

Sika Industry Magazine

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100 Years of Innovation and Consistency



New R&D facility within Sika, Zürich

In 2010, Sika celebrates its 100-year anniversary. Developing innovative products and solutions and being consistent made it possible for Sika to grow throughout its first century. We are now present in over 70 countries, with over 12,000 employees.

Principles of sustainable development play a decisive role at Sika because these principles answer to today's and tomorrow's challenges. The challenges are driven by megatrends such as water management, energy conservation or climate protection, all of which will shape future economic conditions and growth. **Entrepreneurial success depends on intelligent solutions matched to these megatrends. Sika looks optimistically into the future, when the know-how, the service and the products are needed more than ever.**



Sika Group News

March 2, 2010

Full Year Results 2009 Market Share Gained

In the second half of the year under review income was higher than in the first half-year due primarily to improved sales and lower costs, especially for raw materials. Overall in the reporting year 2009 Sika achieved net sales of CHF 4.155 billion. Operating profit (EBIT) before restructuring amounted to CHF 400.6 million (9.6% of net sales, in 2008 9.1%) while net profit before restructuring totaled CHF 269.4 million (6.5% of net sales, in 2008 5.8%).

The difference of the net sales to the previous year comprises a sales decline in local currencies of 3.9%, which itself includes an acquisition effect of 2.3%, and a currency effect of -6.3%. Net sales in Swiss francs thus lay 10.2% below the level of the previous year..

Business with products for industrial manufacturing benefited in the second half-year of 2009 from programs initiated in various countries to promote the purchase of new vehicles with low fuel consumption. Thereby the drop in sales in local currencies, which amounted to 20.1% after six months, could be eased over the entire year to 11.3%. Comparison with the slump in market volume in the building and construction industry by up to 30% and among automobile manufacturing suppliers in industrialized nations by as much as 50% clearly indicates that Sika gained market share.

In local currencies Sika grew in the Region IMEA (India, Middle East, Africa) by 11.2%, and in Region Latin America by 8.0%. In the Asia/Pacific Region sales were nearly unchanged overall, though development from country to country varied. While in emerging markets such as China or Indonesia Sika achieved double-digit growth rates, sales dropped in OECD nations (Japan, Australia, New Zealand). Sales declined in the remaining Regions: Europe North -8.8%, Europe South -4.0%, North America -7.7%. Due to the increase in sales that Sika achieved in emerging

markets, their overall proportion of Group sales rose from 32% in 2008 to 34% presently. Overall in 23 countries, sales growth was positive in the year under review.

Profit.

Following the substantial rise in raw material costs in 2008, Sika benefited in the year under review as prices for raw materials fell and product formulations were adapted. Gross profit therefore rose to the end of the year by 3.5 percentage points, amounting to 55.2% of net sales. Adjusted for acquisitions the company was able to significantly reduce personnel and other operating costs. Operating profit before depreciation and restructuring costs improved by 1.0 percentage point as a proportion of net sales. Operating profit before costs of restructuring improved in proportion to net sales from 9.1% to 9.6% (CHF 400.6 million). The restructuring measures to concentrate European production of Sikaflex sealants and adhesives and Sarnafil/Sikaplan roofing membranes impacted the income statement with a one-time charge of CHF 56.6 million, whereby Sika achieved an operating profit of CHF 344.0 million. Net profit before restructuring at CHF 269.4 million (6.5% of net sales) lay both in absolute terms and relative to sales above the result of the previous year of CHF 267.4 million (5.8% of net sales).

Liquidity and balance sheet.

Due to the high operating free cash flow of CHF 368.7 million (2008: CHF 165.8 million) as well as the 5-year bond issued in the spring in the amount of CHF 300 million (coupon 3.5%) for long-term financing, cash and cash equivalents rose as of the end of the year from CHF 318.3 million to CHF 801.6 million.

Outlook.

In the building and construction industry, market-specific weaknesses must be expected. Companies could thus continue to postpone investments and market volume, particularly for commercial

buildings, may decline. Whether such a decline could be compensated by strengthened investment in infrastructure projects is also dependent, alongside the general economic development, on how quickly and strongly economic stimulus programs demonstrate effect in markets that are relevant for Sika. In the area of industrial manufacturing Sika anticipates a recovery of markets proceeding from their current reduced level. The company assumes that the Regions will continue to develop differently. While in the OECD nations a quick recovery is not expected, the emerging markets in Latin America, in Asia, the Middle East and in India will remain on a growth curve.

