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News

For Immediate Release



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Owens Corning Showcases High-Performance Reinforcements Enabling Composite Application in Developing Source of Renewable Energy

XStrand® glass fibers to reinforce pipe moving large volumes of water while withstanding salt and currents in ocean thermal energy demonstration project

PARIS – April 14, 2010 – At *JEC Composites*, the world's largest trade show for composite materials, global reinforcement producer Owens Corning (NYSE:OC) is showcasing the company's XStrand® high-performance glass fibers that will be used in a project demonstrating how modern composite technology can enable ocean thermal energy power generation, which has the potential to join wind as a major source of renewable energy.

The U.S. Department of Energy (DOE) recently awarded a cooperative agreement contract to Lockheed Martin to demonstrate a pipe fabrication approach using modern composite technology and manufacturing methods at both prototype and pilot plant scales. Lockheed Martin has contracted Owens Corning to provide its XStrand® high-strength glass fiber reinforcements for use in the large-diameter cold-water pipe that will be required to reach ocean depths of thousands of feet.

Ocean Thermal Energy Conversion (OTEC) generates electricity by exploiting the temperature difference between warm surface water and deep cold water. The temperature difference is used to drive a Rankine cycle operating with a low-boiling-point fluid. Warm surface water passes through a heat exchanger, vaporizing the fluid, which drives a turbine generator, producing electricity. The process is free of global warming emissions and does not require any external fuel source.

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Dennis Cooper, OTEC program manager for Lockheed Martin, said OTEC holds the promise of providing clean, base-load electricity to energy markets that today rely almost exclusively on fossil fuels. "It's conceivable, for example," explained Cooper, "that OTEC could enable Hawaii achieve energy independence within a generation. Our independent research and development work to date has shown OTEC to be technically feasible. The next step is to demonstrate it on a commercial scale and the DOE contract will help accelerate our progress toward that goal."

Since the ocean's temperature difference is relatively small, large volumes of sea water must be moved to generate commercial levels of power. The fabrication and installation of large-diameter cold-water piping represents one of the largest technical challenges to the successful installation and operation of an offshore OTEC system.

"This is another exciting application of composite technology in renewable energy," said Marcio Sandri, Americas vice president and managing director for the Owens Corning Composite Solutions Business. "Composite materials already enable cost-effective fabrication of blades for wind turbines. With high-strength glass fiber reinforcements enabling the continuous production of tough, corrosion-resistant large-diameter pipe at sea directly from a floating platform, OTEC can become another viable method for obtaining energy from renewable sources."

Under terms of the \$1.2 million DOE cooperative agreement, Lockheed Martin will demonstrate a cold water pipe fabrication approach using modern fiberglass technology and innovative composite manufacturing methods. Fabrication work will be performed at Lockheed Martin's Advanced Technology Center in Sunnyvale, Calif. West Virginia University's Constructed Facilities Center is also supporting the project.

To support the project's early development work, Owens Corning performed fatigue and corrosion testing at its Science and Technology Center in Granville, Ohio, as well as provided quantities of XStrand® high-performance reinforcements and small composite components for aggressive performance testing. The company also worked closely with Lockheed Martin engineers to develop three special fabric designs for the project.

"OTEC will be an eye-opening demonstration of the potential of composite materials," added Sandri. "Manufacturing large-diameter pipe directly from a floating platform will expand the definition of

on-site fabrication, which is already a familiar practice for composites. The power and caustic effects of ocean water are also well known and make this a great application for the strength and corrosion resistance of composites.

“This project is in illustration of our commitment to working with customers to develop new applications,” added Sandri. “The world desperately needs a diversified portfolio of renewable energy and the composites industry can help make that possible by working together on development projects like this one.”

For more about how Lockheed Martin is addressing energy and climate challenges, visit:

www.lockheedmartin.com/capabilities/energy/

For more about XStrand® high-performance glass fiber reinforcements from OCV™ Reinforcements, visit: <http://www.ocvreinforcements.com/page/hp.asp>

About Lockheed Martin

Headquartered in Bethesda, MD, Lockheed Martin is a global security company that employs about 140,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2009 sales of \$45.2 billion. Additional information is available at www.lockheedmartin.com.

About Owens Corning

Owens Corning is a leading global producer of glass fiber reinforcements and engineered materials for composite systems and residential and commercial building materials. A Fortune 500 company for 55 consecutive years, Owens Corning is committed to driving sustainability through delivering solutions, transforming markets and enhancing lives. Founded in 1938, Owens Corning had sales of \$4.8 billion in 2009 and about 16,000 employees in 28 countries on five continents. OCV™ Reinforcements, OCV™ Technical Fabrics and OCV™ Non-Woven Technologies are the three main business units that make up the Owens Corning Composite Solutions Business. The business delivers a broad range of reinforcement products that provide lightweight alternatives to steel, wood and aluminum, thereby reducing weight and improving energy efficiency. Additional information is available at www.owenscorning.com.