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If you’re looking for insight and best-practice solutions for immediate bottom-line returns, look no further than the 16th annual RELIABLE PLANT Conference and Exhibition.

Need answers, motivation, idea-sharing, networking? Find Your PATH to the Cleveland Convention Center, April 21-23, 2015.

Reliable Plant serves as the leading, “must attend” annual conference and exhibition for industrial machinery lubrication, oil analysis and reliability professionals. Join more than 1,000 of your colleagues from around the globe and take advantage of specialized pre- and post-conference workshops, extensive learning sessions and case studies covering today’s trends, technologies and issues. Plus, you can explore the expansive exhibit hall of products and services to gain useful insight and practical advice in multiple areas of lubrication, oil analysis and reliability.

Set the bar higher and be the best in your field.

If you want to be among the elite experts in lubrication, you’ve certainly come to the right place. You will not find another event that provides the depth and detail of information coupled with faculty expertise. Nor will you find another event where most attendees are among the elite in the application of lubricant know-how. By attending Reliable Plant, you’ll fine-tune your knowledge in order to precisely match the proper lubricant to the equipment and application. You’ll leave Reliable Plant with the skills to make you a more valued expert on your plant floor or in your laboratory.

No other forum gathers industry professionals together and provides an ideal platform to network with decision-makers and peers to gauge what’s hot and what’s not. Your colleagues and competitors will be there – will you?

WHAT’S NEW FOR 2015

- Pre- and Post-Conference Workshops
- Nearly 80 Learning Sessions and Case Studies
- Certificate Track Program – Choose from Two Tracks!
- Dozens of New Exhibitors – More than 100 in all
- Networking Events
- Offsite Lab Tour
- Harley-Davidson™ Giveaway!

Gain Insight in Multiple Areas of Industrial Lubrication, Oil Analysis and Reliability

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Find Your SOLUTIONS

Register today at Conference.ReliablePlant.com
WHY ATTEND?
Reliable Plant Conference covers every facet of industrial lubrication, oil analysis and reliability in one three-day event. Realize immediate bottom-line results by obtaining real-world information and processes that you can put into practice as soon as you get home.

1. Improve your plant’s reliability – learn about real-world deployment processes to sustain your plant’s reliability program
2. Develop powerful connections – exchange ideas with peers, share best practices and expand professional relationships
3. Stay up-to-date on new technologies – make your job easier
4. Become more valuable to your company – learn processes to reduce downtime and control costs
5. Discover solutions that you can implement right away – address specific issues
6. Save money by deducting conference expenses on your taxes – yes, this is a valid reason to attend!
7. Find new customers, suppliers and resources – generate leads and develop partnerships
8. Attend specialized half-day workshops – offered before AND after the conference
9. Share what you learn with co-workers – technical papers and presentations provided to you on CD
10. Invest in your company – capture information and apply what you’ve learned on the job

89% of attendees at last year’s show said they learned something new among the products and services in the exhibit hall.

91% of attendees said the learning sessions’ content and topics were important to their company.

98% indicated that RELIABLE PLANT met or exceeded their overall expectations.

Over 100 gallons of coffee are consumed each year at Reliable Plant.

WHO ATTENDS
As a professional in machinery lubrication, oil analysis and reliability, you value best practices to ensure bottom-line results. Whether you’re entry-level or a seasoned member of your plant’s management team, you’ll benefit from the comprehensive schedule of sessions, case studies and peer interactions. Make plans now to attend the 16th annual RELIABLE PLANT Conference and Exhibition to network with and gather information from the following attendees:

Asset Care Planners
CBM Coordinators and Specialists
Chief Engineers
Design Engineers
Engineers & Engineering Managers
Facility Managers
Hydraulic Specialists
Industrial Maintenance Supervisors
Industrial Mechanics
Infrared/Vibration Technicians
Lab Managers
Lube Analysts
Lubrication Technicians & Specialists
Machinery Engineers
Maintenance Engineers & Managers
Maintenance Planners
Managers of Maintenance and Reliability
Mechanical Engineers
Operations Managers
PdM Analysts and Specialists
Planners and Schedulers
Plant Managers & Engineers
Project Leaders
Quality Managers
Reliability Coordinators
Reliability Engineers
Reliability Team Leaders
Reliability Technicians
Safety Managers and Directors
Senior Reliability Engineers
TPM Coordinators and Facilitators
… and more
WIN A HARLEY!

Registered attendees can participate in the show prize giveaway for a chance to win a sleek 2015 Harley™ from Cleveland Rock and Roll City Harley-Davidson.

HOW DO I WIN?

Check out the latest products and services from sponsoring companies in the exhibit hall. Just stop by each sponsoring company booth during the show, get your entry card stamped and turn your completed card in by 11:00 a.m. on Thursday, April 23, 2015.

WHEN & WHERE?

A random drawing will take place at approximately 11:15 a.m. on Thursday, April 23, 2015, at the show prize giveaway booth. Participation in the drawing is open to full conference delegates and qualified guest entrants. Your odds of winning are great, but you must be present to win – yet one more great reason to attend Reliable Plant 2015 in Cleveland.

2015 Giveaway Sponsors


*Show prize giveaway model may be different from what is depicted in photo. Motorcycle will be purchased in advance and provided by a dealer of Noria’s choice. Winning entrant is responsible for title and all applicable taxes (whether local, state, federal or international), surcharges, tariffs, duties, transport shipping and handling charges, and all other charges associated with taking possession of the prize onsite in Cleveland, Ohio. See terms and conditions at Conference.ReliablePlant.com.
Clark Kellogg (“Special K”) has done television commentating for Cleveland State University, the Big East Television Network, the Indiana Pacers and ESPN. In December of 2008, he became the lead analyst for CBS’ coverage of college basketball after serving as a game and studio analyst for over a decade. He was the lead studio analyst from 1997-2008, and has been with CBS since 1993.

He is a former first-round draft pick of the Indiana Pacers in 1982, and was the eighth selection overall. He played five seasons with the team. Chronic knee problems forced him to retire with career averages of 18.9 points and 9.6 rebounds per game, as well as a unanimous selection to the 1983 NBA All-Rookie Team.

Clark is a native of Cleveland, Ohio, and attended Ohio State University where he was the Big Ten’s MVP in 1982. He averaged a double-double in his three years at Ohio State. He received his degree in 1996. Clark volunteers his time and resources to various organizations including the Fellowship of Christian Athletes, Athletes In Action and the United Way. You will hear more about Clark in the months to come, as he is the chief analyst/commentator for March Madness!
CONFERENCE WORKSHOPS

All Workshops - $225 with Full-Conference Registration  |  Workshop Only - $295

Optimize your conference experience by attending specialized pre- and post-conference workshops. Professional development is critical in any line of work. Results show that participation in workshops ensures an enhanced conference experience. Jumpstart your learning and quantify your investment by committing to one or more of the following options:

**How to Detect and Control Lubrication Failure Modes**
Jeremy Wright – Noria Corporation  | Monday, April 20, 8:00 a.m. – 11:30 a.m.

Targeting root causes of failure with laser-like focus is a sure-fire way to maximize the impact of a lubrication program. Successful companies are relentless in their efforts to control and eliminate lubrication failure modes. This workshop will discuss how to identify the most costly lubrication failure modes and then systematically suppress or remove them. Attendees will learn the three most destructive root causes and how to control them, proactive ways to stay ahead of lubrication-related failures, and how to align oil analysis with failure modes to maximize benefits. Don't miss this opportunity to find out how you can begin eliminating failure root causes right away and make a dramatic impact on downtime.