Sika can quickly adapt costs to altered conditions without thereby diminishing its capability to leverage potential market opportunities. For example the demand for efficient and cost-effective building procedures, energy-optimized structures and sustainable construction materials continues rising. In addition industry is also calling for new solutions that effectively reduce the weight of motor vehicles and sustainably lower the costs of assembly. Sika is attuned to these demands with effective and economic systems.

March 9, 2010

Sika Acquires Automotive Glass Replacement Adhesive Systems Business

Sika AG announces that its U.S. subsidiary, Sika Corporation, has acquired the automotive glass replacement business of ADCO Products, Inc. ("ADCO"). The business acquired reaches an annual turnover of approximately US\$ 6-7 million and will be integrated into Sika's Aftermarket Business Unit in the United States and its Industry Division in Canada and Latin America.

Sika acquired the rights to the "Titan" brand name of auto glass adhesives. Also, 4 employee sales representatives from ADCO's AGR (Automotive Glass Replacement) division are expected to join Sika's existing 21 person sales force which is currently the largest sales force in the US AGR Market. Sika Corporation is based in Lyndhurst,



100 Years Sika

In 2010, Sika turns 100 years.

From its early days, Sika was accompanied by the Gotthard tunnels: The first Sika product, Sika-1, invented in 1910 by the founder Kaspar Winkler became a success in 1918 when the first Gotthard railway tunnel needed to be waterproofed. Today, the new Gotthard base tunnel again is a very important project for Sika. With 57 km, the longest tunnel on earth celebrates its breakthrough in 2010 as well. At this new tunnel, Sika is one of the main suppliers. After extensive testing, Sika and Holcim together won the contract for three of the five sections. Although Sika-1 is still part of the product range, today – after 100 years of research and experience – Sika applies much more advanced products. High-tech admixtures for shotcrete and tailored waterproofing systems are need-



Waterproofing the first Gotthard railway tunnel

ed to guarantee a waterproofed tunnel with a service life of 100 years. In the summer of 2010 the last breakthrough in the tunnel through the Swiss Alps will be celebrated. The construction works of this important infrastructure project, however, will continue until 2017. Sika can be proud of a history that is marked by innovative products and construction systems as well as a consistent behaviour towards customers and society.

Open a new era – www.sika.com

Where unity meets versatility: Sika launches a new corporate website. The new website, which can be found at www.sika.com, provides a complete and modern look at the Company's profile and its solutions.

The new corporate website covers a first step. New country sites will follow. The main features encompass a new content-management-system, an e-catalogue, closed user groups (CUG's), optimized web design and a global navigation structure.

Sika's activities are available by accessing the Sika Group section. Concrete producers, contractors, distributors and industrial customers may find hands-on info for their work by accessing the section "Products/Solutions".

The layout system within the new Sika internet visualizes content immediately, even that information which isn't displayed on the top level of the navigation.

Where unity meets versatility and usability. www.sika.com

The screenshot shows the Sika Group corporate website. At the top, there is a navigation bar with 'Sika Group' and 'Solutions / Products' tabs. Below this, there are links for 'About us', 'Media', 'Career', 'Sustainability', 'Publications', 'Investors', and 'News'. A search bar and 'Quick Navigation' are also present. The main content area features a large banner image of a bridge and a hot air balloon. Below the banner, there are three main sections: 'Sika Profile', '100 years Sika', and 'Sustainability'. The 'Sika Profile' section includes a brief description of the company. The '100 years Sika' section celebrates the company's centennial. The 'Sustainability' section highlights the company's commitment to innovation and consistency. At the bottom, there is a footer with various links and contact information.

New corporate website, www.sika.com

Milestone for Sika Automotive Direct Glazing Range

Not only does 2010 mark the 100 year celebration for Sika, but it is also a milestone for Sika Automotive's PUR OEM direct glazing range. Starting the first week of 2010, Sikaflex®-250 SV-2 was introduced on the line at Volvo Car Corporation's production facility in Gent, Belgium.

Sikaflex®-250 SV-2 is a cold pumpable one-component PUR direct glazing adhesive specially developed for use at Volvo Car Corporation and will offer further improved crash characteristics.

Sikaflex®-250 SV-2 is the first pumpable production line PUR adhesive to be supplied by Sika Automotive directly to Volvo Car Corporation for direct glazing applications.

