OWENS CORNING®
INNOVATIONS FOR LIVING™

COMPOSITE SOLUTIONS

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A MESSAGE FROM CHUCK DANA

PRESIDENT, COMPOSITE SOLUTIONS BUSINESS, OWENS CORNING

Greetings and Happy New Year!
It is my pleasure to help introduce this new publication from the Owens Corning Composite Solutions Business.

Our objectives with this document are to keep you informed about our business and share ideas that will help you prosper and grow your business. We welcome your feedback and suggestions for improvement. You can write to me at chuck.e.dana@owenscorning.com.

If you visited with us last year at JEC Composites or Composites 2005, you already know about some of the innovative reinforcement products Owens Corning has brought to market in the past year. We are pleased to report that both SE 8400 LS and SE 2350 roving have been enthusiastically accepted in the marketplace. Like the SE 1200 roving we introduced the previous year, they are well on their way to setting new standards for performance in their respective applications and markets. Updated information about all three products is reported in this issue.

Early in December we announced a very important step for our global business and that is the acquisition of the composites business of Asahi Fiber Glass in Japan. The agreement, which we expected to have closed by the second quarter this year, includes a glass fiber manufacturing facility in Ibaraki, Japan – near Tokyo – and a range of high-performance reinforcement products to support customers in the automotive, consumer and electrical, building and construction and infrastructure markets.

This acquisition has been a key component of my personal agenda for several months because our business needs to be larger and continue to extend its network of manufacturing facilities around the world. This is the second major acquisition by the business since I took over the leadership in 2004, the other of course being full ownership of Vitro Fibras, a Mexico-based joint venture that manufactures a wide range of fiber glass products including reinforcements.

As we start a new year, many of us wonder what is in store for our business in the months ahead. To answer that question for myself, I took a look into the crystal ball and I share what I saw with you in this issue.

We hope you enjoy this publication and wish you all the best in the months and years ahead.

Sincerely,

Chuck Dana

GLOBAL NEWS ROUNDUP

OWENS CORNING TO ACQUIRE COMPOSITES FACILITY IN JAPAN

Owens Corning announced on Dec. 8 that the company has agreed to acquire the composites business of Asahi Fiber Glass in Japan. The acquisition is expected to be completed in the second quarter of 2006.

The agreement includes a glass fiber manufacturing facility located in Ibaraki, Japan – near Tokyo – and a range of high-performance reinforcement products to support customers in the automotive, consumer and electrical, building and construction and infrastructure markets.

Owens Corning said the agreement underscores the company's commitment to Japan, the world's second largest economy and one of the world's largest glass fiber markets. An expanded presence in Japan positions Owens Corning for greater market leadership and furthers the company's role as a world leader in composite materials.

The facility in Ibaraki was once part of a joint venture with Owens Corning and Asahi Glass Company. The joint venture was formed in 1956 with 40 percent Owens Corning ownership. The Ibaraki facility began production in 1959. Asahi Glass acquired full ownership of Asahi Fiber Glass in 1996, which today also operates a glass fiber insulation plant in Shonan, near Tokyo.

WOLVERINE ACQUISITION SET

The Owens Corning Fabwel business, which makes fiber glass, aluminum and steel products for the recreational vehicle (RV) and cargo trailer industries, is set to expand its capabilities with the acquisition of Wolverine Fabricating Inc.

Located in Riverside, Calif., Wolverine produces exterior side walls, fold-down ramp doors, motor home basement doors and full interior walls for the RV industry.

INDIA PLANT TO EMERGE BETTER

Less than six months after a catastrophic flood devastated Owens Corning India's glass fiber facility in Taloja, plans are in the works to expand the capacity of the facility and make other substantial improvements.

"As we assessed the damage and need for repairs at Taloja, we saw an opportunity to either repair the furnace as it was before the flood or upgrade and expand it," said Chuck Dana, President, Composite Solutions Business.

After careful analysis, the Owens Corning India Board decided to rebuild the furnace and install state-of-the-art technology to melt glass with less energy and to improve safety and the environment around the plant. The Taloja facility is owned by Owens-Corning India Ltd.

