

PROFILE

Shermco Industries

Shermco Industries provides comprehensive wind generator maintenance and repair.

By Kenneth Carter
Editor | Wind Systems

At Shermco Industries, they have a simple goal: Help wind-energy project owners and operators reduce their overall cost of energy.

But achieving that goal takes a lot of effort and a lot of planning.

Part of that planning involves expanding the equipment reliability culture that exists in other industries into wind generation, said Kevin Alewine, director of marketing with Shermco Industries.

“We help this endeavor by developing as many solutions for uptower preventative projects as possible, supplying the most reliable and cost-effective remanufactured generators and by providing the highest level of testing, repairs, and service recommendations for the balance-of-plant equipment,” Alewine said.

FOUR DECADES OF EXPERIENCE

Shermco Industries was founded in 1974 to service, repair, and remanufacture electric motors and generators for general industry in the Dallas-Fort Worth area. The Engineering Services Division was added in 1981 to provide electrical engineering services and to test and repair the power systems, transformers, switchgear, and related components that deliver power to



Field service generator replacement. (Photos courtesy: Shermco Industries)

Shermco Industries

Founded:
1974

Headquarters:
Irving, Texas

Website:
www.shermco.com

factory machinery and power generation facilities.

And Shermco has only continued to grow, adding services and products to improve reliability and safe operations for a gamut of industrial and utility customers.



Generator being installed in turbine.

“We now have over 900 employees and 23 locations in the U.S. and Canada focused on engineering and field services, concentrating our motor and generator remanufacturing in Irving, Texas, and St. Paul, Minnesota,” Alewine said.

ENTERING WIND

Shermco’s first foray into the wind industry involved troubleshooting and failure analysis on a wind turbine’s electrical components for European-based OEMs, according to Alewine. Those OEMs had little-to-no specialized service capabilities in North America.

“As more turbines were installed, we developed great working relationships with both the OEMs and the generator manufacturers and have repaired or remanufactured hundreds of these units in our Irving facility,” Alewine said.

With many wind turbines starting to come out of warranty, Alewine said most of Shermco’s customers are the project owners — utilities in particular — who are interested in long-term reliability solutions.

“Since we have seen so many of these machines and understand their varied failure modes, we have developed upgraded engineered solutions for many of the designs, both mechanically and for the electrical insulation systems,” he said. “These solutions provide reliability and worry-free performance well beyond the original designs.”

Over the years, Shermco has worked with OEMs and owners on multiple upgrade projects, and the company has developed many of the processes used for uptower generator repairs, according to Alewine.

Those projects include rotor and stator lead replacement, mechanical upgrades, fleet change-out of failed bearings, and slip rings replacements ... to name a few.

“Recently, we have been able to



Remanufactured wind generator being set up for testing.



Stator during winding process.

identify rotor winding damage on some popular wind generators that can be repaired before a catastrophic failure, and we are performing quite a few surveys and life extension projects all over the U.S.," Alewine said. "In total, we have repaired or remanufactured more than 5 GW of generators. That's well over 3,000 units representing virtually every manufacturer, so we know what to expect and what is needed to make them more reliable."

CONTINUING EDUCATION

Adding to that, Shermco has a stand-alone training department that provides classroom and field-learning opportunities for hundreds of wind-energy technicians and managers.

"Our electrical safety classes are among the most sought-after in the country, and our technical classes on BOP (balance of plant) and substation maintenance have been adopted by many major OEMs and operating companies," Alewine said.

Shermco had been in the generator remanufacturing business for 25 years before wind became a factor. Because of those decades of expertise, the company has developed many solutions dealing with harsh-environment applications, and it understands what's involved to make those machines last until the end of their 15- to 20-year lifespan, according to Alewine.

"Working with key material suppliers and processing experts, we have been able to provide leading-edge solutions for generator remanufacturing," he said. "Our electrical insulation system has proven extremely reliable, and our redesigns for rotor leads, magnetic wedge retention, and both rotor- and stator-coil designs provide the long term life expectancy required by owners."

Shermco is also an early adopter of ISO 9001 quality standards.

“We have always been ahead of the curve for product quality,” Alewine said. “The Irving, Texas, repair facility was among the first to be accredited by EASA, the industry association for electrical machinery repair, and we have hundreds of technicians certified by the InterNational Electrical Testing Association (NETA), and all of our field-service projects comply with the NETA standards.”

SAFETY FIRST

But all that training and expertise are hard to justify without, according to Alewine, the most important statistic: safety.

Shermco regularly provides speakers and subject-matter experts for presentations, training events, and standards development committees for wind operations as well as the electrical industry in general.

“We have employees on multiple electrical safety and industry committees including NFPA 70E, NFPA 70 (the National Electrical Code), and NFPA 70B as well as the IEEE, ASTM, NETA, and AWEA,” Alewine said. “Additionally, we are avid supporters of the wind industry and have provided strong leadership in the Operations and Maintenance Committee, the Safety Steering Committee, and during multiple visits to Congress in Washington, D.C., on behalf of the industry.”

With all that in its arsenal, Shermco’s employees have worked diligently for more than three years to make the company the first and — so far — only motor and generator remanufacturer to achieve the OSHA VPP Star status in its Irving facility.

“These high standards of safety are adopted throughout our other offices and the field service team, which has led to awards and recognition for our efforts and achievement,” Alewine said.

So, Shermco’s goal of helping project owners lower their costs



Shermco Industries’ corporate office and flagship remanufacturing center in Irving, Texas.

may sound simple; however, the execution of that focused goal is anything but.

“Shermco employees and managers, through human performance education and practice, are embracing a culture of principled owner-

ship, responsibility, and mentoring to achieve the highest level of safety, quality, and job satisfaction,” Alewine said. ↴

Editor’s note: This article was originally published in the February 2017 issue.