This material further compliments the already successful range of PUR adhesives, including the fast curing "SikaTack® Plus Booster" repair set, currently in use at Volvo Cars Customer Service, a sister company of Volvo Car Corporation. Volvo Cars Customer Service handles all VCC branded OEM aftermarket products for Volvo Car Corporation.

In addition to the roll-out of Sikaflex®-250 SV-2 at the Gent facility, a further introduction of Sikaflex®-250 SV-2 is currently in progress at the Volvo Car Corporation Torslanda factory in Göteborg, Sweden. The final stages of the implementation process of Sikaflex®-250 SV-2 at Torslanda are scheduled to be completed by the start of the 2nd quarter, 2010.



The PUR direct glazing cell located at Volvo Car Corporation's Gent facility in Belgium. Photo from February 2010.

The Art of Engineering and Technology

In July 2009 at the Saatchi Gallery in London, Jaguar Cars unveiled its new masterpiece, the All New XJ. This car, the flagship of the company, to be released in January 2010, marked a significant turning point in the company's future strategy and an even bigger milestone in the growing relationship with Sika Automotive.

Beneath the muscled, silk curves and lines of the exquisite aluminium body exterior lay a whole host of innovative and market leading materials, components and concepts from the entire Sika Automotive range. A long, 3 year development between Sika Automotive and Jaguar Landrover culminated in the new all aluminium XJ being the first car to boast containing all Sika Technologies for Bonding, Sealing, Reinforcement and Protection by utilising Crash Supportive Structural, SikaReinforcer® components, Expanding SikaBaffles®, Sika Expanding Extrusions, SikaReinforcer®, Structural NVH Applications, Sika Roof Bonding Adhesives and Sikaflex® Direct Glazing Adhesives for all the glass.

A combined team from Sika Automotive including Commercial, CAE, Materials and Engineering were fully integrated into the customer engineering and manufacturing groups for a 3 year development period in order to design, specify and engineer the custom made solutions for each of the applications within very tight deadlines and commercial and technical targets.

Sika Automotive's relationship with Jaguar Landrover began in 2003 with 4 small SikaBaffle® applications on the Freelander. In 2004 Sika Automotive gained its first SikaReinforcer® application on the Discovery 3 as part of the full acoustic baffle package on that car. Since that time Sika Automotive Products have been utilised more and more by the company on Range-Rover and Jaguar vehicles resulting today in Sika's fully integrated, full concept materials approach utilised on the new XJ, complementing Jaguar Landrover's weight saving and



class leading refinement and safety targets of the all new aluminium design.

Sika expertise was also employed to allow a full range of repair solutions, tailor-made for the Jaguar Landrover dealer network to allow servicing and repair with OEM specified and designed materials and components including Sika Direct Glazing Repair Kits, SikaBaffle®-278 Repair System, and SikaReinforcer®-900 R Repair Kits.

The success of the close, combined engineering work and relationship between Sika Automotive and Jaguar Landrover in developing these innovative and class leading structural and

acoustic solutions was further strengthened by Sika's technologies featuring significantly in the Jaguar presentation of the vehicle at the recent EuroCarBody presentation at which it scored highest against the other OEM's for material concept and achieved second place overall.

Sika Automotive has since started development with Jaguar Landrover on new technologies for their future vehicles and will build off the fully integrated concept utilised so successfully on the new XJ. Just proving, that beauty, strength and protection can be combined through innovation, technology and art.



The new XJ.

China is Taking the Train

The new high-speed network will be the largest, fastest and technologically most advanced in the world.

During 2009, a year in which there was great turmoil in the Global economy, Sika China converted an opportunity that is a first in that country. **A new generation of high speed trains capable of travelling at 300 km/h are being produced in China, as the huge investment in rail infrastructure by the Chinese Government is rolled out.** The CRH3 (China Railway High speed serial 3) is a joint venture between Siemens and CRC which needed a solution for honeycomb panel bonding. The customer was approached to present a validated bonding proposal, based on Sika's expertise and knowledge in the rail market.

Consequently certain key factors influenced the decision to choose Sika as the adhesive supplier:

- SikaForce®-7710 is available with a variety different open and fixture times, allowing for its use in both summer and winter temperatures and changes in production volumes.
- Initial adhesion can be improved by the application of heat, reducing the time taken to assemble and bond components.
- Sika China supplied comprehensive Technical training during the product testing phase and also whilst dispensing equipment was trialled and installed. This enabled the customer to gain confidence in the technology and assess the level of support provided by Sika to its customers.
- SikaForce®-7710 achieved the highest necessary fire classification required by the Chinese rail authorities.

