings an opportunity to get our partners better acquainted with Sika. I am very optimistic that we will achieve this target.

What are the best things about living in

The refurbishment was done with a concrete surface with reduced shrinkage by Sika. For concrete admixtures and the technology experts of Sika Hungary were giving advise on site. The applied systems were Sika® ViscoCrete®-1035, Sika® Control-40 and the concrete quantity was about 1200 m^3.

> **Hungary and what can you not be without?**
Hungary is not just paprika and goulash. It is a highly valued and livable country. We have famous architecture, a fascinating history and culture, beautiful places, and Lake Balaton – a great favorite with tourists. Other reasons why we love this country include the delicious food and drinks, a pleasant environment and climate, a constantly evolving public transport system, a beautiful capital city and amazing countryside.

What do you personally wish your country for the future?
First of all, more economic stability to create more jobs – this is a must. Giving children and young people more educational opportunities is also very important. Last but not least, being more optimistic and looking to the future would solve a lot of problems.

Johanna Kruchina, General Manager of Sika Hungary.

Johanna Göbl, Office Manager, Sika Hungary.

Peter Figeczki, Sales Representative.

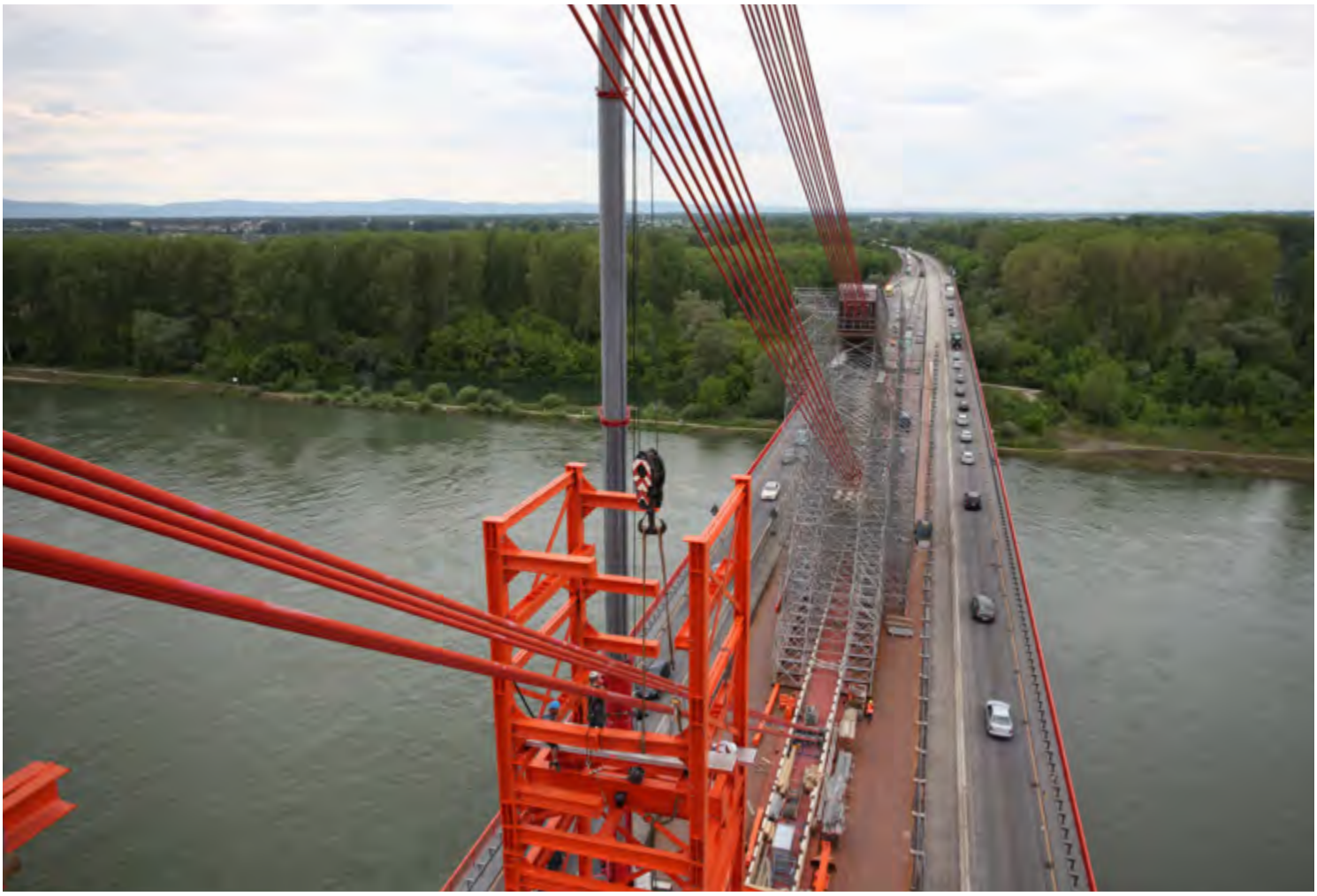
One part of the ambitious team of Sika Hungary.

