Oklahoma State University hosts First International Web Handling Conference

J. David Pfeiffer
Associate Professor
Mechanical Engineering
McGill University
Montreal, PQ, Canada

The First International Web Handling Conference, held May 19–22 at Oklahoma State University, Stillwater, OK, attracted 144 delegates from the United States and nine other countries who heard 22 technical papers covering many aspects of web transportation and winding. Attendees commented on the quality and depth of coverage of the subject matter and the avoidance of nontechnical or sales-oriented presentations.

Assisted by a multinational program committee, J. Keith Good, the technical program chairman, brought together an outstanding collection of papers that were presented in the university's new Center for International Trade Development auditorium. The program was organized so that delegates could attend each paper presentation rather than have to choose between parallel sessions.

Keynote papers

Papers on the measurement and control of tension distribution in newspaper printing presses, by Leif Eriksson of the Swedish Newsprint Research Center, and on roll structure, by J. David Pfeiffer of McGill University, were given keynote status in recognition of the previous contributions by those authors.

Papers concerned with structure irregularities resulting from poor web profiles were authored by Zig Hakiel of Eastman Kodak Company and Doug Kedl of 3M Company. A number of techniques for dealing with the measurement and prediction of radial pressure profiles were reported. Those included pulse-counting density gauges with caliper correction (David Roisum and J. Keith Good), force-sensitive resistors (J. Keith Good and M. Fikes), sonic velocity gauging (R. Swanson), numerical integration (Robert Reuter) and finite element methods (Robert Thomas). In the latter two cases the product was multilayered, formed by winding webs of dissimilar materials to make electrical capacitors. Three papers discussed web flutter instabilities as caused by aerodynamic effects or predicted by wave equations. A bound volume is being planned for publication next year, containing all the conference papers.

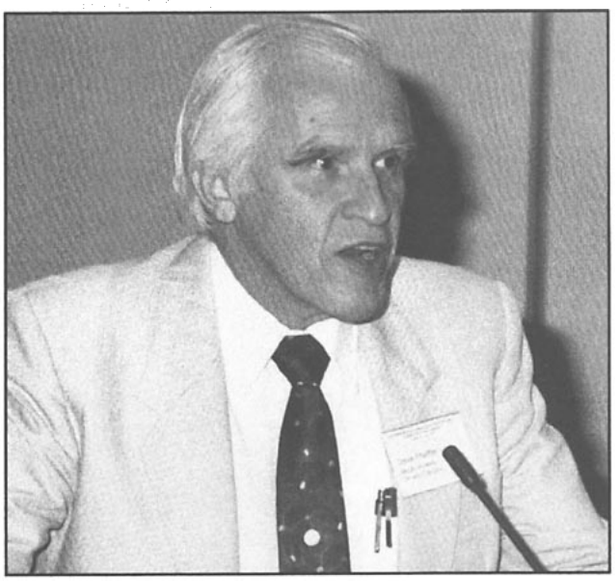
J. Keith Good, technical program chairman of the First International Web Handling Conference.

Center has grown rapidly

OSU's Web Handling Research Center, host for this inaugural meeting, has grown rapidly from its inception in 1986. In that year, Karl Reid, dean of the OSU College of Engineering, Architecture and Technology, and Richard Lowery, professor, set out with grant money from the Noble Foundation and the Kerr Foundation to find eight industrial sponsors interested in funding research into web handling problems. Once this initial group was formed, the National Science Foundation and the Oklahoma Center for the Advancement of Science and Technology provided additional funding. The number of sponsors has now grown to 18. They maintain a hand in the management and operation of the Center through an industrial advisory board which meets semiannually. Sponsoring firms are able to suggest projects for research, and benefit from early reporting of the results of the project

Robert Thomas of Sandia National Laboratories (left) and **Mike Holmberg**, graduate student, chat during a tour of the Web Handling Research Center at Oklahoma State University.

Keynote speaker **J. David Pfeiffer** discusses roll structure during the First International Web Handling Conference.



Attendees at the First International Web Handling Conference. Pictured in front (from left) are **Ron Dalahoussaye, J. Keith Good, David Roisum**, and **Richard Lowery**. In the second row, right of aisle, are **Bruce Feiertag** and **John Shelton**. All but Roisum, of Kimberly-Clark, are on the faculty at Oklahoma State University.

investigations. The results are not made public until released by the members, normally within 1–1 $^1/_2$ years.

Web handling is but one component of the Oklahoma Center for Integrated Design and Manufacturing, led by Reid. The other areas of this "Center of Excellence" include a micro-machining facility and a robotics and automation laboratory. The center involves more than 40 faculty members and 75 graduate students. The Web Handling Research Center has a well-equipped laboratory with several winders, web transport machines, and the newest in stress-strain testing equipment and digital data acquisition equipment.

Based upon the success of this year's conference, another Web Handling Conference is being planned for the spring of 1993. □