

Mercury Corporation Achieves AS9100 Certification

Mercury Corporation recently announced that the company has been certified as meeting the requirements of AS9100, a widely adopted and standardized quality management system for the aerospace industry.

Founded in 1920, the company is into its fourth generation of Meade family ownership and management, and has 175 employees at its Hammond-sport headquarters. Mercury generates annual sales of \$90 million from six locations worldwide



Checking quality on a large 3-D coordinate measuring machine

by providing design, build, and ship services for industries that include defense, electronics, medical, energy, and transportation.

For many years, Mercury has employed various approaches to managing qual-

ity such as MIL SPEC, AWS certification, UL and FCC standards, and Zero Defects. To find out why the company thought it was important to add AS9100 certification and how they went about it, AM&T's Michael Meador spoke with three senior managers: Joseph F. Meade, III (Bud), President and CEO; Joseph F. Meade, IV (Joe), Assistant Vice President; and Glenn Neu, Quality Engineer.

Since Mercury was already certified to the ISO 9001:2008 standard, why AS9100 and why now?

BUD: "To give a little background, we first started working on ISO in the mid-90's, but we worked with a different consultant who created a very large set of documents that wound up being unusable. In other words, we got bad advice and wound up shelving the project for several years."

GLENN: "And then in 2003, Bud decided that it was important for us to tackle ISO registration, so we started again, this time using plain language to describe our procedures instead of using some theoretical template. We wanted expert assistance, so we hired AM&T and, with Bob Mann's help, we passed the certification audit.

We were concerned that achieving and maintaining formal quality certifications was just going to add a lot of indirect labor and other overhead costs. But, in fact, we were able to do it with minimal costs by using some automation to manage our quality documentation -- which is a large part of a good quality system. For example, we print hard copies of work instructions, but everything else is maintained only in electronic form."

That makes sense, but what was the impact to the company at large?

JOE: "We've always embraced the concepts of continuous improvement, but until we had the foundation -- an ISO program -- those tools weren't very effective because we didn't have a system to manage quality. We'd put a new procedure or policy in place and people would follow it for a few months and then it would fade away. The system gives us the structure to make sure these kinds of changes stick. Before we implemented ISO, many of our customers assumed that we already had either ISO or a strong quality system, so marketing benefits weren't the driver -- the big benefit was to internal operations."

OK, you've been ISO-certified for nearly 10 years and ISO is closely aligned with AS9100, so why did you want to add it?

JOE: "Parts of our traditional business are disappearing, so we had to step back and determine where we will fit in the future of manufacturing in the US. Historically our customers came to us based on our reputation; now we have to have a more

Continued on Page 3



Alliance for Manufacturing & Technology

HOW WE HELP

- Business Assessments
- Strategic Planning
- Lean Enterprise
- Supervisory Training (TWI)
- Project Management
- ISO/AS Quality Systems
- Sales and Marketing
- New Opportunity Identification and Growth — Markets, Products, Services, Customers

AM&T is a not-for-profit economic development organization that receives significant financial support from the New York State Foundation for Science, Technology and Innovation (NYSTAR), and the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP). AM&T is a NYSTAR® designated Regional Technology Development Center for the Southern Tier and is one of nearly 50 MEPs located across the country. AM&T works directly with regional companies to increase their competitiveness and profitability.

This publication is funded in whole or in part by NYSTAR. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of NYSTAR.



