

1991 Process and Product Quality Division Symposium

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The Process and Product Quality Division held its fall meeting in Rochester, NY, Oct. 27–31, 1991. Despite the slow economy, the registration for the Division committee meetings and the symposium that followed was higher than expected with 135 symposium registrants. The close proximity of Rochester to Canada provided the opportunity for a number of our Canadian counterparts to attend a Division activity for the first time in a some years. We look forward to their continued participation in the 1992 Process and Product Quality International Conference in Appleton, WI, Oct. 25–28, 1992.

Committee meetings

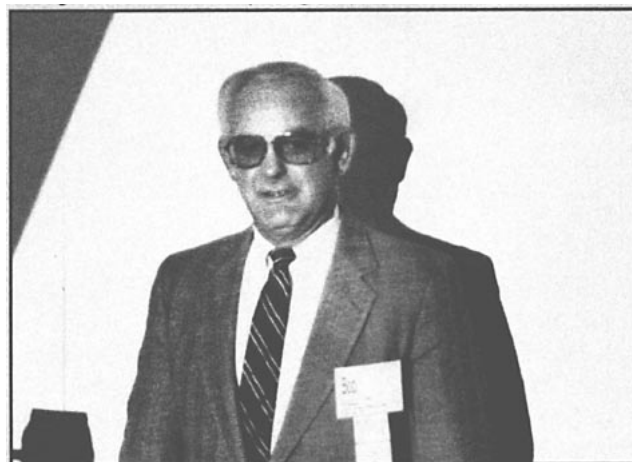
The committee meetings on Sunday and Monday were well attended and resulted in lively discussions relative to test method development and quality issues. Committee chairmen always encourage new member participation in committee discussions and this year there were plenty of active participants. Two receptions, in conjunction with the trade fair, allowed all of us to renew our old acquaintances and make new friends. A special Newcomers Reception, held on the last evening of the symposium, provided an opportunity for first-time attendees to ask questions of the Division officers and to learn more about committee activities.

Awards

The technical presentations of the symposium started on Tuesday morning with a get-well wish to Lucille D. Hahn, Division chair, who was at home recovering from major surgery. We all wish Lucille a speedy recovery and look forward to seeing her at the spring meeting. Then, TAPPI President F. Keith Hall presented awards to James C. Abbott, Leland S. Hetenhouse, and John W. Walkinshaw.

James C. "Jim" Abbott, manager of measurement systems in the Paper Product Division of Procter and Gamble Co., Cincinnati, OH, received the 1991 Process and Product Quality Division Leadership and Service Award. Jim's selection as the award recipient is well placed, as he has served in numerous leadership roles throughout the Division and has maintained an active role in committee assignments. For many years I have looked on Jim as a role model and mentor, and I would like to add my personal congratulations to Jim on receiving this award.

Robert F. Ledet of Asten Press Fabrics, Inc. gave a keynote address during the conference's Opening Session.



Leland S. "Lee" Hetenhouse, recently retired from the ABB Process Automation Group, Columbus, OH, received a Certificate of Appreciation as outgoing chairman (1989–1990) of the Process and Product Quality Division. The Division members wish Lee a happy retirement from the position of chairman and welcome his continued participation in Division and committee activities.

John W. Walkinshaw, professor of chemical engineering, University of Massachusetts Lowell, received two Certificates of Appreciation, as outgoing chairman of the Physical Properties Committee and of the Pulp Properties Committee.

Technical sessions I

The Tuesday session started with two keynote speakers who set the focus for the presentations on quality issues that followed. Robert F. Ledet, president of Asten Press Fabrics Inc., spoke on "The Evolution of a Quality Management Process" based upon the experiences of Asten Press Fabrics. Over the past 10 years quality management issues have been cultivated within the organization. Changes in management style and the use of team dynamics have empowered the workers in the decision making process. As Ledet pointed out, the approach to quality is an evolving process that must be tailored to the individual company requirements; hence, while the road map

John Hele of the British Standards Institute was a second keynote speaker at the Opening Session.



