



INNOVATIONS FOR LIVING™

COMPOSITE SOLUTIONS

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OWENS CORNING LAUNCHES NEW HIGH-PERFORMANCE REINFORCEMENT Page 4

First application in wind energy enables blades that are stiffer, stronger and more competitive.

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A MESSAGE FROM CHUCK DANA

PRESIDENT, COMPOSITE SOLUTIONS BUSINESS, OWENS CORNING



Welcome to this second edition of *Composite Solutions* magazine, a publication from the Owens Corning Composite Solutions Business. As I write this in early March I look forward to seeing many of you this month at *JEC Composites 2006* in Paris. We have much to show and talk about during that time.

We begin this issue with an update on the wind energy market which we expect to continue being the fastest growing global composites market for the foreseeable future. This prediction is a relatively easy call because its growth is being driven by three strong forces – environmental concerns, government tax credits and rising prices for oil and natural gas.

The wind energy industry is also working hard to reduce the cost of generating electricity and Owens Corning is poised to help with a new family of reinforcements that will enable the industry to make larger blades that are stronger, stiffer and more affordable. Introduced at the European Wind Energy Conference in Athens, HiPer-tex™ and WindStrand™ reinforcements resulted from a series of recent Owens Corning innovations that will allow us to offer high strength fibers at a cost/performance level never before achieved.

WindStrand reinforcements are an “enabling technology” for this industry because they will allow turbine designers and fabricators to make larger blades that are cost competitive and weigh no more than current blades. HiPer-tex reinforcement will help open doors for customers in other markets as well.

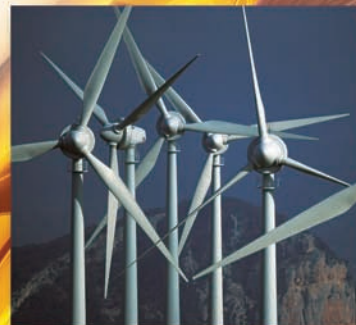
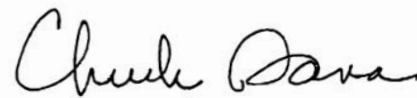
This new reinforcement platform is a great example of living our corporate purpose, which is Delivering Solutions, Transforming Markets and Enhancing Lives. It is also a reflection of our commitment to deliver value for our customers and the end-user. There is more information about this exciting new family of products on page 4.

Our Automotive Solutions business is profiled on page 5. If you are in the automotive business our application development teams in Europe and the US would love to work with you on new applications for the auto and truck markets.

On page 7 you will find a preview of our stand at JEC and the related technical papers our people are presenting with others. Don't miss the Mercedes M-Class that incorporates new composite applications that add value for the manufacturer and the consumer.

We look forward to seeing you. If you are not attending JEC this year, we hope there will be another opportunity to talk with you soon.

Sincerely,



WIND ENERGY TO REMAIN FASTEST GROWING COMPOSITES MARKET

Environmental Concern, High Fuel Costs and Government Support All Driving Gains

When it comes to attractive business growth rates it's hard to beat 15 to 20 percent and that's exactly what is expected in the wind energy market during the next five years.

Already about 60 to 70 percent of the size of the marine market in just 10 years, wind energy is expected to catch up to marine in the next three years. Total spending for wind energy installed turbines in 2005 exceeded US\$14 billion.

While recent growth has been impressive, the wind energy market still has the potential to grow for a very long time. Wind power today accounts for less than 0.2 of 1 percent of total world electricity generation.

What percentage of the world's energy could realistically come from an intermittent source like wind is open to debate but some countries already capture a substantial portion of their energy needs with wind turbine generators. For example, Denmark now gets 25 percent of its electricity from wind turbines, and Germany gets 5 to 6 percent of its electricity from wind.