**Best Practices for Oil Sampling**
Bennett Fitch – Noria Corporation  | Monday, April 20, 8:00 a.m. – 11:30 a.m.

Proper sampling procedures are the foundation of an effective oil analysis program. Without good sampling procedures, time and money are wasted, and incorrect conclusions based upon faulty data will be reached. This workshop will detail the best practices for oil sampling to assist you in your quest to implement a world-class oil analysis program. Attendees will learn the various factors that influence oil sampling frequency as well as how to take a quality oil sample from the right location and under the proper conditions to guarantee that the information reflects the current condition of the machinery and the lubricant. Discover how to collect oil samples accurately and precisely so they can be analyzed and used to make informed maintenance decisions that improve equipment reliability.

**Lubrication Excellence Manager’s Summit**
Jim Fitch – Noria Corporation  | Monday, April 20, 1:00 p.m. – 4:30 p.m.

There’s a revolution occurring. Managers who once desired machine reliability now demand it... it's a matter of corporate survival in the global economy, and effective machinery lubrication is an essential enabler to success. This movement has let companies in all industries to take control of reliability by reinventing their lubrication programs. Those who are responding to the challenge are seeing amazing results... on the bottom line, where it counts most. The change goes beyond simply using better lubricants. The leaders are employing technologies, empowering employees and building ultramodern new practices – creating new and energized reliability culture. The workshop will address the following topics:

- Performance metrics for PM compliance, contamination control and lubricant quality targets
- How to evaluate needed lubrication and oil analysis skills
- How to benchmark your program to world-class and construct a master plan for transformation
- How to build a first rate lubrication team with the specific collection of skills needed
- What kind of return-on-investment you can expect from your program
- The importance of standardization and procedure-based lubrication
- The honest truth about synthetics and premium lubricants
- Lubrication low-hanging fruit and quick kills
- The power of the daily one-minute inspection when done correctly
Forget everything you’ve heard about electric motor lubrication. This presentation will explain how to replace old-time lubrication procedures with best-practice procedures to reduce motor failures, downtime, rebuilds and replacement costs. Attendees will leave with a clear understanding of why proper motor bearing lubrication is so critical and how the size, speed and service conditions of the motor influence grease selection, relubrication intervals and relubrication amounts. Key questions for an effective electric motor lubrication program will be answered, including should single-point or centralized grease lubrication systems be used, should motor manufacturers and rebuilders pre-pack supply pipes with grease, should a motor bearing grease have an extreme-pressure additive system, should bearing grease supply pipes be inspected and cleaned prior to introducing new grease, and much more.

The first step toward a world-class lubrication program begins with the process of managing incoming lubricants. Unfortunately, many plants do not perform sampling or testing of new oil deliveries, which is critical to verify lubricant cleanliness, to ensure that the oil received is the oil ordered, and to establish a baseline for subsequent testing and monitoring of the oil condition. This workshop will explain why new lubricants should be tested upon receipt and placed in quarantine until they are verified to be the correct lubricants, as well as how lubricants should be labeled and placed into storage once acceptable results are obtained from the laboratory. Attendees will learn the proper procedures for receiving and accepting new lubricant deliveries, including the required testing, decontamination, stock rotation and storage methods.

How effective is your oil analysis program? Many programs are limited in their potential because of a lack of vision. Too often the maintenance or reliability person responsible for the oil analysis program simply accepts a program that has been proposed by the lubricant vendor or a third-party lab, assuming that it will meet the needs of the plant. This workshop will provide an overview of the correct practices for designing, implementing and maintaining an effective oil analysis program. Attendees will learn how to customize a program to meet specific machine conditions, equipment criticality and reliability objectives.
LEARNING SESSIONS

Here’s a quick look at some of our learning sessions. More sessions are being added weekly. Stay up-to-date on the latest sessions by visiting Conference.ReliablePlant.com

NEW FOR 2015

Pick and choose from nearly 80 sessions you would like to attend or follow one of the guided certificate tracks.

Certificate Tracks!

Choose one of the tracks and attend at least one session on each of the topics. Sessions will be identified with track icons, and attendance will be tracked.

Lubrication Professional Track

- Contamination Control
- Lubricant Storage and Handling
- Oil Analysis
- Lubrication Program Management
- Lubricant Selection

Reliability Professional Track

- Planning and Scheduling
- Condition Monitoring
- Maintenance Management
- Root Cause Analysis
- Reliability Engineering

Lubrication Professional Track

Oil Analysis

Tools for In-service Fluid Analysis Data Interpretation

Dave Wooton, Wooton-Consulting, Dave Hilligoss, PerkinElmer

A variety of tools are available for in-service fluid analysis data interpretation. This presentation will explain how to utilize these tools in transferring data from the laboratory to the customer and why data interpretation must move beyond a reading from a single data point to studying the effects of many data points. Attendees will see examples of how data acquisition has led to advanced data analysis and learn the best methods for collating, studying, cross-correlating, statistically processing and visualizing the relationships between results.

How to Obtain a Representative Oil Sample

Bennett Fitch, Noria Corporation

Are your oil sampling techniques the reason for your struggling oil analysis program? Oil analysis is not cheap, and if your sampling procedures are not correct, they can devalue the results before the samples are even sent to the laboratory. This presentation will review the various sampling procedures that should be followed so you can expect quality results. Attendees will learn the factors that influence oil sampling frequency as well as how to take a quality oil sample from the right location and under the proper conditions to guarantee that the information reflects the current condition of the machinery and the lubricant.

Case Study

Condition-based Oil Changes: An Easy Way to Save Big Money

Brian Thorp, Seminole Electric Coop

If you are not performing condition-based oil changes, you could be wasting thousands of dollars in unnecessary labor and possibly exposing your equipment to needless risks. This session will explain how to get the most value from your oil analysis reports by utilizing condition-based oil changes. Discover the important information that is available in an oil analysis report, which additional tests may be needed to extend oil drain intervals and how to ensure that oil filters are changed only when required.

Driving Reliability with 1-Minute Daily Inspections

Jeremy Wright, Noria Corporation

The most important maintenance function doesn’t require anything from your toolbox. Nor does it involve an instrument or an oil sample. It may not even be on your PM schedule or lube route. What it does require are skillful inspections that are rapid, comprehensive and frequent. This session will explain how to pick up both your inspection tempo and quality by deploying sensory-based condition monitoring techniques. Attendees will discover how to perform daily one-minute inspections with a sharp and skillful eye to detect more problems than oil analysis, vibration analysis and thermography combined.

Thermal Analysis of Turbine Lubricants

Louis Tisinger, PerkinElmer

A lubricant’s thermal and oxidative properties are among its most important characteristics. The thermal behavior of a lubricant defines how the fluid will behave in equipment hot zones. Unfortunately, monitoring these properties can be quite time-consuming. This session will describe how thermal analysis can be used to evaluate the oxidative stability of turbine lubricants faster than traditional ASTM test methods. Attendees will see comparisons of the results from differential scanning calorimetry to learn how this technique can help save time and money.

Developing an Effective Oil Analysis Program

Bennett Fitch, Noria Corporation

An oil analysis program can be extremely profitable, but there are many aspects that must be managed carefully for any profit to be realized. It can be compared to a chain in which the integrity of each link is critical to the integrity of the entire chain. This session will summarize each link in a successful oil analysis program so you can avoid the consequences of a weak link. Attendees will discover the importance of obtaining a representative oil sample, ensuring reliable testing and determining the optimum course of action.

New Methods for Analyzing Engine Oil Contaminants

Timothy Ruppel, PerkinElmer

New oil analysis technologies are leading to significant improvements over traditional techniques and allowing increased fuel and glycol analysis in less...
time. This session will examine two new ASTM methods (D7593-13 and D7922-14) and the high throughput they allow for analyzing fuel and antifreeze contamination in engine oil. Attendees will see how these methods work with multiple fuel types, including gasoline, diesel and biodiesel, as well as solutions to common problems in commercially available glycol standards.

