

## **2018 STLE Houston Section Lube School**

### **Speaker Biographies and Abstracts**

#### **Track A**

##### **Lubrication Fundamentals - Ray Thibault**

Ray Thibault, CLS, OMA I & II MLT I & II and MLA II & III retired from ExxonMobil with 31 years of service in 2001 to form LTC, a lubrication training & consulting company. He has done extensive training and consulting worldwide for many of the leading manufacturing and lubricant companies. He is well known for his lubricant certification class such as Certified Lubrication Specialist, Oil Monitoring Analyst I & II and Machinery Lubrication Specialist I & II. As a contributing editor for Lubrication Management & Technology magazine for the past seven years, he writes bimonthly articles on lubrication. He has been the session chairman for Lubricants World held at the International Maintenance and Predictive Maintenance Conferences and is an active speaker at many other conferences such as STLE, Predictive Maintenance, and MARTS. He has worked with local STLE chapters such as Oklahoma, Houston, and Chicago as a presenter at their lube schools.

This course will provide an overview of lubricants and their use. Major topics are lubrication fundamentals (wear, functions of a lubricant, lubricant composition, lubricant properties, types of lubricants), lubricant applications (bearings, gears, hydraulics, compressors, turbines), contamination control (water, particulates, air, other lubricants, built-in, added, breathers) and reliability topics (proper oil sampling, condition monitoring, lubricant tests and their meaning, ferrography). Because of the nature of the class and the reference notes provided, this class is an all-day (morning + afternoon) class.

#### **Track B**

##### **Grease – The Niche Market Opportunity – Chuck Coe**

Chuck Coe is the president and principal consultant for Grease Technology Solutions LLC. He holds a BS Chemical Engineering, Pennsylvania State University, along with NLGI CLGS and STLE CLS professional certifications. He worked for Mobil and ExxonMobil for 32 years, including 6 years as ExxonMobil's Grease Technology Manager. He retired from ExxonMobil and launched Grease Technology Solutions LLC, a grease training and consulting business in October, 2009, and has consulted with over 40 clients. He is a past President of the National Lubricating Grease Institute and is the Grease Education Committee Chair of STLE. He has authored several technical papers and articles on grease, and received Best Marketing Paper and Best Paper awards from both NLGI (2008) and ELGI (2009), as well as the John A. Bellanti Sr. Memorial Meritorious Service Trophy from NLGI (2012) and the NLGI Fellows award (2015).

There are industry standard specifications to cover engine oils, gear oils, hydraulic oils, turbine oils, etc. Standardized specifications are wonderful for the end user, simplifying product choice and ensuring a certain level of performance. Unfortunately for the marketer, standards also reduce

the opportunity for differentiation by facilitating cross-referencing and product commoditization. Greases are different. There are virtually no industry standard specifications, and as a result no two greases are exactly alike. Grease performance can vary not just due to formulation differences, but also as a result of the manufacturing equipment and techniques used. The wide variety of grease applications creates a major opportunity for grease product differentiation, and requires end users to carefully evaluate each application's requirements in order to choose an optimal grease.

### **The Unique Lubrication Requirements for Mechanical Seals and Sealing Support Systems – Mike Huebner**

Michael Huebner is a Principal Engineer at Flowserve Corporation out of Pasadena, TX. Mr. Huebner has over 35 years of experience in the design of centrifugal pumps, mechanical seals, and fluid handling equipment. Over his career he has worked in various roles in Engineering, Research and Development, Product Development, and Engineering management both in the US and Europe. He is the author of the Mechanical Seals chapter of the Centrifugal Pump Handbook as well as the Materials for Mechanical Seals chapter in the Encyclopedia of Tribology. Mr. Huebner has lectured extensively throughout the US and published numerous articles on topics related to mechanical seals and pump reliability. He writes the Q&A: Sealing Solutions column in Pump Engineer magazine. Mr. Huebner is a graduate of Texas A&M University with a degree in Engineering Technology. He serves on Pump Advisory Committee for the Turbomachinery and Pump Symposium and the steering committee for the Pump Summit Americas conference. He is an active member of the ASME B73 committee on centrifugal pumps and the API 682 committee on mechanical seals.

This presentation will cover an introduction to mechanical seals, including: seal faces and lubrication, the sealing environment, use of multiple seals and lubrication challenges, design of sealing support systems, and best practices for seals in operation. All of this would have a focus on the role of lubrication in the operation and reliability of mechanical seals and centrifugal pumps.