FABWEL TO OPEN S&T CENTER

On Dec. 1, Owens Corning Fabwel said it will open a new science and technology center in Elkhart, Ind., that will allow the company to bring recreational vehicle (RV) industry component solutions and expertise to the doorstep of major manufacturers. Owens Corning Fabwel made the announcement at the Recreational Vehicle Industry Association (RVIA) annual trade show in Louisville, Ky.

Owens Corning Fabwel has been a leading manufacturer and fabricator of RV components for more than 30 years. Locating near key customers in Elkhart – home to several of the industry's top RV manufacturers and component suppliers – and Riverside, Calif., is part of the company's strategy of growth through customer satisfaction.

MANUFACTURING SOLUTIONS SOLD

Owens Corning has reached an agreement with a German company, Dietze & Schell, to sell the assets of the Owens Corning Manufacturing Solutions (OCMS) business in Anderson, S.C.

The OCMS business produces precision equipment and parts used in the Composite Solutions Business (CSB) glass fiber manufacturing process. OCMS was known as Foundry and Steel prior to the acquisition of the business by Owens Corning in 2000. This transaction will not impact the CSB plant in Anderson. The transfer of ownership took place January 1, 2006.

SUPPLIER AWARD RECEIVED

Owens Corning received the Distinguished Supplier Award for 2005 from MFG, a transportation and wind energy company based in Ashtabula, Ohio. MFG presents the award to the supplier it feels has done the most to help its business grow. Companies are evaluated on their technical support, value, service, quality and availability.

MFG has been an Owens Corning customer since 1948. MFG and Owens Corning were design and application partners for the first Corvette and MFG continues to supply Corvette parts today.

GLOBAL COMPOSITES OUTLOOK FOR 2006 AND BEYOND

GROWTH SLOWING BUT COMPOSITES SHOULD SHINE

by Chuck Dana

When we look back at 2005 a few years from now, we'll probably say it was a pretty good year. We ended up in a relatively good place with overall U.S. market growth of 2 to 3 percent.

But that rosy assessment says nothing about the ride we experienced along the way. We were buffeted by a number of forces during the second half of the year, including a shocking spike in global oil prices.

2006 may be a lot like 2005. Although we see modest market growth in every region except Asia – which is expected to experience double-digit growth again – raw material cost pressures and a challenging pricing environment will put pressure on profits and make productivity improvements in all of our operations essential to our collective prosperity. In addition, consumer reaction to unforeseen events could make the economy highly volatile. Still, the market environment remains positive to leverage the values of composite materials.

The key factors to keep an eye on in 2006 will again be:
- Oil prices
- Consumer sentiment
- Interest rates
- Housing starts

The price of oil is expected to ease somewhat, but then again we could experience another shock due to unforeseen world events.

As we saw at the end of 2005, consumer sentiment can swing sharply in response to current events. U.S. consumer sentiment declined sharply when gasoline prices soared last fall, and then it rebounded just about as quickly once the pump price of gasoline retreated. Unfortunately, we are not out of the woods yet with consumer sentiment because most homeowners will soon see heating bills take a bite out of their disposable income.

U.S. interest rates are expected to continue climbing as the Fed tries to manage growth and curb inflation. Spending on housing remained firm despite rising rates in 2005. Most economists see housing starts tapering off in the U.S. during the next two years in response to rising interest rates.

On the transportation front, car and truck manufacturing is expected to slow in early 2006 due to inventory buildup resulting from slow sales in the fourth quarter of 2005.

With that mixed bag of drivers, then, the underlying trend in 2006 and 2007 will be one of slower growth due to tighter spending habits by stretched consumers and a softer housing market.

Despite slowing overall growth, there is the potential for even stronger growth for Composites.

Commercial construction and infrastructure spending is expected to be a bright spot, and those markets are aligned with applications where composites have significant strength. Continued investment in this segment will boost applications such as pipe, grating, rebar, panels, etc., continuing an important trend for our industry.

Without question, in the present world environment, another composites market that will see increasing momentum is military and consumer protection. Due to the light weight, corrosion and blast resistant nature of composites, our industry is in a position to grow from such applications as body shields and vehicle and building protection. Within the last year-and-a-half alone, 135 embassies around the world have announced they will be retrofitting all of their vehicles for blast protection.