The Exacerbation of Moisture in Lubricant Oils
Christopher Altamirano, Arizona Instrument

Moisture contamination of in-service lube oils is one of the most destructive forms of engine corrosion. Therefore, it is imperative to perform routine moisture testing of these in-service oils. Fourier transform infrared (FTIR) spectroscopy and Karl Fischer titration are the traditional methods for water analysis, but the problem with these methods is their sensitivity and hassle of sampling. This presentation will explain how a relative humidity sensor moisture analyzer is capable of the same precision as Karl Fischer titration but without the use of hazardous chemicals or breakable glassware. Attendees will discover how a relative humidity sensor instrument does not require a strong background in science to operate and is easy to optimize for each sample.

How to Interpret Oil Analysis Reports
Matt McMahon, TestOil

An oil analysis report is a vital tool for a smooth-running operation. Probing deeper than the report summaries and knowing how to analyze a report can help prevent equipment breakdowns and unnecessary teardowns. This presentation will explain the process of reviewing and analyzing oil analysis reports, including how to decipher various alarms and react to marginal and critical reports. Attendees will see results from some of the most common tests run on industrial equipment and learn how to read the test reports.

LUBRICANT SELECTION

Varnish-free Alternatives for Gas Turbines
Kevin Kovanda, American Chemical Technologies

Varnish formation in gas turbines is a serious problem that can affect their efficiency and reliability. In fact, entire industries have sprung up to predict and remediate varnish. This presentation will explain how polyglycols offer gas turbine operators a varnish-free alternative to the current mineral oils in use and how they can eliminate the need for varnish prediction monitoring and filtration techniques. Real-world case studies will show how polyglycols have been used in large-frame gas turbines over the past seven years without any varnish-related issues.

Understanding the Differences Between Synthetics
Wes Cash, Noria Corporation

PAO, POE, PAG… what does it all mean? “Synthetics” is an all-encompassing term that is used to describe a lubricant’s base fluid. However, synthetics can be dramatically different from each other and at times are incompatible. This session will explain why the differences between these base fluids must be understood in order to balance the needs of the equipment as well as the properties of the lubricant. Learn which synthetic bases work well in certain environments and the drawbacks for each type.

How to Select and Use Food-Grade Lubricants
Doug Sackett and Kurt House, Total Specialties USA

Many plants are now required to meet food-grade standards, but they struggle to comply with all the regulations. This session will provide a better understanding of food-grade lubricants along with the different certifications and applications. Learn the proper way to select and use food-grade lubricants, the various food-grade designations, how and where to apply these

CONFERENCE SCHEDULE

Monday, April 20
7:00 a.m. – 5:00 p.m. .................. Onsite Registration
8:00 a.m. – 4:30 p.m. .................. Pre-Conference Workshops
5:30 p.m. – 8:30 p.m. .................. ICML Certification Testing

Tuesday, April 21
7:00 a.m. – 5:00 p.m. .................. Onsite Registration
7:30 a.m. – 8:00 a.m. .................. Continental Breakfast
8:00 a.m. – 9:20 a.m. .................. Opening Keynote
9:30 a.m. – 10:50 a.m. ................. Exhibit Hall Grand Opening
11:00 a.m. – 11:50 a.m. ................. Conference Sessions
12:00 p.m. – 1:20 p.m. ................. Lunch in Exhibit Hall
1:30 p.m. – 5:20 p.m. ................. Conference Sessions
3:20 p.m. – 4:20 p.m. .................. Refreshment Break
5:30 p.m. – 7:30 p.m. .................. Meet & Greet Reception
9:30 a.m. – 5:30 p.m. ................. Exhibition Hours

Wednesday, April 22
7:30 a.m. – 5:00 p.m. .................. Onsite Registration
7:30 a.m. – 8:00 a.m. .................. Continental Breakfast
8:00 a.m. – 9:50 a.m. .................. Conference Sessions
10:00 a.m. – 10:50 a.m. .......... Refreshment Break
11:00 a.m. – 11:50 a.m. .......... Conference Sessions
12:00 p.m. – 1:20 p.m. .......... Lunch in Exhibit Hall
1:30 p.m. – 5:20 p.m. .......... Conference Sessions
3:20 p.m. – 4:20 p.m. .......... Refreshment Break
5:30 p.m. – 6:30 p.m. .......... Networking Reception
6:00 p.m. – 9:00 p.m. .......... ICML and SMRP Certification Testing
9:30 a.m. – 6:30 p.m. ................. Exhibition Hours

Thursday, April 23
7:30 a.m. – 11:00 a.m. ................. Onsite Registration
7:30 a.m. – 8:00 a.m. ................. Continental Breakfast
8:00 a.m. – 11:10 a.m. ................. Conference Sessions
11:15 a.m. – 12:00 p.m. .......... Giveaways in Exhibit Hall
1:00 p.m. – 4:30 p.m. .......... Post-Conference Workshops
8:50 a.m. – 12:00 p.m. ................. Exhibition Hours
types of lubricants, how to monitor machine quality, and how to make the change to food-grade lubricants.

Get the Lowdown on Your Lubricants: How to Read a Product Data Sheet
Michael Brown, Noria Corporation

Important information is locked inside your lubricant’s product data sheet, including key lubrication performance properties. These are not esoteric properties that are of limited value or interest to those in charge of machine reliability. Instead, they represent the core foundation of a lubricant’s formulation and purpose. In other words, they relate to the essence of what you should expect and need from a lubricant. This presentation will explain how to read product data sheets and gain valuable information about your lubricants.

Why All Greases are not the Same
Steve Mazzola, Kluber Lubrication

Greases based on perfluoropolyether (PFPE) oils are very specialized lubricants that are made of higher level chemistries. These chemistry and material changes are important to consider in order to optimize equipment performance. This session will detail how PFPE-based greases can offer clear advantages in certain applications where other greases do not perform adequately and in some cases fail catastrophically. Attendees will learn the basic chemical composition of PFPE greases, their features and benefits, and where and how they should be used.

Contamination Control

How to Get the Most from Your Filter Cart
Loren Green, Noria Corporation

Filter carts are an ideal way to periodically decontaminate lubricated systems. When used properly, they can be vital to machine reliability. They are also capable of doing so much more than simply filtering the oil in storage containers and equipment. This session will describe some of the best ways to use a filter cart, such as to flush hoses, rebuild equipment and reservoirs, as well as what you should consider before adding a filter cart to your contamination control program.

Contamination: The Uninvited Guest
Robert Crowder, Pentair

In order to keep lubricants and the equipment they protect functioning well, you must control contamination. Contamination is a catch-all for anything in the oil that isn’t supposed to be there. This presentation will discuss alternative solutions for contamination control that range in methodology, cost and effectiveness. Attendees will learn the various forms of contamination, the problems contamination can cause, and the available technologies for removing contamination such as absorptive filtration elements, settling, coalescing, vacuum dehydration and membrane purification.

Combating Contamination with Machine Modifications
Rick James, Noria Corporation

If you truly want a world-class lubrication program, you will need to make equipment modifications. These generally are non-invasive alterations that not only can help you control contamination but also improve machine reliability and reduce your operating costs. This session will provide several examples of common machine modifications, including hands-on demonstrations, as well as some of the accessories that are currently available for making the necessary modifications.

How to Sustain Filtration Performance for Increased Reliability
Eric Krause, Pall

The performance of hydraulic and lube filtration products can degrade over the life of a filter element. This degradation has been measured in the field and can be demonstrated in the laboratory through standard cyclic stabilization testing. This session will discuss how advanced filtration media that is designed to withstand system stresses can enhance equipment protection over a filter’s service life and help you achieve improved filtration for increased reliability. Attendees will gain a better understanding of filter performance, the effects of hydraulic stresses on filtration and changing contamination levels throughout a filter’s lifespan.

