



# Inspection Division<sup>®</sup>



## NEWSLETTER

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### NOTES FROM THE CHAIR

by Mollie Brown

#### Fellow Division Members:

Are you teaching refresher courses (or related courses) for the Certified Quality Inspector or Certified Quality Technician's exams? Potential students are looking for you! I and other members of the Division's Management team have received inquiries as to where instruction for inspection can be found. Let us know your educational plans. Past Chair

**Jenny Persfull** ([jnny@insightbb.com](mailto:jnny@insightbb.com)) will receive your information and make sure that the Division Management team members are all aware. Our ASQ website liaison will make sure that anyone looking at the Inspection Division's page will see your educational offering. Also, ASQ is glad to post the information in the upcoming events section of the website. You can let ASQ know or we can help you get that information to ASQ.

Speaking of instruction and education, your opinion and suggestions for what should be in an updated Inspectors Handbook are needed. Send your suggestions and thoughts to Past Chair **Dr. Bud Gookins** ([budgookins@peoplepc.co](mailto:budgookins@peoplepc.co)).

Our sympathy and thoughts go to Past Chair Greg Gay and Examining Chair Larry Ellison in their sad losses. Each recently lost a parent.

*Best Regards,  
Mollie Brown, Chair*

#### Inspection Division Vision

*To be the globally recognized champion on principles and applications related to Quality Technologies, Tools, Techniques and Methods.*

#### Inspection Division Mission

*To satisfy our membership and other stakeholders by being the most reliable source for leading edge information relating to inspection and test methodology.*

#### Optimize Gage Calibration Costs Using Operations Research

By: **Raj Parthasarathy**

Manufacturing establishments certified to ISO 9001:2000 know that one of the most important elements of the ISO 9001:2000 standard is gage calibration and control. This is because gages are used to measure products in order to verify compliance with print specifications or the lack of it. Thus, it is imperative that inspection, measuring and test equipment be capable of consistently providing accurate and precise measurements. To this end, gages need to be calibrated at periodic intervals either internally or by an outside calibration services provider.

Gage calibration typically involves comparing a gage's current state to a master gage to determine the variation from the master measurement. Gage calibration is

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## Optimize Gage Calibration

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expensive due to the high cost of master gages used in the calibration as well as due to the skilled labor required to perform calibration. Thus, the frequency of gage calibration directly impacts annual gage calibration costs.

If gages are calibrated more often than necessary, gage calibration costs will increase and may become a burden for small and medium sized manufacturing concerns. On the other hand, not calibrating gages frequently enough may result in erroneous quality decisions, and cause non-conforming product to be accepted or conforming product to be rejected. Thus, an organization needs to diligently manage its gage calibration and control system with a view to optimizing gage calibration costs while maintaining quality.

### Innovative techniques to control costs

"Operations Research" is a field within Industrial engineering which has to do with using mathematical modeling and simulation techniques to achieve optimization. "Optimization" is a systematic approach to allocation of scarce resources so as to derive the maximum benefit from such an allocation. The variables that need to be optimized are generally defined in an algebraic format called the "objective function" and the constraints are also expressed in a similar algebraic format called the "constraint equations". This algebraic problem is then solved using established techniques to attain optimized values for the output variables. "Simulation" is a statistics and mathematics based method of achieving optimization, and lends itself to easy computerization. Many off-the-shelf simulation optimization software packages are available today at a reasonable cost, and provide rapid returns on investment.

Gages used in quality assurance are precision measurement instruments and are therefore expensive to buy and maintain. While organizations consider it important to apply lean thinking to other areas of manufacturing, they unfortunately do not consider it important to apply lean thinking and waste elimination to gage calibration and control. A poorly conceived gage calibration and control system can result in outrageous annual costs and soon become a "white elephant" in the organization. Under these circumstances, organizations tend to reduce the number of calibrated gages to cut costs, thereby jeopardizing the outgoing quality levels of the product. Quality management gurus agree that inspection for quality is a non-value added function. Since gage calibration and control costs are always a significant component of the internal inspection costs, it makes sense to reduce gage calibration and control costs through the use of innovative techniques such as simulation and/or optimization.

### Modeling a gage calibration system

A gage calibration system can be modeled and the annual calibration costs can be optimized in many different ways. Discussion of all such methods is beyond the scope of this article, but presented below is just a brief example to drive the point home.