In addition to commercial construction market and ballistics, there are a number of other key drivers in our market this year that will help us push the envelope on growth.

Most significant is the U.S. Energy Policy Act. Signed into law last August, the Act has near explosive opportunities for composites in North America. Provisions to encourage the expansion and modernization of the electrical grid provide opportunity for fiberglass-reinforced plastics from electrical components to composite-core high-voltage wires. The Act is also intended to bring more natural gas to market. Applications such as composite

pipe and LNG tanks will see growth because of this. And in addition, tax incentives will expand the production of energy from wind and fuel cells, both of which are composite-heavy opportunities.

For wind energy specifically, the Energy Policy Act gives a 1.9 cent credit per kilowatt hour for the first 10 years of a wind power project. The tax credit has been offered before but energy experts say this is the first time the federal government has extended it over such a long period.

Even without new legislation, high energy costs are driving automakers to seek out energy efficient materials to meet continually greening customer demand. There are currently only 15kgs of composites per vehicle today – far less than the 60kgs per vehicle if all proven applications were used on every car – so our growth opportunity as an industry continues to be significant.

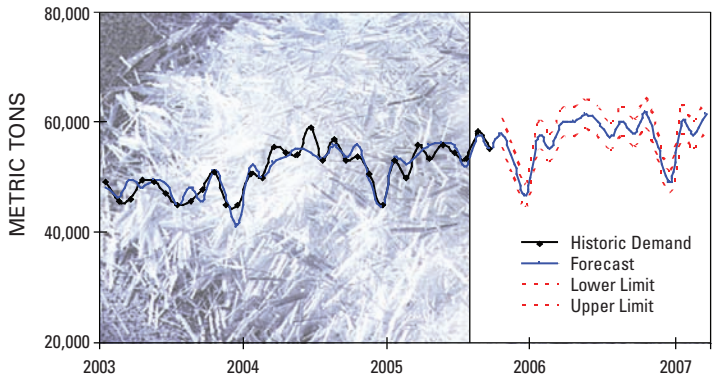
"...the underlying trend in 2006 and 2007 will be one of slower growth due to tighter spending habits..."

And certainly, while the majority of economists see U.S. housing starts tapering off during the next two years in response to rising interest rates, given the devastation wrought by Hurricanes Katrina and Rita, as rebuilding starts and prices for wood, steel and concrete rise, composites will have an opportunity to continue to replace these products. As an industry, we can have a positive impact in rebuilding the Gulf Coast region with strong, non-corrosive, mold-resistant, water-resistant products that offer distinct competitive advantages over traditional materials.

Within this market growth, we expect to see reinforced thermoplastics continue to gain share over reinforced thermosets, driven by continued penetration of the automotive, industrial and consumer markets, expanded product offerings and inherent improvements in recyclability, processing efficiencies and environmental friendliness.

That said, reinforced thermosets continue to have significant opportunities because of their diversity of processing techniques, allowing the production of a broad range of shapes, sizes and production scales. Additionally, thermosets have developed new processes (closed molding, low HAP resins, etc.), that have significantly improved environmental performance. When combined with lower creep and higher temperature resistance, reinforced thermosets continue to open new and exciting market possibilities.

North American Glass Reinforcements Demand Forecast



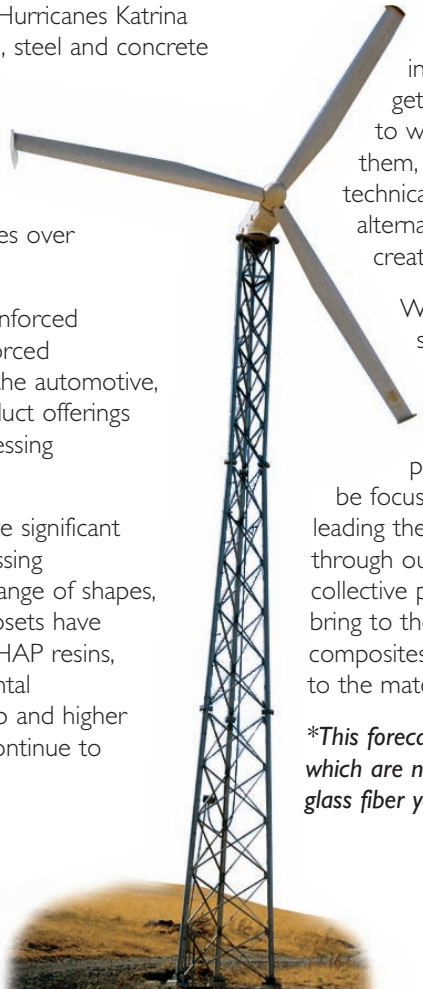
Right now, given these drivers and barring any major unforeseen events, we're forecasting a 7 percent* growth rate for 2006 glass fiber reinforcements in the U.S. That rate of growth is lower than 2004 but higher than 2005, and the growth rate in North America is expected to be strongest in the first half of the year.

