

# GLOBAL SOLUTIONS

GLEASON CORPORATION • KEEPING THE WORLD IN MOTION™ • GEAR EXPO & EMO SHOW ISSUE • VOL. 1, NO. 2

## SUDA INTERNATIONAL GEAR WORKS, LTD.

**Hard-driving, quality-obsessed global companies like ZF Industries and ABB travel half way around the world to have their precision gears manufactured by a small Japanese company at the foot of Mt. Fuji. In Motion asks Suda International Gear Works, Ltd. (SIG) President Haruo Suda for the secrets to his success...**

Mount Fuji

**Q.** *Suda-san, your company has been successful in attracting business from all over the world. This is no easy task for a relatively unknown 130 person company...*

**A.** Not easy, but imperative. Today fully 50% of our business now comes from offshore, as compared to 0% just 15 years ago. While no one could have fully predicted the severity of the economic crisis in Japan, we began in the early 90's to actively seek out customers outside Japan. Diversification has meant survival.

**Q.** *So SIG has been able to offer its customers some*

*distinct advantages that make the size of your company, and the distances traveled, irrelevant?*

**A.** Our investment in building a turnkey gear manufacturing capability – from cutting blanks through heat treat, finish grinding and inspection – using only best-in-class equipment gives us the ability to respond to shorter deliveries and higher quality requirements. In Japan we used to say 'Big eats Small,' meaning in a competitive environment you had to be big to survive. Now we say 'Fast eats Slow'.

**Q.** *For Example?*

**A.** Swedish robotics leader ABB came to us with the need to speed production on high ratio hypoid gears. These are very high precision gears that, because of the number of teeth, are painstakingly slow to produce accurately. By using the latest Gleason high speed Phoenix® hypoid gear cutting and grinding machines and software to produce a Waguri Motion, we succeeded in making significant reductions in production times and cost – but without sacrificing quality. And most recently, we have used this same Gleason high-speed cutting/grinding capability to produce much higher ratio hypoid gears to replace worm and worm wheels to drive precision rotary tables on machining centers. Our customer now can offer a

rotary table with higher positioning accuracies, faster speeds, and longer gear life than possible conventionally. Now even the speeds and accuracy required for vertical turning work is possible on these tables.

In addition, we have a Gleason Single Flank Tester in our inspection room, capable of measuring transmission error in a pair of gears, and providing data that is useful in analyzing gear noise. It's yet another way Gleason technology is helping us compete globally.

**Q.** *Now that you've made a name for yourself outside of Japan, where do you see additional opportunities and growth for SIG in the future?*

**A.** We are very excited about the potential for our new Gleason 245TWG high speed threaded wheel grinder. While we offer a very broad range of sizes on both bevel and cylindrical gears – 10mm to 1000mm – we are generally perceived as a small lot, low volume producer. The 245TWG will put us into the mid volume production range, with lot sizes in the hundreds. The 245TWG was simply the fastest machine of its kind, and versatile enough to produce spur gears and even a unique beveloid for a robotic arm.

**Q.** *And 'Fast Eats Slow?'*

**A.** Yes!



*“In Japan we used to say ‘Big eats Small,’ Now we say ‘Fast eats Slow’.”*

*“Gleason high-speed cutting/grinding capability produces high ratio hypoid gears to replace worm and worm wheels to drive precision rotary tables on machining centers.”*

*“The Gleason 245TWG will put us into the mid volume production range, with lot sizes in the hundreds.”*

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