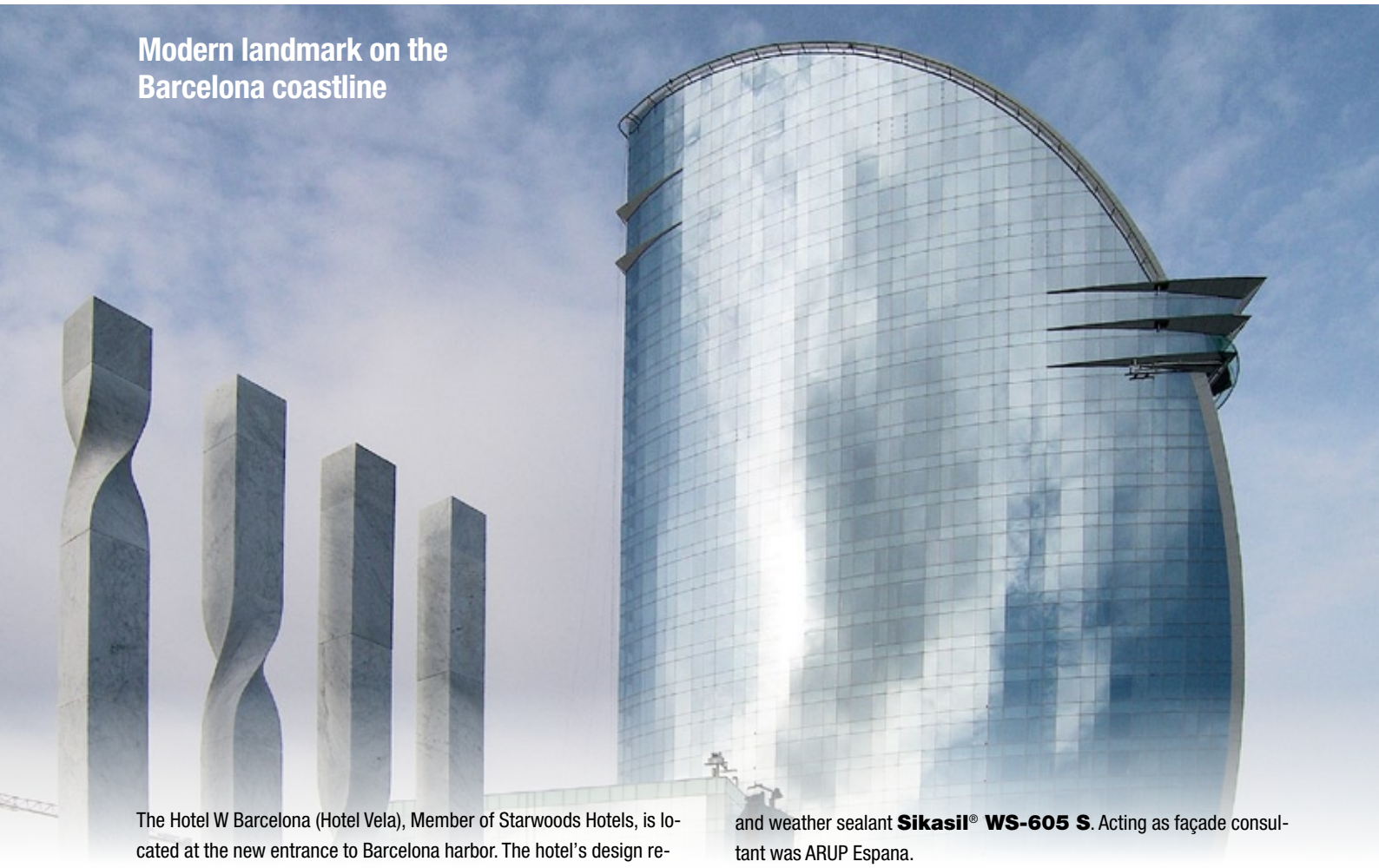
news from sika worldwide

issue no. 3

ambitions direct

Sika at Work

Modern landmark on the Barcelona coastline



The Hotel W Barcelona (Hotel Vela), Member of Starwoods Hotels, is located at the new entrance to Barcelona harbor. The hotel's design resembles a sail-shaped building and rises like a modern icon above the Mediterranean Sea. It's a landmark for an area slated to be redeveloped with office and entertainment facilities. The sail-shaped building on a 10-hectare plot reclaimed from the sea is part of an ambitious urban renewal plan for Barcelona's coastline. The hotel's distinctive feature is the 20000 m² reflecting façade of silvered glass, dazzling with sky colors and sea sparkles.