CONSERVING A BRIDGE

The Speyer Bridge spans the Rhine three kilometers northeast of the center of Speyer. It is located south of the Angelhofer Altrhein area, which is in turn 100 km south of Frankfurt, Germany. The flyover with a cable-stayed bridge in the river segment is part of Federal Highway 61 and is located between the junctions Speyer and Hockenheim. The bridge section is 758 meters long and has two lanes plus an emergency lane in each direction. It was constructed between 1971 and 1974.

TEXT: LESLIE WOLSCHLEGER

> Repair work began on the bridge deck in 2008 and was completed on December 16, 2012. In 2008 the blue, 70-meter-high pylon was restored with corrosion protection. Refurbishment of the outer area and truck lanes started in 2009. Work began in 2011 on corrosion protecting the reddish, 15-centimeter-thick steel cables. Before the new coating can be applied, the old one has to be removed from a total of twelve kilometers of steel cable, for which purpose they need to be encased. This comprises constructing two frameworks and, depending on the rope height, installing a closed workspace, creating the impression of a shoebox. The reason for this procedure is to prevent the old coating from falling onto the road and surrounding area. When the old anti-corrosion coating is removed, the new coat is applied to the ropes. Weather conditions have a considerable impact on application and drying times. The work higher up was affected by the



heavy traffic. If trucks are thundering over the bridge at 70 to 80 km/h, this can cause considerable vibration. To create a more secure working environment, a permanent speed camera was installed to enforce a speed zone of 60 km/h.

Sika Germany's application consultants performed regular site supervisions. Additional controls were carried out at the railings, the pylon and the ropes. Bonding tests were conducted regularly for the construction supervisor.

Coating the cables was a particular challenge. Not because of the material, but owing to the elaborate enclosure. What is more, the high traffic frequencies over the bridge posed considerable logistical challenges.

The customer opted for Sika® Cable System to preserve the ropes. This was not only because of the high quality of the material, but also reflects the excellent service and site supervision provided by Sika. The SikaCor® EG System was used for the pylon and the railings and the Sika® Cable System for the ropes. The system applied to coat the cable-stayed bridges is now recommended by the Federal Highway Research Institute (BASt) of the German Federal Government.

Partial restoration provides system durability of over 15 years. With a full refurbishment, more than 25 years can be achieved. The low-solvent systems which were used during the entire refurbishment process have low VOC loads, which is of particular importance.

Find out more by following this link:
http://www.youtube.com/watch?v=FwtdM51HPZE

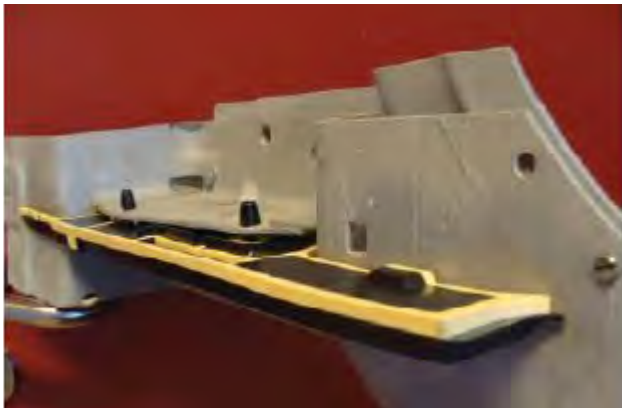
THE NEXT GENERATION SikaBaffle

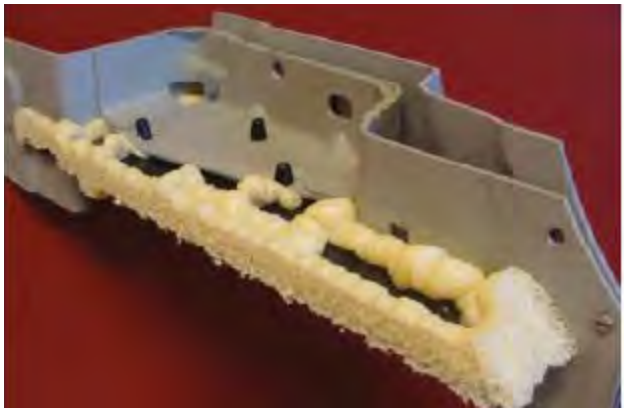
It is important for future automobiles that they reduce their mass. Baffles are based on expandable foams and are applied in selected hollow areas of the automotive body shell, while Reinforcers are used to locally strengthen a car body structure by reducing the overall weight of the vehicle. Now it was time to develop a new product to fulfill the needs of the market.