"Wind energy is sure to be an exciting and dynamic market in the foreseeable future," said Agusti Porta, Global Wind Energy Business Manager at Owens Corning. "The wind energy market has really taken off in the past 10 years and we expect the next 10 to be just as active."

Porta says several factors are driving growth in the market. One is certainly the environmental concerns associated with other forms

of energy and the desire to increase the use of renewable resources. Wind is clean, green and readily available.

A second factor is the escalating cost of oil and natural gas, which has made wind energy more economically viable. When oil and gas prices were lower, the cost of wind energy made some power generating companies reluctant to install wind turbines. With every increase in the cost of oil or gas, however, wind energy becomes more attractive.

A third major driver is the action taken by governments around the world to encourage the use of renewable energy resources and mitigate the global warming effect. At least some of those government actions were spurred by the Kyoto Protocol and the European Directive. In the US for example, the Energy Policy Act of 2005 extended a Production Tax Credit of US1.9 cents per kilowatt hour for the first 10 years of a wind turbine's operation. The European Directive calls for 12 percent of total energy to come from renewable sources by 2010.

A current trend in wind energy is toward larger turbines with bigger blades. Ten years ago wind turbine blades were 13 to 14 meters long (43 to 46 feet) and produced about 225 to 300 kilowatts of electricity. Today, blades are 35 to 40 meters in length (115 to 131 feet) and the turbines produce 1.5 to 2.5 megawatts of electricity. Prototype equipment has been built with blades exceeding 50 meters (164 feet) and power generating capacity of 5 megawatts.

According to Porta, there is also a move to place wind energy farms offshore where prevailing winds blow nearly around the clock. While the additional power generating time is attractive, the cost of building wind turbine generator towers in water is higher.

"To make offshore wind farms really attractive, the builders want 4 and 5 megawatt generators," explained Porta. "That means wind turbine equipment with larger and stronger blades. Recognizing that need, Owens Corning has developed a new affordable family of high-strength reinforcements. Trademarked WindStrand™, the products will be made with a new HiPer-tex™ reinforcement platform we recently introduced at the European Wind Energy Conference and Exhibition (see page 4)."

Porta said Owens Corning is already one of the leading materials suppliers in the wind energy market. With continued innovation and new products like Windstrand reinforcements, Owens Corning and its customers should experience favorable breezes in the wind energy market for many years to come.

Contact Agusti Porta at +34-639.32.66.06.



Windmill photos on pages 2, 3 and on the cover © EWEA/WINTER

OWENS CORNING LAUNCHES NEW GENERATION HIGH-PERFORMANCE REINFORCEMENT

New technology enables applications that are stiffer, stronger and more competitive.

At the European Wind Energy Conference and Exhibition (Feb. 27-March 2, Athens, Greece), Owens Corning stunned attendees by announcing plans to make high performance reinforcements at a cost substantially lower than competitive materials.

Trademarked HiPer-tex™, the new reinforcement platform has performance characteristics that are similar to other high performance reinforcements but at a cost/performance level that is much more attractive than current materials.

“Our challenge was to deliver value innovation that will transform the composites industry,” said Wisdom Dzotsi, Owens Corning Global Product Manager, Type 30® Direct Roving. “The new HiPer-tex reinforcement platform is a breakthrough because it delivers significant improvement in performance at an affordable cost to our direct customers and end-users.”

Compared to conventional E glass fibers, HiPer-tex reinforcements provide:

- 35 percent higher strength
- 17 percent higher stiffness
- Higher fatigue and impact resistance
- Higher aging and corrosion resistance
- Higher temperature resistance

Dzotsi said the new high performance platform also combines state-of-the-art technology and formulation in a process that minimizes impact on the environment.

“We have tested laminates made with HiPer-tex reinforcements and found their performance to be comparable to laminates made with other high performance glass fiber materials,” said Dzotsi.

