AMBITIONS

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AMBITIONS ISSUE #23

BUILDING TRUST

PROTECTION

ASTRID SCHNEIDER
Marketing & Product Communications Manager
Sika Services

The act of protecting or the state of being protected is perfectly natural behavior and something we all appreciate not just when it comes to preservation from injury or harm. We like to build our world around us to shield ourselves and feel safe and comfortable. Though we no longer live in caves, we have retained the instinct to dwell in houses and buildings which can safeguard us from harm. The Protection Motivation Theory states that we protect ourselves based on four factors: the perceived severity of a threatening event, the perceived probability of the occurrence, or vulnerability, the efficacy of the recommended preventive behavior, and the perceived self-efficacy, which is the belief in one's ability to execute the recommended courses of action successfully. Nowadays it is generally easier to experience self-efficacy and take whatever action is needed to feel protected.

A new residential lifestyle in Abu Dhabi (p. 23) shows us how sustainability and state-of-the-art living can be interlinked and how residents feel comfortable in their homes. In the Legacy Rainbow House (p. 10), children with brain damage, multiple disabilities or complex health needs get the care and therapies they require. The correct specification of facilities, and in particular flooring, is vital as they have to fulfill high hygienic standards in order to protect the children's health. In demanding hygiene environments, standard paints are no match for this range of specifically developed hygienic coatings. What is more, we have a duty to protect the environment we live in.

The most used man-made material in the world is concrete. Sika's ViscoCrete® superplasticizer technology promotes the reduction of water and cement in high-volume concrete, while maintaining or improving its properties (p. 42). The superplasticizers solely contain random by-products from renewable raw materials instead of oil, without compromising on quality. And how about your own home? Is it well protected from basement to roof? We show you an example of residential housing in the UK (p. 5) which was built in a challenging location set into a hill on the side of a river. Our remit was to find a convenient construction method to suit the wet, dirty conditions. Find out how we managed.

Yours sincerely,

ASTRID SCHNEIDER

CONTRIBUTORS

CHRIS LIU
Product Marketing Specialist
Sika China

The "Chinese Hollywood" is not the only real estate complex project derived from the film industry in China, but definitely the biggest one so far. For such an influential project, our team had been fought for almost one year.

LUIS CARLOS GUTIÉRREZ
Marketing & Communications Manager, Sika Spain

For a passionate reader like me, it is a great experience to have in the writing contest. The book collection of the winning entries and the accounts of the jurors is the Christmas gift that Sika Spain presents annually to its employees and customers.

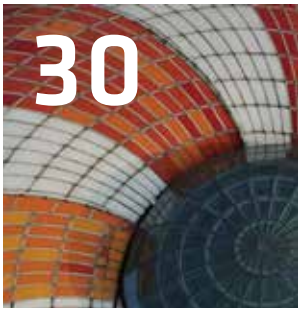
MICK HOOPER
Flooring Manager Sealing & Bonding, Sika UK

The Rocket Restaurant is one of my favorite places to eat – Especially in the summer on the roof terrace. They get quirky tasty food in truly unique surroundings.

YASSAR ALTAF
Marketing Manager
Sika UK

The Sika brand is synonymous with providing quality waterproof concreting systems and that is why the owner chose the Sika Watertight Concrete system or his futuristic self-build home built into the hillside, close to a river.

AMBITIONS #23 2016



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The house was to be built in a difficult location set into a hill on the side of a river.

WHAT IS YOUR PERSONAL DREAM HOUSE ABOUT?

No matter how excited you are to move into your new abode, your first few weeks will probably feel foreign and, well, a little weird. Celebrating a birthday, planting a garden or decorating for the holidays will help that "new-house feeling" fade. But of course it depends as well on where your new home is located and on the character of the place. Does it really suit your personality? Will you feel comfortable once the construction site signs come down? Here is one example where the residents happily settled in – even while living among boxes.

TEXT: ASTRID SCHNEIDER, YASSAR ALTAF
PHOTO: SIKA LIMITED

> We are in County Durham in North East England. It boasts a mixed mining and farming heritage, as well as strong ties with the railway industry. Its economy was historically based on coal and iron mining. It is an area of regeneration and is being promoted as a tourist destination. Durham Castle and Durham Cathedral in the city center are UNESCO-designated World Heritage sites.

We meet the proud owner in his modern, futuristic self-constructed home in County Durham. Built into the hillside, close to a river, it was recently completed using the Sika® Watertight Concrete system. Environmental considerations were high on the owner's list of design specifications, with underfloor heating, LED lighting throughout and a Sika Sarnafil® green roof, which together have resulted in the house having a U-value of below 0.15 W / m^2.

A cost-effective watertight solution was required for the lower floors that are built into the hillside. It had to adhere to BS 8102 Grade 3 (Habitable Space) – the British Standards Institute Code of Practice for protection of below ground structures against water from the ground.

One of the reasons that the owner chose watertight concrete was that the 350 m^2 house was to be built in a difficult location set into a hill on the side of a river. He was particularly looking for ease of construction in the wet, dirty conditions, and so chose the Sika® Watertight Concrete system. The Sika admixtures within the concrete mix work firstly by reducing the water cement ratio, producing a highly workable concrete that aids placement and compaction, and secondly, by blocking the remaining capillary pores. This produces an extremely effective watertight concrete solution which meets the requirements of BS 8102 Grade 3 (Habitable Space).

Another reason was that the overdig requirement was less compared to other so-

>

A cost-effective watertight solution was required for the lower floors that are built into the hillside.

