

Our objective: To increase awareness, interest, and involvement in Section activities and quality-related subjects.

Cost of Quality



DATE: Wednesday, October 8, 2003
TIME: 6:00 PM
PLACE: Hilton Hotel — Dorval Airport
**SPEAKER: Dr. Vince Thomson
 Marjaneh Pourmand**
COST: Members \$25 Non-members \$30
And, we pay the Parking !!

Business professionals know that Quality is an investment rather than a cost. Well thought out Quality initiatives often generate returns that outlast and significantly surpass in value short term, process gouging, cash generating projects. This session will provide information to help leaders be effective.

More details on the event & its speakers on page 3.

For reservations or information contact:
Bernard Doiron, preferably by fax at: (450) 653-5585,
or phone at: (450) 653-4879

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The Editor's Corner

By Raymond E. Dyer, ASQ CQMgr & CQA,
Newsletter Editor & Publicity Chair

HAPPY BIRTHDAY !

At last week's executive meeting, we discovered it was our Section Chair's birthday. I won't say her age (she **is** the boss) but suffice it to say it's much younger than myself. I had just celebrated mine the Friday before and, in discussing this, we discovered that our somewhat more "senior" Program Chair also celebrated his early

September. Then it hit me. There we were, very different in some ways and yet very similar in others. The beauty is, the differences complement each other in our common value towards Quality and objectives for our section. The work we do, the events we arrange, this very newsletter, are the result of leveraging differences for a common goal, something to be valued by all.

Raymond E. Dyer



A word from your Section Chair

By Isabelle Lemieux, Section Chair

KAI what!...

The Japanese word "KAIZEN" means improvement; improvements without spending much money, by involving everyone from managers to workers, and by using common sense. The Japanese way encourages small improvements day after day, continuously. The key aspect of KAIZEN is that it is an ongoing, never-ending, improvement process. It's a soft and gradual method opposed to the more usual western habits of scraping everything and starting with new.

Kaizen activities can be conducted in several ways. First and most common is to change the worker's operations to make his or her job more productive, less tiring, more efficient, and/or safer. To get buy-in as well as significant improvement, the worker is invited to cooperate, to reengineer individually and with help of team mates or a Kaizen support group. The second way is to improve equipment, like installing foolproof devices and/or changing machine layout. The third way is to improve procedures. All of these alternatives can be combined in a broad improvement plan.

The Ten Basic Tips for Kaizen© Activities as per the Kaizen© Institute.

1. Discard conventional fixed ideas.
2. Think of how to do it, not why it cannot be done.
3. Do not make excuses. Start by questioning current practices.

4. Do not seek perfection. Do it right away, even for only 50% of your target.
5. If you make a mistake, correct it immediately.
6. Do not spend money on KAIZEN, use your wisdom.
7. Wisdom is brought out when you are faced with hardship.
8. Ask "Why?" five times and seek root causes.
9. Seek the wisdom of ten people rather than the knowledge of one.
10. KAIZEN ideas are infinite.

Kaizen isn't a method in itself as all usual analyzing and/or creativity techniques will still be used. It's an incentive and formal system.

There is no absolute standard for judging improvement ideas. In an industrial environment, the potential improvement points are numerous. One could even improve endlessly. However, time, technical, financial, and human resources are always limited. Improvement groups or individuals may suggest changes just for the sake of suggesting. Yes, the purpose of a suggestion system is to gather ideas, yet improvement should strive to increase added-value, meaning profit, or eliminate waste.

Isabelle Lemieux

Details of next event

By Bernard Doiron, ASQ CQA, Program & Arrangements Chair

Cost of Quality

This session will provide information on:

- ◆ Cost of Quality models,
- ◆ best practices,
- ◆ use of various metrics and
- ◆ lessons learned,

that helps effective leadership.

Dr. Vince Thomson

**Werner Graupe Professor of Manufacturing Automation
Department of Mechanical Engineering
McGill University**

Dr. Thomson has been involved in manufacturing and information technology related research for the past 25 years at McGill University and the National Research Council (Canada). He is the founder and co-director of the Master in Manufacturing Management (MMM) program at McGill. His re-

search has ranged from shop floor control and production scheduling to the present interest in real-time control and process management in manufacturing. His process management research has focused on new product introduction, concurrent engineering and manufacturing support in terms of coordination, metrics, and process principles. He participates in about 20 manufacturing improvement projects with industry each year.