Contamination Exclusion vs. Removal: Understanding the Difference
Michael Brown, Noria Corporation

It has been estimated that the cost of excluding a gram of dirt is only about 10 percent of what it will cost once that dirt enters the oil. In other words, the cost to filter a gram of dirt from the oil is much higher than the cost of filtering a gram of dirt from the air intake/breather. This presentation will explain why good maintenance means intelligence maintenance and working smart. Attendees will learn how to stop treating the symptoms and start treating the causes. When you filter dirt from oil, you are treating the symptom. When you exclude its entry, you treat the cause.

Filtration and Fluid Additives: Myths and Realities
Christian Bauer, Pall Corp.

There are many myths about filtration in industry, including that “fine filtration” strips additives from lubricants, hydraulic fluids and fuels. This session will dispel the most common filtration myths to help maintenance and reliability engineers improve productivity by determining what is causing their filter elements to have a short service life. Discover how fluid chemistry can be affected by contamination, how to perform contamination analysis and what actions to take when your filter elements experience a short service life.

Improving Filtration with Magnetic Technology
Roger Simonson, One Eye Industries

Premature wear of machine surfaces is a common problem caused by ferrous and non-ferrous contaminants. The most damaging of these contaminants are less than 10 microns in size and, in most cases, cannot be captured by traditional filtration methods. This session will describe the benefits of using industrial magnetic filtration solutions to filter oil to sub-micron levels. Case studies from different industries will be presented to demonstrate the increases in reliability, productivity and profitability these solutions can provide. Attendees will discover how to extend the life of integral system components, decrease downtime and increase efficiencies while remaining environmentally friendly.
Using KPIs to Optimize Your Lubrication Programs
Wes Cash, Noria Corporation

Lubrication programs are most effective when key performance indicators (KPIs) are identified, defined, tracked and then acted upon. These metrics act like signposts along the way, keeping the program strategy on track. This presentation will describe the most critical lubrication program metrics to help meet reliability and cost-saving goals. Attendees will learn how to effectively manage a lubrication program through metrics and goals, and will leave this session with dozens of metrics and KPIs that they can put to use right away.

Case Study
How to Increase Employee Engagement
Diane Closser, Closser Lubrication Services, David Kesterson, DuPont Washington Works

Engaged employees give more effort, exceed expectations, assume ownership, suggest more ideas for improvement, promote teamwork and speak well of the organization. Unfortunately, many maintenance departments have non-engaged employees, which often leads to poor lubrication practices. This session will follow the journey of DuPont’s Washington Works plant and how the company’s engagement process increased task completion rates and limited employee turnover. Discover how to transform your plant into an engaged organization and increase profits, job satisfaction and employee retention rates.

Case Study
Service Duty of a Journal Bearing in a Harsh Environment: What’s Par for the Course?
David Tiffany, Pioneer Engineering

In the past, three years of service life for journal bearings would be considered acceptable, particularly in harsh applications. However, this case-study presentation will detail how switching to a grease with a heavier base oil viscosity, a thickener capable of withstanding severe water contamination and a softer consistency has yielded more than 20 years of continuing service. By applying this same approach, you can achieve continuous improvement in your lubrication program, even if you think your practices are “good enough.” Attendees will learn why all greases are not equal and gain a better understanding of grease properties, characteristics and proper application.

Barriers to Lubrication Excellence and How to Overcome Them
Alejandro Meza, Noria Corporation

Achieving lubrication excellence can be a slow and arduous journey, especially if all the factors involved are not carefully planned and coordinated. This presentation will reveal the essential elements that can make the process faster and more straightforward, including the necessary technical, administrative, cultural and communication components. Attendees will leave this session with enough information to conduct a quick self-assessment of their lubrication program’s strengths and improvement opportunities for a successful and seamless implementation.

Case Study
Case Study: Overcoming Outdated Lube Practices
Stan Hull, USG

Antiquated lubrication practices still permeate modern manufacturing, resulting in considerable costs and equipment problems. By making simple changes to your lube program, you can achieve greater asset reliability and extend machinery life. With examples from USG’s dedicated lubrication program, this presentation will describe the importance of timely and proper lube practices, including how to implement them and how they can lead to tangible savings. Attendees will also learn how to obtain production and management buy-in so they can start their journey toward world-class lubrication.

Case Study
How to Avoid Lubrication-related Failures
Mike Gilliland, Whitlock Packaging

Overgreasing and using a grease that is not compatible with the bearing manufacturer’s specifications are common problems across industry. You can help resolve these issues by installing new bearings, lubricating with compatible grease and only greasing when ultrasound and temperature indicate the need. This presentation will examine the root causes of lubrication-related failures and how they can be avoided to prevent costly downtime. Find out what you should know about grease contamination, the damages that grease incompatibility and overgreasing can cause, how to select the correct grease for your bearings and how to avoid overgreasing them.

LUBRICANT STORAGE AND HANDLING
Get it Right from the Start: Tracking the Life Cycle of a Lubricant
Jeremy Wright, Noria Corporation

A sustainable lubrication program begins with a strong foundation in lubricant selection, storage, handling, application, contamination control, analysis and disposal. Following best practices in each of these areas results in tremendous benefits in machinery uptime, plant cleanliness, reliability, employee happiness and the bottom line. This presentation will describe Noria’s ASCEND framework, which provides an effective tool for evaluating the current state of your lubrication process and life cycle against world-class standards. Attendees will
learn how this method can prioritize implementation steps into an action plan so you can first address the elements with the most return on your time, money and energy.

**Designing Lube Filtration and Storage**  
*Terry Harris, Reliable Process Solutions*

Designing a proper lube filtration and storage area requires an understanding of how to keep all lubricants and equipment safe, accessible and free of contamination. You must also consider lubricant consolidation, ambient controls, environmental needs and safety elements. This presentation will cover 20 steps for designing your own lube storage area, including how to store and handle lube application equipment and why lubricants need to be stored in controlled environments. After attending this session, you will have the information and skills necessary to specify, design and implement an effective and safe lube storage area.

**Best Practices for Waste Oil Management**  
*Loren Green, Noria Corporation*

Proper handling techniques do not end when oil has been put into service. Once the life of the oil has been exceeded, you must ensure the lubricant is captured and disposed of both safely and in an environmentally friendly way. This presentation will describe the best practices for waste oil management, including storage and disposal requirements and the associated record-keeping. Attendees will also learn what waste oil and used filters can tell you about the health of your equipment, as well as simple analysis tools to help capture this important information.

**How to Design a Lube Room**  
*Rick James, Noria Corporation*

The lube room is at the core of a plant’s reliability. It is where the reliability of a rotating component can be strengthened, or the life of a component reduced. Unfortunately, many companies don’t realize or conveniently overlook the importance of a well-designed and well-maintained lubrication storage room. While they may invest in procedure-based lubrication, oil analysis and contamination control, they fail to make the appropriate investments in the one area that can disable all the rest. This presentation will detail the right way to design a lube room, including opportunities for improvement that attendees can implement immediately.

**RELIABILITY PROFESSIONAL TRACK**

**CONDITION MONITORING**

**Predictive Maintenance Program Implementation and Improvement: Roadmap and Pitfalls to Avoid**  
*Aron Brendes, Advanced Technology Solutions*

A comprehensive predictive maintenance (PdM) program is crucial to increasing reliability, but establishing one within your plant isn’t always easy. Using real-life case studies, this session will examine the pros and cons of in-house and contracted PdM services, the roadblocks to implementation and how to score a predictive maintenance program against your business goals. Most new PdM practitioners struggle in getting their programs off the ground. This presentation will answer the important questions, identify key performance indicators and provide valuable information that you can take back to your facility.