One method of modeling a gage calibration system using simulation optimization involves the following steps:

*Step 1:* Log in all the gages into the simulation optimization software

*Step 2:* Enter preliminary estimates of the gage calibration frequency for each gage in the system into the software

*Step 3:* The supporting data to be entered into the software varies with the software package and optimization technique used, but commonly involves such information as the cost of the gage, gage description, digital photograph of the gage, check-out and check-in times for a period of, say, six months to one year, criticality rating of the gage, availability of alternatives when the gage is being calibrated, preliminary gage calibration schedule and calibration times.

*Step 4:* Simulate the gage calibration system by running the software. The simulation should be performed for at least two years to get valid results.

To optimize annual gage calibration costs, the frequency of calibration (FC) for all the gages in the system should be a function of:

(a) initial cost of the gage 'C' (b) frequency of use of the gage 'U' (c) rating of handling methods by the users on the shop floor and in the quality lab 'H' (d) cost and quality impact of arriving at a erroneous measurement 'D, Q' (e) time taken for calibration 'T' and (f) number of gages of the same kind available for use 'N'.

Expressed mathematically,  $FC = f(C, U, H, D, Q, T, N)$

### Optimized gage calibration costs

Running the simulation software program will yield important information including, but not limited to:

- (1) percent annual utilization for every gage in the system
- (2) total annual gage calibration costs (based on the preliminary calibration schedule that has been input) gage shortages and non-availability at different times during the year (especially for critical gages)
- (3) Gages that are under-utilized (and could possibly be "retired" or made "inactive" based on anticipated past and future utilization).

It will now be possible to perform "what-if" analyses using diverse criteria to refine or "fine-tune" the preliminary gage calibration schedule. For example, simulations could be run using several different calibration schedules for under-utilized gages to study the impact on annual gage calibration costs. Through this iterative process, annual gage calibration costs could be minimized by arriving at the lowest cost calibration schedule. Depending on how critical the under-utilized gages are to product quality, all or some of them could either be "retired" or made "inactive" which will help reduce annual gage calibration costs further. Similarly, based on anticipated shortages of critical gages predicted by the simulation run, the optimal number of critical gages required for a particular application could be established. This will help the organization to buy and maintain just the right number of gages for every application, instead of buying too many or too less number of gages. Not having too many gages or too less gages optimizes the annual gage calibration and control costs. The possibilities for "what-if" analyses are endless and depend on the circumstances in the organization. Simulation software enable the animation of the gage calibration and control process allowing users to visually see gage movements and gage utilization at different points in time. Users can thus get a better feel for gage movements and calibration costs.

### Conclusion

Inspection costs are considered "non-value added" quality costs and so it follows that gage calibration costs should be minimized and/or optimized. The above example illustrates how this can be done. The dollars saved through this exercise are then available to the organization to invest in other value adding activities such as new product development or design improvements that will allow the organization to survive and grow in this globally competitive era.

*Raj Parthasarathy is a project manager with a leading consulting company in Illinois. He is a CQE, and a CQM/OE. He has degrees in Mechanical and Industrial Engineering. Also, he is a Six Sigma Black Belt, and has over 10 years of experience in metrology, manufacturing, and quality. Raj is a senior member of ASQ. He can be reached at: [rpartha463@aol.com](mailto:rpartha463@aol.com)*

## 2008 Inspection Division Scholarship

Applications for the 2008 Inspection Division Scholarship are due February 15, 2008.

Applications can be downloaded from the web site or can be obtained by contacting **Jim Spichiger** at [jspichiger@alcatel-lucent.com](mailto:jspichiger@alcatel-lucent.com) or by phone at 614-367-5255.

## 5S for the Quality Lab

By Ray Harkins

Anyone who has worked for an innovative company in the last 15 years likely has encountered a 5S program. It is sometimes described as "good housekeeping". But 5S is much more than a cleaning program. It is a system of creating and sustaining an organized workplace for the purpose of improving efficiency, productivity and employee morale.

Divided into the five English words: Sort, Straighten, Scrub, Standardize and Sustain. Typically, a manufacturing organization applies this methodology to its production environment as part of a continuous improvement initiative. But like the manufacturing floor, quality and test labs are susceptible to the same accumulations of clutter and inefficiencies that 5S was designed to eliminate. By integrating these principles into the culture of your lab, you will see landmark improvements in the performance of those who work there, and set an example of excellence for your entire organization to follow.