This successful example of project management, including fire & smoke certification and provision of dedicated application equipment will form the template for other applications of its kind in the coming years.



CRH3 – China Railway High Speed Serial 3, 300 km/h. China is investing USD 300 billion in the expansion of its high-speed railway network to the year 2020.

Oasis of the Seas – a Swimming City



Largest cruise ship ever built - MS Oasis of the Seas

The MS Oasis of the Seas is the most modern and largest cruise ship ever built. The boat offers luxury that includes an outdoor aquatheater with 1,380 seats, more than 70 bars, 2 shopping streets – one of them located in a true copy of Central Park, NY, with more than 1,200 trees and bushes.

If that is not enough the passengers can enjoy one of the 21 swimming pools, go ice skating or relax while watching a movie in the cinema. But when the boat cuts through the water, there will be a lot of vibrations in the ship caused by the engine power of more than 97.000kW. And when 5400 passengers plus more than 2100 crew members are talking, playing, run-

ning in the gym, listening to entertainment or working they will also create a lot of noise. Being on a cruise ship those vibrations and noises can change the perfect vacation into the worst nightmare of a holiday with no sleep.

To prevent such problems, Sika Acoustic Flooring plays a key role. Sika provides high quality sophisticated acoustic flooring systems from the extensive range of SikaFloor® Marine portfolio consisting of visco-elastic vibration damping systems, floating floors, primary deck coverings and many more. These systems can deal with the problems of vibrations as well as noise. The passengers of the MS Oasis of the Seas will not even notice that under the

carpets in the corridors, under the tiles in the wet areas, under their cabins and under a lot of the indoor facilities Sika has given them a quiet and peaceful journey providing more than 110.000m² (same as 17 international football fields) of acoustic flooring.

New Supply Agreement for Sika

Sika UK approached Auto Windscreens with a new product allowing a Safe Drive-Away Time of 1 hour - in almost all weather conditions.

With an industry reputation for leading innovation, Auto Windscreens allowed trials in selected fitting centres. **The positive trials were the basis of commercial negotiations with Sika and as a result a supply agreement was signed.**

Justin Snell - global key account manager AGR - organised the "train the trainer" event in Zurich. **The idea was to train eight of Auto Windscreens Regional Training Officers (RTO) who would be responsible for the roll-out of the new Sika adhesives system to all of Auto Wind-**

screens 700+ automotive glazing technicians. The RTOs all had indepth personal knowledge and experience of replacing automotive glazing in all weather conditions.

During the training event Auto Windscreens RTOs learnt about the Sika AGR approach and were shown the new R&D facility of Sika in Zurich. Also a factory tour was organised and additional information was given to the RTOs, many of whom were familiar with AGR having worked in the automotive glazing industry for a number of years.



The Auto Windscreens team was quite impressed by the new R&D facility in Zurich



Facts about Auto Windscreens:

- The leading supplier of automotive glazing services to the fleet industry
 - 1.2 Million calls for glass incidents each year
 - UK-wide network of fitting centres backed of a fleet of over 700 mobile service units
- for more information: www.autowindscreens.co.uk

David Tobler - product manager AGR - is training the trainers of Auto Windscreens



Bonding Technology Streamlines Production of Solar Thermal Collectors

Even though the current economic climate has not hit the solar thermal sector as hard as the photovoltaic sectors, there remains considerable potential for optimization in the production of thermal collectors.

The bonding technology has improved and simplified the construction and the automated production of the flat collectors. The combination of these factors translates to the manufacturers as cost savings in design and production, and enhanced product quality.

Savings

The simplified methods mean that the glass can be bonded directly to the frame or tray of the collector, thus avoiding the need for additional profiles, frames and dry gaskets.

The process can also be entirely automated so that, together with the lower component count, substantial cost savings can be made.

Quality and Longevity

As Sika has used similar technology on building facades for several decades, the ability to withstand all weathers is well proven.

Consequently, the approved and tested products ensures that vital joints are extremely durable and watertight, which is not always the case when using the conventional dry gasket method.