Dzotsi said HiPer-tex reinforcements will be available from Owens Corning in late 2006. The first HiPer-tex reinforcement will be WindStrand™ roving, a single-end or direct roving for the wind energy market. The roving will be available in Tex or Yield ranging from 300 to 2400. WindStrand fabrics will also be available.

Researchers at the Owens Corning Science & Technology Center in Granville, Ohio, USA, are developing reinforcement products tailored for other markets and applications.

Dzotsi says the big potential for the new HiPer-tex reinforcement is in opening the door to applications that are not economically feasible at the current cost of competitive reinforcement products. The wind energy market is a good example as design engineers are developing turbine generators that can produce 5 megawatts of electricity.

HiPer-tex reinforcement will allow turbine manufacturers to increase blade lengths by as much as 6 percent and deliver up to 12 percent more power – for up to 20 percent less cost than any competing carbon-glass hybrid solution currently on the market.

“Providing specialty performance at a more affordable cost level will enable our customers to do things they previously thought were not possible,” said Dzotsi. “In the wind energy market, for example, we expect the new material will allow design engineers to take full advantage of the potential benefits of larger blades.

“Our customers are all asking for solutions that will enable them to overcome current limitations,” continued Dzotsi. “They generally like the performance of high strength reinforcements now available but they need lower costs to keep their products competitive, or to develop new applications that are cost-competitive.”

“Design engineers have asked themselves if high performance reinforcements would work in a particular application and found the answer was no because the cost was too high. Now, with HiPer-tex reinforcements from Owens Corning, the answer may be ‘Yes’ – a game-changing opportunity for customers and end-users.”

Contact Wisdom Dzotsi at 1-419-248-8806.

Four of the many people in Owens Corning Science & Technology who developed the new HiPer-tex reinforcement platform are (clockwise from top left) Jim Priest, Pete McGinnis, Dave Hartman and Doug Hoffmann.





AUTOMOTIVE SOLUTIONS CLOSE TO CUSTOMERS

Three of the world's largest automobile manufacturers are headquartered within 90 miles of Toledo, Ohio, the hometown of Owens Corning. Yet Owens Corning elected to establish an Automotive Service Center in Novi, Mich., to be close to those companies and their principal suppliers.

In Europe, Owens Corning operates a Science & Technology Center in Battice, Belgium, only a short drive from major automotive centers in Germany, France and the U.K. And in Asia, the company has S&T Centers in India and China.

Why all this effort to establish application development centers close to the world's major auto manufacturers? Because the global market for composites in transportation is the second largest with 20 percent of the total. Only construction is larger with 24 percent.

And while the construction market is larger from a total dollars standpoint, it is much more fragmented than the automotive market and therefore harder to influence. It is easier to identify the key decision makers in the automotive market and Owens Corning is making every effort to get close to them.

Another important consideration is the "leadership factor." The auto industry has been a bell cow or dragon head for innovations in the composites industry. Once adopted by the auto industry, breakthrough technology is often more easily accepted in other markets.

"As a leader in the composites business, we want to do more than simply sell reinforcements to molders who supply the auto manufacturers," said Steve Zirkel, recently named General Manager of Automotive Solutions and Global Marketing for the Owens Corning Composite Solutions Business.

"Developing new applications takes a lot of time, effort and money, but new applications are the future of the composites industry," continued Zirkel. "We want to be where we can work closely with molders, other top-tier suppliers and the OEMs to develop new applications and technology in the auto sector. We believe we can do that best by being close to where the customers are and working closely with others on joint development programs."

Owens Corning Automotive Solutions is also attempting to get the attention of the leading car manufacturers by introducing innovative products that save weight, add strength, enhance acoustical properties or improve productivity.

The latest in a long history of Owens Corning innovations is AcoustiMax™ substrate, a light-weight glass-mat composite material for vehicle interiors that provides improved structural and acoustical properties in applications such as headliners, trunk liners, under body shields, seat backs and package trays.