The rest of the world is expected to experience a mixed bag of growth rates – Latin America, 4 percent; Europe, 4.5 percent; and Asia Pacific, 10 percent.

Specific market drivers aside, continued cost increases in production will force us to look for markets and value propositions where we can price based on value versus existing materials and imports.

Applications development will remain a key to our individual and collective success. Find ways to truly get ingrained in your customer's businesses and listen to what they're looking for. Find ways to work with them, to see the opportunities and give them the technical resources and expertise they need to find alternative materials that transform their products and create new markets.

Without question, our market won't be exactly the same as it was in 2005, but 2006 has the potential to be no less thrilling. Energy costs, environmental demands and construction and infrastructure markets are truly in need of the value proposition composites deliver. All of us should be focused on taking advantage of these opportunities, leading the conversation, pulling together in the marketplace through our industry associations and harnessing our collective power to maximize the best of what composites bring to the table. If we all pull together we can move composites from being the materials choice of the future, to the materials choice of the present.



**This forecast does not include wet-use chopped strands – which are not commonly used by FRP fabricators – and glass fiber yarns, which Owens Corning does not produce.*

NEW PRODUCTS SET NEW PERFORMANCE STANDARDS

In the past two years, Owens Corning has extended its heritage of introducing innovative products that overcome industry performance issues.

Four of the new products – now setting higher standards in their respective processes and markets – are:

- **SE 2350** single-end Type 30® roving reinforcement for epoxy-based high-pressure pipe applications that distribute oil, chemicals and other corrosive materials
- **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, door modules, seat backs and package trays
- **SE 8400 LS** single-end Type 30 roving for demanding electrical requirements of such fiber glass-reinforced plastic (FRP) applications as medium and high-voltage transmission and distribution insulators
- **SE 1200** Type 30 single-end roving for knitting and weaving operations in the wind energy and marine markets

SE 2350 ROVING

The newest of the four – SE 2350 – offers a 17 percent improvement in burst strength over competing products, a key attribute for high-pressure pipe.

Other industry-leading performance characteristics of the new 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

"We didn't set out to create a product that was just incrementally better than current technology," says Wisdom Dzotsi, Owens Corning Product Manager for Type 30 roving. "We set out to continue our 66-year history of glass fiber innovation and create a product that absolutely transforms this market and sets a new benchmark for the industry – and SE 2350 does that.

"With high steel costs and high oil and gas prices driving increased activity in the market, we're poised for a growth rate of composites in piping applications of more than twice that of general industry," he added. "With SE 2350 roving our customers can take full advantage of that growth profitably with less scrap, increased production speed and volume, and less maintenance and rework costs."

Owens Corning Research Associate Len Adzima says the product represents a significant change in the chemistry of the sizing applied to the product. SE 2350 is the first roving for filament winding with epoxy resin that was specifically designed from the ground up for Advantex® glass.

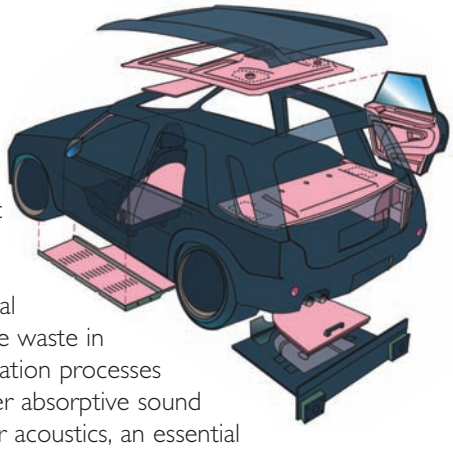
"We already have products that are pretty good," says Adzima, "but we were able to come up with subtle chemistry and processing changes that result in a better-processing product with better mechanical properties."

