Big gears, bright future at Talleres Guibe

Leading Spanish gear manufacturer invests in new-generation Gleason 2000GMS Analytical Gear Inspection System to keep pace with surge in Spain's windpower and other large gear markets.

It might surprise you to learn that Spain is the world's fourth biggest producer of wind power, right after the United States, Germany and China, with an installed capacity of 19,959 megawatts (MW) at the end of 2010. And the number of wind turbine installations in Spain is expected to accelerate. For companies like special gear and gear reducer manufacturer Talleres Guibe, situated in the heart of northern Spain's industrial region of Irura, Guipuzcoa, that's good news.

With a 30-year track record of success, Talleres Guibe is well-positioned to meet the needs of Spain's burgeoning windpower industry, and any other industrial sector requiring large gears and gear boxes. Most importantly, the company has made the investment in the latest Gleason gear grinding technology – specifically P2000G and P600/800G profile grinding machines – giving them the ability to finish from blank, to the highest quality levels, almost any cylindrical gear up to 2.8 meters in diameter in-house.

Meeting the inspection challenge.

But according to company officials, the enormous productivity and quality gains made possible with the Gleason grinder installations were being limited by the deficiencies found in the company's large gear inspection system. This older system was suddenly rendered almost completely obsolete, since its measurement capabilities were far below the exceptional accuracy levels achievable on the new Gleason machines. Furthermore, spare parts and service for the old system were almost non-existent. As a result, large gear inspection would now have to be performed elsewhere, adding to cost and delivery time – neither of which was acceptable to Talleres Guibe or its customers.

No wonder Talleres Guibe is anxiously awaiting delivery of their new Gleason 2000GMS Analytical Gear Inspection System. With a 2 meter workpiece diameter capacity, the new 2000GMS will be able to handle almost any gear produced at Talleres Guibe. Better yet, it will be able to perform the complete inspection of today's increasingly complex gear geometries up to 25% faster, while meeting VDI/VDE Class 1 specifications.

Talleres Guibe has a 30-year history of investing in modern facilities and equipment. With the recent addition of these Gleason P2000G and P600/800G Profile Grinders, and next-generaton 2000GMS Analytical Gear Inspection System, the company is well-positioned to produce larger gears faster and more accurately than ever before.

The new GMS series picks up where the GMM left off. Equipped with a new and improved GAMA 2.0 applications suite of software, the GMS series is unquestionably the easiest and most intuitive system of its kind to operate, empowering even less experienced operators with the ability to inspect any gear faster and more efficiently. GAMA 2.0 puts a host of powerful features right at the fingertips of the operator creating a simple, intuitive human/machine interface to improve their performance.

For example, the process of creating a new program is as easy as point and click, and can be done in just minutes in a few easy steps and regardless of the operator's level of experience, or the gear or gear cutting tool type. This even includes an 'unknown' gear, where parameters aren't defined and even a drawing might not exist.

The operator simply selects from a list of typical machine configurations, enters a part number, and clicks the "create" button. A series of tabs then appears across the top of the screen. The operator clicks on these tabs one by one, filling out the necessary fields with pertinent gear data, special tests required for highly modified gear profiles and geometry, and the type of analysis required.

Then GAMA does the rest, from a suite of applications software supporting the complete topographical inspection and prismatic measurement of any rotationally symmetrical workpiece, including cylindrical, bevel, conical and cycloid gears, shaper and shaving cutters, hobs, bevel blades, rotors…and more.

In addition, the human/machine interface has been further enhanced on the new GMS series with a newly-designed

Here's how GAMA 2.0 (Gleason Automated Measurement and Analysis) operating software simplifies programming and completely automates the inspection process.

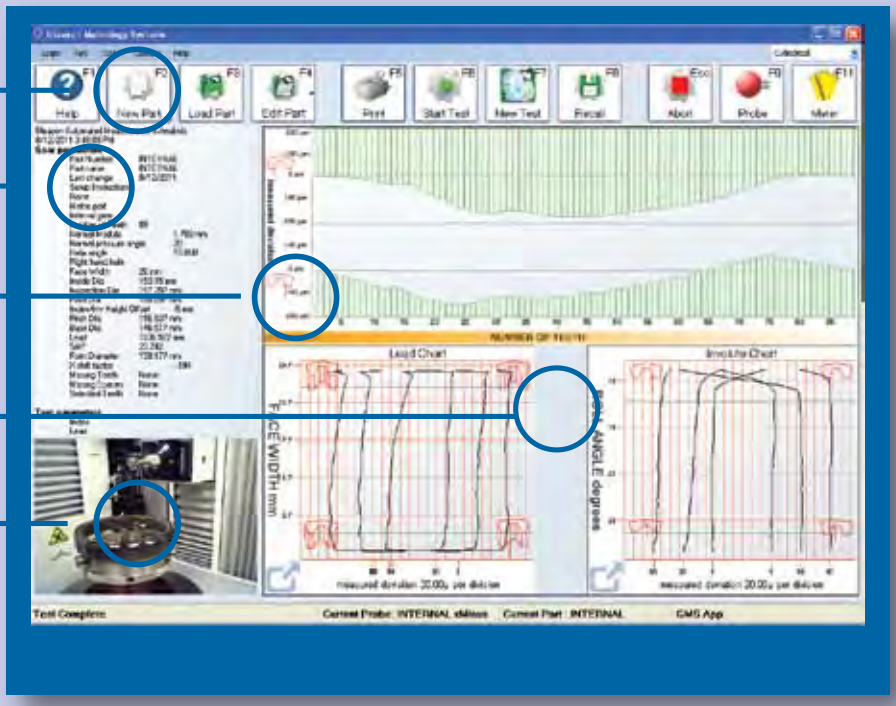
Making a new program is as easy as point and click.

Simple navigation tabs and forms make it easy to quickly and accurately establish gear parameters.

Instant inspection results appear in real time.

Charts open in sequence, and are dynamically updated with each tooth scan.

Digital image makes it easy for the operator to confirm part program prior to execution.



operator work station, which puts the operator in a better position to quickly, easily, and more comfortably perform tasks.

Also available is a unique hand-held remote pendant work station that allows the operator to be productive anywhere, ideal for large gears and particularly complex part setups. This remote pendant control comes complete with video telephony support, internet connection, touch screen input and a host of other important features.

The performance of Renishaw 3-D scanning probes.

The new GMS series are also the only systems in their class uses the Renishaw SP80H 3-D scanning probes – a sensor technology that's 'light years' ahead of older model scanning probes – and is ideally well suited for the complexities of today's gear designs.

GMS can be equipped with a series of various stylus sizes and configurations to meet the requirements of any production environment – all interchangeable with a fast Automatic Probe Changer.

These probes feature industry leading probe axis travels: X axis is plus or minus 1.5 mm; Y and Z axes are plus or minus 2.5 mm…with each axis driven on 20 nanometer resolution glass scales for exceptional measuring accuracies.

This makes it possible for a GMS to acquire data faster and more accurately on even the most complex gear tooth profiles, including crowning, hollow and taper. Also note that the GMS probe system offers an important collision protection feature: it's kinematically coupled to the drive system, enabling it to more easily break away for added safety.

Above all, the GMS Series are built for reliability, with a host of new design features delivering exceptional accuracies and repeatability from Day 1 through the life of the system.

Latest generation GMS Series offers users a highly productive solution for the widest range of gear types and sizes, as well as gear cutting tools.