What We've Been Doing To Spur Innovation, Promote Growth and Improve Profitability

- Conducted an ISO 9001:2008 audit at one company with a mature and effective ISO Quality Management System that continues to generate continual improvement and provide customer satisfaction.
- Conducted Training-Within-Industry (TWI), three modules, at two companies to assist their supervisors with improving job methods and increasing production effectiveness.
- Assisted a company in development of Sales and Customer Service Plans, messaging, and performance evaluation, and provided on-going implementation mentoring and support.
- Assisted an inventor of patented medical devices in finding manufacturing partners and to seek funding.
- Co-sponsored and participated in Startup Weekend competition in Binghamton where an entrepreneurial group known as ProtoME was awarded a \$2000 prize to pursue its plan for large-scale 3D printing in a manufacturing setting. One AM&T staff member served as a mentor to the winning team. During the weekend, 60 participants presented their ideas and seven were chosen as finalists for in-depth presentations. Startup Weekends are held at worldwide locations to encourage and reward entrepreneurship.
- Developed a Problem-Solving training package customized to benefit small to mid-size manufacturers and delivered the training to one company in the Region. This training will benefit a workforce by teaching and facilitating an 8-step methodology that can become ingrained in your day to day culture as issues are addressed.
- Conducted an 8 hour Value Stream Mapping in the Office workshop, training participants in Lean Thinking and how to use Value Stream Mapping to improve administrative processes. The training was attended by 21 people and numerous potential opportunities were identified.
- Completed a 5 day Cellular Flow Manufacturing event. The team designed a cell that incorporated all subassembly, assembly and packaging operations. The cell design will result in better flow and quality, and less WIP, distanced travelled and floor space.
- Completed a 5 day rapid improvement event that targeted supplier corrective action requests. The team redesigned the process to:
 - Improve communications and management
 - Provide more effective information to perform Root Cause and Correction Action to eliminate Supplier defects
 - Assess and evaluate effectiveness of Root Cause and Correction Action activities
- Conducted a three-hour lean best practice tour to see demonstrations of lean principles applied to manufacturing. The event was attended by 12 people.
- Assisted a high-tech startup of patented 3-D printing technology find manufacturing partners.

Mercury Corporation Achieves AS9100 Certification

Continued from Page 1

proactive marketing strategy -- field reps, trade shows, a strong web presence, and those kinds of things -- and a third-party quality certification makes it easier to develop new relationships.

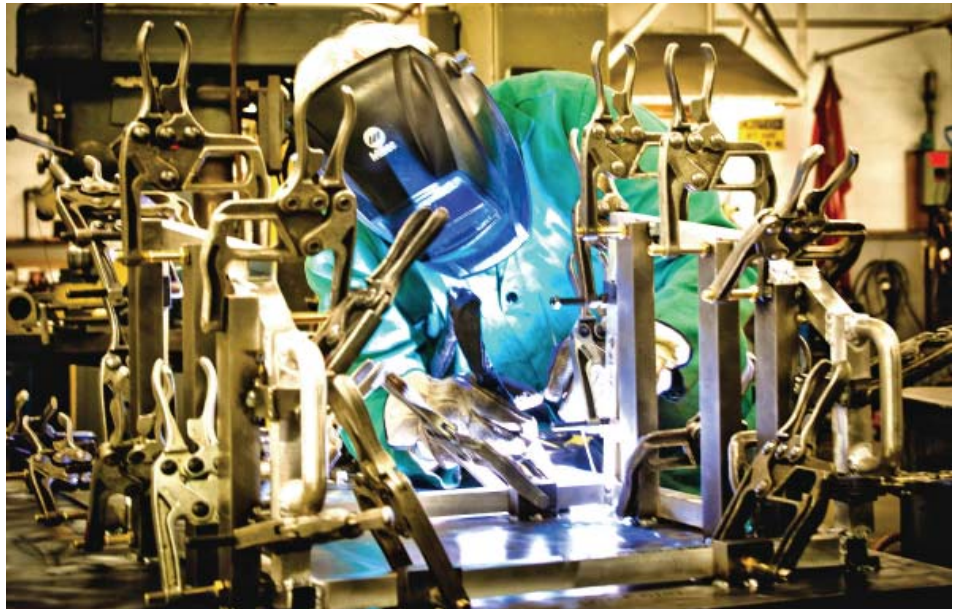
Any company that's serious about doing business needs a quality system of whatever type is right for that business. We certainly consider that when we look at a supplier so we know that others will want it from us. An important market for Mercury is defense, and AS9100 certification is necessary to be a serious player in that area. We're seeing that requirement with both existing and new customers."