**Case Study**

**Vibration Monitoring and Meaningful Alarming**  
*Dennis Shreve, GE*

Vibration is a leading indicator of machinery condition. Vibration monitoring programs use this relationship to determine when a machine’s condition is “normal” or “not normal.” Each point of vibration data requires an accurate alarm level to measure and pinpoint root cause problems. This presentation will describe the various types of alarms and thresholds that are typically used with vibration readings. Practical examples and case histories will illustrate how alarm settings can be applied to detect potential machinery problems early and avert major equipment failures.

**Using Daily Inspections and Online Contamination Monitoring to Create Savings**  
*Steffen D. Nyman, C.C. Jensen*

Contamination results in a large number of oil system failures. Huge savings await companies that are willing to invest in a few minutes of daily inspections and real-time oil contamination monitoring. This presentation will explain how daily oil inspections and online contamination monitoring can provide fast and reliable data that will increase reliability and system uptime. Examples will be given from a variety of industries where daily inspections and contamination monitoring have prevented machine breakdowns. This information will help users reduce operating and maintenance costs associated with downtime, component wear and oil replacement. Attendees will learn the best practices for daily oil inspections, how online particle counting results compare to traditional laboratory methods, and how daily inspections and online oil monitoring can be performed on gears, hydraulics, turbines, etc.
Case Study: Identifying Structural Resonance in a Centrifugal Water Pump
Douglas Moon, Praxair

As machinery becomes more lightweight and structurally optimized, resonance is developing into a more common problem in the field of vibration analysis. This case-study presentation will detail how structural resonance was identified in a centrifugal water pump and how you can resolve a resonance condition. Attendees will learn design mitigations for structural resonance, how to determine and diagnose the cause, and why you should conduct post-repair monitoring to confirm the issue has been corrected.

Bridging the Gaps in Your Electric Motor Reliability Program
Noah Bethel, PdMA Corporation

Despite the best laid plans, many reliability programs fail to meet expectations. This session will discuss common gaps in the implementation and operation of an electric motor reliability program, including end-of-life troubleshooting strategies and mistakes. Attendees will discover how to apply electrical fault-zone analysis principles to determine root causes, the importance of trending electric motor test data, how to identify and overcome the data analysis/data collection imbalance, and detailed analysis techniques in quality control to extend motor life expectancy.

Avoid These Common Mistakes When Lubricating Bearings
Paul Klimuc, SDT International

Greasing motor bearings remains a hot topic across industry as more and more reliability professionals depend on ultrasound as a sixth sense for bearing lubrication needs. For those who have not yet deployed ultrasound technology, this presentation will give compelling arguments to do so and offer advice on how to get started. Attendees will also learn the merits of lubricating bearings based on their condition rather than time intervals between PMs, as well as techniques for applying ultrasound to condition monitoring and relubrication tasks.

Vibration Analysis Case Studies from the Mining and Steel Industries
Ron Kittle, SPM Instrument

Vibration analysis can be difficult on machines that operate at low revolutions per minute (rpm) and have high levels of application or process noise, such as oscillation. These issues can be overcome by trending bearing fault symptoms and applying filters to isolate unwanted vibration signals. This session will examine new measurement techniques, technologies and practices for condition monitoring of applications previously thought too difficult or impossible. Attendees will learn how to set up vibration measurements on oscillating equipment, how to identify bearing symptoms in vibration spectra, and how to deal with low rpm and data acquisition times.

Predicting Equipment Failures with Condition-based Maintenance
Jorge Alarcon, IK4-Tekniker

Can a machine failure be predicted? Using data provided by oil analysis, vibration, ultrasound and other types of sensors, it is possible. Prognostics is an engineering discipline focused on predicting when a system or component will no longer perform its intended function with certainty. This presentation will explain the benefits and potential of this unique tool as well as why data analysis and the integration of different technologies are the future of condition-based maintenance. Attendees will learn the essential elements of data analysis, data interpretation and data prognostics so they can better understand and predict equipment failures at their plant.

Reliability of Electrical Systems: From Testing to Monitoring
Alan Ross, SD Myers

Although the probability of a transformer failure remains less than 3 percent, the consequences of a failure are increasing dramatically. This session will use findings from an 18-month industry-wide study to show how online fault gas monitors not only can help detect faults but also anticipate potential failures, thereby reducing the high consequential cost of these failures. Attendees will discover how to reduce the risk of unplanned power outages and the relationship between testing and monitoring.

Cleanliness Monitoring of Hydraulic Systems
Geoff Grant, MP Filtri

Wear caused by contamination is the single most important factor governing the reliability of hydraulic and lube systems. Maintaining a high level of fluid cleanliness ensures high levels of reliability and long component life, which results in substantially reduced operating costs. This session will discuss the extent to which contamination affects the life and reliability of lube and hydraulic systems as well as the advantages and disadvantages of various forms of cleanliness monitoring. Discover how online particle counting can achieve the requirements of fluid cleanliness monitoring and the factors that influence the validity of cleanliness data.
A New Approach for Online Condition Monitoring of Turbine Oil
Axel Wegner, C.C. Jensen

The condition of the lube oil and control fluid in gas and steam turbines is critical for safe and efficient operation. This session will describe a new system that allows turbine lube oil and control fluid monitoring from any location with phone or Internet access. Real-life examples will be presented to show how oil condition can be monitored from anywhere remotely with “out-of-spec” alarms sent via email or text message. Attendees will learn how to evaluate trends, verify lube oil and control fluid conditioner efficiency, and track and identify changes in oil condition.

PLANNING AND SCHEDULING

How to Mitigate Risk When Installing or Upgrading Equipment
Fred Elbert, Elbert Field Engineering Solutions

Managing risk is the key to successful project startups and implementations. A poorly executed project can put the entire plant at risk. Unfortunately, many manufacturing facilities lack the time and resources to develop and implement equipment upgrades or new equipment installations. In this session, you will learn the essential elements of project planning and the factors to consider when contracting project development support. Discover how to identify the resources required to successfully execute your project, how to provide the necessary guidance to your contracted resources, the importance of regular project review meetings, and the value of a well-developed quality-control plan.

Case Study
Effective Maintenance Planning and Scheduling: A Case Study
Tim Kister, Life Cycle Engineering

Many organizations are integrating planning and scheduling into their maintenance operations to better utilize personnel, reduce unplanned downtime and manage their maintenance budgets. Although every company will face obstacles and resistance along the way, some will be more successful than others. This case study presentation will follow the journey of one company with multiple factories as it incorporated effective planning and scheduling into its maintenance organization. Discover the factors that prompted the planning and scheduling implementation, the challenges that were encountered, the approach the company took, the results it has achieved and its path going forward.

Case Study
Case Study: The Journey to Reliability Excellence
Roger Watson, Owens Corning

This case study will detail Owens Corning’s journey to reliability excellence. See how the company’s journey started, what it has been able to accomplish and what was required to get there. In addition to examples of a successful predictive maintenance (PdM) program and the use of multiple disciplines, attendees will learn how to start and employ PdM technologies to increase their plant’s reliability, including the cost of a typical program, how to use each instrument, the gains and rewards, and the most common successes and misses.

The Value of Maintenance Planning
Doc Palmer, Richard Palmer & Associates

Planning and scheduling comprise the productivity piece of maintenance, allowing the completion of additional proactive work in the face of current reactive workloads. This presentation will use real-world examples to show how maintenance planning makes an essential contribution to maintenance success and why companies should utilize effective planning. Attendees will learn the essence of what planning is and how to calculate its specific benefits, including how it helps all involved parties across the plant, from technicians and supervisors to operators and managers.