TAPPI President **F. Keith Hall** presented **James C. Abbott** with the 1991 Process and Product Quality Division Leadership and Service Award.



to improvement may differ, the goals should always be up front. As total quality management goals are reached, the side benefits of productivity coupled with decreased production costs and increased product acceptance follow. A suggestion from Ledet to other companies is to look into the application process associated with the Malcolm Baldrige National Quality Award. Even if the completed application is never submitted, the review and internal audit processes can assist companies to determine progress towards a quality management approach to manufacturing.

John Hele of the British Standards Institute made a presentation on "Fortress Europe—Fact or Fiction," in which he covered the evolution of the ISO 9000 registration standards and their level of acceptance. This registration process and its importance was discussed through the eventual recognition and cross certification process associated with a combined Europe (EC-92) and EQNET (European Quality Network) member nations. As Hele pointed out, the fact is that there will be a global approach to the full adoption of a registration process as ISO 9000 or EN 29000 (the EC designation), prior to trade with a combined Europe. The fiction is that the process is moving rapidly and that the EC will have its act together by December of 1992. The point that remains is that registration to a quality standard will have direct benefits in the future, but the goal by the end of 1992 will not be there.

Laboratory accreditation

Speakers throughout the remainder of the conference spoke in depth on the topics outlined in the opening session. Session 1 with Charles Leete of Collaborative Testing Services (chairman), Helen Schuierer, H.R. Schuierer, Inc., and John Locke, American Association for Labora-

tory Accreditation, discussed the concept of a laboratory accreditation program, vendor/supplier benefits, and its part in a company quality registration program. Schuierer emphasized the need for laboratory documentation of such items as test methods, reasons for testing, maintenance and calibration procedures, and dates. These items are important parts of the documentation program and often are overlooked in laboratory management. Locke contrasted laboratory accreditation through the guidelines associated with the ISO 9000 procedures and the ISO/IEC Guide 25 on "General Requirements for the Competence of the Calibration and Testing Laboratories."

Quality improvement program

Pat Hartman, Westvaco Corp., chaired the afternoon session dealing with the components of a quality improvement system. The issues of the employee were addressed by Robert L. Deckon, Stowe Woodward and Mount Hope Companies. He stressed that a meaningful and lasting quality improvement program cannot happen without the total involvement of all employees. This must be done through the creation of a plant culture that nurtures the needs of the work force. One suggestion made by Deckon was to survey the workers to determine real and perceived needs. This survey on plant culture is then followed up through the establishment of a forum to improve communications, the institution of quality teams, and training of employees. Deckon stressed the need to involve the unions with the understanding that "employee involvement is dedicated to focusing the skills and knowledge of all employees towards improving the quality of our products, services and work life.... It is not designed to renegotiate the contract or to provide a forum for employee complaints."

John W. Walkinshaw, right, received a certificate of appreciation from **F. Kelth Hall**, TAPPI president, for his work as the chairman of the Pulp Properties Committee in 1990. Walkinshaw also accepted a second certificate of appreciation as the 1990 chairman of the Physical Properties Committee.



TAPPI President **F. Kelth Hall** awarded a certificate of appreciation to **Leland S. Hetenhouse**, past division chairman, 1989–1990.



Preferred vendor

Richard P. Grant, Eastman Kodak Co., reviewed the use of function-based process quality models to help solve problems in the control of quality. Grant's concepts were aptly demonstrated through the control of thick stock flow and a starch cooker. A second speaker from Eastman Kodak, Andrew E. Strawhand, discussed the role of the auditor in the certification of a preferred vendor. While the process of becoming certified as a preferred vendor can be a demanding one, depending of the level of certification, the benefits to the supplier more than justify the effort. For example, a successful audit can result in the certified supplier being designated as the single source for a product or service by its customer; quality improvements can carry over to other customers, thereby improving vendor/customer relationships; and lastly, the publicity from news and advertizing releases from the presentation of the certificate can enhance the company's image with current and prospective customers. In all areas, both the vendor and the customer derive mutual benefit from the audit procedure and the conferring of preferred supplier status.