BUD: "In fact, we're now thinking about going for the ISO 13485 that addresses medical industry requirements. In addition to the marketing benefits which are very obvious, getting ready for the certification process created a structure that enabled our employees to raise the bar on standards, to step up to a new level."



Loading a new 5-axis Machining Center

GLENN: "Right -- when we were being reviewed for AS9100 registration, the auditor said he was very impressed with the knowledge that exists on our shop



Welding aluminum components of a large prototype product

floor. I think these quality programs have played a large part in building that asset for the company."

It appears that Mercury is looking forward, being innovative, trying to anticipate demands that match your capabilities, and then taking actions such as AS9100 registration to make you more competitive. Are there other benefits to becoming AS9100 registered?

GLENN: "We use our quality systems not just in production but throughout the entire business -- administration, marketing, everything. ISO provided a foundation and then AS 9100 took us to a higher level with, among other things, a risk management review process that is very useful."

JOE: "At a management level, we had always tried to analyze risks but now we do it in a more systematic way, document what we discover, and then follow-up with contingency plans to mitigate the risks."

What advice would you give to other Southern Tier companies about ISO and AS certifications?

BUD: "For me, it's actually very simple: the most important benefit is putting a system in place that makes you do a better job of the things you already do, and gives you a framework to do a good job with the new things you want to get done."

GLENN: "This company can't say enough good things about AM&T and Bob Mann. Based on his previous work with us, when we decided to go with AS9100, he was the obvious choice for someone to help. He did a gap analysis, helped with our risk management procedures, and helped tweak our configuration management procedures. The result was that when we had our audit done, our registrar was very impressed and we were recommended for certification."

JOE: "And I, too, want to emphasize what a great job Bob did -- he worked with us well and only pushed us when it was needed. We would recommend AM&T to anyone who wants to go through this process -- it was well worth what it cost."

See www.mercurycorp.com for more information.

US Manufacturing Renaissance

by Rob Lillpopp

On its website, NBC News (11/9, Haller, Balani) reports, "From coast to coast, manufacturers are making more products, but with fewer people, as the sector makes an improbable rebound after a tough recession. 'I think it's a time of great opportunity in manufacturing,' said Mary Andringa, chair of the National Association of Manufacturers. "What's really outstanding is the fact that in 2010, the US had an output of \$4.8 trillion of manufactured goods. That was up from \$4.1 (trillion) in 2000. And we've been through two recessions in the last decade. The United States produces 21 percent of the world's manufactured goods. We're number one, followed by China at 15 and Japan at 12 percent. There's a renaissance going on." Andringa said "Innovation is key for manufacturers to maintain a competitive edge. I think successful manufacturers take charge of the opportunities that are out there. They're innovative in their approaches and they're also pretty tenacious. They have to stay after better products, better costs and understand what their customers really want and what they'll pay for."

The full report aired on Thursday, November 8 at 10pm/9c on NBC's Rock Center with Brian Williams.

Be a part of this renaissance – support manufacturing in New York visit Made in New York at www.madeinny.org

It's Not Too Late! What have you done with 2012?

By Rowan Gibson

Tom Peters once posed this question at a seminar back in the early 1990s. What have you actually done with one whole precious year of your life? And, more to the point, what exactly were you going to do with the next one?

With one year having ended, and we contemplate what lies ahead for us all in 2013, think about Tom's question. Sit down and write an annual report – not for your company or department, but for your own career and personal life. Doubtless you were very busy throughout last year doing all kinds of... er, 'stuff'. But can you list your most 'stunning' accomplishments 2012? Did you make a significant difference last year in your organization or, better yet, in your field? Did you start working on that book, or blog, or pet project, Did you do something – anything – that could one day be legendary? What will your children or your grandchildren boast to their friends about you?