Another relatively new product now getting increased attention is VersaMat® thermal and acoustic insulating material. VersaMat insulation is ideal for a variety of applications including headliners, door panels, under-the-hood applications, trunk storage systems and under carpet heat shields.

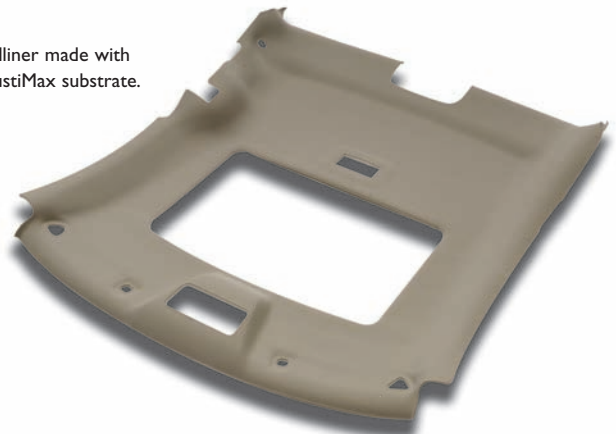
Owens Corning also continues to provide a wide variety of glass fiber reinforcements to auto industry suppliers. One growing product in this category is PerforMax® roving, a single-end reinforcement product used in StaMax* and RHEMAX** long-fiber/thermoplastic composites.

While new products and technology are important, Owens Corning also sees a philosophical change that bodes well for increased use of composites. For many years, auto makers avoided any mention of plastics or composites in their vehicles and that position is changing. Auto and light truck makers are now openly using composite materials in one of the most demanding applications on the road today – cargo boxes on pickup trucks.

"Composites have been part of the auto industry for a long time," said Zirkel. "We haven't yet achieved the market penetration composites deserve and we are determined to join forces with others in the industry to change that and soon."

To contact Owens Corning Automotive Solutions, call Mike Khoury, North American Sales Leader, 248-668-7536; or Mickey Kuhn, Market Manager, Europe, 49-6201-255-121.

Headliner made with AcoustiMax substrate.



*StaMax is a trademark of SABIC PETROCHEMICALS B.V. CORPORATION
**RHEMAX is a trademark of RheTech, Inc.

GLOBAL NEWS ROUNDUP

NIEMAN AND ZIRKEL HAVE NEW JOBS

Gary Nieman and Steve Zirkel have been half a world apart for most of the past couple of years as Nieman led OC® Automotive Solutions and Global Composite Marketing from the Automotive Service Center in Novi, Mich., and Zirkel led the company's Asia Pacific composites business from Tokyo, Japan.

In an organization change that has them both traveling thousands of miles to new jobs, they will be just about as far apart because they are essentially exchanging responsibilities. Nieman is moving to Shanghai, China, to lead Asia Pacific composites, and Zirkel is moving to Toledo, Ohio, to lead Automotive Solutions and Global Marketing.

As Vice President and Managing Director, Asia Pacific Composites, Nieman will work with customers to drive growth across the diverse economies in Asia. He is very familiar with Asia and has a successful track record from previous roles as the Managing Director of Korea for three years and the Managing Director of India for one year.

Zirkel will temporarily remain Chairman and Representative Managing Director for OC Japan to focus on closing the Owens Corning acquisition of the Asahi Fiber Glass composites business in Ibaraki, Japan. He will remain in this role until the success of the acquisition is assured.

Upon completion of this transaction, Zirkel will transition to his new role as Director, Global Marketing and OC Automotive. Zirkel will be responsible for creating new value growth by meeting the needs of customers and end-use markets through extension of existing product lines and commercialization of new innovation solutions.

NIEMAN KEYNOTE SPEAKER IN INDIA

In one of his first official duties as Vice President and Managing Director, Asia Pacific Composites, Gary Nieman served as keynote speaker at the International Conference and Exhibition on Reinforced Plastics in Chennai, India.