This masterpiece of architect Ricardo Bofill (Ricardo Bofill Taller de Arquitectura) was realized over the course of three years by façade manufacturer UTE Vela Barcelona (Lorenzon Techmec System & Somec Marine and Architectural Envelopes), using 4-sided structural glazing technology which incorporated structural silicone adhesive **Sikasil® SG-500** and weather sealant **Sikasil® WS-605 S**. Acting as façade consultant was ARUP Espana.

The symmetric insulating glass construction was a challenge at this location, where the façade has to carry both wind and climatic loads. At close proximity to the sea, heavy wind loads occur of up to 4.4 kPa. Thus reliable and durable high-performance products were in demand.The project was carried out with argon-filled insulating glass units made of laminated, tempered safety glass by Zadra Vetri S.r.L. **Sikasil® IG-25 HM** Plus and **SikaGlaze® IG-5 PIB** were used as insulating glass edge seals. For this project all sealants and adhesives were delivered in the same shade of grey to meet the architects' specifications. Sika provided professional project service including drawing reviews, joint size calculations, adhesion and compatibility tests, support for factory and on-site application and ETAG-conform quality control.

Sika®

Innovation & Consistency | since 1910

Clean Rooms

What is a cleanroom?
Well, what do you consider clean? In high-technology manufacturing industries and health-care facilities the understanding of cleanliness goes far beyond general imagination.
A cleanroom is an environment typically used for producing something sensitive to contamination. This environment has a low level of pollutants such as dust, airborne microbes, aerosol particles and chemical vapors.
The trend to improve the cleanliness of manufacturing processes can be witnessed in many industries today, such as microelectronics, photovoltaics and solar panel manufacturing, bio/pharmaceutical and medical device manufacturing, aerospace and optics.
In surveys conducted by the Fraunhofer IPA, 91% of the managers of clean productions admitted that they considered the cleanroom suitability of materials to be an important factor, as equipment and materials have the greatest influence (40%) on product cleanliness.
Suitable materials for clean rooms possess self-contamination properties including particle emission behavior, cross-contamination potential or the emission of highly-volatile organic substances.

Industrial Alliance Cleanroom Suitable Materials – CSM

The industrial alliance "CSM" was founded by the Fraunhofer IPA Institute with the objective of establishing a sound scientific basis for assessing the cleanroom suitability of materials and for determining material selection criteria for clean applications.
As one of the founding members, Sika AG takes an active part in shaping future requirements and developed a range of cleanroom suitable materials ranging from flooring, joint sealant to wall coating solutions. Test results have shown that Sika has the most advanced cleanroom suitable materials portfolio available on the market today. This is supported by many global references, such as the "Cleanest Cleanroom in the World" at the Fraunhofer IPA in Germany, where state-oftheart flooring, joint sealant and wall coating solutions have been used. Find out more about this fascinating project in the next ambitions-direct edition.

C S M IPA Cleanroom® Suitable Materials
Sika AG Industrial Alliance Membership

The Sika Experience

In 2010, Sika celebrates its 100 year anniversary and takes this opportunity to offer our future generation an amazing experience. Via an online competition young people get the chance to participate in one of a total of six two-week journeys to Sika projects. From the largest tunnel in the world, to the development of lightweight cars or the construction of energy-efficient buildings, the participants experience how Sika solutions contribute to a more sustainable future. Applications are now complete, but the Sika Experience trips can be followed online where the participants continuously write blog reports.

http://experience.sika.com/main/the-experience/

Although the Sika Experience is offered only to the happy group of selected winners, everyone is invited to be part of it by visiting the corresponding Sika Experience Facebook Page.

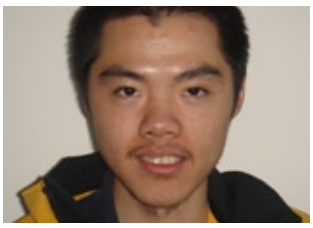
http://www.facebook.com/sika.experience

Social Media platforms function as an exchange through which students can get in touch with each other, form a network and share information. At the same time the Sika Experience Facebook Page offers insight into the project, draws the attention of the students and motivates them to find out more about Sika – even as a potential future employer.