> lutions, together with time saving on site and a guarantee of watertightness that comes with the system. In the owner's words: 'We chose the Sika waterproof concreting system for this project because the Sika name is synonymous with providing quality waterproof concreting systems with a guarantee to back it up. Having looked at a number of other waterproofing solutions, we felt that Sika was by far the most practical and cost effective choice for our project.'

The Sika® Watertight Concrete system is BBA-approved, and has been constantly evolving throughout its long history, uti-

Fast and efficient application in most weather conditions were other key benefits of the Sika system.

Environmental considerations were high on the owner's list of design specifications, with underfloor heating, LED lighting throughout and a Sika Sarnafil® green roof.

Like rocks in the storm: These walls stay watertight.

lizing the latest admixture technologies to provide continual improvement in performance and ease of use. Its successful 50-year track record and warranty give the developer full confidence in the future integrity of the structure.

Around 200 m³ of Sika® Watertight Concrete was supplied to the project. A proven 30-year performance in green roof construction convinced the owners to use a Sika Sarnafil membrane system to waterproof the flat roof. The system is resistant against biological and microorganisms and root penetration. Fast and efficient application in most weather conditions were other key benefits of the Sika system.

So finally, the only question that remains is what makes a house really comfortable and its inhabitants feel at home? It can't be just the furniture, though interior design is essential for personal well-being. Besides a nice neighborhood, it's a well-balanced heating system serving all the rooms, a well-insulated building envelope, the possibility to grow plants in and outside the house, and the security of knowing that the house will remain protected against water leakage and humidity. <

The Sika® ComfortFloor® system and Sikagard® Hygienic Wall Coatings have helped to deliver a high-performance, visually stunning solution for this challenging and innovative application.

A FLOOR FULL OF RAINBOWS

Legacy Rainbow House, UK, was created in 2001 by Joanne Mawdsley, who had two boys who were tragically struck with a rare genetic disorder, resulting in brain damage and disability. It was her passion and drive to help her boys that founded this innovative service. The services were funded by The Mawdsley Family until 2004, at which time it became a charity. Providing assistance for other children, Ms Mawdsley enriched her own life and surrounded herself with like-minded parents who supported and guided each other through a very dark process, and in doing so provided therapy, helping their children to help themselves.

TEXT: ASTRID SCHNEIDER
PHOTO: SIKA LIMITED

> They work with children who have a brain injury, multiple disabilities or complex health needs. The correct specification of facilities, and in particular flooring, is vital. Sika® ComfortFloor® Pro from Sika proved ideal for the children and staff at Rainbow House. The system's chemical composition and texture absorbs impact and offers the perfect surface for that intensive therapy work that takes place at the facility, while also providing a high degree of comfort. >

> The Sika® ComfortFloor® system and Sikagard® Hygienic Wall Coatings have helped to deliver a high-performance, visually stunning solution for this challenging and innovative application. Three colors were used in the main areas of the facility to create a rainbow effect – Sika Sun Fire, Sika Wild Orchid and Sika Spring Grass. For the cleaners' room, an office and a kitchen, Umbra Grey was selected, with an additional aggregate added to complement the rooms' functionality.

In demanding hygiene environments such as Rainbow House, standard paints are no match for this range of specifically developed hygienic coatings. The liquid applied system was quickly and easily installed in the therapy areas by Crown Flooring as

IN DEMANDING HYGIENE ENVIRONMENTS SUCH AS RAINBOW HOUSE, STANDARD PAINTS ARE NO MATCH FOR THIS RANGE OF SPECIFICALLY DEVELOPED HYGIENIC COATINGS

one seamless piece, meaning no joints which can harbor bacteria. In addition, the floor's constitution means that it resists the growth of bacteria or fungus and is very easy to clean.

Sika has also donated its Sikagard® Hygienic Wall Coatings for the entire interior of Rainbow House. The coatings complement the flooring system by offering the same seamless properties as Sika® ComfortFloor®. Sikagard® Hygienic Coatings are designed to provide exceptional durability as well as an enhanced resistance to cracking, splitting and flaking.

Ms Mawdsley continues to develop, create and implement strategies to generate the income needed to continue all services. She leads a small but efficient team that manages development, parent support, key workers, finances, trusts and grants, media and marketing. The charity is supported by a professional board of directors, who ensure and safeguard all services. <

Follow the Rainbow House on Facebook https://www.facebook.com/pages/Rainbow+House/198549160161979

WHAT ABOUT DENMARK?

Denmark is one of the world's oldest monarchies with a history that stretches back to the Viking Age around the year 1000. Danish society rests on the foundation of the Danish Constitution of 1849, and the political system has since been characterized by broad solutions across the political divide. Denmark is often cited as one of the world's best countries to live in. The strong welfare state ensures economic equality in society and the virtual non-existence of corruption, while polls repeatedly show that the Danes are among the happiest people in the world. We met one of them, Ian Brindley, General Manager of Sika Denmark, in Copenhagen.