TEXT: LESLIE WOLSCHLEGER
PHOTO: SIKA UK

> Innovation, motivation, and collaboration between numerous nations – This is what was necessary to successfully develop and implement the next generation SikaBaffle product, SikaBaffle-450. Applied in the body shop at automotive OEMs (Original Equipment Manufacturer), the product reacts under the heat of the e-coat oven to seal the vehicle. As well as ensuring the driver a quiet ride, it protects the vehicle from intruding moisture and dust from the road. The new generation material has double the increase in expansion upon baking. The increased level of expansion, combined with newly designed parts, results in an overall reduction in part mass. This is especially important as regulatory pressure to increase vehicle fuel efficiency has triggered a trend toward overall mass reduction in the automotive sector. SikaBaffle-450 will be rolled out, for example, on a new Jaguar model, with full production in Europe beginning in 2015. The first prototype vehicles containing SikaBaffle-450 were produced in December 2013. The development of the next

INNOVATION MEANS SOLVING A REAL PROBLEM





SikaBaffle®-450 in JLR X760 cavity left before and right after baking.

generation of SikaBaffle was a veritable collaboration between many nations. The New Global Baffle project team has representatives from the three continents of North America, South America and Europe, with team members based at different Sika offices, including Belgium, Switzerland, the United States and Brazil. The cross-functional team contains people from Technology, Engineering, Processing, Marketing and Procurement. The global team met regularly via web conferences to review project status and define the next steps to make sure that synergies and collaborations were maximized. This in and of itself was no easy undertaking; orchestrating lines of communication across the Atlantic was just one of the minor obstacles our team had to overcome. However, these efforts served to foster team unity and kindle a desire to promote innovation.

Innovation means solving a real problem. We need innovation to fill our pipeline and provide new products to expedite market penetration. In this particular case, the problem was that our current generation material was facing limitations in certain applications due to its inherent stiffness and expansion level. The baffle material needs to melt and expand when heated in order to seal the automotive cavity. The innovation process that led to the new generation SikaBaffle called for some detective and design work from our Technology and Engineering departments respectively.

It was some of our technology chemists based Switzerland discovered the key ingredient needed to give the baffle material its critical function. Chemists in the US then optimized the formulation to maximize product performance while minimizing cost. This was done under the supervision of Sika Brazil, where the basis for this technology was first developed.

Concurrently, like a well-oiled machine, the design of our parts was evaluated and optimized to ensure that everything functions correctly at the customer's end. Design guidelines and part performance were fine-tuned to make certain the new material would expand and seal as needed with minimized overall part mass. The key features of the material that needed improvement was compared and identified. This information was fed back to the Technology team, which then optimized the product for internal needs, taking an iterative approach.

The project provides countless examples of innovation. And just as innovation comes in many forms, this final product can also be designed into an endless variety of morphologies, via either injection molding or extrusion, to produce the plastic baffle parts that are sold to OEMs. All the team worked together to learn how to mold the new generation SikaBaffle into many challenging shapes. The cross-functional global team successfully completed the development of the formulation on target and obtained approval from first customer Jaguar Land Rover to move the project on to the field testing stage. The customer approval process at PSA is nearly complete, and approval is expected from Renault by the first quarter of 2014. This is proof that our new product can be used at multiple OEMs. The next challenge is to modify the product to fulfill North American OEMs requirements, which is scheduled to be done throughout 2014.

DIGGING DEEPER – SIKA MINING TRAINING

It's a cold February morning at the Hagerbach testing gallery in Switzerland. Slowly the sun is coming out from hiding behind the snow clouds that have been covering the eastern Swiss Alps for days. We are entering the underground testing facility, which is part-owned by Sika and is used for material and equipment testing for mines and tunnels all over the globe.

TEXT: FABIAN ERISMANN
PHOTO: SIKA AG

> Sika personnel from across the world have gathered for a week of extensive training in injection systems, fiber-reinforced shotcrete, Aliva spraying equipment, and coatings and floors for mining as well as to learn more about a newly developed product line for the repair of conveyor belts in the mining industry.

At the beginning of the new millennium, the mining industry entered an unseen boom that was later to be called the mining super cycle. Decades of stagnating or declining commodity prices came to a sudden end and rising commodity prices fuelled a sharp surge of investments in the global mining sector. It was the time when China surprised the world with industrial growth figures beyond what experts ever imagined possible. The money that hit the ground was invested in the exploration and exploitation of resources that were needed to keep the Chinese machine running.