Sometimes it takes an exercise like this to jolt us out of our complacency and get us to make those hefty adjustments to our careers and our lives that we know we should be making but somehow haven't yet gotten around to. So, having done the self assessment looking back at 2012, the next challenge is to look ahead to this year, 2013. What are you going to do this year that could meet the test of being truly 'Wow'?

What projects, goals, values, are you going to adopt a 'fanatic's posture' toward? How exactly do you plan to make a dent in the universe?



The greatest piece of advice ever followed might be just one single word: **"focus"**. Make a list of all the things you will inevitably end up doing this year unless you intervene. Then make a list of what you would truly love to do, and where you would love to be. Throw the first list away and start crossing things off the second one until you get down to just one big career-changing or life-changing goal. Then resolve to focus all your energy in 2013 on that one big thing and treat all else as secondary. Pursue your goal tenaciously as if it's the only thing worth doing for the rest of your life. View it as a grand adventure, or as someone put it, "Life is either a daring adventure, or nothing."

If you're gutsy enough to follow your dream this year, and to work like hell to make it happen, congratulations. May 2013 bring you and your family wealth, health and happiness.

Manufacturing News

Public View of Manufacturing

Economists, business and government leaders all keep a close eye on the fortunes of the U.S. manufacturing industry, knowing the impact it has on the broader business environment. But what about the public? After all, their views of the manufacturing industry help shape public policy and have a direct impact on the talent pool.

Deloitte and The Manufacturing Institute's third annual survey of the American public's opinions on the manufacturing industry and its future show a nation looking for jobs that have so far failed to materialize after the significant cut-backs during the Great Recession. Although surprisingly hungry for a strong manufacturing sector, the survey findings reflect a level of nervousness about the industry's future competitiveness.

Throughout one of the most turbulent periods in U.S. economic history, they have maintained remarkably consistent views, year after year, on the importance of manufacturing. Starting in the immediate aftermath of the recession in 2008-2009, each year our survey has uncovered a consistently high regard for manufacturing, both in terms of its role in the U.S. economy and our global standing, as well as its importance in job creation. In many cases, the results of our queries on these messages are virtually interchangeable over the past three years.

The survey findings suggest that despite the frequent swings of public opinion on a wide range of topics, Americans remain steadfast in their commitment to creating a strong, healthy, globally

competitive manufacturing sector in the United States, no matter the prevailing economic winds. And the survey further suggests they would support, and expect, appropriate investments toward that end. That's important for leaders in business and government to understand, as they work together to pull the right levers on the country's economic and job creation engine. According to the public, manufacturing is a consistent top priority.

All of this occurs at a moment when the US economy is facing a challenging, stubborn economic environment - particularly when it comes to job creation. Keeping the U.S. manufacturing industry on the right track is of vital importance to the country's future.

Small U.S. Manufacturers Give Up on 'Made in China'

By David Rocks and Nick Leiber

When Sonja Zozula and Jerry Anderson founded LightSaver Technologies in 2009, everyone told them they should make their emergency lights for homeowners in China. After two years of outsourcing to factories there, last winter they shifted production to Carlsbad, Calif., about 30 miles from their home in San Clemente. "It's probably 30 percent cheaper to manufacture in China," Anderson says. "But factor in shipping and all the other B.S. that you have to endure. It's a question of, 'How do I value my time at three in the morning when I have to talk to China?'"

As costs in China rise and owners

look closely at the hassles of using factories 12,000 miles and 12 time zones away, many small companies have decided manufacturing overseas isn't worth the trouble. American production is "increasingly competitive," says Harry Moser, founder of the Reshoring Initiative, a group of companies and trade associations trying to bring factory jobs back to the U.S. "In the last two years there's been a dramatic increase" in the amount of work returning.

An April poll of 259 U.S. contract manufacturers—which make goods for other companies—showed 40 percent of respondents benefited this year from work previously done abroad. And nearly 80 percent were optimistic

about 2012 sales and profits, according to the survey by MFG.com, a website that helps companies find manufacturers. "A decade ago you just went to China. You didn't even look locally," says Ted Fogliani, chief executive officer of Outsource Manufacturing, the San Diego company working with LightSaver. "Now people are trying to come back. Everyone knows they're miserable."

