## **ISD Spring Technical Event 2016**

2016

| <ul> <li>Rubber 101</li> <li>Elastomers – Types of Polymers and Proper Selection for Application</li> <li>Compounding/Rubber Failure</li> <li>Basic lab tests</li> <li>Surface Treatment options</li> </ul>  | Kirk Brown – Precision<br>Associates; Technical Leader<br>for O-Rings |
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| Decoding Rubber Classifications and Certifications  Kirk Brown, Rubber Chemist will explain a variety of rubber material certifications and various agency acronyms and approvals as they pertain to molded elastomers. Find out what you need and when you need it. Includes ASTM classifications.  • ASTM D2000  • UL  • NSF  • FDA  • USP VI  • Reach  • RoHs  • ADI Free  • 3A  • Conflict Free  • NORSOK  • ISO                   | Kirk Brown – Precision<br>Associates                                  |
| Tour The Hercules Sealing Products tour will include product development, sales, procurement and warehouse processes. The warehouse portion of the will include a tour of the entire warehouse with demonstrations of the horizontal carousel, vertical lift modules, kitting process and custom seal manufacturing.   | Hercules  |
| Analyzing Seal Failures Presenter, Chris Brierley will be analyzing the many reasons and causes for Seal Failure. Failure analysis will include extrusion, wear pressure, dieseling, fluid compatibility, spiraling and compression set. Session attendees will see first-hand accounts of each type of failure, possible explanations and the necessary steps that should be taken to avoid these failures during the repair process. | Chris Brierley - Hercules   |

## Tutorial on Ducting, & elastomeric expansion joints – Part A & Part B

Ben Tannler -Holz

This technical training session will provide an intermediate level of exposure for high temperature fabric expansion joints. We will discuss:

- Intended purpose of expansion joints,
- Where they are used in typical power and process plants,
- Selection of materials,
- Applications for expansion joints,
- Importance of why certain types of joints work better in specific applications,
- How to locate and analyze the condition of in-service expansion joints, and
- How to offer solutions to existing problems for plant staff.

Attendees should have a very basic understanding of expansion joints. The class will teach the foundational knowledge needed to ask the right questions to get the information needed for the proper design and quotation of expansion joints, and will build on the Sealing Your Success e-Seminar planned for January 18.

Leading the session is an industry expert with 27 years of expansion joint design and field experience, so please bring your questions and don't miss this training session."

## Dynamic Sealing – basic concepts through advanced applications

The session will expose students to a variety of different sealing solutions from

O-Rings to Spring Energized Polymeric lip seals for static, rotary, and reciprocating applications. It will include:

- Discussion of various sealing solutions
- conditions under which different solutions should be selected including Temperature, Pressure, Fluids and Friction
- when to use a backup ring device and different materials for back up rings what the glands should look like and how static, reciprocating and rotary glands differ
- O-Ring energized PTFE (Teflon) rings and how they are applied. This discussion will include the basics on which material will be used in combination with the O-Ring Basic cross sections commonly applied in the industry, to include the channel seal, piston/rod seal, buffer rings, excluders, and finally polymeric bearings

Engineering

Cliff Goldstein - Eclipse

| 0 0  | energized polymeric seals the operating conditions that would cause you to use a spring energized seal over a rubber energized seal further discussion on Temperature, Pressure, Fluid and Friction, which directly relates to material of the seal and type of spring that may be applied based on the operating parameters of the application A discussion on gland considerations for this type of seal and applications in Rotary, Reciprocating and Static sealing high and low speed Rotary lip seals and when it's time to start thinking about a Mechanical Face Seal |  |
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| leading equipresales & services a wide variety. Their vast ranges tables & water web die cuttinesingle knife & | s Supplies Company, in partnership with Europe's ment manufacturers, specializes in the complete of precision cutting & converting technologies for of industrial sectors.  ge of technologies include: dieless knife cutting rjet cutting systems, die cutting presses, narrow g (flat bed & rotary) & laser cutting equipment, multi-shaft lathe slitters, slitters-rewinders & log sive coaters & specialty laminators.  | Nathan Goff - Manufacturers Supplies Company             |
| Seales on Seals Mechanical Sea   | : Notes From The Field on Common Problems Affecting all Performance.  | Tommy Seales SEPCO Technical Leader for mechanical seals |
| Radial Shaft Sea   | al Basics   | Don Grawe  |
| <ul><li>basic te</li><li>compor</li><li>and how</li></ul>  | aft seals are made<br>erms<br>nents and configurations of shaft seals<br>w shaft seals work   | ESP International  |
| The art and sci  | ience of packing, both valves and pumps.  | Chuck Tanner<br>SEPCO                                    |

| The Extrusion Process - Understanding the process of extruding rubber. Taking the raw material and converting it to an extruded profile to be used in a sealing application.  | Elastoproxy          |
|---|----------------------|
| The Gap - Defining the history of sealing and the different methods used to take an extruded profile and transform it into a finished gasket. What is the best product for the application and the technical knowledge behind sealing the gap.  | Elastoproxy          |
| Proper Viton™ polymer selection in the various chemical & temperature environments for fabricated gasketing and coated fabric applications.   | Jim Briggs Thermodyn |
| Selecting the type of Viton™ FKM that best fits your needs is important, but that doesn't mean it has to be complicated. This presentation will help you understand the range of Viton™ polymers and options for selecting the best product for the application. It will also address some of the current changes in the Viton™ brand and the popular "Genuine Viton™" labeling program, clearing up some of the mystery surrounding FKM's, reviewing industry alternatives, and why it is important to protect your company's reputation when dealing with knock-offs. Viton™ fluoroelastomers differ in the degree of chemical and fluid resistance as well as various temperature environments.  Viton™ is a registered tradename of The Chemours Company (formerly part of E. I. du Pont de Nemours and Company, commonly known as DuPont). |                      |