Case Study
RELIABILITY ENGINEERING

Using Big Data to Improve Your Uptime
Burt Hurlock, Azima DLI

Maintenance and reliability professionals too often find themselves struggling when asked for key performance indicators (KPIs) to measure their performance. Return on investment (ROI) is a critical metric that can be leveraged by maintenance managers to achieve just that. This presentation will detail how machine health data, when tracked and leveraged effectively, not only can help to compare machine performance across plants and over time, but illustrate ROI of maintenance to date and pinpoint critical compliance areas. Attendees will learn how to analyze ROI to avoid budget cuts, decrease unplanned downtime, extend machinery health and maximize productivity.

Measure and Verify Foundation Flatness to Ensure Reliable Machine Performance
Steve Lochard, LUDECA

Many machine failures are the result of an uneven base or foundation. Flat and level machine foundations ease the positioning of machines, guaranteeing trouble-free production processes. Any deviations could cause soft foot, misalignment and stress on the machinery casing. This session will explain the importance of checking machine foundations for flatness and levelness. The latest technology for these types of geometric measurements will also be discussed, including how to measure flatness and levelness with lasers.

Improving Reliable Manufacturing with Precision Maintenance
Tom Carr, Reliability Solutions

As a large population of baby boomer professionals prepare to retire, now is a crucial time for companies to consider and pursue sustainable skillset improvements for their workforce. This session will discuss where precision maintenance begins and what it can encompass. Real-world demonstrations will be used to identify and reinforce the results of misalignment, unbalance, common assembly misconceptions, resonance, dynamic soft foot and other errors found in today’s manufacturing world. Find out where to begin, how to determine the current state of asset reliability and practical tips to improve reliable manufacturing within your facility.

“This conference was worth the time to attend. The sessions were outstanding. I enjoyed the knowledge all the speakers shared. It was valuable information. This was my first year to attend, and I have enjoyed the conference.”
- JIMMIE HENRY, GE OIL AND GAS
The Importance of Designing Reliability into Machines
Jerry Putt, Noria Corporation

Most efforts to meet reliability goals generally come from the maintenance organization. Often the inherent reliability of the system is determined by the design and procurement practices employed long before the equipment becomes the responsibility of the plant. Design and procurement personnel usually are focused on meeting functionality requirements within cost and delivery time constraints. This session will provide suggestions for designers and procurement professionals that can result in higher potential reliability and give the maintenance team a better opportunity to consistently achieve the optimum capability of the equipment.

3 RCM Methods that can Improve Your Maintenance Program
Darrin Clark, ArcelorMittal

Having a proper maintenance program is key for any organization’s business strategy to ensure that assets continue functioning appropriately. However, many organizations lack this type of program. This presentation will detail three reliability-centered maintenance (RCM) methodologies that can be used to develop a technically valid maintenance program. Attendees will learn what the seven questions of RCM are and how they can be applied using RCM2 analysis, maintenance task analysis and current practices review. A common, everyday maintenance task will also be reviewed employing each of the three RCM methods.

Case Study: The Essentials of Operator-driven Reliability
Phillip Weer, USG

Operator-driven reliability (ODR) should be important to every organization. When operators are more engaged in the production process and take ownership of the equipment they operate, the result is increased uptime and less waste. By sharing how USG developed its reliability program, this case-study presentation will outline the necessary prerequisites for those serious about achieving ODR. Attendees of this session will take away a roadmap for implementing such a program at their facility, including what it takes to remain committed to ODR, the roles everyone plays and the metrics to help gauge success.

GET A FREE NORIA TRAINING COUPON

Full conference registration includes a $1,295 training coupon which can be used toward Noria’s lubrication or oil analysis training courses for up to one year. Use it yourself or give it to a co-worker. It’s like attending the conference and getting Noria training for free!

*Terms and Conditions: Only one coupon issued per person. Coupon is transferrable within your organization and must be presented when registering for the training. Coupon is valid for Noria public training course in the United States taking place between April 24, 2015 and April 25, 2016. Coupons are given to full conference (Tuesday-Thursday) attendees who pay their conference registration fee and attend the conference. Speakers and exhibitors are not eligible unless paying full conference registration fees. Coupons may not be used for private onsite training.
MAINTENANCE MANAGEMENT

Case Study
PM Optimization Made Easy
Joe Anderson, JM Smucker Co.

Most organizations’ preventive maintenance (PM) programs are outdated and too generic, with many different PM types incorporated into a single PM. Streamlining the PM program and eliminating waste will be crucial in these situations. By understanding the various PM types, you can break down your PMs into more efficient and effective activities. For those who want to improve their PM program but feel overwhelmed and don’t know where to begin, this session will explain how to start a PM optimization, the value of an optimized PM program, the seven PM types and the importance of visual work instructions for precision maintenance.

Case Study
Failing to Communicate: The Role of Effective Task Descriptions
Michael Mazur, Schwan’s Global Supply Chain

In order to address maintenance requests safely and effectively, maintenance personnel must clearly understand the problem. Unfortunately, requests and reports are often obscure, misleading, minus important information or overly verbose, which can result in equipment failures and injuries. This presentation will explain how to standardize task requests to eliminate confusion, resolve issues faster and ensure accurate, high-quality repairs. Prearranged examples will show how well-written task descriptions can be used for training and to increase the quality of PM performance.

Steps for Successful Change: Leading Your Team into the Future
Chris Christenson, Noria Corporation

One of the biggest hurdles when trying to implement a reliability or lubrication program is that people naturally choose the path of least resistance or effort. This principle can be a powerful influence. At times, it will inspire those involved to create innovative solutions that unleash great efficiencies. However, it can also be a force that holds your team in old habits, ruining attempts by leadership to move to new processes. This presentation will offer examples of the challenges leaders face when implementing change as well as some of the key steps that you can take to convert resistance into a successful project implementation.

Influencing Operations to Be Your Partner in Reliability
David Rosenthal, Jacobs Engineering Group

Reliability is the key to meeting manufacturing goals for higher productivity, lower costs and improved safety. However, improving reliability requires a strong partnership between engineering, maintenance and production that can be difficult to establish. This session will outline the particular need for operations personnel in this partnership and how to change the way they perceive their role from mere operators to owners. Attendees will learn several tools and methods that they can use on the plant floor to start developing this crucial partnership.

How to Lead a Reliability Initiative
Greg Folts, Marshall Institute

Many times the people who try to lead reliability improvements are not in leadership positions and do not have the authority to drive change. Whether you work on the shop floor, as a supervisor or in management, there are key principles that can increase your influence within your organization. This presentation will explain the differences between average and exceptional leaders, four personal characteristics every leader must develop, and how these principles apply to leading maintenance reliability regardless of your current level of support.

7 Wastes That Kill Craft Productivity
Edward Stanek, Predictive Service

Waste is responsible for reducing maintenance effectiveness by as much as 75 percent. This often translates into huge backlogs, large mean time to repair and urgency for all tasks. By identifying the non-value-added losses in your system, you can measure their impact and analyze the gaps in your maintenance/reliability program. This session will reveal the seven most common wastes in maintenance and demonstrate a systematic approach for capturing and eliminating them. Attendees will discover the causes of waste, how to determine current craft productivity levels and how to increase labor hours by up to 50 percent.