>

A SHORTAGE OF QUALIFIED MINING LABOR, GROWING DEMAND FOR ENERGY, HIGHER EQUIPMENT COSTS ETC. HAD DETRIMENTAL IMPLICATIONS FOR THE PROFITABILITY OF MINING COMPANIES

> Copper for every day electronic equipment and housing, zinc to galvanize the steel produced from billions of tons of iron ore, lead to fuel batteries for new, green cars, uranium and coal to power the industrial engines of Asian and other economies, and last but not least the gold and silver demanded by a newly emerging middle class in Asia and people that did not trust the new established world order.

"What can't be grown needs to be mined" is the slogan of Sika's latest mining brochure. This sums up the industry perfectly. It draws on non-renewable resources, and over the decades the good quality mineral deposits have been mined out and most have long since disappeared. In order to profitably mine the lower quality deposits that remain more and more material needs to be processed. This strategy, which economists also call "economies of scale", has had very dramatic consequences on the costs that mining companies have been facing during the last ten years.

As commodity prices rose, so did costs. A shortage of qualified mining labor, growing demand for energy, higher equipment costs, and the ever-increasing capital intensity of new, large mining projects all had detrimental implications for the profitability of mining companies. Today, a large copper mine in the Chilean, Peruvian or Argentinian Andes costs anything from 1 to 5 billion dollars. These projects are among mankind's largest industrial undertakings, entailing an extremely high degree of complexity both from a technical and a socio-ecological point of view.

Sika can offer the mining industry a range of solutions to improve costs and raise safety standards at mines all over the world. Sika's people and products have provided decades of underground construction excellence to the global mining industry. Our values and standards are being carried deep underground into mines in all corners of the world. For this to happen, Sika employees from numerous countries have come together during this cold February week to learn more about the industry that they will be confronted with today and in the future.

Experience the wonders of the dark: participants get trained in injection systems, fiber-reinforced shotcrete, Aliva spraying equipment, coatings, floors as well as a new product line for the repair of conveyor belts in the mining industry.

FIVE STAR RESEARCH AND STUDIES

Do you remember where you did your studies for exams during your university days? In the park, where you would have jumped in the river rather than study? Or in your shared flat, while the others were partying? And where did you get your books from? Do you remember what you liked about your library, back then? Was it the kind of place you could have stayed for hours or even the whole day? Not at all? Then read on ...

TEXT: SIKA AUSTRALIA
PHOTO: SIKA AUSTRALIA

The Macquarie University Library complex is a classic example of how concrete can be used to enhance the architectural appearance of a building.

A balance of color was required to create a bold and comforting area for visitors to the University.

> Macquarie University is an Australian public teaching and research university in Macquarie Park, New South Wales. It is ranked in the 201st-300th bracket and 8th-9th in Australia in the 2013 Academic Ranking of World Universities. Founded in 1964 by the New South Wales Government, it was the third university to be established in the metropolitan area of Sydney. It has four faculties, and is the fourth largest university in Sydney. At present, it offers 87 undergraduate courses and 124 different postgraduate courses to students. The university is governed by a 17-member council.

Macquarie University also has the largest student exchange program in Australia. It is ranked among the national top five recipients of relative research income. Also affiliated with the university are several research centers, schools and institutes including the Macquarie Graduate School of Management, the Australian Proteome Analysis Facility, the Institute of Human Cognition and Brain Science, the Macquarie University Research Park and the Macquarie University Hospital.

In 2002, plans for a new 63 million euro state-of-the-art library were drawn up. With aspirations to develop the new library building as a 21st century learning environment, sustainability was at the forefront of the design brief. The facility is unmatched by any other academic library in Australia and is compatible with a collaborative approach to learning and research.

With the need to define the site and its spatial zones a solution was required that would satisfy the design principles. The Macquarie University Library complex is a classic example of how concrete can be used to enhance the architectural appearance of a building.

Sika Architectural Concrete from Sika Australia was utilized to achieve the balance of color required to create a bold and comforting area for visitors to the University. Sika ColorFlo® liquid concrete pigments were incorporated into the concrete mix, particularly for the walls and pathways to give the spaces an architectural appeal. One of the most interesting applications of Sika Architectural Concrete is the full-height precast panel screen walls used along the northern facade of the podium, incorporating a framed glass balustrade above a metal louver screen. The new Macquarie University Library is a remarkable building, inspired by the bushland environment of North West Sydney, where the campus is located.

I am certain that each and every one of us would have wished that our faculty had access to a library such as this. Perhaps learning would have been a little bit more exciting and enjoyable.

SIKA WINS "ROOFTOP EXCELLENCE IN DESIGN" AWARDS

The Excellence in Design Award was established in 2003 to recognize the best in design and installation of long-lasting, energy efficiency, environmentally friendly roof systems. With the development of Roof-Point in 2011, the Center for Environmental Innovation in Roofing began recognizing design excellence through the RoofPoint program. Annual design award winners are selected from projects that best exemplify the mission and meet the criteria of RoofPoint.