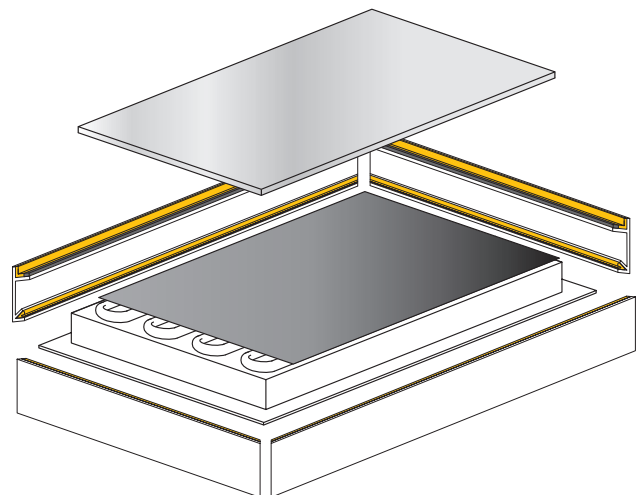
With the elimination of the frame, the solar panels not only look sleeker and more stylish, but they no longer have raised edges that trap dirt and water, and when warm enough, snow simply slides off.

The backs of the solar panels can also be bonded in the same way thereby doubling the benefits and ensuring an overall weather-tight seal.

Once again, Sika bonding technology is instrumental in improving quality and driving down costs.



Solar thermal flat collectors



The Light and Energy Game

The facade of a building is not only functional, it also lends a building character. So, besides its primary functions, a well designed facade saves energy and provides the aesthetic finish to the architecture.

With the introduction of its Engineering Silicones to the Hungarian building industry, Sika broke into a new market area for Sika Hungary.

Every new endeavour in industry involves the building of relationships with both customers and symbiotic businesses, so, as a first step, Sika Hungary joined the Hungarian Aluminium Windows and Facade association (ALUTA). This allowed them to make the acquaintance of many of the key insulating glass producers and facade manufacturers.

Then, with a lot of hard work by the Sika Hungary team, a series of projects were won.

The first glass facade project was at Váci út 33 in Budapest.

This facade was built by Frontal/ALUFE who are a fabricator of modular and glass facades in both Hungary and Germany.

Frontal/ALUFE were actively seeking an improved energy-efficient glass system for the facade. Jüllichglas won the supply rights after the Sika team introduced them to Sikasil® IG-25 HM, an insulating glass secondary sealant, which they used in the production of their argon-filled insulated glass (IG) units.

The deal was clinched after the use of the Sikasil® product reduced the Ug value of the units to 1,0 kW/m² K. This required the technical assistance of Sika FFI, for the calculation of the IG seal depth. The Sika team went on to support Jüllichglas with the change to Sikasil® IG-25 HM using their existing pumping equipment.

After the glass was fitted, Frontal/ALUFE sealed all visible joints with the Sikasil® IG-25 HM compatible weather sealant, Sikasil® WS-605 S.



Váci út 33 in Budapest

Krisztina Palace

The next project was at the Krisztina Palace which has a modular facade. This was fixed using fast bonding technology, as the large glazed modules were quite complex and there was a need to get the two hundred bonded-facade elements to site urgently so as not to set back the building schedule.

To stay ahead of the competition, ALUKOL is ever vigilant for new and innovative solutions in facade technology. However, in this case there was also a need to be fulfilled.

They spoke to Sika who were required to identify an adhesive with good adhesion to aluminium, and sufficient temperature resistance to withstand the powder-coating process. It was also necessary for the adhesive to be 'invisible' when sealing the edges of the covering sheets. Sika recommended the heat-curing SikaPower® family as the solution; of which, the first strength trials for this type of bonding system had been conducted in the summer of 2008.

After conducting their own set of trials at TS Krakow, ALUKOL finally approved SikaPower®-423 for bonding the outer overlay of the modular elements, and SikaPower®-415 for seam-sealing prior to powder-coating. The lap shear tests had revealed cohesive break at high strengths and an added benefit was that both adhesives cure completely during powder-coating.

After bonding the units with Sikasil® SG-20, the now fully bonded overlay showed very good insulation against both heat and noise.

The glazed overlay units were now passed to Höszig Kft for final assembly of the glazing and the fitting of the hardware that adapts the glazing to the building.

The glazed units were bonded together using SikaGlaze® IG-50, which is compatible with Sikasil® SG-20.

As mechanical fixings cannot be made to the powder-coated rear surface of the glass, all inserts and L profiles had to be bonded with Sikaflex®-252.