TEXT: SANNE W. SKJØTH, ASTRID SCHNEIDER
PHOTO: SIKA DENMARK, OLGA ITENBERG, LARSE, TOBIAS KIERK, HENRIK WICHMANN

IAN BRINDLEY,
General Manager, Sika Denmark

THE BLACK DIAMOND

Copenhagen's Slotsholmen Island, is home to the majestic Black Diamond building, standing in all its glory at the waterfront. Designed by architects Schmidt Hammer Lassen, it was erected as an extension to the existing Royal Danish Library and finished in 1999. The building's facade comprises 2,500 m² of Absolute Black granite cladding and a huge wall of 6-meter-high glass elements. The extension has 450 rooms and no fewer than 800 doors, each requiring a key. Two floors are dedicated to the library, whose contents aren't measured by the number of books, but in kilometers. Today the library has around 160 km of books, increasing by a few kilometers each year. The beautiful building also houses auditoriums used for lectures, concerts, fairs and the like. The National Museum of Photography and a smaller museum dedicated to cartoon art are also located in the building.

> **What comes to mind first when you think about working in Denmark? What makes this little country special?**
Denmark is recognized for its social balance, equality, low levels of corruption and high transparency with universal welfare services such as free healthcare and free education. Modern design and great architecture can be found in all aspects of daily life. The infrastructure is highly developed and constantly being improved. One of the most important things for Danes is to live a socially balanced life and prioritize time with their families and friends. All this makes Denmark a special country and also a very likeable country.

What are your personal secrets for leading a team?
It should probably stay a secret, and perhaps you should ask my team!
It is important that we all feel part of Sika Denmark, and strive to achieve our common goals. That requires each team member's full involvement and engagement. Ensuring that each person can use their talents and further develop their strengths helps to build a highly motivated and energized team focused on success. Clear direction, authentic leadership and stable decision criteria are key in order that people can orientate themselves. We operate in a fast-changing environment with constantly new conditions, requirements and regulations. Each individual needs to understand common values and principles in order to focus their energy and steer the boat in the right direction.

Denmark is currently one of only five nations in the world that live up to the UN target of committing 0.7% of GNI to development assistance. Do you think this impressive achievement can be kept up in the future?
Denmark is among the top five countries, together with its Scandinavian neighbors Norway and Sweden. Our neighbors have an even higher GNI, and it is about more than just a calculated indicator. It is more the Nordic approach in general, which is why I'm confident that there won't be any major changes in this respect. But let's hope that other countries increase their GNI and maybe even push Denmark down in the rankings. You can't say fairer than that.

SMALL DENMARK (43,094 KM²) BOASTS THE WORLD'S THIRD LARGEST SUSPENSION BRIDGE

In 1991, the decision was taken to build a transport link between Denmark and Sweden to promote cultural and economic ties in the Oresund region. And by 2000 the Øresundsbroen was a reality. The 16-km combined bridge and tunnel connection is used by more than 10 million people every year to transit between Denmark and Sweden. The popular Øresundsbroen rail line attracts a daily 30,000 commuters between the two countries.

© Tobias Kierk

REBUILT POST OFFICE
Product: Sika® ComfortFloor PS-25

© LarsE

Copenhageners are avid bikers and cycling has a great tradition. Can Denmark serve as a role model for sustainable living and leading the transition to a green growth economy?
Denmark is well on its way to reaching a goal of 50% clean energy by 2020, with data showing that 39% of the country's electricity consumption was covered by wind in 2014. The country aims to become independent of fossil fuels by 2050 and that requires a broad range of innovative technologies and an ambitious policy framework to support them. This is why the USA rates Denmark as the second most attractive country for their European investment spending after Norway.

Sika can offer many different systems and technologies which support the ambitious way Denmark is going. The wind energy business is already a very important field of activity for us today. As for bikers and cycling, Danish people are getting lots of fresh air by being one of the most bicycle-friendly populations on the planet and the weather is never an excuse. Public transportation is outstanding and the Metro in Copenhagen is completely automatized, even working with driverless trains. A new Metro ring with 21 new stations is scheduled for completion by 2018. An estimated 130 million people will use the Metro

>

> **OFFICE COMPLEX AXELTORV**

40,000 m² of offices, shops and restaurants for up to 16 floors, as well as five storey underground garage for parking, storage and archives as well as technique.

The floors of the five towers must be fitted with ultra-modern office environments designed according to the latest requirements for indoor climate and energy.

BÚÐARHÁLS HYDRO POWER STATION, ICELAND.

Products:

- Sika® ViscoCrete®-1135
- Sigunit® L53/P1
- Sika Plastiment LA55
- Sika® Pumpstart
- Sika Denmark team

© Olga Ltenberg

THE COPENHAGEN OPERA HOUSE

This beautiful building located at Holmen in Copenhagen is the National Opera House of Denmark. Designed by architect Henning Larsen, the ambitious project was funded by A.P. Møller and his wife Chastine Mc-Kinney Møller. The building was completed in 2005 at a total cost of DKK 2.2 billion. The Copenhagen Opera House is among the most modern of its kind anywhere in the world, and the resident choir is said to be one of the best internationally. The wall of the auditorium facing the foyer is clad with maple wood, and the ceiling in the main auditorium is adorned with 105,000 sheets of 24-carat gold leaf, equivalent to 1.5 kg of gold. Besides opera, the house also stages ballets and concerts.

COPENHAGEN CITY RINGEN METRO

Cost: DKK 21.3 billion / EUR 2.85 billion / CHF 4.26 billion (2010)

17 new underground stations + four maintenance stations (21 total)

Length: 15.5 km (double tunnel)

A total of 130 million passengers annually expected (approximately 50 million on the M1/M2, and 80 million on the M3/M4)

The entire project will be completed in December 2018

The stations and shafts are being constructed by the cut-and-cover method

All tunnel elements are produced in Rügen, Germany

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> **NOVO NORDISK**

Sika is a full-range supplier for seamless floors at Novo Nordisk in Denmark.