TEXT: JANE RUEEG, ASTRID SCHNEIDER
PHOTO: HODNETT PHOTOGRAPHICS LLC, BRENT HAYWOOD PHOTOGRAPHY, RED WING AERIAL PHOTOGRAPHY

San Diego County Operations Center, San Diego, CA

George W. Bush Presidential Center, Dallas, Texas USA

> **What is RoofPoint?**

RoofPoint is a voluntary, consensus-based green rating system developed by the Center for Environmental Innovation in Roofing to provide a means for building owners and designers to select non-residential roof systems based on long-term energy and environmental benefits. RoofPoint provides a simple, transparent and professional measure to validate that new and replacement roof systems are designed, installed and maintained in accordance with the most current sustainable best practices. The RoofPoint functions include a checklist to identify the many ways current roofing systems provide economic value and protect the environment as well as a guideline to establish design, installation and maintenance criteria for the selection of sustainable roof systems.

Furthermore, there is an assessment system in place to compare different sustainable roofing strategies and select the optimal roof systems for any building and site condition and a recognition program to validate roof system selection and reward environmental innovation in roofing.

Sika's commitment to the environment is evidenced by the numerous projects realized all around the world. Sika actively participates in various green rating systems. In 2013, three Sika roofing projects using Sarnafil roofing systems won the USA Rooftop Excellence in Design Award, which is recognized through the RoofPoint system. We proudly present the winners:

George W. Bush Presidential Center, Dallas, Texas USA

Completed: Nov. 2012

The roof on the George W. Bush Presidential Center has many different levels and features green roofs, plazas, rooftop photovoltaic arrays, and rooftop solar hot water panels. The building owner wanted a roof that incorporated reflective roof surfaces, for energy efficiency, and a waterproofing membrane that could handle plazas and a green roof that had been incorporated into the site. The owner wanted this to be a 100-year building and required a roof system with long-term durability, the strength of hot-air welded seams and strong resistance to weathering.

SuperTarget Retail Store, Olathe, KS.


San Diego County Operations Center, San Diego, CA

Brent Haywood Photography

Hodnett Photographics LLC

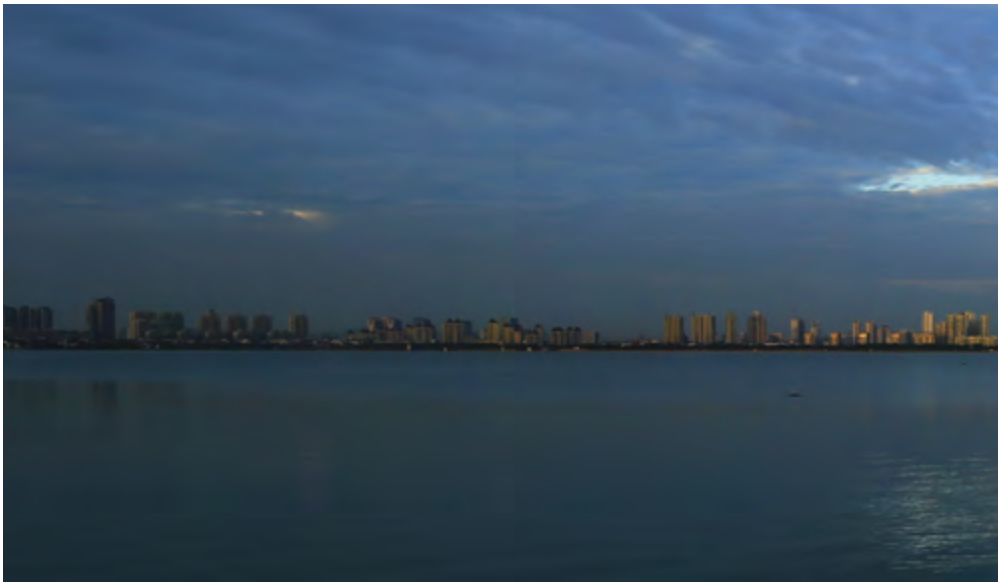
San Diego County Operations Center, San Diego, CA
Completed: Jul. 2012
The new San Diego County Operations Center is designed to be a symbol of sustainability for all of San Diego, and the building's roofing system features every key RoofPoint strategy available for building designers. In addition to a roof designed to provide the ultimate in performance and life cycle endurance, this unique roof features a rooftop terrace, a vegetated green roof, and a photovoltaic solar panel array on trellises, which also serve to produce shading.