Then, when final assemblies were fitted in the building, all interior joints were sealed with Sikaflex®-221, thus satisfying the requirement for a facade with hidden fixings.



Krisztina Palace



Höszig Kft was also the facade contractor on two further projects. The first was the facade for the Cella Septichora/Pécs which has a Walkable Glass roof. On this project, the joints were sealed with Sikasil® SG-500. The two component Sikasil® SG-500 cartridge allows easy application on-site.



The photograph shows the new bridge over the Danube. The glass in the facade is fixed mechanically, but sealed using Sikasil® WS-605 S.



In the Eiffel Office Building (above) Schal Tech created the facade using IG units by Jülichglas



The second was the apartments and glass balustrade at Lake Balaton. Here, the glass panels were bedded in a U profile using SikaForce®-7780. The mantles were bonded using Sikaflex®-552, and sealed with Sikasil® WS-605 aluminium. Then SikaPower®-7780 was applied with Metermix equipment, and one hour later, the pre-fixings could be removed.



The facade of the "K2" building shown here uses coloured glass panes embedded in Sikasil® SG-20. Produced by Rollatech, the project is a fine example in the use of designer glass to create a finish of distinction.

Always eager to introduce new ideas into their work, architects are also keenly aware of environmental issues and the rising costs of energy. One of the effects of this is the enormous efforts applied to energy conservation, which is increasingly a focus of attention for investors.

In spite of the economic down-turn, building and development continues and Sika's range of state-of-the-art products are perfectly placed to provide innovative solutions for designers and improved returns for investors alike.

Join the Sika Experience: Construction Site Adventure, Fascination of Research



Sika AG, a leader in process materials for the construction industry and for industrial manufacturing, is searching worldwide for students and young engineers who want to gain practical experience in large-scale, complex construction projects and in industrial research. At the center of all efforts is the development of products and processes that align with sustainability. Please apply online immediately if you're interested.

This year Sika is celebrating its 100-year jubilee. On the occasion of its birthday the company is opening its doors to especially exciting construction and research projects for young people from all over the world. Among these projects are included for example the major building site of a new tunnel through the Alps, which at 57 km sets a world record for length and as of 2017 will connect Northern and Southern Europe with a railway line for high-speed trains (www.alptransit.ch). Simply the trip into the mountain is a special adventure in this case.

Another project deals with adhesives for lightweight metals. In this topical area Sika Research repeatedly finds fascinating solutions for the vehicle construction industry, making vehicles of all types lighter in weight and safer to drive, while at the same time lowering the costs for their production (www.sika.com/industry).

Sika fully recognizes its obligation to the principles of sustainable development, and from these principles derives its own path towards future economic success. Project participants will thus encounter above all the challenges to be mastered along this path. Central in this is the development of products, applications and processes.

An overview of the projects available for selection as well as of Sika's endeavors on behalf of sustainable development can be found on a website the company has set up especially for this jubilee year (www.sika.com/experience).

Here interested students and aspiring engineers from the disciplines of architecture, construction engineering, chemistry and related fields can apply online to take part. Applicants are required to solve basic technical tasks, such as calculating the CO₂ emissions of an automobile or formulating their ideas on the topic of sustainable development.

From among all submitted applications Sika will select those candidates who are most appropriate, and who will then travel in small, interdisciplinary teams to the various projects. Under the leadership of experienced project managers, the participants will spend two weeks working on solutions for a range of construction and technical fabrication assignments, reporting on their experiences with Sika and the projects in a blog.

The successful applicants will incur no costs, as Sika will assume both travel expenses as well as costs for accommodation and meals.

Event Calendar

DATE	COUNTRY	CITY	EVENT	FURTHER INFORMATION
April 13 – 15, 2010	France	Paris	JEC	www.jecomposites.com
September 6 – 9, 2010	Spain	Valencia	PV Sec	www.photovoltaic-conference.com
September 7 – 10, 2010	Germany	Hamburg	SMM	www.hamburg-messe.de
September 14 – 19, 2010	Germany	Frankfurt	Automechanika	www.messefrankfurt.com
September 23, 2010	Germany	Hannover	IAA	www.iaa.de
26. September – 1. October 2010	Germany	Düsseldorf	Glasstec	www.glasstec.de
28. September – 1. October 2010	Germany	Düsseldorf	Sorapeq	www.solarpeq.de



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