### Sort

A thorough sorting of every single item into two categories – Keep or Discard – is essential to starting an effective 5S program. Labs notoriously store hoards of obsolete check gages, documents, mating parts and prototypes. Closets and cabinets too often house broken gizmos and binders full of dead quality standards. Throw this junk out! Clutter is a bitter enemy of organization and clear thinking. If any item is not essential to the day-to-day quality function, remove it from your lab.

### Straighten

The articles that remain after completing the first "S" then need arranged in a logical and accessible manner. For the serious adherents of the 5S principles, this process starts with a floor plan. After removing the nonessentials from the lab area, many practitioners find that they no longer need many of the racks and cabinets that were used to store these items. This step offers the ideal opportunity to rearrange the lab furniture to optimize the flow of people and information.

Once the foundation of an effective layout is in place, add the tools and visual aids to organize your lab's contents. Group the tools and procedures near where they are most commonly used. Clearly label drawers, cabinet doors and binders. Unknot the nest of cables behind your desk. Design a bulletin board for displaying current and relevant information. Apply the adage "a place for everything and everything in its place."

### Scrub

"Scrub" is as simple as it sounds. And in practice, Straighten and Scrub largely overlap. As you rearrange furniture and empty filing cabinets, it's a convenient time to wash and wax under and behind them. Clean the shelves and counter tops. Repaint the walls. Replace the stained and broken ceiling tiles. Strip and wax the floors. Repair the broken handles and hinges. Make your lab and test area look professional and well groomed.

This "S" isn't just a one-time event, but an on-going pattern of cleanliness. Each person who works in the lab should be assigned an area to keep neat and organized. As inspectors and technicians continue to maintain their area, they will develop a sense of ownership and satisfaction. And as company executives and prospective clients tour your facility, they will see the same precision and consistency in the quality lab that's built into every product.

### Standardize

The first three S's are corrective in nature, while the last two are preventive. This step of standardization moves the cleanliness

effort upstream by preventing the disorder from occurring in the first place. For instance, by establishing and following procedures for retrieving and returning hand tools and production documents, these items get misplaced and left out far less often. By standardizing best practices for conducting product tests and issuing first piece approvals, your tools and equipment are used in a consistent manner that prevents damage and minimizes loss. By implementing calibration and preventive maintenance programs, your measurement systems remain in a state of readiness. Standardization builds order into your quality-related processes.

### Sustain

This final "S", which the English-speaking world has translated as Sustain, comes from a Japanese word that means "a commitment that flows naturally from within". Sustaining isn't the last step of 5S, but the true goal of continuous improvement, where efficiency, integrity and diligence are integral to the people who form your team. And as people committed to these virtues develop quality systems, inspect material and build measurement tools, the natural outcome of their work is excellence.

*Ray Harkins is the Quality Manager of Mercury Plastics, Inc. in Middlefield, OH. He earned a B.S. in Engineering Technology from the University of Akron. Harkins is a Senior Member of ASQ and a CQE and CCT.*

## Dedhia Wins Harrington-Ishikawa Medal

**Navin Dedhia**, Past Chair of the Division, Has been recognized as the 2007 winner of the Harrington-Ishikawa Quality Professional Medal. Given annually by the Asia Pacific Quality Organization, this medal is awarded annually to a quality professional that has distinguished himself or herself as a person who has provided outstanding contribution to the promotion of quality methodologies in the Pacific region.

The nominee must, within the Asia Pacific region:

- Have personal contributions to the advancement of the quality movement.
- Have some uncompensated activities to support the dissemination of quality methodologies.
- Have recognition and awards presented to the nominee in support of the quality movement.
- Have dedicated time and effort in support of the quality movement. Have personal impact on advancing the state of the art quality.
- Have papers and books published that advanced the quality profession.

The Medal will be presented to Navin in October 2007 in Shanghai China during the 13th APQO International Conference.

## Your Inputs & Articles Are Always Needed!

It seems like a never-ending hue and cry that is raised. I want and I **need** your inputs, whether it is your inspection related articles and techniques or your inputs into the new Inspection Division people column. There are many good ideas that you have or unique inspection activities that you perform that would be of interest to the Division membership. There may be articles in technical journals that I have missed that would be beneficial to the members. Provide any inputs that you come across. I would much rather deal with an excess of information and have to select the best of what was available than have a very small newsletter. Take the time to forward items of interest. Thanks.