Marjaneh Pourmand

Marjaneh Pourmand is a senior project manager and consultant specializing in process management and re-engineering, and related organizational development. She has over 18 years of professional experience including implementation and management of change and improvement initiatives using Six Sigma, Lean Manufacturing, Kaizen and recognized international Quality standards. She is the president of 7S Knowledge Express Inc. and the new chair of Six Sigma and Change Management for ASQ Montreal Section 0401.

It's your section - Participate!

By Raymond E. Dyer, ASQ CQMgr & CQA, Nominating Committee Chair

As with most ASQ sections, volunteer leaders of the Montreal Section 0401 do their best to provide their membership interesting and value-added events, informational newsletters, timely and useful Internet web sites and e-mail notifications, certification, recertification, and educational services, etc.

In order to continue providing such services, the section leadership needs your help. We need feedback as to how well you feel we are meeting your expectations as ASQ members. We need participation at the events in order to sustain critical momentum and motivation. We need new volunteers to help replace the ones that have generously given their time so that you, as member, could benefit from this very precious network of colleagues and friends.

Bottom line, it's your section - Participate! Each one of you has an opportunity to benefit and give back to the section what he/she has gotten. Here are some ways you can actively participate and advance your section:

- ◆ Attend and be active at events.
- ◆ Provide the Section Executive feedback on satisfaction, needs, expectations, interests.
- ◆ Participate on the Executive Committee and/or help out one of the Chairs.

Please send any feedback you would like me to raise with the Executive Committee to redyer@sympatico.ca and start the subject line with "ASQ feedback:". If interested in exploring opportunities on the Executive Committee, please send them to redyer@sympatico.ca and start the subject line with "ASQ interest:". Thank-you for your active participation in our section's activities. 

Upcoming Program of Events

By Bernard Doiron, ASQ CQA, Program & Arrangements Chair

Here are this season's planned events.

Date, time, and location will be confirmed as we progress into the year. Please note that the Cost of Quality and the Six Sigma / Lean Manufacturing events have been rescheduled. Watch the Newsletter for further details. I will be glad to answer questions and take your recommendations. You may contact me, **Bernard Doiron**, at Tel: (450) 653-4879 or Fax: (450) 653-5585.

8 Oct. 2003	Cost of Quality – Speaker is Dr. Vince Thomson of McGill University.
12 Nov. 2003	AS 9100 – Planned speaker is Mr. Roger Ritterbeck of QMI.
14 Jan. 2004	Monitoring and Measurement Devices – More details to come!
11 Feb. 2004	Quality Tools / QFD / SPC – More details to come!
10 March 2004	Leadership / Change Agent – More details to come!
14 April 2004	Annual General Assembly – Your Section's annual report, election of the 2004-2005 Executive Committee officers, and a chance to voice your opinion.
12 May 2004	Six Sigma / Lean Manufacturing – More details to come!

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ASQ Certification Programs

By David Tozer, Education Chair

The quality field can be considered to have three main disciplines: auditing, evaluation (e.g. inspection, testing, and quality control), and defect prevention. Progressive organizations have demonstrated that the discipline generating the best return on investment is problem prevention. Getting people involved in prevention is a priority.

To be effective, a quality program must address all three disciplines. In turn, to be equally effective, people also need training in these disciplines, although not everyone needs training in all three. People involved in managing the audit process should be trained in that discipline. Everyone, however, should be trained in the basic tools of problem prevention.

Once people are trained, it is necessary to evaluate how well they have acquired the body of knowledge. This assessment can be done by formally testing people on this body of knowledge.

The ASQ offers a certification process that acknowledges the people who have passed the examination as having met a standard and possessing a basic understanding of the subject. For most organizations, it is important to have well trained people. With certification, there is proof that the person passing the examination is properly trained and understands the subject. Having proof of knowledge acquisition is an important part of a quality system.

There are two certifications that are of general interest to ASQ members or the organizations they work in. They are: the Certified Quality Auditor (CQA) and the Certified Quality Technician (CQT).

For those involved in auditing, CQA certification is an important recognition of their understanding of the auditing process. People who pass this examination demonstrate knowledge on audit planning, conduct, and report writing. The CQA body of knowledge requires auditors to understand the importance of problem prevention.

For those involved in inspection or prevention, CQT certification demonstrates that the person has mastered the basic tools for inspection and problem solving. People become more valuable employees when they acquire the ability to think more critically and use data to solve problems. Many people in organizations are involved in some form of inspection and problem prevention. These people should be trained to the CQT level to make them more effective.