SuperTarget Retail Store, Olathe, KS
Completed: Apr. 2012
This 175,000 square foot reroofing project sets a new benchmark for sustainable retail roof design and installation. The existing 175,000 sqft PVC roofing membrane was recycled, and a reflective, energy efficient, and highly durable roofing system was installed using RhinoBond. This innovative roof fastening technology virtually eliminates roof seams at fastening locations and allows for effective removal and recycling of the roofing membrane at the end of its service life.

BREAKING RECORDS IN URBAN DEVELOPMENT

China's new Suzhou Central Plaza will consist of 10 buildings, from skyscrapers of 500 and 400 m of height plus seven towers ranging in height from 100 m to 280 m.

TEXT: APRIL LV
PHOTO: BRUCE YANG



> We are talking here about an urban construction project which has so far set an amazing six records in China:
The largest urban complex, with a total area of 1.82 million m^2, the largest underground area, at 520,000 m^2, the largest shopping mall, spread over more than 400,000 m^2, the largest roof garden, covering an area of 50,000 m^2, the largest central heating and air conditioning system, the largest foundation pit, with a depth of 17 to 22 m and an area of 140,000 m^2.

CHINA'S LARGEST URBAN COMPLEX, UNDERGROUND AREA, SHOPPING MALL, ROOF GARDEN, CENTRAL HEATING AND AIR CONDITIONING SYSTEM AND FOUNDATION PIT

The record-breaking Suzhou Central Plaza is located in Suzhou, a major city in Eastern China, close to Shanghai. The city is on the lower reaches of the Yangtze River. Administratively, Suzhou is a prefecture-level city with an urban population of over 4 million in its core districts, expanding to over 10 million in the administrative area.

The center is located in the Central Business District of Suzhou. It is part of the major Suzhou Industrial Park urban development project. The estimated cost of the plaza is EUR 3.36 billion. Construction began in early 2012.

It will consist of 10 buildings, including one skyscraper 500 m high and one 450 m high, seven towers ranging in height from 100 m to 280 m, and one large commercial building. The total investment is about EUR 3.7 billion. The seven tall towers under construction are being financed by Jinji Lake City Development Co, Ltd., based in the Suzhou Industrial Park. They are being constructed by Suzhou 2nd Construction Group and China Construction 8th Engineering Company.

The plaza boasts the convenience of two metro lines. The entire project covers an area of about 21.1 ha with a net ground area of 13.9 ha. The total construction area is about 1.82 million m^2, including 1.3 million m^2 above ground and 520,000 m^2 underground.

The first pouring of concrete for this project was completed by Goldsun (Suzhou) Concrete Co., Ltd. Sika®. ViscoCrete® and SikaPlast® from Sika China are being used on the project, and it is estimated that the ongoing construction process will require about 2,000 t of admixtures.

See more in: http://bit.ly/1etLju8

A STADIUM LIKE A LANTERN

With the Football Championship in Brazil coming up, some of us are starting to dream again of being in the stadium while our favorite football team is playing – and winning, of course. This dream already came true for us in Wroclaw's spectacular Municipal Stadium during the European Championship in 2012, with three group matches played there. A stadium is always a place of emotions, socializing and collective excitement.

TEXT: ASTRID SCHNEIDER
PHOTO: MACIEJ LANGE

Wroclaw Municipal Stadium.

Municipal Stadium in Poznan.

Joint sealing with Sikadur-Combiflex® between the precast reinforced concrete elements.

> The Wroclaw Municipal Stadium is the third largest in Poland. It is located in the west of the country, close to the Czech and German borders. Construction began in April 2009 and was completed in September 2011, including integration into the local and regional transport infrastructures, one feature of which is the new tram line to the city center. The stadium was built as part of a multi-purpose complex that encompasses commercial offices, conference halls, a fitness center and a casino, as well as being home to the local football team WSK Śląsk Wroclaw.

The stadium is architecturally structured in the style of a lantern. Its distinctive shape is highlighted by the innovative design of its roof and external walls. The facade is covered by a lightweight glass fiber mesh fabric that is coated with Teflon, giving the whole of the massive building structure a unique transparency. This quality is accentuated by the almost unlimited colored designs that can be produced within the facade using a sophisticated lighting system that creates quite stunning visual effects.

The facade and the roof structure are anchored into the foundations all around the base of the stadium. The 6-storey stadium has a capacity of 42,771 spectators, all seated and all covered, and includes extensive VIP and business facilities, with numerous restaurants, bars and retail areas. All types of sports and events are now held in the Municipal Sta-

Roof system of the Wroclaw Municipal Stadium.

