

Engineering Conference growth leads to innovative program, show

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For a first-time attendee, it might not have seemed like all that much. A conference and its associated trade fair had grown to the point that more room was needed. For part of the time the conference was held away from the hotel so the technical sessions would be near the exhibition, giving attendees the opportunity to visit with manufacturers and hear the technical presentations.

For anyone who has attended several Engineering Conferences, however, the changes were dramatic: a 12,300 ft² exhibit, 123 exhibitors, and the technical program arranged in "tracks," the meeting held both in the Westin Hotel and in the Washington State Convention Center in Seattle, and over 1400 registrants with a total count of 2800 attending, including exhibitors and spouses.

The result was one of the best Engineering Conferences ever. The state provided some spectacular weather, for the U.S. Pacific Northwest. The meeting went smoothly, even when a visit from the vice president of the United States required some fancy footwork to keep TAPPI registration open while the Secret Service did their job.

Making tracks

W. B. A. (Sandy) Sharp, the secretary and technical program chairman, was the innovator and champion of the "tracks" concept for the technical program. There were eight tracks for attendees: Electrical Engineers/Process Control, Human Resource Management, Maintenance Engineers, Materials Engineers, Papermaking Engineers, Power and Recovery Engineers, Process Engineers/Process Simulation Engineers, and Pulp and Bleaching Engineers.

In previous years the sessions were scheduled according to the technical committees which sponsored them. This year, the papers were scheduled according to the tracks, each of which related to the interest of a particular type of mill person. The tracks were keyed to the relevant sessions in the program.

While this was new this year, comments were favorable. Most attendees questioned remarked that there were fewer session conflicts than in the past.

Committees

Monday, September 24, was committee day, and the effort

Charles B. Tibbits, Engineering Division Chairman, welcomed the registrants to Seattle.



to arrange the technical program into tracks had a secondary benefit for the committee meetings. These were also included in the tracks concept and were scheduled to minimize conflicts for someone in a given track. Several of the committee members commented that it was now possible to attend several committee meetings because of the rearrangements and that attendance was higher. The Water Removal Committee had between 150-200 participants, and several committee officers commented that there were blocks of people moving from committee meeting to committee meeting, giving a continuity to the process.

Technical program

This year's technical program was almost overwhelming. More than 100 papers were presented along with panel discussions. The complete preprints of the Engineering Program are available from TAPPI PRESS for anyone desiring

Max D. Moskal, Stone Container Corp. (left) receives the 1990 Engineering Division Leadership and Service Award from **Clarence Hornsby**, TAPPI president.



The 1990 Engineering Division Award and Beloit Prize was given to **Ian T. Pye** (right) of the Pulp and Paper Research Institute of Canada. **Charles B. Tibbits** (center) and **Clarence Hornsby** present the award.



additional information.

Interviews and discussions with attendees gave us some of the highlights of this year's program. The comments and insights are presented here to give some of the flavor of the 1990 Engineering Conference.

AC drives

AC drives, covered in Session 3, are a hot topic in the industry today. Many of the earlier limitations have been overcome, and it appeared to many at this session that AC drives are the wave of the future for paper machines and other mill machinery.

Because AC drives lack commutators and other wear parts they are relatively easier to maintain than DC drives, but they have not been as easy to control to the fine limits needed for the paper industry. New control systems have overcome those limitations and now the economic advantages of the AC drive can be exploited.

Sludge disposal

Session 4, Sludge Disposal, showed this part of the industry to be in a "sorting out" phase. The technology is new and innovative, but there is no clear consensus on which way is best. Many of the technologies are in their infancy, but show great promise. Legislation in many states is limiting the variety of technologies that can be tried, such as the incineration of sludge and the use of sludge as a boiler fuel, but the increasing problems with landfill siting will provide continuing incentives to find better ways to dispose of sludge.

Water removal

Session 12, Water Removal in Forming, Pressing, and Drying, included a presentation on the application of an expert system to wet felt design. This paper described the efforts of a Japanese company to use an expert system to reduce the learning time of new designers by capturing the knowledge of more experienced workers who could not spend the time to help train new engineers. One of the problems with any expert system is the amount of time required to update the

system to keep it current.

Also in this session was a paper discussing operating results from an installation of the Bel-Champ single-tier dryer. This dryer is designed to overcome some of the longstanding limitations of conventional dryer sections. The paper is fully supported, with no open draws, and the tail is self-threading with no need for ropes. The runnability is greatly improved because of this. More importantly, the drying rates are significantly improved because the pockets are eliminated to give better ventilation.

Also, because the sheet is fully supported, this dryer has much better sheet-restraint during drying, giving improved uniformity of sheet properties. A sheet dried in a standard dryer tends to shrink towards the center, changing the fiber distribution and orientation on the edges.

Pulping Session

There were several key papers in Session 17, CTMP—Development Objectives and Efficient Energy Utilization. The whole field of mechanical pulps is keyed to inexpensive electrical energy. The most striking paper in this session was by Ronald A. Yeske, Institute of Paper Science and Technology, on whether there will be enough electrical power available to support the expansion of TMP/CTMP in the United States. The production of CTMP (chemithermomechanical pulp) and TMP (thermomechanical pulp) are very energy-intensive with individual motors up to 20,000 hp each and up to 75,000 connected hp for some mills.

Other sessions

Thomas Grant of API made a presentation on the paper industry's energy use. The paper industry has become very self-sufficient in energy production over the past two decades, which will help it tremendously in the near future. He painted a very complimentary picture of the far-sightedness of the paper industry management in capitalizing these projects.