### **Innovative Additive Chemistry for Better Lubrication – Liwen Wei**

Dr. Liwen Wei has over 30 years of professional experience in the chemical manufacturing and lubricant fields. He has expert knowledge in many areas of catalyst, chemical intermediates, synthetic base oils, specialty additives, and formulated oils and greases. He is currently the President of Novitas Chem for sales of specialty additives and synthetic base oils for automotive, industrial, metalworking, and grease applications. He has been working for the last 12 years as a consultant providing services to clients in catalysis and chemical manufacturing for chemical intermediates, and in the lubricant industry on wide-ranging subjects including product manufacturing, formulation, failure analysis, condition monitoring, tribology, and intellectual properties. Dr. Wei has previously worked for Shrieve Chemical Products, Rhein Chemie Corporation/Bayer, Mobil Chemical, Exxon Research & Engineering. He has an MA from Columbia University and a PhD in Organometallic Chemistry from the Massachusetts Institute of Technology. He has numerous patents covering grease, refrigeration oil, gear oil, base oil, and lubricant additives.

This presentation will cover improving lubricant additives based on an understanding of surface chemistries. Lubricant additives are often if not always surface active when it comes to providing the lubricity necessary to lubricate rubbing metal surfaces. Surface activities through chemical, namely tribo-chemical, or physical, tribo-physical, means are essential to the understanding and ultimate success of lubricant formulations. This presentation shall provide a comprehensive overview of such surface chemistries with the emphasis on recent advances of new and innovative additives in the industries and the synergisms that makes additives work better and more effectively on metal surfaces.

### **Industrial Oils – David Turner**

David Turner is a Product Specialist with the Lubricants Fluid Technology group of CITGO Petroleum Corporation in Houston, Texas. David is a graduate of Lamar University in Beaumont, Texas, holding a Bachelor of Science degree in Chemical Engineering. He has more than 36 years of experience in the lubricants industry, in formulation, manufacturing, selection, application, and technical service of lubricants and greases. He is a member of STLE and ASTM, and has authored several papers for NLGI. He is the chairman of ASTM D02.G on Lubricating Grease and is co-chair of the NLGI Technical Committee. He is the recipient of the NLGI Clarence E. Earl Memorial Award, the ASTM Award of Excellence, the NLGI Meritorious Service Award, the NLGI Fellows Award, the NLGI Chevron Lubricants Award, the NLGI Shell Lubricants Award for Instructor Excellence, the ASTM Eagle Award, and the NLGI Award for Achievement. He is an NLGI Certified Lubricating Grease Specialist (CLGS), an STLE Oil Monitoring Analyst (OMA I), and an 4STLE Certified Lubrication Specialist (CLS).

This presentation will cover Industrial oils (hydraulic fluids, gear lubricants, compressor fluids, turbine oils, etc.). Each industrial oil category will be discussed from the standpoint of the equipment involved and how it works, along with a generic listing of typical products used in the application and what properties of those products are important for the lubricant to provide satisfactory lubrication.

### **Keynote Address (Lunch)**

#### **Addressing Industry Costs – Heinz Bloch**

Heinz Bloch has BS and MSME degrees in Mechanical Engineering. He looks back on a 57-year professional career dealing with root cause failure identification, lubrication techniques, machinery repair cost reduction, and failure avoidance strategies. Formerly involved in design of high-speed machinery with Johnson & Johnson (1962-1964), and all aspects of machinery at Exxon Corporation (1965-1986). Retired from position as Exxon Chemicals' USA Regional Machinery Specialist after line and senior staff assignments that included tours of duty in Italy, Spain, England, The Netherlands and Japan. Over 500 course presentations and/or troubleshooting and reliability improvement missions to most Exxon affiliate companies and to 43 different countries in Asia, Australia, Europe, Africa and North and South America. He is the Reliability Editor of Hydrocarbon Processing Magazine since 1990 and has authored/co-authored over 700 technical papers or articles and 20 full length text books. The titles include: <> Improving Machinery Reliability <> Failure Analysis and Troubleshooting <> Machinery Component Repair

<> Major Machinery Maintenance <> Oil Mist Lube Handbook <> Process Plant Machinery <> Machinery Reliability Assessment <> Steam Turbine Technology <> Compressor Technology <> Practical Oil Mist Technology <> Reciprocating Compressor Operation and Maintenance <> Lubrication for Industrial Facilities <> Turbo-expander Technology <> Pump User/Life Extension Handbook <> Compressors and Modern Process Applications <> Pump Wisdom <> Compressors: How to Achieve High Reliability and Availability <> Petrochemical Machinery Insights.

The presenter is a noted expert on practical lubrication. In this Practical Keynote, he makes the compelling case to act on facts to find elusive underlying errors and misunderstandings that have cost industry in the US Gulf Coast millions of dollars each year. He shows slides and explains issues that are often hidden by the “quick fix” or the notion that “we’ve always done it that way.”