

# GLOBAL SOLUTIONS



## BETTER INSPECTION for Windpower Gears

**Japan's Iwasa Tech is ramping up to help meet fast-growing Asia windpower generating capacity with Gleason's 3000GMM Analytical Gear Inspection Systems.**

The winds of change are blowing throughout Asia. Hungry for new sources of clean energy to power their fast-growing markets, China, India, Japan, Taiwan, South Korea and the Phillipines are today all making investments in their wind power capacity. Innovative gear manufacturers like Iwasa Tech. Co., Ltd., Tokyo, Japan, are reaping the rewards. The company has steadily risen higher on the strength of Asian wind power currents to become Japan's leading manufacturer of the large internal gears used in wind turbine gear boxes. In fact, the company has a near 100% market share of the internal gears domestically produced for windpower.



**Producing 2 meter gears faster, with aircraft quality.** Today's windpower turbine gears must run with extraordinary reliability. Installations are often in inaccessible areas and operating in adverse conditions that make repair and maintenance both difficult and expensive. Increasingly important is the need for quiet-running wind turbines, particularly for wind towers in close proximity to populated areas. As a result, quality requirements have never been more stringent, approaching those once required only by products like aircraft. At the same time, the demand for these large, highly accurate gears has never been greater, with consumption doubling year to year in markets like China and India.

**“Fast, reliable inspection of these high quality windpower gears would not be possible without them.”**

Meeting all of these requirements can only be done by a handful of companies around the world. Iwasa Tech has managed to meet the insatiable Asian demand for gears of this type, and maintain its marketshare dominance, by investing not only in production capacity, but also in the ability to thoroughly inspect all the critical features on 100% of its product. This is no easy task, given that Iwasa Tech's internal gears are 1.5M to 2.0M, Module 12 to 20, with 400 mm face widths and weigh upwards of 3 tons. In addition, Iwasa Tech produces close to 100 gears of this size every month. Fortunately, help has just arrived, in the form of a second Gleason 3000GMM Analytical Gear Tester.

Iwasa Tech bought its first 3000GMM in 2007. They liked it so much that they ordered another which, according to company officials, they like even better because of a host of new features that improve measurement speeds and day-to-day performance. Iwasa Tech believes that, for the work they do, the new Gleason 3000GMM is unmatched in every critical category, particularly speed, accuracy and ease of operation.

#### Here's why:

- It's a super-rigid, column-type gear measurement machine with a solid granite base that provides considerably more stability for a 4 ton gear than competitive models with cast-iron bases. Its Meehanite® cast iron slide assemblies provide vastly better damping characteristics than conventional cast-iron fabrications too. The design allows for the stability required for even the very long probe lengths used for measuring the 400 mm face widths.

**Company:** Iwasa Tech. Co., Ltd.

**Location:** Tokyo, Japan

**No. of Employees:** 44

#### Major Products/Markets:

Design and manufacture of ground internal and external gears, including the very largest for windpower applications; various kinds of worm gears, screw rotor and spiral bevel gears.

**Gleason Solutions:** Two Gleason 3000GMM Analytical Gear Inspection Systems.

- Like all the Gleason GMM Series, the new 3000GMM is equipped with the Renishaw® SP80H probe – an advanced, 3-D scanning probe with the largest probe travel in the industry.



*Two Gleason 3000GMM Analytical Gear Inspection Systems give Iwasa Tech the ability to meet stringent windpower quality needs.*

- It comes equipped with GAMA (Gleason Automated Measurement and Analysis) software to greatly improve the man/machine interface. It's a true Windows® VB.NET application, fully compatible with Iwasa Tech's LAN network so inspection data can be easily transmitted across the network for refinements to parts processing. In addition, it's particularly easy to learn and use, with a highly intuitive graphical user interface and a host of features including help menus, language translation, multiple security levels, and even on-line support.

These and other features make the 3000GMM highly versatile as well. In addition to large internal gears, Iwasa Tech uses the inspection systems for external gears, worm gears, rotor gears and even bevel gears across a very wide range of gear sizes and configurations.

Of course, Gleason's localized service and support network has been instrumental in the successful startup of the new technology. Gleason Asia Co., Ltd, is just minutes away, providing on-site technical expertise and application support throughout the installation and launch period.



*The Gleason 3000GMM's are versatile too, giving Iwasa Tech the means to inspect a complete range of products, including large bevel gears.*