Adzima says development work by Owens Corning included making more than nine tons of sample material, more than 2,500 feet of pipe and running more than 4,600 cyclical regression and tensile tests.

"We were close to giving up many times," he adds. "It took a long time to develop the product but we got a good result, which is the bottom line."

ACOUSTIMAX™ SUBSTRATE

Another innovation unveiled in 2005 is AcoustiMax™ substrate for automotive interiors.



Highlights of the product's attributes compared to competing materials include:

- Up to a 45 percent improvement in isotropic properties – strength in all directions – which improves overall structural integrity and helps reduce waste in the fabrication and installation processes
- Up to a 20 percent better absorptive sound ability to improve interior acoustics, an essential consideration in the face of increasing use of electronics in cars
- Excellent lofting characteristics or ability to increase thickness as much as 100 percent through pre-heating/cold molding process – allowing the material to vary in thickness and still be molded in one process

"The ability of AcoustiMax substrate to enhance performance and reduce vehicle weight, part numbers and overall system costs highlights how and why composites are continuing to transform the automotive industry," said Gary Nieman, Vice President of OC® Automotive.

SE 8400 LS ROVING

Last spring, Owens Corning introduced a new single-end Type 30 roving to meet the demanding electrical requirements of such fiber glass-reinforced plastic (FRP) applications as medium and high-voltage transmission and distribution insulators.

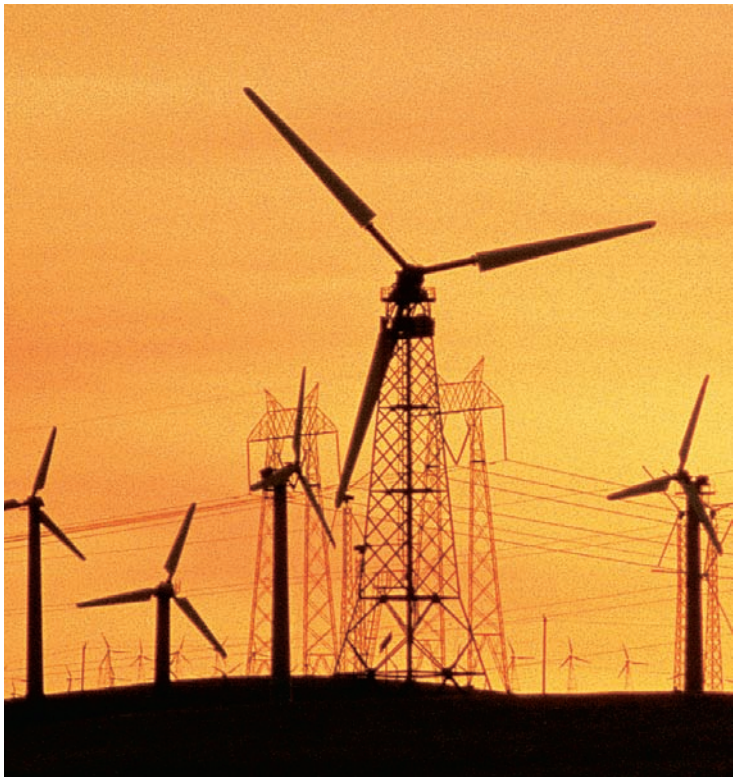
Known as SE 8400 LS, the new roving has all the anti-corrosion, electrical and mechanical benefits of boron-free Advantex E glass manufactured using state-of-the-art melting technology. In addition, minimizing microscopic bubble voids or "seeds" in the glass prevents the formation of hollow filaments, which increases conductance and offers a path of least resistance to the electrical energy, causing system failure.