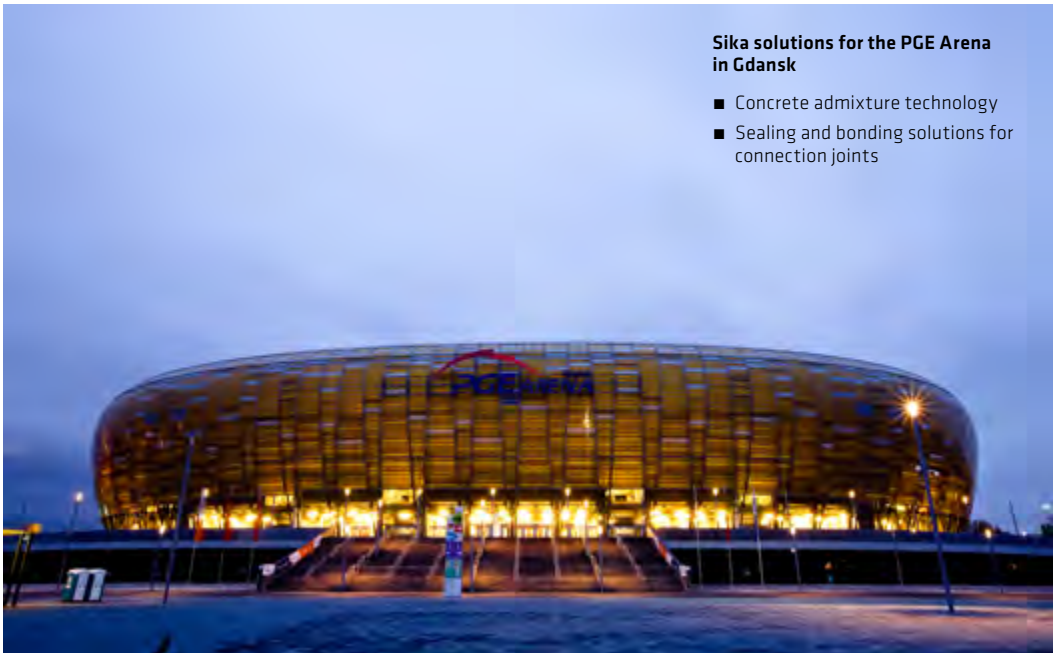
Sika solutions for Municipal Stadium in Poznan

- Concrete admixture technology: Sika®Viscocrete®, Plastiment® and Sikament® for the stadium structure
- Sealing and bonding solutions: Sikaflex® to seal in and around complex details and connection joints
- Flooring solutions for colorful floors in auditoriums and passageways
- Cementious grouting systems: SikaGrout®
- Steel corrosion protection: SikaCor®EG System and SikaCor®PUR System for 120,000 m² of steel structures

dium, the biggest so far being the staging of several European Football Championship games in 2012.

What were the challenges that Sika Poland faced during the building? An expanding, pourable, consistent cement grout was required to grout the steel support stanchions and rings into the reinforced concrete foundations. SikaGrout® is polymer-modified, expansive and cement-based. It was selected to grout around the steel support structures and their holding down bolts into the reinforced concrete foundations.

Additionally, the joints between the precast reinforced concrete elements that were used to form many of the internal walls, floors, terraces and stairways, all had to be securely and durably made watertight. The Sikadur-Combiflex® System Joint Sealing system was used to seal the joints between the precast reinforced



Sika solutions for the PGE Arena in Gdansk

- Concrete admixture technology
- Sealing and bonding solutions for connection joints

Sika solutions for the National Stadium in Warsaw (above)

- Concrete admixture technology for all precasted concrete elements 100 km of piles, 75, 000 precasted elements creating construction of the stadium and almost 8,000 elements of stairs
- Flooring solutions for 30,000 m^2 of floors in multi-storey car parks
- Flooring solutions for 25,000 m^2 of resin floors in service areas
- Sealing and bonding solutions: Sikaflex®PRO 3 for terraces, spectator areas, main promenade etc., which altogether sums up to 35,000 m of connection joints
- Waterproofing solutions: Sikadur-Combiflex® tapes used as joint waterproofing

> concrete units in the structure. This is a high-performance, over-banding, sealing tape system based on a combination of structural Sikadur® epoxy adhesive and a Sikadur-Combiflex® polyolefin membrane tape. This system allows and accommodates joint movement in any direction, including beyond the capability of traditional joint sealants.

All of the exposed and trafficked surfaces, including some of the car parking areas built over other facilities, had to be waterproofed. It was stipulated that the waterproofing solution must conform to German specifications ZTV-ING part 7, sections 1 and 2, to be suitable for use beneath asphalt-wearing surfaces in some of these areas.

What is more, many of the internal facilities, such as restaurants and VIP areas etc., needed a high-quality wood floor finish, but with minimal noise transmission from the anticipated heavy foot traffic. SikaBond® was selected for full surface bonding of the wood floors throughout the interior of the stadium. This material was chosen due to its proven track record in a great many prestige buildings and similar facilities around the world, providing acoustic insulation and noise reduction by up to 14 dB.

