

Q&A with QA & QC: A Look At MGS Quality Systems

Quality assurance and quality control are just two of the many essential facets of the MGS Mfg. Group of companies. Among its four production molding facilities (Germantown, WI; Antioch, IL; Libertyville, IL; Chihuahua, Mexico), the company has over 50 employees dedicated to establishing and maintaining quality systems that meet or exceed customer expectations. Along with an on-site Quality Manager at each facility, the company also employs numerous Quality Engineers, Inspectors, Technicians, Operators, Metrologists, and Documentation Control Specialists.

MGS NEWS interviewed the Quality Management team for a Q&A session. Those who participated include Larry VanHoven: Quality Manager and Al Vick: VP of Global Quality at TecStar Mfg. Company in Germantown, WI; Ron Claypool: Director of Quality at All West Plastics, Inc. in Antioch, IL; and Karen Coleman: Quality Manager at TecStar Mfg. Company in Libertyville, IL.

As you read this article you will notice that numerous acronyms are used. Please utilize the helpful Quality Acronym Index on page three of this newsletter as a resource.

What type of ongoing internal and external quality training is provided for employees at MGS?

LV: TecStar in Germantown uses a self-directed computer based training program for gauging and blueprint reading, along with one-on-one and team training. Most recently, inspectors went through a training program based upon the ASQ Body of Knowledge for a Certified Quality Inspector.

KC: We have everyone trained externally on programming the CMM and the OGP. Internally, we train on GMP and the ISO requirements and expectations. Training continues on procedures and practices within the lab. If an inspector devises a better way in which to do a certain procedure or job, it is evaluated, and if approved, all team members are trained on the new method.

RC: At All West, continuous on-the-job training is given for new processes and procedures, as well as for any new equipment that is acquired. Part-specific training, such as measuring techniques is required on all new products. We also plan to incorporate some of the same computer-based training that is provided at TecStar Mfg. Company in Germantown.



Explain the roles of quality processes in the lab versus on the shop floor.

LV: All quality evaluations, both dimensional and visual, are performed on the production floor. The Quality Lab at TecStar in Germantown houses the more sophisticated instruments requiring a more secure

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and environmentally stable environment. Instruments such as a touch CMM, optical CMM, three visual 2D measuring systems, various force gauges, and a mixture of other instruments are accessible to all department personnel.

KC: Quality processes in the lab are nearly identical to those on the floor. For manufacturing, QA must approve all line clearances and start-ups (both visual and measurements). They also monitor all running presses and work with the supervisors and operators on part quality.

The Quality Technician handles all new part approvals, while the inspectors are responsible for measuring and visually inspecting the parts.

RC: In-process inspection is typically done on the production floor at gauging stations located in each production area. More sophisticated equipment is accessible in the Quality Lab. Mold validations are also performed in the lab.

"Within the last two years, TecStar has invested nearly \$70,000 in new equipment to improve quality processes."

What investments have been made in quality-related equipment and technologies?

LV: Within the last two years, TecStar has invested nearly \$70,000 in new equipment to improve quality processes. This includes a Tesa DCC CMM, a Mitutoyo Laser Scanning Micrometer, and a Byk Gardner Color Spectrophotometer, among various other equipment.

KC: In 2007 the Libertyville facility purchased an Optical Gage Comparator, and also invests in the maintenance and upgrading of its CMM.

RC: A new programmable OGP Smart Scope was purchased in 2007 and a Chatillon Force Gauge in 2008. To increase in-process efficiencies, equipment was purchased to supply

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AT A GLANCE!



MOLDMAKERS INCORPORATED

DESIGNERS MOLDBUILDERS CONSULTANTS

A new Mori Seiki NL1500SY CNC (Computer Numerical Control) lathe was added to the Moldmakers Incorporated tool shop this month.

The new lathe is a smaller version of the company's existing Mori Seiki NL2500Y CNC lathe, offering Y Axis and live tooling, but provides a few additional features including a graphite package and a sub-spindle.



CNC lathes provide consistency, accuracy, and efficiency with greater throughput.

As an additional improvement in the automated tool shop at Moldmakers, a Fanuc robot is being installed on the company's rōders 500 DS 5-axis machine.

