Reducing Tribological Losses and Failures – Part 3
Workshop and Panel Discussion

STLE TORONTO SECTION
Wednesday, November 27, 2019

Lubricant End Users, Equipment OEM'S, Oil Analysis Personnel, Consultants, Lubricant Suppliers, and Other Lubrication Related Suppliers

Today, manufacturing and service sector companies must become more reliability focused to remain competitive in a global economy. Proper lubrication and reducing tribological failures are the cornerstones of any reliability focused programs.

Industry does not capture full value from the assets due to tribological losses that lead to damaged equipment, energy loss, and premature disposal of the assets and lubricants used in their operation. Billions of dollars are wasted every year, but industry can often do better by implementing simple solutions. All it takes is a little planning, proper maintenance procedures, and most importantly, letting everyone know that doing it the way it was always done before is not the way to progress. Plus, to maximize returns more emphasis and awareness is needed about life cycle costing rather than short term initial costs. This is for effective asset management.

STLE is a not-for-profit organization with a mission "To advance the science of tribology and the practice of lubrication engineering in order to foster innovation, improve the performance of equipment and products, conserve resources, and protect the environment."

The STLE Toronto Section has a goal to help companies address these problems with a series of workshops on cost savings. This can be accomplished with the better application of existing technologies, by improved condition monitoring and by improved awareness. Do not miss out so come to this great event and learn so that you can return to your respective companies better equipped to make a difference.

Parts 1 and 2 presentations are available at www.stletoronto.com

Location: SKF Canada Limited
40 Executive Court, Toronto, ON, M1S 4N4, Canada

Reducing Tribological Losses and Failures – Workshop and Panel Discussion

Program

8:00 Registration and coffee
8:30 'Welcome and Safety'
Jim Arner, Pirr Tribology Solutions, STLE Toronto Section Chair

Talk 1: Cost savings through real total cost of ownership

Colin Lewis, P.Eng
Regional Sales Manager, SKF

Abstract: Cost reduction continues to be a top pressure for manufacturers, driven through in the entire supply chain. However, prioritizing cost over quality and performance when replacing key components – such as bearings and seals - can lead to higher costs for maintenance and operations. Undesired consequences can be shorter mean time between failure and unplanned stops, which is one of the highest cost drivers. What if you would switch this approach to select components and solutions based on their contribution to performance, safety, and real total cost of ownership? SKF has a program to do just this, to show the realized value generated from our products and services. We will present our program, the approach and present 3-5 success stories on savings.

Biography: Colin is a P.Eng with a MBA from the Schulich School of Business at York University. He attended McGill University and graduated with a BEng in Mechanical Engineering. With SKF he first provided support to industrial end-user and distributors then moving on to develop business plans and strategic initiatives to customers in the metals industry. Following that he moved into being a district sales manager for Central Canada and is now a Regional Sales Manager for Central and Western Canada. He has been a lead in global cost saving programs.

Talk 2: Formulating with synthetic base oils for improved lubricant performance

Cory MacLeod, PhD, Technical Service Manager
Lanxess Solutions US, Inc.

Abstract: With the ongoing development of more severe performance requirements from formulated lubricants, the use of synthetic base oils is increasingly seen as a way to meet these rising demands. Synthetic base oils have high oxidative stability, high viscosity indexes, and can have lower friction profiles, all of which can lead to extended service lifetimes of formulated lubricants, wider operating temperatures, and improved equipment efficiencies. This presentation will provide an overview of the advantages associated with using synthetic base oils.

Biography: Dr. Cory MacLeod is a Technical Service Manager for the Lubricant Additives Business at LANXESS Solutions US, Inc. Cory earned his BSc at the University of Prince Edward Island and his PhD in organometallic chemistry at the University of British Columbia. After completing his PhD, Cory joined the Department of Chemistry at Yale University as a Postdoctoral Research Associate where he conducted mechanistic studies on nitrogen fixation with first-row transition metal complexes. Since joining LANXESS in 2016, Cory's research interests have focused on the development of new lubricant additives designed to improve wear protection, reduce friction, and improve lubricant service lifetimes.

Talk 3: How better oil sampling practices drive bottom line profitability
Bernie Hall
General Manager, Checkfluid

Abstract: Oil analysis provides you with the earliest opportunity to identify risk to an asset and the best chance to implement immediate corrective action. Why many Canadian companies choose not to implement best practice sampling is difficult to understand. The small 50 to 70 mL sample that gets sent to the lab could represent an entire 500 L or larger system. To gain the full confidence of the maintenance and reliability people, that small sample must be highly representative and consistent, sample after sample. It must be able to tell a story. What is the reward? A 20:1 or higher return on investment in the first year has often been reported by companies worldwide. Safety and sustainability needs also help launch many programs. This presentation will help you understand the challenges and resources available to establish that great sampling program. Bring questions to the session about any difficult to sample equipment.