Creating a Reliability Culture: How to Establish Your CMMS as the Backbone
Matt Midas, GenesisSolutions

A reliability culture entails getting the most out of your assets and having assets operate at optimum performance. In order to achieve this, you must have a complete understanding of your asset base, a master equipment list and an asset criticality ranking. With this information, you can establish your computerized maintenance management system (CMMS) as the backbone of a true reliability culture, tying it to mechanical integrity and reliability analysis. This session will explain how to integrate your CMMS with your reliability program, the importance of accurate CMMS data and what happens if any of the key components are missing.

Show Me the Money: Cost-Reporting Analysis for Maintenance Mitigation
Leon Reed, GenesisSolutions

Many organizations have a serious deficiency when it comes to identifying excessive maintenance and operating costs. Instead, they rely on tribal knowledge or individual operators and technicians to inform them of the big
spenders and problem makers. This presentation will explain a method of harvesting CMMS/EAM data to quickly find and eliminate unnecessary costs and spare parts. Learn how this process called “cost-reporting analysis for maintenance mitigation” (CRAMM) can pinpoint your costliest units so you can reduce waste, improve safety and increase your profit margin.

8 Steps to Successfully Build a Reliability-centered Culture
Ricky Smith, People and Processes

Studies show that more than 60 percent of organizations remain reactive from a maintenance and reliability perspective. Surprisingly, many of those outside that 60 percent practice unnecessary parts replacement that is counterproductive to the bottom line. In both cases, opportunities are left on the table in the form of reduced costs and better efficiencies. This session will reveal eight major components to establishing a reliability-centered culture, including ideas for building confidence and support for change within your organization, key performance indicators to show the return on investment and a step-by-step approach to drive your organization forward. Case studies from around the world will be used to help you visualize the concepts and avoid making critical mistakes.

Case Study
PM Optimization: Striving for Excellence
Kenny Myers, Ashland Specialty Ingredients

A lack of organization within a preventive maintenance (PM) program can lead to serious problems, such as inaccurate data, scheduling issues, poor procedure standardization, etc. To optimize your PM program, you must define the problem, identify the stakeholders, develop the right strategy, establish the timeline, execute the plan and follow up. This presentation will detail how Ashland Specialty Ingredients used its computerized maintenance management system (CMMS) in its PM optimization efforts, including best practices and strategies that you can take back to your facility and implement right away.

Case Study
Starting Your Campaign: Selling Maintenance as a Profit Center
Joe Anderson, JM Smucker Co.

Proactive maintenance can be a tough sell. Why invest in expensive updates or costly downtime to work on machines that are functioning well enough? While most maintenance managers understand the value of proactive maintenance, making it happen may require an effective sales pitch to upper management. This presentation will help propel the careers of those in maintenance by explaining how to present your maintenance department as a profit generator, not a necessary evil. Attendees will learn how to start this type of campaign as well as the business side of maintenance management, including why competitive advantage is important, the three value types, and the different methods of tracking cost savings and avoidances.

How to Increase Reliability with Failure and Spending Analysis
Michael Holloway, ALS Tribology

When a large machine breaks, it is normally due to a small component failing. This presentation will describe a method by which you can lower operating costs and increase productivity by establishing a performance-based procurement specification on the very components that are a cancer to your plant. To develop the specification, you must understand on what you are spending the most money. This practice known as spend analysis is vital to the operation of any organization. Attendees will be provided with tools that they can use to help contain spending costs and increase overall plant reliability through a failure and spend analysis.

Reliability Leadership: Why it’s Broken and How to Fix it
Terrence O’Hanlon and Maura Abad, Reliabilityweb.com

Reliability initiatives often fail because they are misapplied and misused. This presentation will take a close look at how reliability leadership can improve asset performance management for any organization and create collaboration across all industries and government. Attendees will discover how to deliver the triple bottom line of economic prosperity, environmental sustainability and social responsibility through an engaged and empowered workforce. Proven solutions will be offered that have been validated by more than 400 organizations from nuclear power, oil and gas, mining, and other industries.

Selecting the Most Reliable and Cost-efficient Air Compressor
Sue Benes, FS Elliott

The delivery of plant air is often an afterthought for many organizations, but it can result in higher operating costs. Selecting the correct air compressor is key to reliable and cost-effective manufacturing. This session will review the various features and benefits of air compressors, with actual case studies to show the importance of the right air-delivery system. Attendees will learn about the different types of air compressors as well as the advantages of choosing the best air compressor for their facility.

ROOT CAUSE ANALYSIS

How to Identify the Origin of the Contaminants in Your Machines
Alejandro Meza, Noria Corporation

Contamination control is an important element of proactive maintenance. It can help eliminate the root causes of critical machine failure modes. The first step in keeping lubricants clean, cool and dry is addressing existing contaminants, their significance and their source within the machinery, including whether they are internal, environmental or the result of specific maintenance activities. This presentation will provide crucial information to help attendees design a plan to control the root causes of contamination in a cost-effective manner.

CERTIFICATION The International Council for Machinery Lubrication (ICML) will offer certification exam opportunities during RELIABLE PLANT 2015. Advance registration is required. All exams will be conducted at the Cleveland Convention Center on Monday, April 20, from 5:30 p.m. to 8:30 p.m. and on Wednesday, April 22, from 6:00 p.m. to 9:00 p.m. To learn more about the certification types, registration fees and exam preparation, visit the ICML website at LubeCouncil.org or call 1-918-259-2950.
TESTOIL LAB TOUR

Wednesday, April 22, 2015

Departs at 5:45 p.m. Returns at approximately 8:30 p.m.

Want to enhance your conference experience? Get on the bus to TestOil for an exclusive lab tour that is perfectly-suited for industry end users who desire an up-close-and-personal view of an advanced industrial oil analysis laboratory. Since 1988, the laboratory, owned by Insight Services, has been providing fast and reliable oil analysis results across all industries throughout the Americas. TestOil’s comprehensive range of oil analysis services assists reliability engineers with condition monitoring and identification of machine wear. TestOil understands the urgency of the data and is committed to analyzing and processing routine samples the same day they are received.

Attendees will tour the state-of-the-art laboratory and watch as lab analysts perform actual oil analysis testing. Come see their methodologies first-hand.

$19.95 lab package includes:

• Round-trip transportation
• 90-minute tour
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To register, visit Conference.ReliablePlant.com and click on the registration tab to guarantee one of these 40 seats today.

TestOil reserves the right to approve all lab tour registrations.

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Find Your Solution

Make your conference experience as valuable as possible. Wander the expansive exhibit hall and discover tools and solutions among a comprehensive group of global suppliers representing various disciplines of industrial lubrication and oil analysis.

With over 150,000 square feet of exhibit hall space, attendees can meet with more than 100 exhibitors highlighting innovative products and services over the course of three days. Unwind in the “Relaxation Station,” network with colleagues during lunch breaks and receptions, gather hands-on information and generate ideas to address specific needs.
Founded in 1796 near the mouth of the Cuyahoga River, Cleveland is located in northeastern Ohio on the southern shore of Lake Erie. It quickly became a manufacturing center due to its location on the lake shore, as well as being connected to numerous canals and railroad lines.

Cleveland is a city with a rich and vibrant history extending over 200 years. Founded by General Moses Cleaveland, the city changed the spelling of its name to Cleveland in 1831. Massive growth in manufacturing, steel and other industries has allowed the city to experience tremendous development and growth. Post-recession, a re-development surge occurred within the city limits and has been strongest in the downtown area near the Gateway complex and North Coast Harbor. This development includes the new, state-of-the-art Cleveland Convention Center, the Rock and Roll Hall of Fame, Cleveland Browns Stadium and the Great Lakes Science Center. Local sporting facilities include Progressive Field, FirstEnergy Stadium, Quicken Loans Arena and the Wolstein Center where sports fans can follow their favorite teams including the Cleveland Indians, Cleveland Browns and Cleveland Cavaliers. April weather in Cleveland ranges from highs near 60-65 degrees with evening lows in the 40s, providing an ideal and comfortable climate for conference attendees.

