

# MANUFACTURING

*Production • Fabrication • Components • Supply Chain • Materials • Tooling • Machinery*

## AGY AND CTG/TAISHAN FIBERGLASS TEAM TO PRODUCE MATERIAL TARGETED AT WIND BLADE PRODUCTION

AGY, a global producer of glass fiber yarns and glass fiber reinforcements, has announced the start of production of S-1 HM glass in conjunction with CTG/Taishan Fiberglass. The material was developed by AGY and will be produced by CTG/Taishan Fiberglass to fill the cost and performance gap between traditional E-Glass products and higher performance glasses such as AGY's S-2 Glass products.

CTG/Taishan Fiberglass is one of the world's largest glass fiber manufacturers whose main focus is supplying the highest quality glass fiber to its customers at the best price and with the best service. "We are looking forward to working with AGY and producing S-1 HM glass," said Zhiyao Tang, Chairman and President of CTG/Taishan Fiberglass.

S-1 HM glass was developed primarily for the wind energy market with input from blade and turbine manufacturers. While AGY and



CTG/Taishan Fiberglass are targeting the wind energy market with S-1 HM, they both believe the material has potential for many other industrial applications. "Since S-1 HM glass is mechanically superior to E-Glass,

but much less expensive than the extremely high-end glasses, we feel that S-1 HM will be an excellent fit for composite manufacturers in a wide variety of markets," said Drew Walker, CEO of AGY.

## DNV GL ENABLES SINOMA TO INCREASE THE QUALITY AND RELIABILITY OF ROTOR BLADES MADE IN CHINA

DNV GL and the wind turbine blade manufacturer Sinoma have signed a partnership agreement for certification of Sinoma's products to improve the reliability and quality of blades manufactured in China. Certification ensures that turbines that use blades produced by Sinoma comply to international safety and reliability standards throughout their lifespan, in onshore and offshore wind applications.

As wind turbines increase in size, the failure of key components as rotor blades can lead to significant losses for the different stakeholders involved.

"Turbine manufacturers constantly work on

improving quality and reliability of wind turbine components such as rotor blades and gearboxes for example," explains Daniel Hein, Country Manager China for Renewables Certification, DNV GL. "Certification helps to increase the credibility and trust in the quality of such components. The objective of the wind industry is to provide clean, reliable and affordable energy. In order to achieve this, it is important that the industry concentrates its efforts to increase the quality and efficiency of wind turbines. I am confident that the long term partnership between Sinoma and DNV GL will contribute to this

and will yield mutually beneficial results. We expect that other manufacturers consider to follow the example of Sinoma and improve their competitiveness, as OEMs and wind farm operators increasingly pay attention to the quality of rotor blades and the used materials throughout the manufacturing process."

The partnership with DNV GL will contribute to an improvement of wind turbines that use Sinoma's blades and to a stronger market positioning for the blade manufacturer.

Sinoma is engaging DNV GL as certification body to maintain and increase the company's processes and product quality.

DNV GL's main responsibilities within the framework of the partnership include certifying rotor blades, certifying rotor blade repair shops, materials, supervising material production, and assessing blade designs as well as the implementation of quality requirements throughout the manufacturing process in the entire supply chain.

## PRODUCT

### MORGAN SLIP RINGS AIM TO REDUCE DOWN TIME, MAINTENANCE, AND COSTS BY EMPLOYING THE LATEST RESIN TECHNOLOGIES

Morgan Advanced Materials Electrical Carbon business announces that its quality engineered slip rings, can reduce down time and improve the life of equipment whilst reducing maintenance time and costs. Made with the latest innovations in resin compounds Morgan's molded slip rings encapsulate all current carrying components, inhibit harmful dust intrusion and contamination, and increase the dielectric strength. They can also be specially engineered to improve airflow, which reduces the amount of thermal build up.

These key benefits make them ideal for use in wind turbines as well as numerous other industrial, traction power and signal transmission applications. Slip rings are offered in a wide range of both standard and customized sizes and designs and can be manufactured in either molded or fabricated versions.

High quality slip ring transmitter systems are

available in 1 to 8 rings from Morgan, with outside diameters ranging from 24 to 500 mm and feature high mechanical, thermal resistance and excellent dielectric properties.



### POWER CLIMBER WIND MEETS STRICT TURBINE SERVICE LIFT REGULATIONS AT ONTARIO WIND FARM PROJECT

Power Climber Wind recently provided 58 turbine service lifts (TSLs) to the Port Dover and Nanticoke Wind Project in Ontario, Canada.

Strict lift and elevator code compliance was required by the Technical Standards and Safety Authority (TSSA) and the soon-to-be-adopted A17.1.5.11 wind turbine elevator standard issued by the American Society of Mechanical Engineers.

Power Climber Wind's engineering and product support team expertly navigated the codes, securing the required permits and product acceptances for the installation of TSLs at the project.

Fifty-eight Sherpa window model TSLs were installed, enabling safe and efficient access of workers and materials to the wind turbines while eliminating the potential for injuries caused by repetitively climbing the turbines' ladders. Power Climber Wind provided installation training and oversight throughout this phase of the project.

"Our experience and thorough knowledge of industry regulations enables us to lead the way with the safest, most reliable and code-compliant products in North America," commented Colby Hubler, Key Account Manager for Power Climber Wind.

## LAUFER WIND'S RADAR-ACTIVATED OBSTRUCTION LIGHTING SYSTEM PASSES FAA SCRUTINY DURING TRIAL AT NWTC

Laufer Wind has successfully demonstrated its Aircraft Detection Sight Solution (ADSS), the first-ever trial against a radar-activated obstruction lighting system on a wind farm in the U.S. The Federal Aviation Administration and the Energy Department's National Renewable Energy Laboratory participated in the trial.

Laufer Wind is a technology leader in the field of radar-activated lighting for wind farms. The ADSS enables wind farms to keep FAA-required obstruction lights off at night, turning them on only when aircraft are detected in the nearby vicinity. Several wind farm developments in the U.S. have recently been permitted with the expectation that they will include radar-activated lighting systems, when approved by the FAA. The successful trial advances efforts to bring radar-activated lighting systems to market.

The demonstration consisted of Laufer Wind radars deployed around NREL's National Wind Technology Center, controlling lights on an Alstom 3.0 MW turbine, a GE 1.5 MW turbine, and on a meteorological tower. FAA representatives flew various patterns against the ADSS, observing operation of the system from both the plane and on the ground. The purpose of the evaluation was to test the Laufer Wind ADSS system against a series of performance standards that the FAA has developed to address Aircraft Detection System (ADS) technologies that will minimize the impact of FAA-required obstruction lighting on nearby communities and wildlife yet at the same time maintain a high level of safety for pilots operating aircraft near the obstructions.

The FAA is not changing the obstruction lighting guidelines for wind turbine farms. This technology is simply a smart switch that will activate the lighting when an aircraft is within

three nautical miles of any part of the obstruction.

After its evaluation, the FAA was able to confirm that the Laufer ADSS

system has met the requirements set forth in its performance standards.

The FAA will issue report on the trial within the next few months.



The advertisement features a large image of a wind turbine's tower and nacelle against a blue sky. Superimposed on the top right is the Bourn & Koch logo, which consists of the letters 'BK' in a stylized font inside a square, followed by the words 'BOURN & KOCH' in a bold, sans-serif font. To the left of the logo, there is a small graphic of a gear.

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