There's a growing sense, with the economy doing what it's doing, of U.S. companies wanting to produce in the United States. It's very important to them to have 'Made in the U.S.A.' on their label again.



Alliance for Manufacturing & Technology

Benefits of Becoming an AM&T Associate

- Four free hours of consulting services
- Your company's profile will be featured in the "Associates' Corner" of our monthly newsletter, which is distributed throughout eight counties: Broome, Chemung, Chenango, Delaware, Schuyler, Steuben, Tompkins, and Tioga. Also, the newsletter is featured on our website giving your company worldwide exposure
- Discounted fees at AM&T sponsored seminars & workshops
- A free Performance Benchmark and Transformation Planner (\$2,500 value)
- A link to your company's website from ours
- Assistance with Technology Transfer, Funding Sources, Venture Capital Investment, Networking, Research & Development Programs, etc

Call Jim Cunningham at 607-725-1225 to ask about becoming an associate.

More information at www.amt-mep.org

Associates' Corner



Silicon Carbide Products, Inc. (SCP) is located in the Airport Corporate Park in Horseheads where its 32 employees manufacture abrasion-resistant products used in the power generation, mining, and molten metal contact industries.

SCP was founded in September 1994 by Martin Metzger and Mark Witmer, and in 2010 was named to the list of Best Companies to Work for in New York, specifically as one of the top 25 companies in the category of 15-249 employees. The company also received the SBA's 2011 Small Business Excellence Award.

The company casts its custom products from a variety of grades of silicon carbide, a synthetic material known for its hardness and strength, and its resistance to high temperature and corrosion by other materials. There are several grades of silicon carbide, each with unique physical characteristics. Witmer, the company's vice president, explained that one of the company's strengths is its ability to match the product characteristics with the application requirements.

One key to consistency and quality is that the company designed, developed, and manufactures its own family of silicon carbide formulations used to cast SCP's products. Witmer, said that other competitive advantages include in-house pattern making, close monitoring of process controls, and proprietary fur-

nace controls that optimize firing consistency and material performance.

He noted that the company expanded its rapid prototyping capabilities by acquiring two 3-D printers that can create ABS plastic molds from specification provided by the customer or internally developed. They have also added a portable coordinate measuring machine that enables precise field inspection and reverse engineering.

SCP products include power plant burner liners and flue gas spray nozzles; mining components; material handling liners; molten metal pump sleeves; hydro cyclone apexes; crucibles; bearings and similar wear components;



centrifuge port liners; and other abrasive environment applications. More than 2,400 unique components have been produced and installed in over 16 countries.

With assistance from AM&T, SCP has completed ISO 9001:2008 Certification, conducted Strategic Planning and Sales Training, and implemented Lean Manufacturing including 5S programs.

For information, contact:
Martin Metzger
607-562-8599
www.scprobond.com

Associates' Corner



Doron Precision Systems, Inc. has over 38 years experience with products that provide driving simulation training for law enforcement, fire and EMS, commercial truck, transit bus, and novice drivers.

After acquiring the Singer Company's driver simulation business in the early 1970's, Doron became the first company to develop and produce complete driving simulation systems, including hardware, computer software and audiovisual software with driving scenarios supporting specific training objectives.

From the company's facility in Binghamton, more than 25,000 driving simulators and over 400

professionals, electrical/electronic engineers, mechanical and software engineers, technicians, and draftspersons. To create content and materials as well as the simulation technology, the company relies on ad-

vice from curriculum committees of nationally recognized traffic safety education experts.



Contact Doron at 607-772-1610 or via www.doronprecision.com

A local example of Doron's products is the 550Bus interactive driving simulator installed last year at the Broome County Department of Public Transportation. This system includes the Situation Display, Performance Evaluation System and Scenario Developer Software options. The Scenario Developer enables transit instructors to create unique training scenarios.