Product: Sika® ComfortFloor PS-25

FIRST MOVER IN WIND POWER – OFFSHORE WIND FARMS

It's windy in Denmark, which helps explain why Denmark is so skilled at capturing the power of the wind. Relying on 28% wind power for its electricity system, Denmark is a nation that many others are looking to in order to discover sustainable energy solutions for the future. However, plentiful wind is not necessarily synonymous with a strong wind industry. Denmark's achievement in bringing 28% wind power into the electricity system is built on several key factors, that together have made Denmark the world's wind power hub. Denmark's role as a first mover in both onshore and offshore wind power has been important. The lessons learned through the early years of setting up wind turbines across the nation have been pivotal. The industry has developed through innovative thinking and experience, which have helped create core competencies in the production, design and installation of wind turbines that are sought after worldwide. To date, Danish companies have installed more than 90% of the world's offshore wind turbines. The wind industry today is part of the backbone of the export earnings of the Danish economy.

Sika Denmark team

CREATIVE PEOPLE, MODERN LIFE STYLE, PUBLIC DESIGN, SEXY FASHION, PROGRESSIVE TECHNOLOGIES, AND A LEADER WHEN IT COMES TO INNOVATION

> yearly. We are very proud to be an important supplier to this impressive project.

How about the construction market? Where exactly does Denmark need Sika?
Challenging infrastructure projects call for high-quality functional systems. Long-term experience and technical know-how are key elements and the construction industry demands a reliable supply chain. We can look back on over 50 years of expertise in Denmark, but being a part of a big group like Sika also spells numerous benefits for our partners. If our local know-how for a specific detail is not sufficient, we can get support from experts in other Sika sister companies. This is of immense value to our customers.

Are there any new trends in the construction sector that you can see?
As in all countries, more and more importance is being attached to sustainability. But we are also witnessing a trend toward faster construction and greater flexibility in building use. Denmark is investing in infrastructure and welfare. Water-tight underground structures become more important with higher life expectancy. Tunnels such as Fehmarn Belt, Metro stations and car parks are built underground, but most of the country is at sea level. For a company like Sika it is a good investment to build up waterproofing capability and expertise.

Where is Sika Denmark heading?
Sika Denmark wants to be the number one when it comes to services, quality and know-how. We have many excellent systems and high-quality products which fit Danish market requirements, including waterproofing membranes, Waterbars and the ComfortFloor range, which combines design with comfort and delivers a great work or leisure environment. We want to be a step ahead of the competition in bringing new products and solutions to the local market.

What do you personally enjoy most about living in Denmark?
It is clearly a very attractive mix of many different things: Creative people, modern life style, public design, sexy fashion, progressive technologies, and a leader when it comes to innovation.

The low level of administration and the family support infrastructure are outstanding. According to the 2014 Corruption Perceptions Index published by Transparency International, Denmark is still the least corrupt country in the world.

What do you wish Denmark for the future?
The balancing act of success in business and happiness in private life is challenging. With increasing competitiveness, this balance comes under more and more pressure. I wish that for Denmark, its creativity and innovative spirit can help reduce the cost gap. I'm looking forward to seeing many fantastic new designs and to learning about new ways of thinking and I hope to witness many other countries adopting the Danish approach.

<

LIVING SMART

This new residential lifestyle shows how sustainability and state-of-the-art living can be interlinked. Efficient energy usage is supported by smart construction and modern technology. Residents can satisfy all their everyday needs and leisure requirements within their own housing complex.

TEXT: JOHN VERNON, ASTRID SCHNEIDER
PHOTO: SIKA UAE

> Cars are not needed here to get to other locations. The idea of smart living in one place is further proof positive that we are facing a new era of profitable housing concepts that is beneficial to nature and residents alike .

We are referring here to Rihan Heights in Abu Dhabi. The whole area of residential houses and recreational space occupies 38,000 m² of prime land on the north eastern corner of Arzanah, which is located at the gateway to Abu Dhabi Island and, as the grand mosque district, boasts 1.4 million m² of mixed-use development encompassing residential, commercial, sports, and leisure components. Conceptualized by international award-winning architects SMC Alsop, Rihan Heights comprises 868 apartments that range from single-bedroom units to penthouses spread over five luxurious residential towers and 14 premium villas that line its perimeter.

Magnificent sky gardens adorn each podium, while exclusive, private enclaves are dotted throughout the property. Designed as practical living spaces, each tower is built to maximize the views of the adjacent gardens, the waterfront and the Zayed Grand Mosque. Taking into account the city's soaring temperatures of up to 44°C, each tower is wrapped with horizontal fixed brise soleils which serve to shade and define the façade as well as reduce heat.

Beyond the carefully landscaped courtyards, elegant sky gardens and contemporary architecture of each tower, Rihan >

Taking into account the city's soaring temperatures of up to 44°C, each tower is wrapped with horizontal fixed brise soleils which serve to shade as well as reduce heat.

The clubhouse has an origami concept design.

> Heights' residents enjoy the full benefits of its recreational features. Three outdoor swimming pools offer respite from the hot desert temperatures. Sports and leisure needs are met by a fully equipped gym, barbeque pits, children's playgrounds and a multipurpose room that can be booked exclusively.

This luxury residential development forms part of the Arzanah masterplan, transforming a culturally significant area of Abu Dhabi into a fully sustainable, 21st century mixed-use community. It integrates existing landmark structures with new uses and the vision for a world-class public zone and landscape.