Breakthrough actions

The day's session ended with an excellent summary given by Jack Steele, Competitive Technologies Inc. Steele's definition of quality ensures that the needs of the customer and business are always met or exceeded. While he indicated that there are no "cookie cutter" solutions to the development of a total quality management program, there are many aspects to the solution that are common to all companies. Commonalities can be found in areas such as the use of a team approach, the use of a common language between all parties, and the identification of

actions that will achieve a breakthrough in performance. Steele used the Florida Power and Light Company, a Deming Quality Award winner, to show that by focusing on customers, this company achieved such outstanding results as a 75% reduction in complaints, 73% reduction in serious employee accidents, and an 11% reduction in the price of electricity from 1985 to 1990.

Quality: from forest to recycle

The second day of the symposium, under the chairmanship of Peter Daisley, Daisley Associates, covered the topic of "Quality Measures from Forest to Recycle."

Pulp Quality

Papers presented included "Quality Management with Fiber Crops," by R. Wilson, Celulosas de Asturias, who proposed the cloning of selected trees to produce uniform fiber properties. These crops would then be combined with other selected agricultural operations to properly manage limited growing resources. Heiko H. Fastenau, LaserSorter GmbH, made a presentation on "Automatic Dirt Counting During the Production of Market Pulp," which contrasted the tedious procedure of manual counting of dirt specks to a high-speed method. This method utilizes a laser scanning device capable of performing dirt counts at pulp machine speeds.

CSF test alternative

Roland J. Trepanier, Noram Quality Control and Research Equipment Ltd., highlighted the use of "The G/W Drainage-Retention Tester" as an alternative to the Canadian Standard Freeness test. The automatic device proposed develops a drainage profile, thus providing more

Sue F. Jakubsen, division secretary, **John W. Walkinshaw**, technical program chairman, and **Griffith H. Howell** take a moment for discussion between sessions.



useful information than a freeness value from the CSF test. As a result, the device may become a more useful tool for evaluating chemical additives and pulp mill control.

Air permeability test

George Hagerty of Hagerty Technologies discussed Gurley-type permeability test apparatus. His presentation entitled "Analysis of the Gurley-type Air Permeability Test and Comparison with Electronic Flow Measurement" contrasted the slower manual method with a device that uses air flow transducers to quickly determine equivalent Gurley seconds. Hagerty's analysis of the present instrument indicated that the measurement of air flow is more correctly based on seconds for an air volume of 107 mL rather than on the usual assumption of 100 mL.

Printing showdown

Robert Chung of the Rochester Institute of Technology presented an interesting paper that discussed a show-down printing press run in which introduced upsets challenged two groups to keep a color press in correct control by two very different methods. The first group used the eyeball method, while the second group used a color scanner and SPC charting techniques. In general, the eyeball group was able to detect the change first, while the equipment/SPC group required slightly fewer changes of the press configuration to restore proper printing.

Deinking

In his presentation, "Recycled Fiber and Quality," Michael A. McCool of Beloit Corp. gave a comprehensive review of the processing stages that can be used to pulp and deink wastepaper. Of interest to the quality engineer is the use of dirt counting techniques to evaluate the control of the cleaning process. The proposed analysis technique and process line plus the use of on-machine dirt scanners could permit the development of an automatic control system for a secondary fiber market pulp processing line.

