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CASTROL IS KNOWN FOR ITS SPECIALLY FORMULATED HIGH-PERFORMANCE LUBRICANTS. TELL US ABOUT THE DEVELOPMENT OF YOUR SUITE OF PRODUCTS FOR WIND APPLICATIONS.

We began focusing on the wind market in the early nineties, when turbines began making their appearance in the United States. Talks with the major turbine manufacturers convinced us that this would be a viable market, and one that we could make a positive contribution to. So we continued our conversations with OEMs, learning more about the challenges they were facing. What were their plans and expectations, what attributes did they require in their lubricants, and where would they be used within the system? Then we took that information and began formulating lubricants that would meet their needs. Most of the wind farms in the United States were located around Palm Springs and central California at that time, maybe four states where the weather was quite similar—desert-like climates with low humidity and no major temperature swings. Based on all those factors, we determined that mineral oil would fit the bill, so we introduced our first lubricant for wind applications around 1996. As the industry began to grow throughout North America, our product offerings evolved as well. The OEMs wanted a semi-synthetic gear oil, so we introduced the Tribol® 1500 series, and then the Tribol 1700 series as turbines moved into new environments and required protection from different temperature and humidity levels, as well as airborne particulates such as sand and dust. That formulation was Siemens' number-one fill for many years, in fact. In 2000 one of the major manufacturers shared their "wish list" with us. They wanted a lubricant that would last 20 years, could handle extremely high and low temperatures, and would guard against micropitting. Our answer was the Castrol Optigear® Synthetic A series, which has been the first fill for many turbine manufacturers for years, and then the Castrol Optigear Synthetic X series after that. The basic characteristics include no micropitting or foaming, it's less sensitive to water ingress, and we also have an organo-metallic additive package that really helps gearboxes run more efficiently with much less friction, resulting in extended life. These days we have an extensive lineup of specialty greases and oils for lubricating main bearings, pitch and yaw bearings, generator bearings, and the main gearboxes, along with corrosion preventatives and screw and high-temperature pastes used during assembly. The latest development in the Optigear series is the third generation, Castrol Optigear Synthetic CX, which we'll be introducing at the AWEA WINDPOWER show. We will be at booth number 2010, so I hope your readers will make a point of stopping by to learn more.

SPEAKING OF LEARNING, I UNDERSTAND THAT PART OF YOUR WORK INVOLVES CONDUCTING TRAINING SESSIONS FOR WIND PROFESSIONALS.

That's right, we do. Some of the classes we offer are scheduled in advance, with wind technicians traveling to attend at a centrally located site. At other times we'll hold the session at our customer's facility, meeting with O&M specialists and company tribologists to provide our viewpoint on managing their lubrication issues. What we want to do is share the knowledge we've amassed during our years spent developing specialty lubricants for the wind energy market, working closely with OEMs, wind farm owner/operators, O&M service companies, and research institutions such as the National Renewable Energy Laboratory, with whom we have a longtime and very close working relationship. This experience is based on our activities both here in North America and through our colleagues in Europe. The central message we want to convey is that we're in this for good. We believe in the important role wind power will play in providing clean energy in the future, and as we accrue data we will continue incorporating those findings into our lubrication formulations. And although it may sound like a pipe dream, our ultimate goal is to develop a one-time fill that's good for the life of the gearbox. We now have automotive transmission lubricants that are rated at 100,000 miles, and there was a time when that was unthinkable. So keep your eyes open, we just might get there!

Call (877) 641-1600, e-mail techhelp@castrol.com, or go to www.castrolindustrial.com/windenergy. Also visit AWEA booth #2010.