# MEMBERSHIP FEEDBACK

by John Vandenbemden



I recommend attending one of the ASQ's World Conference for Quality and Improvement if you get the opportunity. It is a great opportunity to make new friends, gain knowledge and obtain networking opportunities.

I have had the privilege to represent the Division the past two years as a speaker. Speaking in such a forum is an emotional high but also an enormous relief when it is finished. I compare it to a wedding, you spend an abundance of time preparing and practicing. Then the time comes and everyone is excited however the reality is that the event is so short compared to the preparation that when it is over it leaves you completely drained, at least if you are the parents of the bride or groom. It is difficult to state in words the appreciation I have for the division for their support over the years. Becoming an ASQ Fellow would never have become a reality if it wasn't for the efforts of **Greg Gay** and **Larry Ellison**. The great workshops we were able to conduct for the old CMI Certification was because of the combined efforts of Clarence, Steve, Jenny, Vicki, Greg, Jim, Molly, Lou, Jackie and others. Jenny, Molly, Navin and Bud have been invaluable in their support and assistance for the WCQI as well as other conferences in past years.

You may be wondering where I am going with this article, but I do have a point. I recently had my left knee replaced and I was not at all confident going into the surgery. The only reason I went through with the surgery to begin with was that friends from across the world that I have met through ASQ and especially in the Division called or emailed their support. They sent me articles that they had found or provided personal or family stories of those who have gone through the procedure. Assessing all of this provided me the confidence to have the replacement. Here I am only one week after the surgery and am relating this story to you. Actually at this very time last week I was waking up in the recovery room. How ironic life is.

We complain about higher dues, changing membership requirements and ... But, I look at my ASQ membership experience as I do the rest of life we get out of it what we put into it. Life is a balance of give and take. A pure taker acquires as much as they can sucking up information and energy from everyone, unfortunately they give very little back to those they come in contact

with. The giver keeps going and going and going volunteering for various positions and tasks these people are the real contributors. The problem for the giver is they often suffer burn-out and when they reach that point ASQ and the division often lose a great resource for a significant period of time, if not forever.

Thus, we must balance the give and take in our lives and as members. We should never expect anything for free. Unfortunately, many feel that if they pay a certain number of dollars they acquire specific privileges. Those privileges are a base line. If you never go to a section meeting or function then the privilege you just acquired is wasted. If you do not support a division, or become involved, visit the website or ... then the privilege as a division member is not fulfilled. In order to provide "value" the privileges and opportunities that become available with membership is in our own hands, it is up to us to be a "value added" member.

Let us now take a look at what is happening with our Inspection Division Membership. The graph below depicts another year of increase over 2006 at approximately 7%. We are less than two hundred members short of the 2002 membership total of 4,121 members. There are still a few months left that if we concentrate we can beat the 2002 membership total and set a record for the 2000's.

Keep in the mind the division is here for you. Use the discussion board; submit an article, become involved in one of our committees. To add value to your membership, volunteer and bring us your expertise. Help us be a better division, make a difference. Feel free to contact me if you have any questions or comments @ [sigmawiz1@yahoo.com](mailto:sigmawiz1@yahoo.com) about division membership or other topic of interest.

## APRIL 2007 CQT EXAM REVIEW



From left to right: **Tim Bintz, Jamey Meyer, Sara Ethier, Louna Barnett, Carol Helton, Grant Short, Linda Jacques, Allen Wong, Mary Jo Grabner, Ernie Lang, Mary Rehm (staff)**

During the month of April 2007 a few brave individual agreed to participate in the CQT (Certified Quality Technician) Exam Review workshop. The committee of ten individuals was challenged with reviewing two exams for the program. During this workshop, the committee achieved a major milestone not only for the program but also for ASQ exam administration as a whole. The committee through hard work and dedication has successfully created not one but two exams completely free from Negative stem and Roman numeral items. ASQ will proudly be administering for the first time an exam free from Roman numeral and Negative Stems at the World Conference followed by the standard exam schedule.

*Editor's Note: We often think of inspection as having to do with commercial products or services. However, inspection is vital in more than just these areas. The following is an article of just such an inspection. Too often we forget one of the more important inspections that can impact us*

## **NEW CONSTRUCTION PROGRESS INSPECTIONS**

BY JAMES QUARELLO

**IRV HOME INSPECTION SERVICES, LLC**

Having a new customized home built can be an exciting experience. Getting through the process however can be a long and at times difficult ordeal. People having a new home built often rely solely on their builder to help guide them through the construction. Unfortunately he may not be the best person to advise them on their project.