Included here are some statements of Sika Experience participants as well as some enjoyable photo impressions.

Sompol, a Sika experience participant from Thailand, points at the BMW-Welt in Munich, Germany.

Yaobo Ding, Master in Material Science, China



What impressed me the most is the innovation of ideas that Sika engineers have been coming up with during the designing of new components. The heat reactive foam for structural reinforcement, sound damping materials with air bubbles inside, the primerless adhesives for sealing and bonding, all inspired my imagination of intelligent designing of products

Prashant Kumar, Master of Mechanical Engineering, India

When I came to interact with Sika employees I was amazed to see the love they had towards the company. Also people were not only doing their job brilliantly, they also loved their job. When asked I was told it was 'The Sika Spirit'. This was the most impressive thing which I noted in the experience.

Garry Corcoran, Bachelor of Mechanical Engineering, Ireland

The thing that I found about this trip was that I really could not have planned it. I did not expect as much information to be handed out to a Joe like me. It was like being on the Discovery channel. Everything that I had learnt was starting to make sense and my brain was just like a sponge. I soaked up so much information that my head was sore.

Amulya Tata, Bachelor of Chemical Engineering, India

The trip has been like a bag of Santa goodies, just that Santa gave all the goodies just to the three of us, so many memories, people, buildings, food, etc in such a short span of time has been mind-blowing.

The Sustainability Challenge

Current patterns of economic and social development – megatrends – pose considerable challenges to future management of the world's natural resources and also human society in order to avert unbearable strain on the natural environment, national economies, human welfare and cultures.

Young people today constitute an important group, representing tomorrow's leaders and thinkers, whose decisions will have a growing influence on markets and lifestyles. The YES (Youth Encounter on Sustainability) program brings together future leaders from all around the world to explore the challenges of sustainable development and the state-of-the-art research developed to address them. YES was founded in 2000 by the ETH sustainability, a partner of the Alliance for Global Sustainability (AGS), with the aim of developing the leadership capacity necessary for a viable future. Since then, the course has been held bi-annually in Braunwald, Switzerland, as well as in other countries, such as Austria, Australia, Costa Rica, Japan, Kenya and Slovakia, and has attracted a highly diverse group of students to discuss global challenges and opportunities for sustainable development. As per end of 2009, more than 1100 students from over 110 different countries and as many academic fields have been trained in YES courses, and form the YES Alumni network. Typically two weeks in duration, the course trains a maximum of 40 international students per session with a focus on basic sensitization to the multifaceted concepts of sustainable development. Sika is aware of the topic's importance and therefore fosters such initatives and sponsors the YES course.

On the Sika Experience webpage you can also make a contribution by telling your friends about Sika's engagement, by downloading a banner or even by motivating your friends to become a fan on facebook. For each action Sika will donate USD 15 – 25 to sustainable projects.

http://experience.sika.com/?utm_source=sika.com&utm_medium=Teaser%2BHome%20DE&utm_campaign=experience

http://www.facebook.com/sika.experience

http://www.actis-education.ch/

Sustainable Solutions

Setting new Ecological Standards

What the world needs are water based pre-treatment's.
At first sight this statement may sound exaggerated but on closer inspection it proves true.
In the modern world, nothing moves anymore without adhesives technology. In industry and construction, bonding increasingly replaces the more traditional fixing joining and fastening methods of welding, bolting or riveting. To provide proper adhesion, depending on the substrate, a pre-treatment step is required.
Pre-treatments consist of adhesion promoters, which are usually diluted in solvents.
Since public ecological awareness is constantly increasing, Sika focused one of numerous research programs on investigating the possibility of reducing VOC in pre-treatments for elastic bonding. After several years of development, the first products of a water-based pre-treatment range are now commercialized and show a number of advantages over solvent-based solutions.
Water-based products have low to no VOC (volatile organic compounds). In this respect they are noncritical for the environment, while their performance equals or even exceeds that of existing products. They are more comfortable to work with, since they exude weak low odor and application tools can be cleaned and reused a second time. Water-based pre-treatments are not flammable, show no sensitivity to humidity and aren't exothermic. They also offer lower consumption than solvent-based primers.

Sika provides a range of water-based pre-treatment solutions for glass, wood and concrete.
Customers can thereby avoid solvents, consequently improve working conditions and save costs in potential investments for ventilation systems.

