Conference focus: Sealing well represented at International Pump Users Symposium

The 20th International Pump Users Symposium was held in Houston on 17–20 March 2003. Sealing was a major topic covered in four of the 10 key lectures and the subject of several discussion groups.

The four sealing papers presented were:

- "Noncontacting seals in volatile services" by Bob Goodenberger and Jason Marquardt of John Crane and Doug Barron of Chevron Phillips Chemical. This paper covered the sealing of high pressure volatile fluids and the use of noncontacting seals to provide reliability.
- "Developments in high performance seal designs for critical high pressure offshore and pipeline applications" by John L. Morton and John G. Evans of John Crane EAA, UK. This presentation discussed how new technology has been used to move mechanical seal operation to a new level to minimize lost oil production.
- "Integration of split sealing constraints to a gas seal challenge" by Henri Azibert and Shifeng Wu of A.W. Chesterton Co. Split mechanical sealing technology has lagged standard seal applications because of the many difficulties introduced by the requirement to assemble separate parts to a high degree of precision in the field. But recently, many complex chemical, pharmaceutical, and other applications have been successfully addressed with split seals. To push the envelope further, this paper deals with the design and field application of a completely split mechanical gas lubricated seal.
- "Advanced gas sealing systems for hydrofluoric acid alkylation and other extremely hazardous duties" by Dan Kozlowski, Ebrahim Jahromi and Jim Wasser of John Crane Mechanical Seals. This paper provided a detailed description of seal face development, including adaptation from noncontacting to face-contacting operation. Laboratory testing, seven years of field operation, as well as substantial end-user benefits were also addressed.

The discussion groups are a regular feature of the pump symposium and generate a lot of interest. Group one covered centrifugal pump operation, maintenance, and reliability. The discussion included experience of installing gas seals in existing pumps and maintenance of sealless pumps.

The mechanical seals group discussion topics were tabled to be wide ranging and included:

- electronic seal monitoring;
- when and where to apply noncontacting double gas seal technology;
- when and where to use dry running backup seals;
- materials, for example compatibility of O-rings;
- API 682 etc.

Other discussion groups of some relevance to seals included, alignment, pipeloads and sealless pumps.

Perhaps the liveliest discussion was in the group on alliancing. Some vendors suggested that such arrangements are not a good deal for the users, but major users present disputed this view.

The mixing discussion also contained a significant contribution from the seal vendors present, occupying perhaps half of the meeting.

Copies of the lecture papers will be available through the symposium organizers.

Contact:
Joanne Burnett, Turbomachinery Laboratory, Texas A&M University, 3254 TAMU, College Station, TX 77843-3254, USA. Tel: +1 979 845 2924, Fax: +1 979 845 1835, Email: joanne@turbo-lab.tamu.edu.

- inert behaviour in accordance with the requirements of the FDA; and
- extremely low permeation.

The O-rings are also available in alternative cross sections.

The seals are suitable for use with glass apparatus and in medical technology and biotechnology, as well as in pumps and mechanical face seals.

Contact:
Freudenberg Simrit LP, Unit 7 Wycliffe Industrial Park, Leicester Road, Lutterworth, Leicestershire, LE17 4HG, UK. Tel: +44 1455 204 403, Fax: +44 1455 204 466, Email: info@simrit.com

New coupling design offered

A new shaft coupling intended to suit a wide variety of demanding industrial applications is now available from John Crane.

Designed to be efficient, reliable and cost-effective the L Series membrane couplings are claimed to offer a number of advantages including easy installation and versatility of application. Membrane couplings have no relative moving parts and require little or no maintenance. Overload collars protect the membranes in the event of severe torsional overload. It is claimed that with correct machinery alignment they will frequently outlast the machines to which they are connected. These couplings also comply with the requirements of the ATEX Directive 94/9/EC, which is expected to be widely adopted as a new benchmark for couplings.

Contact: Yvette Tack, John Crane EAA, Nash Road, Trafford Park, Manchester M17 1SS, UK. Tel: +44 161 886 5996; Fax: +44 161 886 5990; Email: yvette.tack@johncrane

In Brief

GE Toshiba Silicones acquires business in Australia
GE Toshiba Silicones has purchased the Parfix consumer sealant and adhesive business from Parchem Construction Products Pty Ltd in a deal arranged through General Electric Plastics (Australia) Pty Ltd. Parchem Construction Products is a major Australian construction chemical producer, formerly known as Parbury Technologies Pty Ltd. All Parfix brand consumer sealant and adhesive products are now supplied by GE Toshiba Silicones through a Silicone Products Division of General Electric Plastics (Australia) (GEPA). GE Toshiba Silicones, together with GEPA, now own the PARFIXTM and OZTRADETM brands of consumer sealants and adhesive products.

PDL releases revised guide to packaging and barrier materials
Plastics Design Library has published the Second Edition of Permeability Properties of Plastics and Elastomers – A Guide to Packaging and Barrier Materials. The guide is claimed to contain extensive data ranging from a general overview to detailed test results, and a comprehensive primer on core permeability topics. The data is presented in graphical and tabular format, with results in SI units. All the permeability data has been normalized to allow for easy comparison between material and test conditions. Contact: William Andrew Inc. Tel: +1 607 3375080, Fax: +1 607 3375090, Email: publishing@williamandrew.com.

Seals contribute to hydraulic cylinders' long service life
Bosch Rexroth Industrial Hydraulics says its CDT3 series of tie rod hydraulic cylinders offers up to five times normal service life. The increase in performance is said to result from a precisely designed and machined one-piece cylinder head, integral piston rod guidance, and a modern sealing system.