Consider the following:

- Home builders and many contractors involved in home construction are not licensed professionals.
- No license means no mandated formal training or apprenticeship, no continuing education, and minimal accountability.
- City building inspectors check for code compliance, **not quality**.
- Codes do not cover all aspects of the building process.

These are facts that the majority of people building new homes or for that matter having work done on their existing home, do not know. But who can a new construction home buyer find who will objectively and competently oversee an entire building project and provide knowledgeable, unbiased information on construction techniques and materials? An independent, licensed, professional home inspector.

Most often home inspectors are called in after the new home owner has been experiencing problems with the house, often for many months or even years after it was built. What new construction home buyers almost never consider is hiring the inspector while the house is being built.

When problems do occur and the homeowner is asked about new construction inspections, some reasons heard for not enlisting the help of an independent home inspector are:

### **The local building official is inspecting the home.**

As previously stated these inspectors look for code compliance, not quality. They are in the home only briefly during different phases of the construction. Do they miss things? Yes they do and no they are not usually held accountable for their mistakes. Also they are municipal employees and are not directly responsible to the persons buying the home. In other words they won't contact the buyer if there are problems. They simply instruct the builder to correct the issues and move on to the next home.

### **Cost**

It's always about the money and for good reason. Costs can escalate quickly when building a new home. Buyers often want upgrades and these push up costs. So hiring an independent inspector can be an expense that is hard to justify. After all they believe the city building official is inspecting the home.

### **The builder has a good reputation**

He may, but how do you know. Many people do not research the builder before signing on with them to build their home. This may be even truer when purchasing the home through a third

party such as Realtor. Get references and check them before signing a contract.

It is also important to understand specifically what the builders' job is. He generally is the person who manages the entire construction process. He must hire and coordinate many subcontractors to install the vast amount of components that make up a house. This can be an overwhelming task for just one home, but if he is building several homes at once it can be nearly impossible to effectively manage.

**It's a new house; there should be nothing wrong** (Very likely the biggest misconception related to new homes)

If you have ever bought an item, taken it home and it broke the first time you used it then the absurdness of this statement should be glaringly apparent. But never the less many people who have a home built believe because it is new and there is a *one year* builders warranty there will be no problems.

A house is a complex structure containing many different systems that must all function correctly and in harmony. It is built over the course of several months by many different people. Assuredly there are going to be problems and, most often, they are minor or cosmetic. But there are those occasional big problems that can make the home barely habitable or in extreme cases uninhabitable.

### **Was not aware that an outside inspector could be hired**

When paying hundreds of thousands of dollars to have a home built, you are certainly entitled to have whomever you choose oversee the process. If you meet resistance to bringing in an outside inspector, this should be a red flag that something could potentially be wrong.

But why is it important to hire an independent inspector to look after the project?

Very simply, quality control. If the construction company in charge of building your home knows that the customer has hired an independent, knowledgeable inspector to oversee the build, they are very likely to be more diligent in their quality of work. The psychological effect can be just as influential as the actual physical inspections.

Home inspectors and home builders encompass similar knowledge of home construction. However home inspectors are formally trained individuals who are licensed and consequently must also attend a specific amount of continuing education for license renewal. Home builders are not licensed, only registered, and therefore are not required to be formally trained or attend continuing education. They must only pay a yearly fee to remain registered and in business.

This is also true of the majority of contractors who perform work on a new or existing home. The term Home Improvement Contractor is a catch all category for companies that do any type of improvement work on homes. For example carpenters who frame the home fall into this category, as do roofers, foundation contractors, sheet rockers, flooring installers and many other individual companies that are part of putting a house together.

Another important aspect of the home inspectors experience is they view all types and ages of homes. They see the results of poor construction practices and understand better than anyone the consequences of inferior workmanship. It's an important and unique perspective that no other profession can claim.

Finally a hired independent home inspector works for and reports directly to you. He is your advocate and can be an invaluable asset during the building of your new home.

