



Reducing Tribological Losses and Failures – Part 2 Workshop and Panel Discussion

**STLE TORONTO SECTION
Wednesday, May 15, 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.

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."

Our speakers have been selected to provide you a better understanding of the challenges facing industry but more importantly, provide some solutions. These speakers are well established experts in their field with many years of experience and practical know how.

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.

**Location: OPG Pickering Nuclear Information Centre Auditorium
1675 Montgomery Park Road, Pickering, L1W 3X5**

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: Why do Machines Require Clean Oil?

Terry Pitcher

Chevron Canada

Abstract: To maximize productivity and component life, equipment manufacturers create parts to precision levels. Most manufacturers then set oil cleanliness requirements, using a component's sensitivity to contamination to determine how clean the oil used to lubricate it should be. As a rule of thumb, oil should have a cleanliness level that protects the tightest machine clearance on your equipment. Why is this important? Because according to leading OEMs, 82% of wear is particle induced. Many maintenance professionals assume that the typical new oil they're using in their equipment meets the performance and cleanliness requirements set by the equipment manufacturer. That's usually not true. The fact is, typical new oil could contain up to 32 times more contaminant particles than what the equipment manufacturer deems acceptable.

How is this possible? Typical new oil can be transferred up to multiple times before it reaches your equipment. Each time it's transferred, the oil picks up more contaminants. Filters on your equipment will remove some of the contaminants, but not before those contaminants have had the chance to cause damaging wear. Some companies choose to pre-filter their new oil on site to ensure it's clean enough. But this is an expensive and risky strategy.

Come learn about some common misconceptions of lubricant cleanliness, equipment filters, on-site filtration, and equipment productivity regarding lubricant cleanliness.

Bibliography: Terry has been in the industry for just over 20 years, the last 15 have been directly with Chevron and the first five were with Transit Lubricants, Been involved with promoting Chevron pretty much his entire career. His current role as Indirect Business Consultant for Chevron responsible for Marketer business relationships in Ontario, Manitoba, and Saskatchewan. He has attained STLE CLS and OMA 1 designations and is am a graduate of the Industrial Lubrication Certificate Program at Mohawk College. He is based in Guelph.

Talk 2: Polymer Technology in lubrication and approaches to reduce costs in formulations.

Gavin Duckworth

VP of National Accounts, Functional Products

Abstract: Identifying viscosity index improvers in today's modern formulations, combining polymer chemistries to reduce costs and improve performance, and also detecting sources of haze and solutions to solve hazing in automotive formulations. Also, present case studies of improving performance and reducing costs in everyday formulating with regards to different polymers chemistries.

Bibliography: Gavin Duckworth has been in the oil industry since 1986 and worked in the lubricant additive market for 20 years. Gavin has an Environmental Engineering background and is currently the Vice President of National Accounts for Functional Products. Functional Products is a specialty additive supplier which is proficiency in polymer chemistry in the lubricant market including the automotive and industrial segments, bio-based, food grade, and grease markets.

Talk 3: Oil Analysis for Equipment Reliability at OPG Nuclear

Andrew Sit, OPG
Pickering NGS

Abstract: As with correct lubricant selection and usage, oil analysis is an important maintenance activity for detect early signs of contamination and degradation, to improve equipment reliability, reduce downtime and save you money. This presentation describes the oil analysis program at OPG Pickering Nuclear.

Bibliography: Andrew Sit is a Components Engineer at OPG Pickering Nuclear and has been supporting the station Predictive Maintenance and Lubrication programs for the past 18 years. Prior to joining OPG, Andrew was a field service engineer with Westinghouse installing and servicing industrial gas turbines. Andrew holds a BAsC in Systems Design Engineering from the University of Waterloo. Andrew also holds CLS and OMA certifications from the STLE.

10:00 Break

Talk 4 Filtration and its Effectiveness - Critical Aspect for Protecting Equipment/Reliability Program

Wendy Walker
Pall Canada

Abstract: Effective filtration is a critical aspect of a reliability program , fluid cleanliness (particulate/water/varnish) can be controlled allowing components/systems to operate at peak efficiencies. Pall has been an industry leader in these areas. Maximize your equipment reliability and power output while reducing outage times and operational costs.