Sika® Cleaner S (II)
Best contamination remover for windscreens on the market (assessed by CTS and corporate marketing)

Sika® Primer MR Fast
Sika's parquet primer is a 2C-water based primer for parquet bonding.

Sika® HydroPrep-100 is the first water-based activator system for direct glazing, which can be used analogue to solvent-based activator systems. Due to its advantages and performance, this product is in use at several automotive customers.

Sika® HydroPrep-290 is a 2C water-based primer for teak deck caulking.

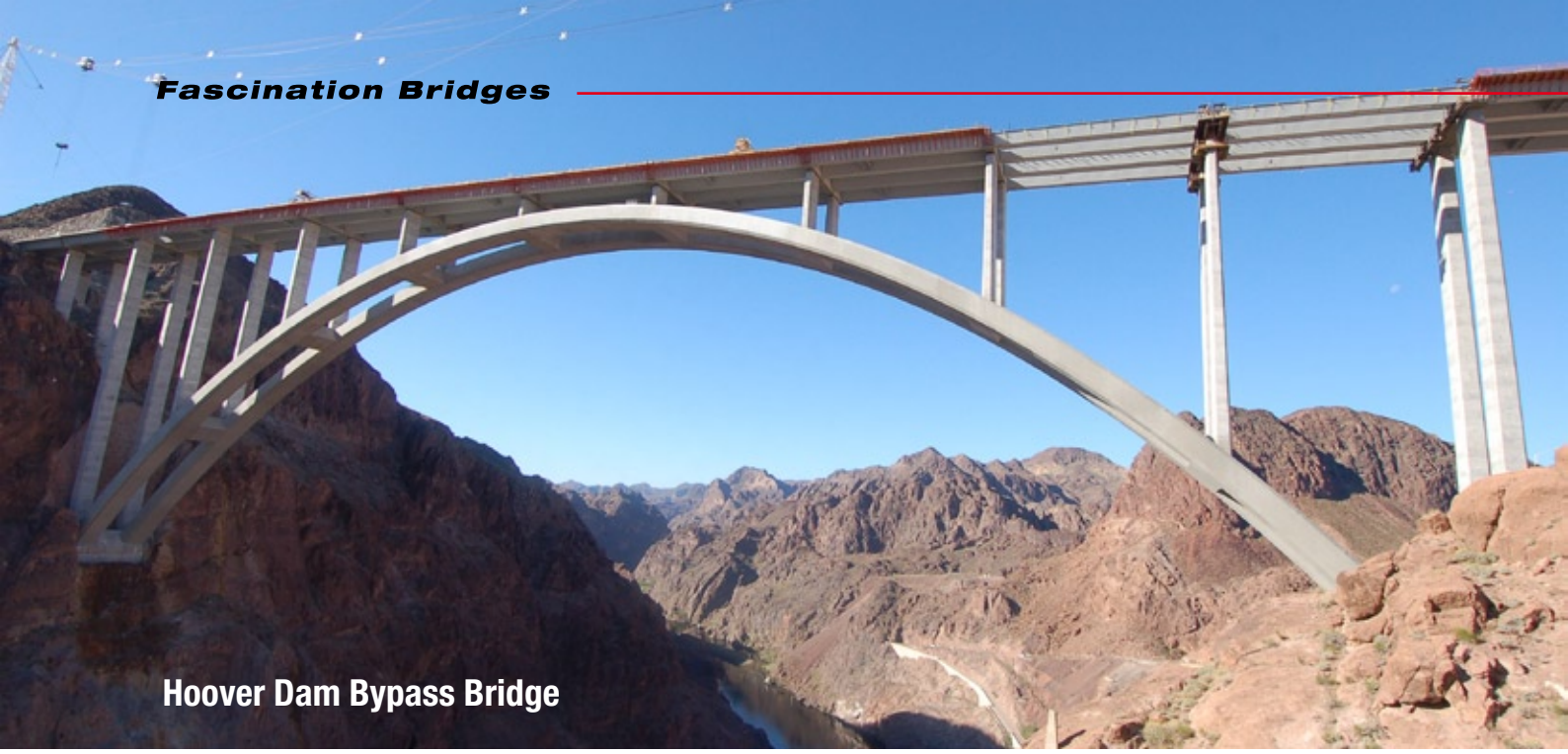
Company Investments

Fit for the Future

Today waterborne technologies replace more and more products based on either modified silicone (MS) or polyurethane (PU) technology that often contain solvents or release volatile organic compounds (VOC) during cure.
Dispersions consist of plastics or rubber particles distributed in water and are often called "latex". Curing of such products that in addition to the dispersion itself commonly contain fillers and various additives occurs by evaporation of water. Due to the drying process single latex particles merge into a homogenous phase.
The Sika Co-Elastic Technology (CET) combines the high performance of a polyurethane dispersion with the well-known properties of an acrylic. This offers an environmentally and consumer friendly alternative for different product technologies.The product does not contain any reactive components, is solvent-free and will therefore be only marginally affected by regulations in the future.
Sika's co-elastic (CET) technology is used for coatings – so-called liquid applied membranes as well as for sealants. It is most likely that especially in the DIY market sealants and adhesives based on our waterborne CET technology will replace the majority of Sika's current reactive systems.

Advantages CET vs. Acrylic:
- Higher durability and better weather resistance
- Lower water uptake and less prone to ponding water
- Similar price level to a good quality acrylic

Advantages CET vs. classic 1C-Polyurethane:
- Longer shelf life
- Water-based and almost odorless
- Lower costs

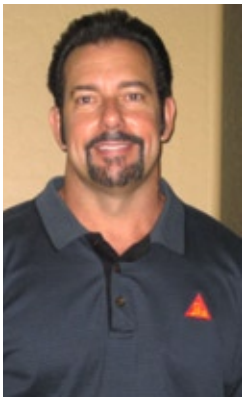


Hoover Dam Bypass Bridge

If you've ever visited the Hoover Dam, a concrete-arch gravity dam located in the Black Canyon of the Colorado River on the border between Arizona and Nevada, then you are well aware that it is a marvel to behold. The dam can draw up to 10 million visitors per year. And for trivia gurus, there is enough concrete in the dam to pave a two-lane highway from San Francisco to New York.
Highway 93 crosses the Colorado River over the top of the Hoover Dam. A constant bottleneck and a potential terrorist target over the top of the Hoover Dam, it became apparent that an alternate roadway would need to be constructed.