For people needing more detailed knowledge, there other certification programs to meet their needs.

Get your organization involved in solving problems. Establish a prevention program and train your staff on how to increase their success rate at problem prevention.

*We should not only use the brains we have, but
all that we can borrow. - Woodrow Wilson*

Special welcome to our new members

By Bernard Doiron, ASQ CQA, Membership Chair

Rosanna Aurello, Denis Carrier, Charles Froment, Robert Gagné, Claude Lauzon, Katherine Norenus, Jean J. Richard, Kenneth Anthony Stamm

Aerospace Standards: Ready To Take Flight

By Roger Ritterbeck Jr., Product Manager for QMI

Safety and Airworthiness are primary concerns in the aerospace industry. The Original Equipment Manufacturers (OEM's) take on significant liability for the Safety and Airworthiness of their products. The aerospace industry realized a need to reduce variation in the supply chain and develop consistent aerospace standards that could be used globally. Given the state of the economy, this had to be done with cost in mind.

In the mid 1990's, a group of aerospace industry members formed the Americas Aerospace Quality Group (AAQG). Their mission was to develop an aerospace standard that could be utilized globally between the many OEM's. The group looked at all the various requirements that evolved over the years, such as Mil-Spec's, DOD and FAA. It was decided that the new standard would be based on the ISO9001 standard. Additional aerospace requirements were added that were deemed critical for suppliers of aerospace products. The outcome was AS9100.

AS9100 was developed and harmonized internationally through the International Aerospace Quality Group (IAQG). The standard was published through the Society of Automotive Engineers (SAE), European Association of Aerospace Industries (AECMA) and SJAC in the Asian sector.

AS9100 includes several additional requirements above the ISO9001:2000 standard. The industries supplementations underscore its concerns with product safety and reliability. The additional requirements are identified in the standard by bold print text. These requirements have been determined to be critical by the Aerospace OEM's for the delivery of conforming product. In addition to the base requirements of AS9100, organizations must also ensure that applicable regulatory requirements, such as the FAA (Federal Aviation Administration) and FAR (Federal Acquisition Regulations) and customer requirements are referenced within their quality system documentation.

Organizations who supply to the aerospace industry now have a single Quality Management System (QMS) standard as a base model for their internal system. This is a significant improvement over years past. Typically, Aerospace OEM's each had their own QMS requirements that suppliers were required to meet. This drove considerable cost throughout the supply chain. Suppliers would often have numerous quality systems in place depending on their customer base. The OEM's would then go out and audit the suppliers to their own requirements. It was not uncommon for suppliers to undergo several audits to similar requirements. This not only placed a burden on the suppliers, but also increased cost as OEM's were going out and auditing several suppliers.

Since the implementation of AS9100, there have been several supplier testimonials of the benefits of AS9100 and the reduction of multiple audits throughout the chain. Additionally, suppliers have realized benefits of continual improvement. The requirements of ISO9001:2000 require an organization to measure the effectiveness of their QMS and continually improve processes. This requirement has given organizations the opportunity to cut waste from their system through the continuous monitoring of processes.

While AS9100 provides an excellent model for organizations for who are responsible for the design, manufacture and/or testing of aerospace products, there still remained a need to control other aspects of the aerospace industry. Two areas were identified that would require the development of additional aerospace standards. These were the Maintenance, Repair and Overhaul (MR&O) and Distributors.

The AAQG went to work developing standards for these two areas within the industry. AS9110 - ***Quality Management System-Aerospace-Requirements for Maintenance Organizations*** focuses on the maintenance repair and overhaul aspects of the aerospace business. AS9110 is based on the ISO9001 model and includes additional requirements specific to the MR&O industry. The additional requirements of AS9110 provide guidance for organizations on complying with the FAR Part 145. AS9110 has been published globally by SAE, AECMA and SJAC.

(continued on page 8)

Aerospace Standards: Ready To Take Flight (cont'd)

By Roger Ritterbeck Jr., Product Manager for QMI

In addition to the MR&O world, the Aerospace OEM's realized a need for more control of distributors. These organizations accumulate raw materials and products for resale to the aerospace industry. The distributors provide a valuable service to the aerospace industry, but can also have an impact on product conformity if they fail to handle parts correctly or fail to maintain a part's chain of custody. Traceability, supplier control, configuration management and records are some examples of the key requirements with AS9120. AS9120 is intended to replace SAE7103 which, which is currently listed in the FAA's Advisory Circular 00-56, *Voluntary Industry Distributor Accreditation Program*.