"Stadium" comes from the Greek word "stadion", a measure of length equaling 600 human feet. The oldest known stadium is the one in Olympia, in the western Peloponnese (Greece), where the World Games of antiquity were held from 776 BC. Now, many centuries later, we still like to gather in stadiums to watch and experience an event together. The bravest and most talented among us may well be the ones on the field or on stage – the player who scores a goal in the 91st minute or the rock star performing before an audience of more than 40,000 people. But on the other hand, why be brave or talented when you can be chatting and enjoying the event with your friends in the stands?

A NEW HOME FOR CHILDREN

A SOS children's village? Building a home? For children? Perhaps all these factors were behind Sika Hungary's decision taken in January 2014 to support the construction of a juvenile home in Kecskemét (Helvécia) with raw materials and Sika products.

TEXT: DOROTTYA WETTSTEIN
PHOTO: SOS CHILDREN'S VILLAGES, SIKA HUNGARY

> SOS Children's Villages works in 133 countries to support families and help children at risk grow up in a loving home. In a world filled with poverty, violence, and injustice, the greatest victims are often children. For more than 60 years, SOS Children's Villages has worked with partners in each community to either help families care for their children or to provide an alternative, for instance an SOS family, where the love of a carer is essential. Everything the organization does is based on the best interests of the child, for each of whom an individual development plan is drawn up, focusing on his or her care, health, education and general development.

Uniquely, SOS Children's villages provides practical support over the long term, so that each child or young person can develop lasting relationships and face life's challenges in the future. In turn, this strengthens communities and society as a whole.

The SOS Children's Village in Kecskemét has been part of the international network since 1990. The mission of the village leaders is to create a home for children who are forced to grow up without their family. The current 72 000 young girls and boys who have found new and caring parents in 300 countries bear testimony to the success of the system.

When Sika Hungary heard in January 2014 that a new home was being built for the residents of the SOS Children's Village in Helvécia and offered to supply building materials, the leader of the Children's Village was delighted. The house was scheduled for completion in late March. It will be home to 12 young people under the continuous supervision of six educators. Sika Hungary donated SikaCeram® tile adhesives and Sikalastic® waterproofing mortars.

For more information please visit:
http://www.sos.hu/rolunk/sos-gyermekfalu-a-vilagban

DOLPHINS CAN HEAL

Happy Dolphins Encounters (HDE) is a Belgian non-profit organization founded in 2000, consisting of a team of 14 volunteers, including doctors specialized in the treatment of sick children. HDE solicits funds – public and private – to give these children a chance to encounter dolphins in their natural environment in Florida. The goal is to provide an extraordinary and unforgettable experience to children weakened by a serious illness or physical disability, or in a highly precarious social situation.

TEXT: EMMANUEL DEHANTSCHUTTER
PHOTO: HDE, SIKA BELGIUM

> Since no child should suffer because their condition prevents them from knowing the joy of holidays, our team has decided to give them some happiness by taking them out of their daily life (grueling treatments, regular hospitalizations, schooling problems, etc.). The feelings of delight and amazement brought on by the experience of contact with marine

mammals enable them to overcome their difficulties and expand their horizons in terms of respect for others and the environment. This adventure also contributes to their development and raises their self-esteem.

In 2010, Olivier Vangaever and Emmanuel Dehantschutter from Sika Automotive Belgium S.A. joined HDE to bring in their support and gain an enriching human experience. Since joining the association, they have collaborated on three trips, and Olivier even went on one in person in 2011. HDE has already taken a total of 60 children to Florida. Sika has been supporting the association since 2011, funding one child's travel costs each year, which means that so far three children have been able to make the trip thanks to Sika.

The dream starts at the airport and in the plane. For some of the children this is the first ever flight. They land in Panama City Beach, where they are welcomed by Water Planet, the team in place in the USA to organize activities. During their week in Panama City Beach, the children live this dream 200%.

When the kids return home, they are not the same as before. They are no longer the sick and disabled little boy and little girl, but the children who met the dolphins in the ocean. Their social label has changed. Some of them have gained more independence, others more confidence. Some take comfort from their memories, like the little boy who uses a picture of the dolphins to calm him during anxious moments. The bonds forged during this adventure remain firm after the trip. HDE members stay in touch with the children and their families, meetings are held, photos and videos are exchanged, barbecues organized, and e-mails sent. And children who participated in a trip will share their experiences with the children on the next trip.

All the happy smiles and gratitude from the children and their families give us the energy to keep investing in our activities. And all the companies who support us, such as Sika, are so important for the dream to continue becoming reality.

If you like to learn more, visit:
http://www.happydolphins.org/

BUILDING TRUST