Working in the UAE presents unique challenges in terms of the use of natural resources and maneuvering within the existing conditions and framework. Sika UAE's project remit was to provide a waterproofing system for the Rihan Heights clubhouse that could be overclad with stone. Given the very complex geometry, a liquid applied membrane was the best solution.

Concrete Primer was used initially to prepare the surface prior to application of Sikalastic® MTC 18 liquid applied membrane. This was then reinforced with Flexitape Heavy 150 mm and Flexistrip to provide additional tensile strength. Specified in white, the system was chosen because of the many other successfully completed projects in the local area. Sika's comprehensive technical support team was also available to provide on-site support throughout the project.

The clubhouse has an origami concept design. It also houses a selection of retailers which residents can patronize, including a supermarket, a laundry, a beauty lounge, a pharmacy and a coffee shop. This new mode of community living sounds quite attractive, doesn't it? <

The housing complex covers 868 apartments that range from single-bedroom units to penthouses spread over five luxurious residential towers and 14 premium villas.

WE CAN SOLVE THIS!

HOLDING THE WORLD'S BIGGEST PORCELAIN VASE TOGETHER

China was the birthplace of porcelain making and proto-porcelain wares exist dating from the Shang Dynasty (1600–1046 BC) while at 618–907 AD it was already exported to the Islamic world, where it was highly prized.

TEXT: ASTRID SCHNEIDER
PHOTO: STIFTUNG LEUCHTENBERG

> The ceramic material is made by heating materials, generally including kaolin, in a kiln to temperatures between 1,200 and 1,400°C. The toughness, strength and translucence of porcelain, relative to other types of pottery, arises mainly from vitrification and the formation of the mineral mullite within the body at these high temperatures.

The material derives its present name from the Italian porcellana (cowrie shell) because of its resemblance to the translucent surface of the shell. Porcelain can informally be referred to as china or fine china in some English-speaking countries. Properties associated with porcelain include low permeability and elasticity; considerable strength, hardness, toughness, whiteness, translucency and resonance; and a high resistance to chemical attack and thermal shock.

This year a record was broken! The biggest porcelain vase in the world, which stands around eight meters high, was created in early 2015 for the "Porcelain Worlds" exhibition at Castle Leuchtenburg in Thüringen. Artist Alim Pasht-Han, from the Caucasus region, created the 7.90 m high objet d'art for the exhibition together with long-established porcelain manufacturer Reichenbach, and Sika Germany is proud to note that he relied on Sika's tried and tested Sikaflex® products to do so. Hitherto, all attempts to bond porcelain pieces on this monumental scale had failed. Thanks to Sikaflex®, they have now succeeded!

The unique design consists of 360 honeycomb shaped porcelain pieces, which were built up one upon the other in 13 layers, and further secured on the inside with Sikaflex®. The artist took his inspiration for the honeycomb and horsetail principle from nature. This enabled him to give such a fragile material as porcelain the necessary stability and size to make the vase. The motifs, which were painted by hand on each and every honeycomb, are also taken from nature. The artist confined himself here to the traditional porcelain colors of cobalt blue and gold. After around a year and a half of design and manufacturing work, in April 2015 the vase was ready to be presented at the Porcelain Worlds exhibition at Leuchtenburg.

The "Porcelain Worlds" exhibition is definitely worth a visit – the world's biggest vase, held together by Sika products, is an impressive sight! <

Visit the exhibition:
http://www.leuchtenburg.de/en/porcelain-worlds-en.html

360 honeycomb shaped porcelain pieces were bonded with Sikaflex® to make the biggest vase in the world.

© Stiftung Leuchtenburg

RECREATING HOLLYWOOD IN CHINA

Is Hollywood unique? No, but it has been for a long time! From Los Angeles via Mumbai's Bollywood, we have finally arrived in Western China. Qingdao Oriental Movie Metropolis, funded by China's largest property developer Wanda Group, aims to become the Hollywood of the East.

TEXT: CHRIS LIU
PHOTO: GUANGHAO ZHANG

中建八局
07771 9999

FOR QINGDAO ORIENTAL MOVIE METROPOLIS, WHICH STRETCHES ALONG THE COASTLINE, MORE STRINGENT ENGINEERING REQUIREMENTS AND STANDARDS APPLY COMPARED TO A PURE LAND-BASED DEVELOPMENT

> According to the Wanda Group, 30 foreign movies and 100 Chinese movies will be produced here every year. It boasts the world's largest studio pavilion (10,000 m²) and China's most advanced temperature-controlled permanent underwater stage. The complex houses 30 purpose-built production stages and the country's biggest exterior water tank, a combination of natural scenery and customized locations, in addition to world-class facilities for post-production.

I am Chris Lu, a Sika Product Marketing Specialist for concrete. Since I joined the company, one aspect of my work has been to learn about and get involved in various projects. As a foreign language graduate who knew little about the chemical industry, every time I took over a new project, it was necessary to make preparations and conduct research. I was often unfamiliar with what was needed until I visited the project site in person.

It was not until this spring, when I had the chance to visit Qingdao Wanda Oriental Movie Metropolis, that my project preparation changed. I have to admit that I looked forward to this site visit more than previous ones. Maybe it's because Wanda has established a great reputation among individual consumers as a real estate brand in recent decades. On the other hand, it has helped to create record-high GDP growth assisted by rising consumption. I couldn't help but wonder what the comprehensive Oriental Movie Metropolis would look like.