### **Before you buy a new home**

Consumer groups advise protecting your rights by taking these steps:

## HOME INSPECTION

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- Research your builder thoroughly before signing any agreements.
- Consider hiring a real estate lawyer to negotiate your contract. There is no better time to negotiate than before you buy.
- To protect your right to sue, strike any requirement that disputes will go to binding arbitration.
- Ask for the names of subcontractors building your home. Investigate their work before you buy.
- Hire a professional inspector to examine your home during construction. Point out flaws that can be fixed before you move in.
- Discuss your warranty thoroughly with the builder. Put everything in writing.

Leave a paper trail. Send all correspondence to the builder by certified mail, return receipt requested.

*James Quarello is the founder of JRV Home Inspection Services in Wallingford, Connecticut. He brings to the company over 20 years in industrial equipment installation engineering and home remodeling. He is a graduate of The Home Inspection Institute of Americas' intensive State certified HI-100 Home Inspector training program. He is also a graduate of Inspection Training Associates (ITA) New Construction inspection program and has passed the National Home Inspectors Exam (NHIE). Mr. Quarello is a certified member of The American Society of Home Inspectors (ASHI) and is active in the local Southern New England Chapter (SNEC-ASHI). He is also a member of The Connecticut Association of Home Inspectors (CAHI).*

## 2007 INSPECTION DIVISION SCHOLARSHIP



**Mrugesh Patel**

The Inspection Division Scholarship Committee is pleased to announce that it awarded its 2007 Scholarship to **Mrugesh Patel** of Piscataway, NJ. Mr. Patel graduated from Piscataway High School in June 2007 and will now pursue an undergraduate degree in Biomedical Engineering at the University of Michigan.

In fulfillment of scholarship requirements, Mr. Patel submitted an essay in excess of 750 words entitled "Use of PDCA to Score Higher in New SAT" which explained how he used the Plan-Do-

Check-Act cycle to improve the process he used to study for the SAT. His essay also described each step of the PDCA cycle and listed the benefits of the process he used.

Mr. Patel was an active member in his school's Key Club, Science League and tennis team. He was Vice President of both Math League and Ping Pong Club. In his spare time he likes to watch movies, hang around with friends and family, play basketball, do anything and everything on the computer and enjoys photography.

The Inspection Division scholarship was first issued in 1999 in order to assist recipients in any manner to defray the costs associated with college expenses. Mr. Patel is the ninth recipient of this award.

On behalf of the Inspection Division Executive Committee, the Scholarship Committee wishes Mrugesh Patel the best of success in his academic future.

## Getting Started in Automated Data Collection

By Ed Maresh

Collecting data from shop floor instruments has never been easier. This process has advanced significantly since the days of taking measurements by hand and recording the results on paper. Automated data collection systems have many advantages over paper-based systems, including the elimination of transcription errors and significant time savings.

The easiest system to implement starts with a simple digital instrument with a data output option. Most manufacturers such as Mitutoyo, Starrett, and Fowler offer a wide range of tools with this option. Add the gage manufacturer's appropriate input cable and a PC, and you're ready to start automating your data collection.

Connecting your measurement tool to your PC is as simple as plugging the input cable into the right ports. Once you've captured the desired measurement with your calipers, push the data button on the input cable and the measured value will be sent to your software application as if it was typed on the keyboard. Most manufacturers offer hubs allowing several gages to be connected to a single PC at the same time. Coupling this hardware with an adequately formatted spreadsheet, you will be capturing, summarizing and charting your data in no time.

Data can also be collected from many instruments via the RS232 (serial) port on the back of your computer. RS232 communications have been around since 1969, and are still a common method for collecting data from measurement equipment. Your first step to set up a serial data collection system is to determine the type of cable your hardware requires. Many applications require a standard null modem cable, but some manufacturers require a unique configuration. The gage manufacturer can help you determine your exact cable requirements, and often sell the cables themselves. Null modem cables are available at most computer stores. Whereas custom cables are available from specialty shops found on the internet, or for the resourceful technician, can be made with a little solder and some components from your local electronics store.

Once your gage, cable, and PC are connected, setting up the serial connection is next. The easiest way to establish the initial communication is using HyperTerminal. HyperTerminal is the Windows standard RS232 communications program. It allows you to determine if the gage and PC are exchanging data. HyperTerminal needs several parameters, including baud rate, data bits, stop bits, flow control and parity, setup correctly to establish communications. The gage manufacturer will specify each of these parameters. Once HyperTerminal is properly configured, pushing the send button on the gage will cause the desired value to appear in the HyperTerminal window. Some instruments do not have a send button, but instead require a command requesting the data. Simply type the required request command such as "send data" in HyperTerminal and press enter. HyperTerminal will send the command to the gage, and the gage will respond by returning the desired measurement value.