The Colorado River Bridge contract, worth $114 million, was awarded to a joint venture partnership of Obayashi Corporation and PSM Construction USA, Inc. The design

was chosen because it not only met the technical requirements but because it was an overall cost-efficient solution that combined the best properties of concrete and steel and had the least environmental impact.
The product offering consisted of concrete admixtures, utilizing **Sika**® **ViscoCrete**® technology, Segmental Bridge Epoxy and Post-Tensioning Grout. A particular success factor was surely the good collaboration with Sika Japan and their long-time customer Obayashi, and the global scope of excellence Sika maintains in the bridge market.
The opening of the Bypass is scheduled for late 2010. Next time you are in Las Vegas, you can drive over the Colorado River Bridge with pride and confidence knowing you've got 100 years of Sika expertise spanning the distance.

Our Employees



Ray Russo
Sika Corporation, District Sales Manager for Arizona /Las Vegas territories

Fourth largest Concrete Arch Bridge

The Hoover Dam Bypass Bridge spans close to 2,000 feet in length and is up 900 feet over the Colorado River; it is the 4th largest concrete arch bridge in the world.
"In my role as a District Sales Manager for both Arizona and the Las Vegas territories, I was involved in the Colorado River Bridge construction project where I dealt with the structural design team on product recommendations and attempting to secure a commitment to Sika products. During the course of construction, I was directly concerned with all orders; being a liaison between the plant and the project owner insuring our production could meet their tight working schedules as well as servicing the contractors, Federal Highway Authority and the design team for this project.
For the project owner, dealing with a single manufacturer who offered admixtures, epoxy and grout was a major advantage.
The biggest difficulty happened when all 4 cranes collapsed one windy day and as a result the cableway which transported everything from one side of the bridge to the other was down. This turned out to be approximately a two year delay for ultimate completion. In the end, the overall project was built to design and incredibly challenging for all parties but was especially satisfying for Sika since this proved to be a total team success story. As a company, we utilized all available resources and personnel from start to finish; Management, Marketing, Concrete and Contractors business units, each contributing a major role in the construction of this amazing structure."