The 5-axis machine was incorporated in July of this year and has proven to be a valuable and resourceful addition for the company and its customers, as it improves lead-times and efficiencies.

ALL WEST PLASTICS, INC.

PRECISION MANUFACTURING
CLEAN ROOM MOLDING / ISO 9001-2000

In order to ensure the continued supply of on-time molded components for a large medical customer, All West Plastics, Inc. recently completed an overhaul of one of its manufacturing cells. The upgrade included replacing two Van Dorn hydraulic molding machines with late model Toshiba electrics and replacing the Yushin robots with late model Wittmans. All West's Specialty Equipment Group built all new end-of-arm tooling for the cell.

In conjunction with the equipment upgrades, MGS Mfg. Group redesigned and built new safety guarding and shrouds for the manufacturing cell. These changes improved production efficiencies and were very well received by the customer.



Visit our newly updated websites for more photos, videos, and information!

www.mgstech.com

www.multishot.com

www.allwestplasticsinc.com



Chihuahua, Mexico:

TecStar de Mexico is increasing production molding capabilities with the addition of a Bekum continuous extrusion shuttle blow molding machine. This machine will produce blow-molded parts for the consumer market. According to MGS Vice President Dave Sansone, "Implementing blow molding processes at TecStar de Mexico brings progressive technology to the Mexican market. The blow molding capabilities will generate new business and create the potential for future expansion."



To prepare for production, key staff members incurred weeks of on-site training at the Germantown facility, which involved the disassembly, crating, and shipping of the blow molding cell, which was then reassembled at the Mexico facility. Additionally, tool room personnel were trained in mold maintenance.



UMS (Universal Multishot Systems) has united with Gammaflux L.P. to develop hot runner control solutions specifically designed for the UMS line of systems. "Gammaflux has worked with us to integrate their hot runner control into our multishot molding system," said John Hahn, VP of Engineering for MGS Mfg. Group. "Their control and screen is integrated into the MGS screen, so all of the Gammaflux features are accessible to operators at the touch of a button."

Benefits for the customer include a single control screen for all machines and hot runner control functions, said Hahn.

Based in Sterling, Virginia, Gammaflux is a leading supplier of hot runner temperature control systems to the plastics injection molding industry.

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MGS In The News

November 2008 - Plastics

News: The magazine publishes an article in the November 17th issue regarding All West Plastics, Inc. All West Plastics, MGS Mfg. Group's ISO Class 8 Clean Room facility, is building dedicated manufacturing space to house the production for a new specialty product for a major pharmaceutical manufacturer.

October 2008 - Fabricating & Metalworking Magazine:

The October issue features an extensive article about the partnership between MGS Mfg. Group and Haimer USA. MGS utilizes Haimer USA tool holders and power clamp shrink fit machines at its tool shops in Germantown and Menomonee Falls.

September 2008 - Manufacturing News:

In this issue, a story pertaining to the addition of two 880 ton Krauss Maffei presses is published, accompanied by two photos. A similar story is also published in the September 22nd edition of Plastics News.

QUALITY Acronyms

A2LA- American Association for Laboratory Accreditation

ASQ- American Society for Quality

CFR- Code of Federal Regulations

CMM- Coordinate Measuring Machine

FDA- Food & Drug Administration

GMP- Good Manufacturing Practices

ISO- International Organization for Standardization

NSF- National Sanitation Foundation

OGP- Optical Gaging Product

QA- Quality Assurance

QC- Quality Control

QS- Quality Systems

TS- Technical Specification

UL- United Laboratories

Six Sigma- A business management strategy using statistical methods to remove the causes of defects in processes

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three QA gauging stations on the production floor, and more than 70 custom gauges were acquired to improve inspection processes.

What industry certifications or licenses are available/required for the quality lab and/or for personnel?

AV: We are required to only use the services of Calibration Laboratories that are A2LA or ISO 17025 certified. These certifications ensure that any equipment calibrated will be traceable to the National Institute of Standards and Testing.

KC: TecStar in Libertyville has QS and ISO certifications as well as an industry NSF International certification. Our QA Manager is Six Sigma Black Belt Certified, which is a professional who can explain Six Sigma philosophies and principles, including supporting systems and tools.