With a beautiful cityscape, convenient geographic location, technological synergy and array of entertainment and dining options, Cleveland offers the perfect mix of business and pleasure. We look forward to seeing you there!

Cool trivia facts:

• Cleveland became the world’s first city to be lighted electrically in 1879.

• Cleveland boasts America’s first traffic light. It flashed for the first time on August 5, 1914.

• Many movies have been set or filmed in the city, including “Major League,” which featured the Cleveland Indians, “A Christmas Story,” “The Shawshank Redemption,” “Planes, Trains and Automobiles,” “Men in Black,” “Spiderman 3” and many others.

• Cleveland is home to many nationally-recognized museums including the Rock and Roll Hall of Fame, the Great Lakes Science Center, the Cleveland Museum of Art, the Cleveland Botanical Gardens, and the Cleveland Natural History Museum to name a few.

For more information about Cleveland, check out ThisisCleveland.com
HOST HOTEL
Specially-rated blocks of rooms are reserved at the Cleveland Marriott Downtown at Key Center, directly across from the convention center. You can take advantage of these discounted rates by booking your room(s) directly with the Marriott using the group name “Reliable Plant 2015” at the time of reservation. Availability is limited, and you are encouraged to make reservations early.

Cleveland Marriott Downtown at Key Center
1-800-228-9290 | 127 Public Square | Cleveland, Ohio | USA 44114

Reserve Your Room by March 25, 2015
Single or Double Occupancy: $169

- Call the hotel at 1-800-228-9290
- Be sure to provide the group code: RELIABLE PLANT 2015
- Make all hotel reservation changes or cancellations directly with the Marriott
- Visit Conference.ReliablePlant.com for a shortcut to the hotel registration site

AIRLINE DISCOUNT
United Airlines is offering a 5% discount on published fares for attendees of RELIABLE PLANT 2015. Some restrictions may apply for airline tickets, and discounts may not be available on all fares. For reservations and ticketing information, visit United.com and enter the offer code: ZTRE928993 or call the United Meetings Reservations Desk at 800-426-1122 (there will be a $25 ticketing fee for telephone reservations) with agreement code: 928993 and Z code: ZTRE.
Outside of the U.S., please call your local United Airlines Reservation Office. Valid group travel dates are April 14 – 29, 2015.

CAR RENTAL DISCOUNT
Avis Worldwide is offering a discount on car rentals for attendees of RELIABLE PLANT 2015. To reserve a vehicle, visit Avis.com and enter AWD code: J907635 or call Avis Worldwide at 800-525-7537, x31247. The discount is valid from April 13-30, 2015. Attendees can also arrange a chauffeur driver for groups by visiting AvisChauffeurDrive.com or by calling 800-272-5839.

Need a visa?
Noria welcomes international attendees to the Reliable Plant Conference and Exhibition. To receive an invitation letter to Reliable Plant, please e-mail registrations@noria.com.
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- Conference proceedings
- Opening general session and keynote address
- Exhibition hall access
- Lunches in the exhibit hall
- Daily Continental breakfasts and refreshment breaks
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- **FREE** Noria training coupon, valued at $1,295

**WORKSHOP REGISTRATION INCLUDES:**
- Course materials
- Refreshment breaks
- Opening general session (**Tuesday only**)  
- Exhibition hall access (**Tuesday only**)  

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**FULL CONFERENCE REGISTRATION**

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**Registration Information**  
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**BRINGING THE CREW? GROUP DISCOUNTS AVAILABLE**

**3 to 9 ATTENDEES:**  
Get three or more full conference registrations for only $595 each, plus a 30% discount on all pre- and post-conference workshop fees.

**10 or MORE ATTENDEES:**  
Get 10 or more full conference registrations for only $495 each, plus a 30% discount on all pre- and post-conference workshop fees.

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**HOW TO REGISTER**

**ONLINE:** Conference.ReliablePlant.com

**PHONE:**  
Give us a call  
Monday – Friday, 8 a.m. – 5 p.m. (CST)  
918-392-5038

**FAX:**  
Fax your completed registration form to:  
918-746-0925

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REGISTRANT INFORMATION
Please print your name clearly. Your name and company will appear on your badge. PLEASE photocopy this form for an additional registrant.

First Name ____________________________________________
Last Name ____________________________________________
Title _________________________________________________
Company ______________________________________________
Address 1 ______________________________________________
Address 2 ______________________________________________
City __________________ State/Province _________________
Zip/Postal Code ______________ Country _______________
E-mail (required) _____________________________________
Phone Number (required) _________________________________

CONFERENCE FEES
REGISTER BY FEBRUARY 26, 2015 AND MENTION PROMOTION CODE RP325M TO SAVE AN EXTRA $25

Individual Full Conference
☐ Expires 02/26/2015 ................................................. $895
☐ Expires 03/19/2015 ................................................. $995
☐ After 03/20/2015 ................................................... $1,195

Individual 1-Day Guest
☐ Individual 1-Day ........... $395
☐ Guest/Spouse/Family ... $195 (Must accompany paid attendee)
*Until 03/20/2015

BEST VALUE! Group Discounts
3 or more full-conference registrations for only $595 each;
10 or more $495 each. Group discounts include a 30 percent
discount on pre- and post-conference workshop fees. Group
registrations must be purchased at the same time. Call 918-392-5038
to take advantage of this offer.

PRE-CONFERENCE WORKSHOPS
☐ How to Detect and Control Lubrication Failure Modes $295 $225
☐ Best Practices for Oil Sampling $295 $225
☐ Lubrication Excellence Manager’s Summit $295 $225
☐ Designing and Implementing an Effective Electric Motor Lubrication Program $295 $225

POST-CONFERENCE WORKSHOPS
☐ How to Design, Implement and Maintain a Powerful Oil Analysis Program $295 $225
☐ Best Practices for Receiving New Lubricant Deliveries $295 $225

TESTOIL LAB TOUR
☐ Wednesday, April 22, 2015 $19.95

4 WAYS TO REGISTER
ONLINE: Conference.ReliablePlant.com
BY FAX: Fax your completed registration form to:
Mon – Fri, 8 am - 5 pm (CST)
918-746-0925
918-392-5038
BY PHONE: Send this form and payment:
c/o Noria Corporation
1328 E. 43rd Ct.
Tulsa, OK 74105 U.S.A.

PROMOTION CODE _____________________________

TOTAL PAYMENT DUE: $___________________________
Payment due upon receipt of invoice and prior
to conference. No registration materials will be
distributed without full payment. Customers outside
the U.S.: We accept checks drawn on U.S. banks in
U.S. dollars.

METHOD OF PAYMENT
Payment must be received prior to the conference.
☐ Check # __________ is enclosed or will be mailed
Please make check payable to: Noria Corporation
☐ Charge my: ☐ Visa ☐ MasterCard
☐ AmEx ☐ Discover
Noria Corporation is authorized to charge the credit
card below for my conference registration fees in the
amount indicated on this form.
Card Number _________________________________
Expiration Date _____ / _____
Name on Card ___________________________________
Cardholder’s Signature _________________________
☐ Bill Me/My Company - P.O. No. __________________

Cancellations/Substitutions:
Cancellations must be in writing and postmarked by March 15, 2015. All cancellations received after this date are subject to a $75 administrative fee, but you will also receive a $75 coupon good for use against the cost of a Noria training or conference. If you don’t cancel and you don’t attend, you will be charged the full registration fee. However, a company may substitute one attendee for another without penalty. Written notice prior to the event is required for substitute attendees.
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For more details and the most up-to-date information, visit Conference.ReliablePlant.com