Smart

Energy Smart Roof Installation

Known as the “Batman Building” for its resemblance to the superhero’s mask, the AT&T Tennessee Headquarters Building is a distinctive feature of the downtown skyline in Nashville, Tennessee, USA. At thirty-two stories, the skyscraper is the state’s tallest building, with multiple roof elevations and numerous irregularly shaped roof areas.
Most of the original roofs on the building were ballasted EDPM systems, which were leaking and showing signs of age. Specifications for roof replacement in 2008 called for the installation of thermoplastic membranes, making **Sika Sarnafil’s EnergySmart Roof**® system an attractive option for the building owner. This system provides maximum watertight protection and reduces energy costs by reflecting the sun’s radiant energy. The **EnergySmart Roof**® meets the cool roof requirements of EPA ENERGY STAR®, California Title 24, LEED® and Green Globes™ programs.
The newly-installed Sika Sarnafil roof is performing well. The “Batman Building” is once again safely protected and will not be sending out distress signals any time soon.

Extraordinary

Concrete performance and surface appearance

Precast concrete spiral stairs produced out of reinforced concrete are cast as a single monolithic piece. This is executed by casting fresh concrete into a tailor made wooden formwork which is individually built by carpenters. In addition the concrete stair has to be densely reinforced with steel for static reasons. The intricate formwork in combination with dense steel reinforcement requires a fluid, fresh concrete consistency. This can only be achieved with the utilization of a powerful superplasticizer technology like **Sika**® **ViscoCrete**®. With its powerful liquefaction this product offers high concrete flowability for a sufficient period of workability and the easy and complete filling of the formwork.
Moreover, quality and appearance of such a precast concrete element is of decisive importance since the surface appearance represents a producer’s calling card. A smooth and blowhole free surface can be realized with a suitable concrete mix design and formwork preparation. The formwork surface has to be treated with a mold release agent prior to concrete installation. This ensures sufficient release of both concrete and formwork after concrete hardening. With application of **Sika**® **Separol**® **W** mold release agents (water based emulsions), it is possible to produce precast concrete spiral stairs with fair faced concrete quality.

Social Responsibility

Romuald Burkard Foundation

Social responsibility is not a buzzword for Sika; it is taken seriously and demonstrated concretely. In 2005 Sika's Board of Directors created the "Romuald Burkard Foundation" in memory of Dr. Romuald Burkhard, Sika's chairman for many years. The foundation grants financial support to social and ecological projects in developing countries where Sika operates subsidiaries.

In Indonesia, Sika supports the Yayasan Tirta Lestari, a community organization under the umbrella organization Watsan Action (formally Ye Water Program), which is dedicated working with people and in particular to improving children's quality of life. The organization addresses growing environmental and hygiene problems that are related to water, involving not only improved water facilities but also education and training.

Surrounded by fields of garbage, pools of standing water and often open sewage, the need for improved sanitation in slum communities is evident. Without adequate water drainage, standing water has become a breeding ground for mosquitoes and waterborne disease. People endure inadequate health systems and lack access to proper water supply.

http://www.watsanaction.org/

Company News

ambitions-direct no. 3

Sika' international newsletter to customers

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Future-oriented Packaging

Packaging matters more than we'd like to think. Not only visual appearance but also suitability for transportation and filling are important parameters. Each year, a jury consisting of 14 country representatives from the World Packaging Organisation (WPO) and one representative from the International Packaging Press Organisation (IPPO) nominates and distinguishes trend-setting packaging ideas from around the world with the WorldStar Award.

The WorldStars are presented only to those packages which have already won recognition in a national competition on the basis of consistent and binding evaluation criteria. All facets of trend-setting packaging ideas come into play: innovation and originality, functionality and ease of use, design and emotionality, as well as economy, ecology and safety.

The WorldStar 2009 attracted 237 entries from 35 countries around the world.

Sika won the WorldStar Award for its new click packaging, developed to increase ease of use and reduce consumption of Sika's pre-treatment products.

State-of-the-art packaging for solvent-based pretreatments comprises a plastic stopper and a screw cap. Opening the products was therefore rather complicated and needed an additional opener. The new snap cap on Sika Click Packaging can be opened and closed with just one hand. Compared to existing packaging it's very handy, because it consists of only one part and can even be closed after use. Even after initial opening, the material can be safely stored in the workshop and kept fresh for 30 days.

In addition to these benefits, Sika Click Packaging also reduces consumption by the integrated restrictor, allowing up to 20% more glass replacement jobs to be done with the same amount of pre-treatment product.