Qingdao Oriental Movie Metropolis is located in Huangdao District, which faces downtown Qingdao across the bay. The two districts are closely connected by an undersea tunnel and a drive of just over 10 minutes. Although I had already been told about the scale of the project, I could never have envisaged what I would see on site. The planned 270 hectares of land follows the coastline like a landscape painting. Although most of the site was still under construction and crammed full with equipment, it is easy to imagine the site in action after its completion.

The development is divided into eight functional areas, the main one of which is the movie industrial park, which is to be used for movie production and covers half of the total square meterage. The other seven functional areas include the Wanda Victoria Bay Club and a yacht club. The innovative development integrates commerce, tourism, entertainment and leisure.

The superb insight and ambition of this real estate brand is on display throughout the development, including the planned annual international film festival, the eye-catching international yacht exhibition, and the excellent shopping and entertainment center. Based on current plans, after completion, Wanda Oriental Movie Metropolis will stretch along the coastline and cover almost half of the entire Huangdao District.

Hollywood in China: the only thing we missed was Walk of Fame.

Chris Liu, Product Marketing Specialist, Sika China

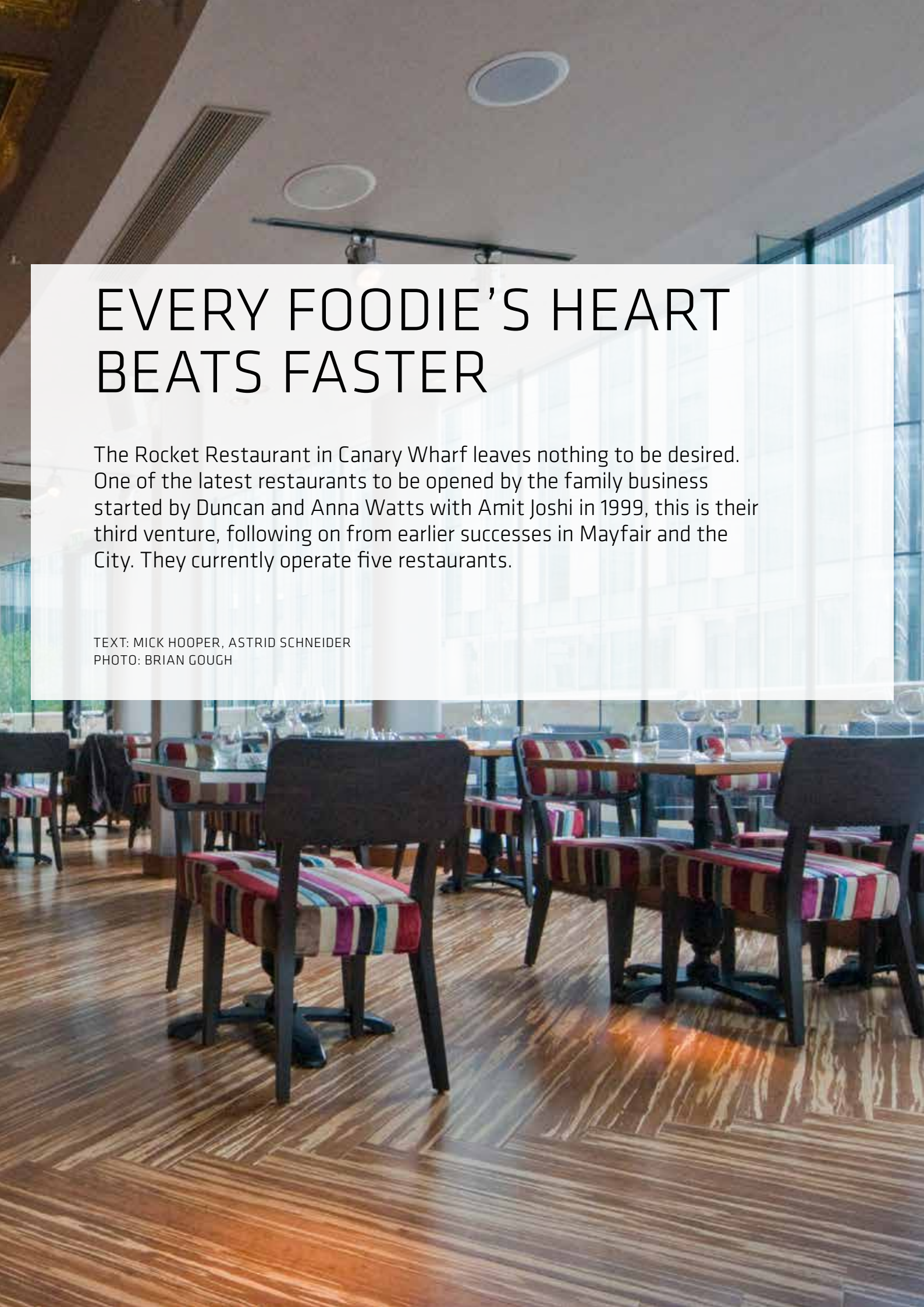
Since the western coastal region of Huangdao was formed by land reclamation, there are more stringent engineering requirements and standards compared to a pure land-based development.

Given that the project is directly located by the sea, its buildings require special protection from corrosion. Sika FerroGard®-901 C was used to shield the buildings and prolong their service life. The developer specifically selected Sika FerroGard®, because it is an excellent compound type concrete corrosion inhibitor. The product can be applied in construction projects on saline-alkali soil near the sea, such as ports, coastal nuclear power stations, and bridge splash zones.