The properties of SE 8400 LS roving offer not only the required high electrical resistance from low seed production but also:

- Higher corrosion and temperature resistance of Advantex glass over conventional E glass, reducing brittle fracture failure
- Quicker processing than alternatives owing to fast wet-out in polyester, vinyl ester and epoxy resins
- Low migration for improved wet-out and glass-to-resin bonding
- Improved flashover resistance in highly polluted areas
- High mechanical strength
- Greater design flexibility and overall system cost reduction

"The use of boron-free glass fibers has been a long-acknowledged means of preventing brittle fracture if an insulator's housing has been breached. However, earlier generations of boron-free fibers had seed count levels that were too high and wouldn't consistently pass qualification tests mandated by insulator standards," said James Schmiedeknecht, Vice President, International Sales and Marketing at MacLean Power Systems.

"Owens Corning has solved that problem with their Advantex corrosion resistant E glass fiber that is low in seed count. Insulator manufacturers like MacLean Power Systems can now take full advantage of boron-free glass fibers and also have wicking performance comparable to standard E glass. MacLean Power Systems can now offer the utility engineer that extra margin of safety at a relatively low incremental cost," said Schmiedeknecht.



SE 1200 ROVING

Introduced nearly two years ago at the JEC Composites Show in Paris, SE 1200 roving continues to experience growing market acceptance. The positive reaction is said to be due to the product having much improved dynamic fatigue properties when used in polyester resins systems.

"SE 1200 was quickly recognized as the benchmark multi-resin-compatible product for knitting and weaving," says Wisdom Dzotsi. "SE 1200 has been especially welcomed in the wind energy market, where it provides higher strength and improved fatigue performance – allowing for longer, more efficient blades.

"With strength and fatigue performance in polyester resins more than 10 percent greater than competitive products, SE 1200 also allows builders to design boats with superior performance at minimal weight and enhanced lifetime properties.

"By listening to and working with our customers, we were able to develop a product that not only meets a pressing industry need for higher fatigue properties but also delivers a wide range of other product attributes for a host of other end-use applications," added Dzotsi.

INNOVATIVE SERVICE

OWENS CORNING REDEFINES CUSTOMER SERVICE

During the past year, the Owens Corning Composite Solutions Business made a strategic decision to raise the bar in customer service. Not content with incremental improvement, the business decided to literally redefine what has been the traditional notion of customer service. Their goal is to make a step-change and move the company's relationship with customers to a whole new level.

Mala Nanda, Director, Global Supply Chain, Composite Solutions Business, says it all started with a survey of international composites customers finding that while quality was the number one driver of purchasing decisions, which is not surprising, number two was a surprise as it wasn't price; it was customer service. Price ranked third.

"Owens Corning has made the strategic decision that our customer service redefines what has been the traditional definition," says Nanda. "Around the world, our customer service teams do a fantastic job interacting with our customers and ensuring product delivery. But today our customer service is about getting our relationship with the customer to the next level by focusing all of our mutual resources to meet our collective business needs; to grow their businesses and to grow our business.

"Every customer is unique and today," she continues, "customer service means providing solutions that help every customer become uniquely successful, and those solutions can range from global sourcing to supply chain efficiency, to Six Sigma and lean manufacturing processes."

As an example of what differentiated service can mean to a customer, Nanda cites the story of an Indian customer who was facing a problem with high product rejections due to "pitting" of one of their products. A team of Owens Corning Six Sigma black belts worked with the customer's core team to study the problem and come up with a solution, which resulted in substantial savings for the customer.

"This is a perfect example of where we've listened, we've acted and we've driven a mutually beneficial outcome for both of us," says Nanda. "As a result, Owens Corning secured 100 percent (up from 20 percent) of the business from this customer because of that partnership. That increase in business is a sign from the customer that our differentiated service is a strategic competitive advantage for them in the market and that we're integral to our customer's growth."

COMPOSITE SOLUTIONS

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COME SEE US

The Owens Corning Composite Solutions Business will be at the following trade shows during the first quarter of 2006:

- **Marine Engineering Conference (MEC), February 14-15, Milan, Italy**
- **European Wind Energy Conference & Exhibition 2006, February 27 – March 2, Athens, Greece**
- **JEC Composites 2006, March 28-30, Paris, France**
- **VDI Plastics in Automobile Construction, March 29-30, Mannheim, Germany**
- **World of Concrete (WOC), January 17-20, Las Vegas, Nevada**

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