How do we meet industry/customer requirements with regard to compliance and calibration of our processes and/or equipment?

LV: TecStar maintains registration to both the ISO 9001 and TS-16949 Quality Management Systems. We are also recognized by the FDA and UL and are operating under GMP and 21 CFR guidelines.

KC: All equipment is calibrated on a schedule. We are audited annually by the NSF and ISO, successfully passing all audits for 2008.

RC: All West is certified ISO 9001:2000 Standard and is also an FDA Registered facility. Calibrations are performed to a defined schedule which can be anywhere from a one to five year frequency based on application and frequency of use.

Is there a quality "report card" which is specific to a customer program or to MGS corporate-wide?

AV: A few of our customers provide us with monthly report cards that detail their perception of our performance. Other customers send report cards that detail and grade our performance concerning quality, on-time delivery, and service. One of our customers for the telecommunications market requires its suppliers to be Six Sigma, which only allows three defects per million parts. We currently conform to this requirement.)

KC: Our facility receives a monthly report card from our largest customer. We currently hold a score of 97%, which makes us eligible for their Supplier of the Year Award. We also welcome customer audits at the discretion of the customer.

RC: We receive report cards from several customers, which are sent monthly, quarterly, or annually. Typical feedback includes quality, on-time delivery, administrative accuracy, and customer service. We also receive daily feedback from one particular customer that performs 100% visual inspection of all of their products.

The MGS Mfg. Group of companies continues to develop and advance quality assurance practices through process updates and edification to ensure it meets the requirements of both its diversified group of customers and its auditors.

Thank you to the MGS quality teams for dedicating their time to assist with this Q&A session.

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Since relocating to Menomonee Falls in July of this year, PMD (Prototypes, Molds, & Design) has expanded production by adding supplementary equipment to its 14,000 square feet of space dedicated to manufacturing. Along with the addition of a Kitamura Bridge Center 8F double column machining center, the company has also integrated a Makino SNC64 Graphite Cell with a 3R robot and inline CMM inspection, a Deckel Maho DMG 75V (head pivoting model) and a Hermle C360N (trunion style) 5-axis machine.



To keep up with steady growth, PMD continues to expand its equipment resources, as well as its talented staff. This year alone, PMD has grown its staff by 30%. Employees of PMD include 3-D designers, toolmakers, CNC and EDM Specialists, shipping, and office staff.

The company anticipates it will continue to increase its customer base, providing even further opportunity for growth in 2009 and the years to follow.



The employees at PMD pitched in to make the July move to the Menomonee Falls facility seamless. According to Erica Neu, everyone took initiative to get involved and help each other to ensure every project was completed as planned during the transition to the 34,000 square-foot facility.

Comments, ideas, and suggestions for the *MGS NEWS* are always welcome.

Please send your communications to Rebecca Reed in the MGS Marketing Dept. at rebecca.reed@mgstech.com.

MGS Receives Visit from Senator Feingold's Staff

On Monday, November 17, 2008, MGS Mfg. Group received a visit from Rebeca Lopez, Manager and Regional Coordinator for United States Senator Russ Feingold.

The Senator and his staff learned of the MGS Mfg. Group after receiving a copy of the August 2008 edition of *MGS NEWS*. Intrigued by what they read about the company, its capabilities, and its customers, a visit to the MGS facility was scheduled.

During her visit, Ms. Lopez met with Rebecca Reed of the MGS Marketing Department to collect additional information about the MGS Mfg. Group of companies and to receive a tour of the Germantown facilities. She was very impressed overall, particularly with the scope of the company's production molding processes.

The visit was initiated at the request of Senator Feingold, who, according to Ms. Lopez, plans to visit MGS personally within the next couple of months.

CALENDAR OF EVENTS

JANUARY 2009

26th Molding 2009 - Vital Technologies for Business Success Seminar - Session Two, "Best Practices" - John Berg, Guest Speaker: Continuous Improvement Teams New Orleans, Louisiana

JUNE 2009

22-26 NPE 2009 (National Plastics Expo) Chicago, Illinois - Booth #12110

OCTOBER 2009

5-7th Pack Expo 2009 Las Vegas, Nevada - Booth S-5811



*from the MGS Mfg. Group
May you prosper in good health and
happiness throughout the new year.*