Several sessions on simulation, including Sessions 20 and 22, covered a wide spectrum. A consensus of sorts is de-

Charles B. Tibbits receives a plaque for his service to the Division as chairman from **Clarence Hornsby**, TAPPI president.



Native American dancers, preserving the traditions and ways of the tribes of the Pacific Northwest, performed at the Awards Banquet.



veloping in the industry that one of the best uses of simulation is in operator training, especially for high-risk operations such as that of the recovery boiler. Simulation is the best training tool available to give operators multiple experiences in learning how best to handle low-frequency, but very costly, events.

In addition to the "high-end" simulation applications, it was interesting, and eye-opening, to see how much simulation can be done with a spreadsheet program on a personal computer. While this cannot provide real-time event training, it can be used for predicting directions and critical events for many processes.

The Dryer Section Runnability Panel Discussion, Session 29, provided some useful details on cleaning methods and

strategies for dryer clothing. A good overview of shower types and placement made this a good discussion.

Honors and awards

The Engineering Division held its awards ceremony at the conference luncheon on Wednesday.

The 1990 Engineering Division Technical Award was given to Ian T. Pye, Pulp and Paper Research Institute of Canada. Along with the award, Pye will receive the Beloit Prize which carries a \$5000 honorarium, made possible by a gift to TAPPI from Beloit Corporation.

Max D. Moskal, Stone Container Corp., was honored with the Engineering Division Leadership and Service Award.

Running for scholarships

The 8th Annual Paper Chase fundraiser for scholarships was held at the conference, with over 120 signing up. Only about 80 of those actually ran, but all who registered supported the scholarship fund. According to Scott Robertson of BE&K, this event has raised over \$22,000 in scholarship money during the past eight years. This year, 10 schools will receive \$12,000.

Daniel Fisher, an analyst for H. A. Simons Ltd. in Vancouver, B.C., Canada, topped the field of 5K runners from around the world with his 14:59.4 finish. Another Canadian and last year's winner, Andy Jones, engineer for ABB-Combustion Engineering of Ottawa, Ont., placed second with a time of 15:15.7. John Holton, senior process engineer for Scott Worldwide of Everett, Wash., U.S.A., placed third with a finishing time of 18:06.3.

In the women's division, Patricia Jones of Ottawa,

Ont., Canada, placed first with a finishing time of 22:04.0. She is the wife of second-place men's finisher, Andy Jones. Second place in the women's division went to Ginger Sears, power engineer for Union Camp, Savannah, Ga., U.S.A., who had a time of 24:03.5. Finishing third in the women's division was Mary Hughes Larsen of Babcock & Wilcox, Lake Oswego, Ore., U.S.A., with a time of 24:36.6.

This year's race had 21 sponsors, which enabled more than \$12,000 in scholarship money to be raised. This year the University of Wisconsin at Stevens Point and Western Michigan University joined North Carolina State, the University of Maine, the Institute of Paper Science and Technology, the University of Washington, the University of Minnesota, Syracuse University, Miami University of Ohio, and Auburn University in receiving \$1200 scholarships.



Engineering Trade Fair

The 1990 Engineering Trade Fair was held Sept. 24-25 at the Washington State Convention Center. There was a record-breaking 1400 in attendance at the conference and trade fair. The trade fair also broke a record with 12,300 ft² of exhibit space and 123 exhibitors.

The conference reception was held in conjunction with the trade fair on Monday night and the traffic flow was excellent. The show was open all day on Tuesday with concession stands to provide breakfast and lunch in the exhibit area.

Moskal joined TAPPI in 1972 and has been active in the leadership of many committees. Also with the award, Moskal will receive a \$1000 stipend, which is donated to TAPPI annually by Sandy Hill Corp.

Six outgoing committee chairmen were given Certificates of Appreciation for their work. They were: Charles E. Guzi, Corrosion and Materials Engineering Committee; Maryann C. Kenney, Water Removal Committee; Patrick T. McNulty, Electrical Engineering Committee; Michael D. Wallace, Process Control Committee; Robert G. Guide, Maintenance and

Mechanical Engineering Committee; and Robert H. Rouda, Continuing Education chairman, Division Council.

Also honored for his service to the Engineering Division was the outgoing Division Chairman Charles B. (Chuck) Tibbits. Tibbits, a Seattle resident, was a proud host for his Division and enjoyed the opportunity to show off his city during the conference. Jere W. Crouse, the vice chairman and Conference chairman, will succeed him as the Division chairman.

Engineering Division scholarships

The TAPPI Engineering Division has established a scholarship program to increase interest in the pulp and paper industry among engineering and science students, and to increase interest in an engineering career among students with an interest in the pulp and paper industry. Two \$2500 scholarships will be offered. One will normally be offered to a student entering his or her junior year, and the other normally to a student entering his or her senior year.

In addition to the financial award, scholarship recipients will be encouraged to take summer employment in the pulp and paper industry.

At this year's conference the Engineering Division awarded Glenda L. Sneden, Fife Lake, Mich., and Jeffrey G. Thomas, Raleigh, N.C., \$2500 scholarships for the 1990 scholastic year. Sneden is a student at Western Michigan University, Kalamazoo, studying paper science and chemistry with a minor in mathematics. Thomas is studying chemical engineering pulp and paper technology at North Carolina State University, Raleigh. □