Held Feb. 23-25, the Conference is Asia's leading composites industry event and the voice of the Indian composites industry. The event was organized by the FPR Institute of India and Owens Corning India Ltd. was the key sponsor.

India represents the fourth largest economy in the world and – after China – the second fastest growing economy. India is also the second biggest market place in the Asia Pacific region. Last year India recorded a 6.9 percent growth in GDP, including more than 14.5 percent growth in industrial production. The Indian composites industry registered 25 percent growth in 2004-2005.

Owens Corning formed its first partnership in India in 1995, when it joined Mahindra & Mahindra to form Owens-Corning India Ltd. The enterprise opened an Application Development Center in 1996 and started up a manufacturing plant in Talaja, near Mumbai, in 1998. In 2004, the business added the production of reinforcing fabrics to support the wind energy market.

Also during the conference Owens Corning announced plans to expand its fabric-making capability at Talaja.

To contact Owens Corning India, call Sunil Saxena, Sales Leader, at 91-22-5668-1706.

ACMA VISITS FABWEL CENTER

Owens Corning Fabwel barely opened the doors of its new Science & Technology Center in Elkhart, Ind., when attendees at ACMA's 2006 Midwest Composites Conference arrived for a tour on March 9.

Announced Dec. 1, 2005, the S&T Center was established to bring recreational vehicle (RV) industry component solutions and end-user value to the doorstep of major manufacturers in Elkhart, which is home to several of the industry's top RV companies and component suppliers. Fabwel has been a leading manufacturer and fabricator of RV components for 33 years and its production facility in nearby Goshen, Ind., was also part of the American Composite Manufacturers Association tour.

To learn more about Owens Corning Fabwel, check out the business's revamped Web site at www.fabwel.com.

PIONEERS PICKED FOR HALL OF FAME

The National Inventors Hall of Fame in Akron, Ohio, recently announced that three Owens Corning innovators – Dale Kleist, Dr. Russell Games Slayter and John T. "Jack" Thomas – will be inducted posthumously into the Hall of Fame on May 5. Collectively, the trio invented processes for making glass fibers in commercial quantities. Their innovations also led to the formation of Owens Corning in 1938.

KIMCHON PLANT EARNS AWARD

OC Korea's composites plant in Kimchon received the 2005 Energy Saving Grand Prize from its provincial government. The plant was selected as the outstanding energy saving business because it implemented a power demand and management tool to reduce energy consumption, and because of its energy saving education efforts.

OWENS CORNING REPORTS RECORD SALES

Owens Corning reported record annual sales or turnover of \$6.3 billion in 2005, compared with \$5.7 billion in 2004, an 11.4 percent increase from the prior year. During the fourth quarter of 2005, the company recorded record sales of \$1.7 billion, compared with net sales of \$1.5 billion in 2004, an increase of 15 percent.



WE LOOK FORWARD TO SEEING YOU AT JEC!

Owens Corning Will Have New Products and Applications on Display

Owens Corning will be easy to find at JEC Composites 2006 – just look for the bright red logo at N8/Q19.

Another large landmark to help you find your way will be a shiny new Mercedes M-Class, complete with the latest in composite parts. Smaller but no less important will be samples of reinforcement products. Even with all of that there will still be plenty of room for you to sit down and have a chat with us.

The big star on the Owens Corning stand this year will be WindStrand™ roving and fabrics made with our new HiPer-tex™ reinforcement platform. The products were introduced at the European Wind Energy Conference in Athens at the end of February and this will be their debut appearance at JEC.

Another product making its JEC debut is SE 2350, a revolutionary direct or single-end roving for high-pressure pipe applications.