Biography: Bernie is an owner of Checkfluid and a science graduate of the University of Western Ontario. He also attended the University of Toronto and the MBA program at BGSU in Ohio. Bernie has developed several patents relating to oil sampling valves and equipment. Checkfluid started in 2001, sells to over 60 countries worldwide

10:00 Break – 15 minutes

Talk 4: Predictive Maintenance of Motors using Current Analysis, Vibration/Temperature, and Insulation Resistance Monitoring Devices
Christopher Barnes, P.Eng, MBA
Omron Industrial Automation

Abstract: Unplanned downtime can be extremely expensive. What if you could prevent costly production downtime by knowing the status of your assets? What if a component could be added to your infrastructure to help predict the replacement time of assets? Motor monitoring devices are bringing practical Internet of Things (IoT) to the component level to improve predictive maintenance routines! This presentation will provide an overview of the predictive maintenance of motors using Current Analysis, Vibration/Temperature, and Insulation Resistance Monitoring Devices including several case studies from a range of industries.

Biography: Chris Barnes is currently the Strategic Account Manager - Infrastructure for Omron Industrial Automation. Prior to joining Omron, he worked for over a decade at Honeywell developing Cloud-Based, Internet of Things (IoT), Real Time Locating Services (RTLS), Security, Video, Fire, HVAC, Energy Retrofit, Metering, Load Shedding, Lighting, Building Automation and Service solutions for a wide range of clients. Chris is a Professional Engineer with a degree in Chemical Engineering from the University of Toronto and an MBA from York University Schulich School of Business. Chris has been an STLE member for over 20 years and was Chair of STLE Toronto in 2005-2006.

Talk 5: Ultrasound Assisted Lubrication

Sean Miller, CMRP
Canadian Operations Manager UE Systems Inc.

Abstract: It has been said that as many as 60 to 80 percent of premature bearing failures are lubrication related. Whether it is due to over lubrication, under lubrication, or simply using the wrong lubricant for the wrong application, it is still a lubrication related failure. One challenge for maintenance & reliability professionals is how to optimize their lubrication PM's. This presentation will give a better understanding as to how Ultrasound technology is one way to assist in enhancing lubrication procedures. Using ultrasound, we can prevent lubrication failures due to over and under lubrication. When this method is used, the move is more towards condition-based lubrication, rather than time-based lubrication. Additionally, more problems can be found than with traditional time-based methods.

Biography: Sean has been involved with ultrasound technology since 2007. He has trained and lectured about the technology throughout Canada and has been instrumental in the program implementation of ultrasound for multiple companies. As a Certified Level III Ultrasound Inspector and Level 1 Steam Examiner, he travels extensively supporting the implementation and ongoing ultrasound programs for UE Systems operations in Canada.

Talk 6: Bearing Damage/Failure Analysis

Devan Devalia, P.Eng
SKF Application Engineer

Abstract: Rolling bearings are among the most important components in the vast majority of machines. Exacting demands are made on their load carrying capability, running accuracy, noise levels, friction and frictional heat, life and reliability. Despite careful design and manufacture as well as testing the bearing in the application, it sometimes happens that a bearing does not attain its required service life. Failures will generally cause economic losses due to loss of production, consequential damage of adjacent parts, and the cost of repairs. Premature bearing failure can occur for a variety of reasons. Each failure leaves its own special imprint on the bearing. Consequently, by examining a failed or damaged bearing, it is possible in the majority of cases to establish the root cause and define corrective actions to prevent a recurrence.

Biography: Devan is a P.Eng. and graduated with a BASc in Mechanical Engineering from the University of Toronto. He is currently an applications engineer providing engineering/technical support to the SKF Canada inside/outside Sales team. This includes developing solutions to help resolve customer application challenges, conducting product and technical training for channel partners and end-users as well as conducting failure analysis inspections and helping determine root causes. Devan has previously worked companies including Comdale Technologies, ABB, Omron Automation and Phoenix Contact

12:00 Wrap Up: Jim Arner and Ken Brown

Lunch: At SKF

STLE Toronto Section Workshop
November 27, 2019

SKF Canada Limited
40 Executive Court, Toronto, ON, M1S 4N4, Canada

Lunch and refreshments will be provided. Presentations can be downloaded. No payment is required until the November 27 check-in but must preregister. Payment can be made in advance by check or calling in credit card number. Payment at the door can be by cash, check or credit card. Credit cards accepted are Visa and MC.

Space is limited to the first 30 registrants.

Name: _____

Company: _____

Address: _____

E-mail: _____

Phone: _____

Will you stay for lunch?	☐ **Yes**	☐ **No**
Members of STLE, PEMAC and ASRAE (Also, SKF employees or their quests)	☐	**$89.00 before Nov 17**
	☐	**$119.00 after Nov 17**
Nonmembers	☐	**$120.00 before Nov 17**
	☐	**$140.00 after Nov 17**
Students and retirees	☐	**$25 before Nov 17**
	☐	**$45 after Nov 17**

Payment: ☐Invoice Before Workshop ☐Check ☐Credit Card (MC, Visa)

Registration fees includes attendance, coffee/tea/soft drinks and lunch.

Please register now by phone, e-mail or mail.

Attn: Ed Milanczak
1361 Clearview Drive
Oakville, Ontario, L6J 6X5
Phone: 416 702-3107
edmilanczak@gmail.com

The STLE Toronto Section uses events like this to help spread the word and also to raise funds. These funds are used to support the section activities and to provide donations and assistance to local universities and colleges. No money raised goes to salaries.

Program can be subject to changes for events outside our direct control.