Process control panel

A feature of the Wednesday session with Peter Daisley was a panel discussion with Heiko H. Fastenau, Laser Sorter; Lars C. Ingman, Valmet Automation (USA); Roland J. Trepanier, Noram Quality Control and Research Equipment Ltd.; Heinz H. Walbaum, International Paper; Len Whiting, Stora Papyrus; and Robert Wilson, Celulosas de Asturias. The discussion began with a position statement by Daisley that read, in part:

Many a company in the paper industry will be seen as a house divided when the subject of process control is addressed. If fast measurement or on-line control is involved, the subject is the province of the process engineer. Where lab testing or sample evaluation is used, it becomes the province of the technical and quality section people. With judgments against standards or operating rules determining the control action, the task is usually left to the production people to resolve....

There is a clear necessity for the integration and coordination of effort. The real requirements have to be assessed in relation to known market expectations, competition and economics. The means have to be examined and selected against preassessment of the effect and the resources available. We should be prioritizing according to needs and opportunities for improvement rather than by availability of experience....

The question before the panel is, "How do we get it together?"

Some of the responses represented differing areas of interest of the panel members. The highlights of these responses include:

Trepanier: Science needs to provide a better understanding of the cause and effect relationships. For example, what are the control parameters that can affect sheet formation?

Ingman: The evolution of QC and inspection has led to a separation of product data and information for process control. An example cited is that of basis weight, where there are two views: a process control and a product control standpoint. There should be shared cross objectives in order to solve the problem.

Walbaum: Stressed that the number of interfaces must be reduced to lessen the amount of misunderstandings. Walbaum not only pointed to equipment interfaces but also to interfaces between departments, people, and managerial philosophies. To illustrate his point he cited the interfaces involved in the design, installation, and use of a consistency control loop.

Fastenau: Emphasized the need for education of process control people coupled with simplification of the process. Pressures from mill needs and equipments suppliers need to be addressed without compromising production demands or compromising quality control and customer needs.

Whiting: After removing his jacket and tie and rolling up his shirt sleeves, Whiting assumed the role of the hourly operator who declared that he did not have all the educational background nor had he acquired all the skills necessary to deal with computers, statistics, and the large amount of information that is coming to him. He wants to make good paper and wants to receive the training to do the job properly. On the other hand, the unions may tend to compartmentalize both people and issues. A balance is needed if we are to succeed.

Wilson: There is a need for a common language to assist the flow of ideas and to permit departments to handle limited resources and market demands by quantifying needs and benefits.

Customer satisfaction

Lars Ingman provided the wrap-up comments for Wednesday's session with a paper titled "Customer Satisfaction—The Ultimate Goal." Ingman stressed the main functions of communications, expectations, and perceptions. But what may be more important is the task of measuring customer satisfaction. This measurement process may be more complex than first imagined as the customer must be identified. An easier task may be to breakdown the vendor/customer relationship into smaller segments and use gap analysis on those aspects of the relationship that are important to the customer. Once the analysis is complete, the obvious next job is to improve those areas where the customer perceives dissatisfaction.

ISO 9000 registration

On the last day of the symposium (Thursday), a session about the ISO 9000 registration process was chaired by Sue F. Jakubsen of the Herty Foundation.

Overviews to the registration process were given by John H. Stratton, Eastman Kodak Co., who outlined the function of the Registrar Accreditation Board, and by Harvey Berman, Underwriters Laboratories, who spoke on the role of UL in the accreditation process. The first half of the session ended with a comprehensive review by John T. Rabbitt of the review process that the Foxboro Co. went through to receive the ISO 9001 Certification.

The session ended with Greg E. S. Hutton's review of the complications encountered in the certification of Prince George Pulp and Paper Mills to ISO 9003 (Canadian Standard Z 299.4). Mark Berenson, SCM Chemicals, discussed the process by which SCM Chemicals set up its organizational structure in order to meet the requirements of the ISO 9002 certification. The last presentation, by Joseph P. Kafieh, Valmet Automation (Canada), rounded out the discussions with an indication of the requirements of the ISO 9003 certification process.

Though the last day's session ended prior to all questions being answered, there will be two sessions planned on ISO 9000 for next year's International Conference in Appleton, WI.