Introduced last fall, SE 2350 was developed for epoxy-based pipe applications that distribute oil, chemicals and other corrosive materials. The roving offers a 17 percent improvement in burst strength over competing products. Other industry-leading performance characteristics of the product include:

- A 10 percent increase in cyclical regression (stress) strength
- A 41 percent increase in fabrication efficiency and 35 percent reduction in rework costs
- The opportunity to reduce pipe thickness by 10 percent

The Mercedes M-Class is sure to be a show-stopper with its elegant exterior and rugged off-road capability. The Mercedes M-Class includes an instrument panel made with long-fiber/thermoplastic composite, and a headliner that includes Owens Corning reinforcement.

Also on display will be a headliner made with AcoustiMax™ substrate, a new light-weight glass-mat composite material for vehicle interiors that provides improved structural and acoustical properties in applications such as headliners, trunk liners, under body shields, seat backs and package trays.

Compared to competing materials, AcoustiMax substrate's attributes include:

- Up to a 45 percent improvement in isotropic properties or strength in all directions
- Up to a 20 percent better absorptive sound ability
- Excellent lofting characteristics

Also at the stand, be sure to pick up our updated *Product Reference Guide*, which lists all of the reinforcement products available from Owens Corning in each region.

Two technical presentations will be made by Owens Corning people and their co-authors.

- **High Performance GRP Pipe Solutions for Chemical, Oil and Gas Transport**, by Dave Hartman, Research Associate, Owens Corning, and J. D. Givens, Vice President Quality and Process Engineering, Fiber Glass Systems, at 2:30 p.m., Wednesday, March 29
- **Development of Low Density Thermoplastic Composites for Interior Applications with Improved Structural and Acoustical Performance**, by Enamul Haque, Director, Application Innovations, Owens Corning Automotive, and Dan Asbury, Manager, Advanced Product Development, Intier Automotive, at 2:30 p.m., Thursday, March 30



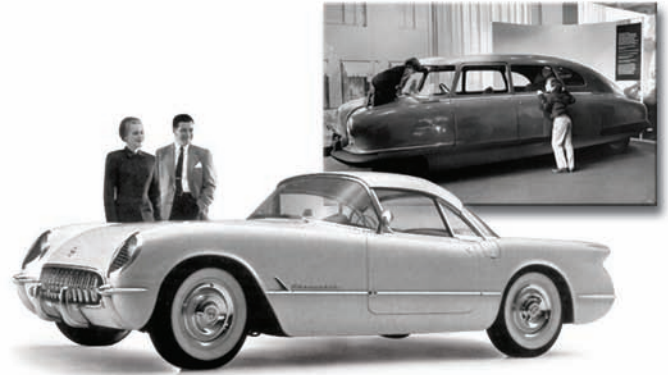
We look forward to spending some time with you at JEC Composites 2006. Have a safe journey.



INNOVATIVE TECHNOLOGY

OWENS CORNING AUTOMOTIVE MILESTONES

- Fiberglass-reinforced plastic (1935)
- Pre-forming process (1947)
- Roving (1952)
- FRP automobile body (Stout Scarab, 1945 & 1953)
- Chevrolet Corvette and Kaiser-Darrin (1953)
- Fiberglass tire cord (1966)
- First class-A resin (1970s)
- Sheet molding compound (1979)
- Fiberglass-filled mufflers and silencers (1985)
- First front-end module (Peugeot 405, 1987)
- Composite valve covers (1996)
- Silentex® noise control system using Advantex® Glass (1999)
- First FRP cargo box (Ford SportTrac, 2000)
- PerforMax® roving and StaMax long-fiber/thermoplastic composite (2001)
- AcoustiMax™ substrate



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COME SEE US

The Owens Corning Composite Solutions Business will be at the following trade shows in March and the second quarter:

- JEC Composites 2006, March 28-30, Paris, France
- VDI Plastics in Automobile Construction, March 29-30, Mannheim, Germany
- Reinforced Plastics 2006 International Balaton Conference, May 23-25, Balatonvilagos, Hungary
- Windpower 2006, the American Wind Energy Association Conference, June 4-7, Pittsburgh, Pennsylvania



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