

Okamoto Trip Report Thursday, March 14th Singapore Plant

Attendees:

Gary Hartwig

Greg Kinney

Gary Frick

Ishikawa Kiyokazu (Executive Director Singapore)

David Tay (Director Singapore)

Takahashi Yukio (Factory Manager Singapore)

John Gannon (President USA)

Yoshi Yoshida (Service Manager USA)



The Okamoto Singapore plant is 200,000 sq. ft. in size and employs 230 people. The products that are built in this plant are ID/OD, surface, high accuracy surface and semiconductor wafer grinders. The breakdown of machine shipments by country are: 50% Japan, 30% USA, 10% Europe and the rest is Asia. It was very obvious the pride the workers showed during our tour. When the employees are hired, they go through a six month apprentice program. They believe in cross-training all the factory workers. Talk about controlling your manufacturing "destiny". The gentleman that gave the tour was Takahashi and he had worked with Okamoto for over 40 years. He was full of knowledge, passion and pride. They assemble grinders from start to finish in approximately 3 weeks. The assembly process is Kan Ban system. Once the assembly starts, the grinder doesn't move from the assigned area until it is completed. The tools, and all of the components that belong to the machine, are kept organized in bins. "Hand scraping is truly an art".



We saw a unique grinder; the model number was UPZ210LI. This baby was loaded with options. The market for the grinder would be for small and very accurate parts. The machine has a built-in vision system and is capable of measuring parts prior to leaving the machine. Then it will compare it to the part drawing where you can make adjustments to the part. The table travel is 200mm in the x axis. By the way, the x axis is powered by linear motor- "very fast". The machine accuracy is 2 micron minimum. The plant is investing in new technology. They just purchased a double column from Okuma MCR BII. They have a large Makino 1000mm horizontal with a 20,000 RPM spindle. Okamoto believes the big growth in the next two to three years will be in the semiconductor business. Okamoto currently has 50 of these type of grinders in California and about 3 in Oregon. Okamoto has two full time service guys in the US just for the semiconductor machines. They believe the wafers will be getting thinner. The thickness will be .001 of a micron (45 nanometers). They are also developing a universal ID/OD grinder for the automotive industry.

The new color for the surface grinders!



Friday, March 15th
Thailand Plant

Okamoto:

Tsuneyuki Ishii (President Thailand)

The Okamoto facility in Thailand has the WOW factor. The size was 1,000,000 sq. ft. and around 1,000 employees. They run two, 12-hour shifts per day, 5 days a week. They are producing around 150 machines a month. They have a goal of producing 400 grinders per month. "WOW"! The facility was very clean, well thought out and organized. The facility consists of two foundries to produce the castings, one weldment, one powder coating and paint area and two machine facilities. They produce 2200 tons of castings per month. They make all the castings for their own machines in addition to some for Okuma, Makino and Mori to name a few.



They only have a 3% turnover rate with their employees. They produce most all of Okamoto type grinders in this facility. They have around 100 employees that hand scrape. The philosophies are the same in both plants and that is quality, quality and quality. The President Ishii was very informative and was a hands-on guy. What an outstanding experience!

Summary:

Team, we represent the best grinding manufacturer in the world. You should be proud to talk the talk about Okamoto. They represent 22% marketshare in the United States. They control a big portion of the manufacturing process, from the castings to the spindles. This was a big eye opener and it showed our partner Okamoto that we are committed to being their partner in all of Hartwig territories.

Sincerely,
Gary Frick