## THE POWER OF GAMA . . .

### GAMA AT WORK:

#### Making a new program

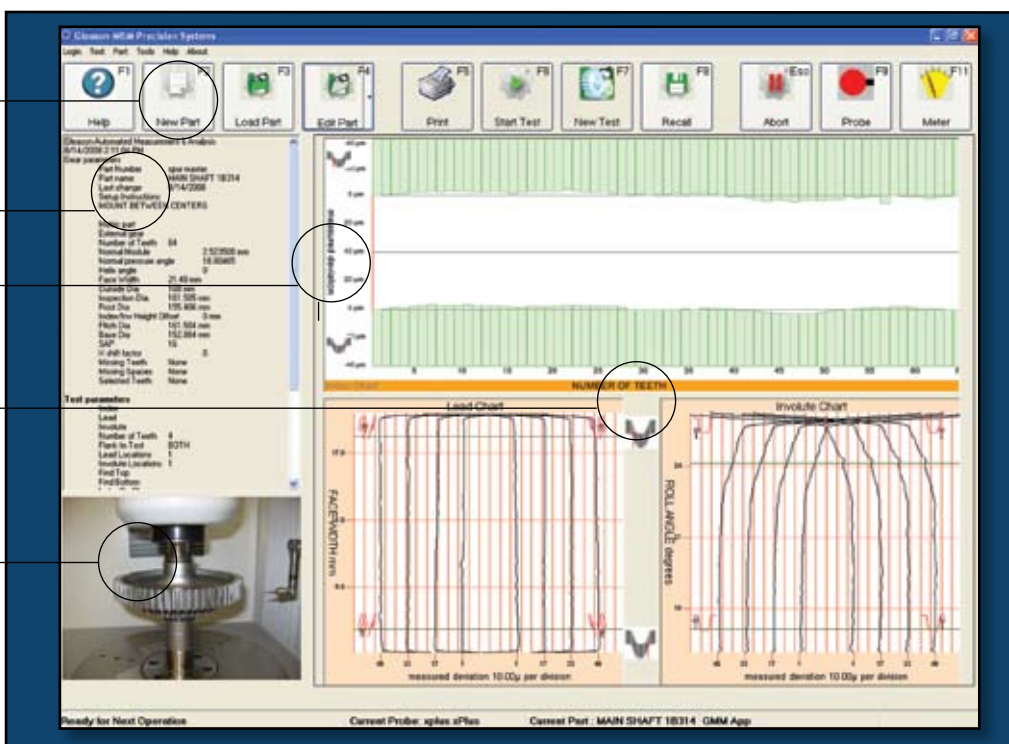
is as easy as point and click. . .

**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.

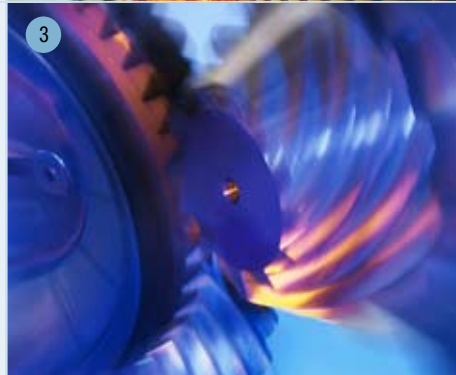
**Digital image** makes it easy for the operator to confirm part program prior to execution.



Only Gleason offers all of the capabilities you need to produce any gear, any size, any quality, faster and more economically, anywhere in the world.



- 1 Spur and helical gear production to 5,000 mm
- 2 Bevel gear grinding
- 3 Bevel gear testing
- 4 Complete gear inspection systems
- 5 Tooling solutions
- 6 Quick-change workholding systems
- 7 Localized service and support resources



## Americas

## Europe

## Asia

### Gleason Corporation The Gleason Works

1000 University Avenue, P.O. Box 22970  
Rochester, NY 14692-2970 USA  
+1-585-473-1000  
sales@gleason.com

### Gleason Cutting Tools CORPORATION

1351 Windsor Road  
Loves Park, IL 61111 USA  
+1-815-877-8900  
gctc@gleason.com

### Gleason-**MVI** Precision Systems CORPORATION

300 Progress Road  
Dayton, OH 45449 USA  
+1-937-859-8273  
mmprecision@gleason.com

### Gleason - PFAUTER Maschinenfabrik GmbH

Daimlerstr. 14  
D-71636 Ludwigsburg, Germany  
+49-(0)7141-404-0  
pfauter@gleason.com

### Gleason - PFAUTER Maschinenfabrik GmbH

Buetigenstrasse 80, P.O. Box 152  
CH-2557 Studen, Switzerland  
+41-(0)32-266-6171  
sales@gleason-pfauter.ch

### Gleason - HURTH Maschinen und Werkzeuge GmbH

Moosacher Str. 42-46  
D-80809 München, Germany  
+49-(0)89-35 401-0  
hurth@gleason.com

### Gleason Cutting Tools Limited

Plymbridge Rd., Estover  
Plymouth PL 6 7LQ England  
+44-(0)1752-724 424  
ukss@gleason.com

### Gleason Gear Technology (Suzhou) Co., Ltd.

No.61, Qiye Road Weiting Technology Park  
Suzhou Industrial Park, Jiangsu  
215121 P.R. China  
+86-512-6271-8767  
sales@ggts.com

### Gleason Cutting Tools (Suzhou)

A division of Gleason Gear Technology (Suzhou) Co., Ltd.  
Block 8B, Modern Industrial Square  
No. 333 Xingpu Road, SIP, Jiangsu  
215126, P. R. China  
+86-512-6732-5806  
Yao.dan@gleason.com

### Gleason Works (India) PRIVATE LIMITED

Plot No. 37 Doddenakundi Industrial Area  
Whitefield Road  
Mahadevapura  
Bangalore 560 048 India  
+91-80-2852-4315  
bangalore.sales@gleason.in

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