Bibliography: Key Account Manager – Pall Canada Limited– focused on nuclear since 1995. Wendy Walker is responsible for nuclear customers in Canada and supporting CANDU reactors world-wide. Wendy has over 25 years of experience working with Pall filtration products on process and lubrication/hydraulic applications and has worked with OPG, Bruce Power, Gentilly (prior to shutdown) and NBPower for lowest cost of ownership filtration solutions.

Talk 5: Realizing ongoing benefits through the deployment of Ultrasound technology

Robert Dent
SDT

Abstract: Ultrasound is an extremely versatile condition monitoring technology. Join us to learn how to apply it to Lubrication, Leak detection and steam system inspection. Machines depend on proper lubrication to reduce friction forces which otherwise shorten asset life.

Ultrasound provides you with the data to optimize your lubrication program and shift from calendar based to on-condition based scheduling. Applying the right amount of grease, at the right location and at the right time interval. Compressed air is one of the top three most expensive utilities used in manufacturing. Air leaks are expensive, and often ignored. The high frequency component of a leak is directional making it fast and easy to locate its source with ultrasound. A compressed air survey once per quarter will benefit facilities managers looking to improve efficiency and reduce costs.

Ultrasound surveys of an entire steam system will reveal system leaks, blockages, stuck valves, and failed traps. Increasing steam efficiency translates to huge dollar savings and increased product quality.

Bibliography: National Sales & Service Manager, SDT Ultrasound Solutions

Robert Dent is responsible for managing SDT's Canadian operations and leads cross functional teams dedicated to supporting the ongoing development of clients' maintenance and reliability programs. He is a Certified Maintenance & Reliability Professional (CMRP) through the Society of Maintenance & Reliability Professionals (SMRP) and a Certified Reliability Leader (CRL) through the Association of Asset Management Professionals (AMP). Robert has over 20 years experience in helping organizations enhance their reliability programs by successfully implementing Ultrasound and Vibration technology for their applications.

Talk 6: Predictive Maintenance of Motors using Current Analysis, Vibration/Temperature, and Insulation Resistance Monitoring Devices

Christopher Henn

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.

Bibliography; Chris Henn is a Professional Engineer who graduated with a Bachelor of Mechanical Engineering from Ryerson University. Chris is working as a Territory Account Manager for Omron Automation Canada. He started his career with Cimco Refrigeration designing ammonia power plants for applications varying from ice rinks to industrial cold storage. After his tenure with Cimco Refrigeration, Chris worked for Honeywell managing an HVAC division responsible for the maintenance and installation of various HVAC equipment across the GTA.

12:00 Wrap Up: Jim Arner

Lunch: In Auditorium

Cost: Lunch and refreshments will be provided. Presentations can be downloaded. No payment is required until the May 15 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.

Members of STLE, PEMAC and ASRAE (Also, OPG employees)	\$89.00 before May 10 \$119.00 after May 10
Nonmembers	\$120.00 before May 10 \$140.00 after May 10
Students and retirees	\$25 before May 10 \$45 after May 10

A lunch is optional and included in the price.

Presentations will be available from the Toronto Section website for downloading for attendees and in the fall for everyone.

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.

***Our thanks to the Workshop Committee;
Ken Brown (Eco Fluid Center), Jim Arner (Pirr Tribology Solutions)
Andrew Sit (OPG Pickering) and Ed Milanczak (ret' d)***

STLE Toronto Section Workshop

May 15, 2019

OPG Pickering Nuclear Information Centre Auditorium
1675 Montgomery Park Road, Pickering, L1W 3X5

Name: _____

Company: _____

Address: _____

E-mail: _____

Phone: _____

Will you stay for lunch? Yes No

Members of STLE, PEMAC and ASRAE
(Also, Kinectrics and OPG employees) \$89.00 before May 10
 \$119.00 after May 10

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 \$140.00 after May 10

Students and retirees \$25 before May 10
 \$45 after May 10

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

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

Please register now. Then complete this form and phone, e-mail, mail or bring with you.

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