By forming a protective film over the surface of the metal, the product is able reduce corrosion. Even if corrosion has already started to appear, the product can also slow further erosion by means of competitive adsorption. In previous cases, Sika® FerroGard has proved its outstanding performance by more than tripling the lifespan of reinforced concrete.

However, to build such an amazing city from scratch should take at least 20 years. I recall my boss's words to me on a recent business trip: "I visited these places ten years ago. You can never imagine what it was like at that time." I truly believe his words were meant to be much more than just encouragement from an outstanding salesman to his young subordinate. Just like Wanda, which has developed from a single store two decades ago to a creator of comprehensive urban development today, this was not accomplished in an instant. In order to put on a great show, you need a support team working together backstage, no matter what kind of show, or whether the producer is an individual, a company, or even a city. <

WOOD FLOOR BONDING



EVERY FOODIE'S HEART BEATS FASTER

The Rocket Restaurant in Canary Wharf leaves nothing to be desired. One of the latest restaurants to be opened by the family business started by Duncan and Anna Watts with Amit Joshi in 1999, this is their third venture, following on from earlier successes in Mayfair and the City. They currently operate five restaurants.

TEXT: MICK HOOPER, ASTRID SCHNEIDER
PHOTO: BRIAN GOUGH

The stylish and slightly quirky interior was designed by Duncan Watts.

> For all of us who like to wine and dine and enjoy the more flavorsome side of life, this is a fitting way to spend the evening. They have a ground floor bar and a heated terrace serving fresh cocktails, beers, wines and champagne. In the first floor restaurant and al fresco mezzanine, they serve their 12-inch stone-baked pizzas and a great selection of fresh salads and grills. The bar is open from 10.30 am Monday to Friday, and the restaurant from 11.30 am. There are lots of flexible options for reserved areas, private parties, group bookings and private hire, so don't wait too long before making a reservation.

The stylish and slightly quirky interior was designed by Duncan Watts, who chose the extremely resilient strand-woven bamboo for the floor coverings after seeing it in a restaurant during a visit to the USA. Strand-woven bamboo has a higher fiber rating than any hardwood, and is twice as hard as oak – an important consideration as the floors have to withstand high foot traffic, including stiletto heels. As it can be harvested every three to five years, it is also environmentally friendly compared to most woods. Duncan approached Ambience Hardwood Flooring, and, after consultation, asked them to supply rustic strand-woven bamboo for the downstairs bar area and 130 x 12 mm tiger solid strand-woven boards for the restaurant zone. All the boards have a lacquered finish, ensuring that the floors are low maintenance and >

Rustic strand-woven bamboo was used for the downstairs bar area and 130x12 mm tiger solid strand-woven boards for the restaurant zone.

STRAND-WOVEN BAMBOO HAS A HIGHER FIBER RATING THAN ANY HARDWOOD, AND IS TWICE AS HARD AS OAK

resistant to spills, making them easy to clean up – the perfect solution for a bar or restaurant.

SikaBond® AT-80 easy-clean wood flooring adhesive was the perfect choice to fully bond the wood floors in the recently opened Rocket Restaurant in Canary Wharf. Incorporating new-generation hybrid technology, SikaBond® AT-80 is the latest easy-to-use adhesive from Sika Limited, the innovators of wood floor bonding. SikaBond® AT-80 not only produces the highest performance, it also offers the added eco-friendly benefit of being solvent- and isocyanate-free.

95 m^2 of flooring were supplied by Ambience Hardwood Flooring, who recommended SikaBond® AT-80 to bond the bamboo boards. "SikaBond® AT-80 can be applied directly to almost any surface without the need for a primer," said Chris Elliott from Bamboo Flooring: "We recommended SikaBond® AT-80 because it is simple to spread and has easy clean properties should the installer accidently get some adhesive onto the face of the boards. We knew that it was going to be used in a high traffic area and Sika products are very strong with a successful track record that has been proven over many years."

Duncan Watts, whose business philosophy promotes attention to detail, reasonable prices at good quality, having fun and providing an ambiance that makes you smile said: "The advice given to us by Ambience Hardwood Flooring was extremely helpful. Using SikaBond® AT-80 to bond the floor made the whole operation fast and easy. Two men completed the job of fitting both the bar and res-

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> taurant areas in three days without any fuss. We are very pleased with the finished result."

Bonding is the modern method for fixing wood floors, delivering numerous advantages over traditional methods such as battens and secret nailing. These include considerable application time savings, absorption of both dynamic and static stresses within the wood itself, and compensation for some unevenness of the substrate. Sika is recognized as the original innovator of wood floor bonding and a leading exponent in the supply of premium wood flooring adhesives with a long and successful track record.

In December 2015 Sika UK obtained approval by RIBA (Royal Institute of British Architects) for the new CPD Presentation on wood flooring adhesive systems. As it has been approved by RIBA it counts as double points towards an architect`s annual learning requirement which currently stands at 35 hours per year. <

Bonding is the modern method for fixing wood floors, delivering numerous advantages over traditional methods.

For all of us who like to wine and dine and enjoy the more flavorsome side of life, the Rocket Restaurant is a fitting place to spend the evening.

FROM SUGAR CANE TO CONCRETE

SUSTAINABLE PRODUCT DEVELOPMENT

It is easy to overlook the use of concrete in society. Concrete plays a vital part in our daily lives and in a functioning society. Its benefits to society are immense, being used to build our schools, hospitals, apartment blocks, bridges, tunnels, dams, sewerage systems, pavements, runways, roads and more.