Beyond the QMS standards, supplemental requirements have been developed that may be imposed contractually. These are requirements that required additional clarification. AS9102 covers *First Article Inspection Requirements*. AS9102 has been published as a guidance document and is intended to clarify the requirements of clause 8.2.4.2 of AS9100. Currently, most OEM's have their own first article systems and reporting requirements. Again, the supplier is burdened with numerous requirements from various customers. AS9102 provides a consistent tool for the documentation of first article requirements.

Variation control is critical in the aerospace industry. Many components that go into aerospace products have tight design criteria and often have "key characteristics" assigned for certain features that may impact the safety and reliability of a product. AS9103, *Variation Management of Key Characteristics* was developed to ensure control over these characteristics. The requirements in AS9103 can be imposed contractually or utilized internally to enhance Clause 7 requirements.

The industry is now in the process of implementing the requirements throughout the supply chain. Many OEM's have specific targets in place for their suppliers to implement an AS9100 QMS. One of the objectives of the aerospace industry is to eliminate redundant audits of the supply chain. To realize this objective, suppliers need to pursue registration by an "Industry Controlled Other Party". Without registration suppliers may not realize the benefit of minimizing or eliminating redundant audits as OEM's may still perform QMS audits. Unlike other industry specific standards and registration, there is definitely a mutual benefit to both supplier and customer in achieving AS9100 registration.

Registration must be performed by an approved "Industry Controlled Other Party" or (ICOP). The aerospace industry maintains control over the registration activity and monitors the registrar's performance. This is handled through an extensive "Oversight" activity. A subcommittee of the AAQG has been formed called the Registration Management Committee (RMC). The RMC is responsible for the implementation of international procedures within the Americas sector. The RMC is responsible for approving Accreditation Bodies, Registrars and Auditors. After approval, there is an extensive "Oversight" that takes place. Oversight takes place in the form of office audits and field audits. Organizations utilizing ICOP for AS9100 registration work can be assured that their auditors have a high degree of aerospace industry knowledge and will provide a value add service to the organization.

In an ever changing industry, the aerospace standards and requirements for registration that have been developed provide a consistent platform for organizations to develop their quality systems. For all stakeholders, there is a level of confidence that product safety and reliability are at an all time high. This has been accomplished while maintaining a mutual beneficial relationship between supplier and customer. The future of the aerospace industry will no doubt be ever changing, but with the development and implementation of the aerospace standards, change will be managed and controlled.

Roger Ritterbeck Jr. is currently a Product Manager for Quality Management Institute (QMI) a Division of CSA Group. Roger has 20 years in the quality management field in the aerospace, automotive and quality system registration industries. He is a Registrar Accreditation Board (RAB) Certified Lead Auditor and also a Certified Aerospace Industry Experience Auditor. Roger has conducted over 350 quality system audits. He is an American Society for Quality (ASQ) Certified Quality Manager (CQMgr).



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The American Society for Quality (ASQ) is a not for profit Society incorporated in 1946 as the American Society for Quality Control. In 1997, the Society changed its name to the American Society for Quality (ASQ) to better reflect its mission *"...(to) advance individual and organizational performance excellence worldwide by providing opportunities for learning, quality improvement, and knowledge exchange."*

ASQ's Vision Statement :

"A World of Improvement Through the American Society for Quality".

ASQ is a society of individual and organizational members dedicated to the ongoing development, advancement, and promotion of Quality concepts, principles, and techniques. With a network of over 133,000 members in 64 countries, it's initiatives focus on enhancing the quality profession and on quality's role in the marketplace. Leading people with a commitment to quality into action is ASQ's mandate, stemming from the belief that the best way to improve quality is by helping people improve themselves.

The **Montreal Section**, was accepted as the 43rd Section of the *American Society for Quality* in 1950 and designated **Section 0401**. 

The Montreal Section 0401 Mission

« To promote and enhance the quality profession by providing support to our Section membership, offering information, educational programs and events, and promoting the awareness and value of quality in the community. »

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1/4 page	\$ 75	\$ 100
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1 page	\$ 200	\$ 240
2 pages	\$ 330	\$ 380
Sponsoring the <i>Newsletter</i>	\$ 150	\$ 200

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