These values can then be copied from HyperTerminal and pasted into any software program. However most applications will want the data sent directly to a spreadsheet or statistical software package. This requires a separate program called "wedge software" that is designed to take the signal from the RS232 port and insert it directly into a data file. Wedge programs such as ASD Wedge, ByteWedge and WinWedge are all available at a nominal cost. As with the direct entry methods, you can then format the statistical package or spreadsheets to meet your exact needs.

Automated data collection is now accessible to shop floor technicians and engineers at a price that quality managers can justify. And the advantages these systems offer over their paper-based ancestors will benefit your entire organization.

*Ed Maresh is a Quality Engineer with Mercury Plastics in Middlefield, Ohio, where he has developed several data collection systems. He is a member of ASQ, and a certified quality technician.*

# 2006-2007 INSPECTION DIVISION COUNCIL LISTING

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## 2008 Inspector of the Year

Each year, the Inspection Division, ASQ, seeks nominees for the International Inspector of the Year Award. This award honors the contributions of an outstanding inspector within our organizations.

**Purpose:** To provide ASQ, Inspection Division recognition to "The Inspectors" as those who: (1) have the knowledge, qualifications, background and experience to accept or reject; (2) represent the customer in on-line or final inspection test, audit, calibration, etc.; (3) assist and or motivate other peers and workers, supervision, departments, etc., to produce Quality Products or Services while reducing related costs of prevention, appraisal and failures; (4) train others in Inspection methodology and techniques, calibration, defect prevention, failure analysis, data recording, documentation, cost reduction, statistical applications, etc.; (5) are continuing to professionally develop themselves via Quality Certifications, technical papers, teaching, taking technical and quality courses in college, trade schools, etc., to maintain themselves as professionals worthy of recognition, rewards, awards and promotions in concert with their goals and objectives. All too often "THE INSPECTOR" receives little or no recognition in today's environment. The purpose then, is to recognize "THE INSPECTOR OF THE YEAR".

**Eligibility:** Any qualified individual who spends more than 50% of his or her time in inspection, test, audit, calibration, etc., functions to assure conformance to engineering, manufacturing, quality and customer standards or requirements, is eligible as a candidate to receive the award. Managers, supervisors, planners, engineers or associate engineers are not eligible for this award.

Nominations are due by February 15, 2008. The award will be presented during the 2008 World Conference on Quality in May in Houston, TX.

Time has a way of getting away from us. You may think that there is more than enough time to nominate your outstanding inspector for this recognition he or she so richly deserves. However, things occur and your good intention of nominating your outstanding inspector gets pushed to the back while you tend to more pressing issues. Suddenly, the time has past and you did not nominate your inspector.

Take the time **NOW** to nominate your inspector. Further information is available at the Inspection Division's web site, [www.asq.org/inspect](http://www.asq.org/inspect).

## Inspection Handbook

The following is a tentative Table of Contents for the "Inspection Handbook." Dr. Bud Gookins, Past Division Chair is heading up this effort.

- Chapter 1 — The inspection function
- Chapter 2 — Specification criteria
- Chapter 3 — Standards Criteria
- Chapter 4 — Measurement concepts
- Chapter 5 — Mechanical inspection
- Chapter 6 — Electrical inspection
- Chapter 7 — Electronic inspection
- Chapter 8 — Food and drug inspection
- Chapter 9 — Building inspection
- Chapter 10 — Textile inspection
- Chapter 11 — Process inspection
- Chapter 12 — Measurement device calibration
- Chapter 13 — Product disassembly and evaluation
- Chapter 14 — Sampling inspection concepts
- Chapter 15 — Geometric tolerancing
- Chapter 16 — Visual inspection
- Chapter 17 — Workmanship standards
- Chapter 18 — Product auditing
- Chapter 19 — Screw thread inspection

If anyone is interested in contributing to any chapter please contact Bud and let him know of your interest.

## New Division Liaison to CQI

**Lisa Reeves** is the new Division Liaison to the Certified Quality Inspector exam. She replaces **Vickie Earp**, who has moved up and now chairs the CQI committee. Congratulations to both Lisa and Vickie.

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**Please submit news and  
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