TEXT: ASTRID SCHNEIDER, JEANNINE LEUPPI
PHOTO: ISTOCK

> Few people realize that concrete is in fact the most used man-made material in the world, with nearly three tons used annually for each man, woman and child. Twice as much concrete is employed around the world than all other building materials together, including wood, steel, plastic and aluminum. For most purposes, none of these other materials can replace concrete in terms of effectiveness, price or performance.

Sustainability and resource efficiency are very important aspects for this kind of business area, also since cement industry is responsible for about 5% of the global carbon emissions, and concrete production requires large amounts of water and aggregates.

Sika concrete admixtures are added to concrete mixture in a very small amount, mainly to improve the performance of the concrete in its solid and/or fresh state. Their purpose is to make concrete and construction works more durable and workable by improving water tightness, corrosion resistance and sulfate resistance, prolonging workability time and improving high early strength development.

What is more, concrete admixtures significantly improve the sustainability of concrete. The use of superplasticizers with unchanged concrete properties can reduce the total amount of binder content in the concrete, and alternative additives can be employed to bring down the active clinker content in the cement. Life cycle analysis (LCA) shows that energy demand and the CO_2 balance can be improved by over 20%. Finally, the water reduction improves the water balance. To make these positive effects visible, Sika has developed a calculation program (Sika MixDesign calculation), which computes and compares the environmental benefits for each designed concrete.

It is a known fact that Sika's ViscoCrete® superplasticizer technology, based on polycarboxylate ether (PCE), promotes the reduction of water and cement in high-volume concrete, while maintaining or improving its properties. As with most chemical products, these are oil-based materials.

To round out the established product range, Sika has developed a bio-based version of its concrete superplasticizers containing by-products from renewable raw materials instead of oil, without compromising on quality. To produce bio-

SIKA HAS DEVELOPED A BIO-BASED VERSION OF ITS CONCRETE SUPER-PLASTICIZERS

based PCE superplasticizer, polyethylene glycol is synthesized by a unique process using molasses (a by-product of sugar production) as feedstock. When using plant-based materials to produce biofuels or other chemicals, there is always a question of whether such crops and land should otherwise be used for agriculture and human consumption. However, since these raw materials are obtained from a by-product of sugar production, they are not competing with products which could be used for food production.

Sika's concrete superplasticizers were also applied in the highest broadcasting tower in the world: 634 m high, the Tokyo Sky Tree is not only the highest broadcasting tower in the world, is also the world's second tallest building after the Burj Khalifa in Dubai, which stands at roughly 830 m. Tokyo's landmark project with its central concrete pillar was built within only 6 months.

The short construction time was achieved by continuous concrete slipform casting. Sika's concrete superplasticizers assured high flowability during concrete filling and fast initial strength development for accelerated de-molding. The superplasticizers employed in Tokyo are high-performance formulations.

It remains vitally important to develop products and systems that can be used to construct more durable, energy-efficient eco-buildings, and concrete can fulfill this very remit. With its strength, durability and excellent thermal mass, concrete is a key component in eco-buildings of today and the future. <

Sika's concrete superplasticizers were also applied in the highest broadcasting tower in the world: the Tokyo Sky Tree.

Upper photo: Patricia Sanchez Lurueña, winner of the international category.

To the left: Cristina García Pimentel took the top award in the national Category.

LITERATURE AT ITS BEST

No matter how much stress you have at work, in your personal relationships, or countless other issues faced in daily life, it all just slips away when you lose yourself in a great story. A well-written novel can transport you to other realms, while an engaging article will distract you and keep you in the present moment, letting tensions drain away and allowing you to relax.

TEXT: ASTRID SCHNEIDER, LUIS CARLOS GUTIÉRREZ
PHOTO: ISTOCK, LUIS MURILLO

> We are on our way to track down Spain's best young writing talents. And we soon find what we are looking for...

We are at the ceremony of the 7th Patricia Sánchez Cuevas International Short Story Award in Madrid, Spain. The competition has set itself the goal of improving over time, from year to year if possible. Not surprisingly, the compilation of this year's winning entries and contributors is called "That Which Remains". Ángel González Lucas, GM of Sika Spain, recalls "When a few years ago we were given an opportunity to sponsor this literary prize, we didn't need to think twice. Although Sika's operations are not directly related to literature, we could not pass up on the chance to support such a great initiative. At the end of the day, two of Sika's core values – the strength to persist and the pleasure of working together – are fully personified by the entrants, who year after year submit their stories, and in the selfless efforts of the many people who work to make the competition a reality."

Even though it has only been held seven times to date, the annual Patricia Sánchez Cuevas International Short Story Award is already a firm fixture in the calendar for lovers of the genre. This latest competition attracted a total of 800 entries, with 508 in the national, 257 in the international and 35 in the construction category.

The works vary stylistically and thematically: Stories that stand out for their robustness and literary dignity, and others for their boldness and novelty. Patricia Sanchez Lurueña won first prize in the international category with "Cuestión de suerte" (Luck of the Draw), "La cita" (The Appointment) by Cristina García Pimentel took the top award in the national Category and "El lunar" (The Blemish) by Javier Ramiro González garnered first prize in the construction category.

The jury was made up of several well-known popular Spanish authors, including Almudena Grandes, guaranteeing a highly cerebral outcome. Give yourself a treat and get hold of one or two of these winning books, put your smartphone to the side, turn it off and start reading...
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BUILDING TRUST