

Pump Symposium gets high marks

Texas A&M University Turbomachinery Laboratory's 15th International Pump Users Symposium & Short Courses, held in Houston, TX, during the week of March 2, again brought together the community of users and suppliers in a venue where the mix of lectures, tutorials, discussion groups and accompanying exhibits provided a variety of educational options.

The Symposium, founded in the early 1980s, has grown into the most important user-oriented gathering concerned with the maintenance, performance, upgrading, operation, troubleshooting and procurement of pumps. This year, there were some 250 firms in the exposition and about 3,500 participants in the overall event.

The discussion groups program is perhaps the most distinguishing feature of the Symposium. It is here that attendees get sound advice from peers on problems of immediate importance and equipment suppliers hear first-hand from users about the challenges they are facing in the plants.

It's not so simple

It was apparent throughout the event that equipment reliability continues to challenge the industry. In the opening address, Jim Ingram, a founding member of the Pump Symposium Advisory Committee, observed that, "Compared to, say, an aircraft jet engine, pumps lack both complexity and, sadly, reliability."

Ingram noted that the average value of an avoided pump repair in a U.S. refinery is approximately \$10,000. Thus, the opportunities for sizable improvement are illustrated from the following:

- At the Pump Symposium 15 years ago, the best-in-class centrifugal pump owner-operator company reported a mean time between failure (MTBF) of 3.4 years.

- At the 1997 Symposium, another company reported 6.6 years.

Because not many plants fall into the best-of-class category and there are still some plants that report an MTBF of only one year, or have no statistics at all, reliability improvements will continue to be on the minds of both users and suppliers.

The challenges in reliability of centrifugal pumps were again emphasized in a lecture by Neil Wallace of Flexibox International on "Pump Reliability Improvements Through Effective Seals and Coupling Management."

Surveys in more than 20 operating plants were discussed, which addressed variable lifetimes currently achieved, improvements being made through performance surveys and reliability improvement programs. Again, we see a wide range in performance and lots of room for improvement. Special software for continuous monitoring and management of pumps, seals, couplings and bearings offers yet another tool in the drive to "do more with less."

Emerging trends

The discussion groups, lectures and interaction with exhibitors

provided me the opportunity to crystal ball some technology and business trends.

As part of the movement throughout industry to drive down costs and improve productivity, the push for increased efficiency is on the minds of most plant managers. As such, variable speed pumps are getting more attention, equipment electronics ("smart pumps") are becoming more widely used, life-cycle costs are becoming far more important and sealless pumps are increasing in market share.

New problem solving tools and approaches are emerging. For example, our Pumping feature in this month's issue (pg. 51) is based on a lecture presented at the Symposium focusing on the use of an advanced analysis technique involving computational fluid dynamics (CFD).

Faced with a very noisy pump operation and unable to pinpoint the source of the problem by conventional methods, engineers used CFD to discover an area of separation in the pump inlet that was causing flow distortion at the impeller eye. Performance was enhanced following modification of a wearing ring to minimize the separation and improve the flow.

The landscape of the business community and the purchasing process is also changing. Some examples include consolidation of vendors; purchasing moving away from the plant floor; user companies looking for long-term relationships from supplier companies and getting a lot out of those relationships; and suppliers working harder to help customers get longer equipment life.

High marks all around

The International Pump Users Symposium and Texas A&M's Turbomachinery Lab are to be commended for their accomplishment in melding short courses, user-oriented discussion groups, formal presentations and exhibits into a cohesive and extremely relevant learning experience.

They have also succeeded in building a sense of community among the owner-operators, craftsmen, reliability professionals and equipment suppliers charged with adding value to their individual businesses.



Peter

Peter J. Knox
Editor-in-Chief & Associate Publisher

XXX: **XXXXX**

e-mail: pjknox@bway.net