The company has 50 employees, including service personnel who are strategically located throughout the country. These regional service personnel maintain an inventory of most commonly used parts to help keep down-time at a minimum.

Around the Southern Tier

Jan 08	Eggs at Eight - Watkins Glen Area Chamber - 607-535-4300
Jan 09	Business After Hours - Tompkins County Chamber - 607-273-7080
Jan 09	Small Business Training Part 1 - Small Business Development Center at Binghamton University - 607-777-4024
Jan 10	SBC network Luncheon - Greater Binghamton Chamber - 607-772-8860
Jan 10,11 or 14	What's In Federal Health Reform for Small Business? - Tompkins County Chamber 607-273-7080
Jan 15	Business after Hours - Greater Binghamton Chamber - 607-772-8860
Jan 16	Small Business Training Part 2 - Small Business Development Center at Binghamton University - 607-777-4024
Jan 23	Small Business Training Part 3 - Small Business Development Center at Binghamton University - 607-777-4024
Jan 23	Lunch & Learn - Tioga County Chamber - 607-687-2020
Jan 23-25	Lean Six Sigma Green Belt Training - Binghamton University - http://www2.binghamton.edu/watson/professional-development/programs/leansixsigma/reg-form.html

Return Service Requested

**AM&T
DIRECTORY**

www.amt-mep.org

Tel: 607-774-0022
Fax: 607-774-0026

Jim Cunningham x311

Business Developer /
Principal Consultant
jcunningham@amt-mep.org
mobile: 607-725-1225

Robert F. Edwards x307

I.T. Administrator /
Webmaster
redwards@amt-mep.org

Ed Gaetano x304

Executive Director
egaetano@amt-mep.org
mobile: 607-760-3864

Lloyd Johnson x312

Principal Consultant
ljohnson@amt-mep.org
mobile: 607-227-6229

Bob Mann x305

Principal Consultant
rmann@amt-mep.org
mobile: 607-725-8226

Michael Meador x314

Principal Consultant
mmeador@amt-mep.org
mobile: 607-342-3208

Carol Miller x316

Principal Consultant
cmiller@amt-mep.org
mobile: 607-237-8031

Kathy M. Peacock x308

Finance Administrator /
Notary Public
kpeacock@amt-mep.org

HELPING MANUFACTURERS PLAN, PERFORM, PROFIT & GROW

We are a team of experienced, skilled consultants and trainers dedicated to helping manufacturers in the Southern Tier of NY plan, perform, profit & grow. Our goal is to have manufacturers remain, grow and prosper in the Southern Tier.

AM&T uses a comprehensive, overall business approach to create significant and long-lasting business improvements. Our experience is that individual improvement methodologies will provide some measurable benefits on their own, but it is the combination of them across the whole value chain that will lead to dramatic gains.

WE CAN HELP YOU:

- Assess your current state
- Articulate and define the desired future state
- Train your workforce in improvement methodologies
- Implement process improvements across the whole value chain
- Identify new opportunities
- Achieve and sustain growth and breakaway results

AM&T DELIVERS:

A third-party survey for 2005-2012 reported impacts of:

- 3,005 jobs created or retained
- \$634 million in increased or retained sales
- \$15.5 million in cost savings
- \$41 million in investments
- \$818 million total impact
- 4.7 out of 5.0 Customer Satisfaction

OUR SKILLS:

- Business Assessments
- Strategic Planning
- Lean Enterprise
- Supervisory Training (TWI)
- Project Management
- ISO/AS Quality Systems
- Sales and Marketing
- New Opportunity Identification and Growth — Markets, Products, Services, Customers

Our integrated, comprehensive approach, applied to the whole value chain, can make a difference. We are "hands-on", roll-up-your-sleeves people and we're passionate about manufacturing.

Call Jim Cunningham at 607-725-1225 to ask how we can help.