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NORIA'S 15TH ANNUAL CONFERENCE & EXHIBITION
RELIABLE PLANT 2014
APRIL 22-24TH · SAN ANTONIO, TEXAS

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APRIL 22-24TH, 2014! SAN ANTONIO, TEXAS!



When it comes to ensuring positive bottom-line results, the hero lies in YOU. Where do you turn to identify proven heroic solutions? It's simple ... attend the 15th annual RELIABLE PLANT Conference and Exhibition, the premier global event for machinery lubrication, oil analysis and reliability.

No problem or issue is bigger than you can handle. With comprehensive learning sessions, specialized pre-conference workshops and an expansive exhibit hall of products and services.

RELIABLE PLANT 2014 provides best-practice tactics and solutions. Attendees gain useful insight in multiple areas of lubrication, oil analysis and reliability. Join an elite group of manufacturing professionals, decision-makers and practitioners from around the globe - make plans today to attend this once-a-year industry event. No other forum gathers industry professionals together and provides an ideal platform to network with thought-leaders and peers to gauge the latest trends, technologies and issues facing our industry today.

BE THE HERO of your plant and your team

Register today at Conference.ReliablePlant.com. Sidekicks welcome!

SCHEDULE AT A GLANCE

MONDAY, APRIL 21

7:00 a.m. - 6:00 p.m. . . . Registration Open
 1:00 p.m. - 4:30 p.m. . . . Pre-Conference Workshops
 5:30 p.m. - 8:30 p.m. . . . ICML Certification Testing

TUESDAY, APRIL 22

9:30 a.m. - 5:30 p.m. . . . Exhibition Hours
 7:00 a.m. - 6:00 p.m. . . . Registration Open
 7:30 a.m. - 8:00 a.m. . . . Continental Breakfast
 8:00 a.m. - 9:20 a.m. . . . Opening General Session
 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
 5:30 p.m. - 7:30 p.m. . . . Meet and Greet Reception

WEDNESDAY, APRIL 23

9:30 a.m. - 6:30 p.m. . . . Exhibition Hours
 7:00 a.m. - 6:00 p.m. . . . Registration Open
 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 in Exhibit Hall
 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
 3:30 p.m. - 4:40 p.m. . . . Refreshment Break in Exhibit Hall
 5:30 p.m. - 6:30 p.m. . . . Networking Reception
 6:00 p.m. - 9:00 p.m. . . . ICML Certification Testing

THURSDAY, APRIL 24

8:50 a.m. - 12:00 p.m. . . . Exhibition Hours
 7:00 a.m. - 11:00 a.m. . . . Registration Open
 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

WHO SHOULD ATTEND?

Calling all heroes! As a professional in machinery lubrication, oil analysis or 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 15th annual RELIABLE PLANT Conference and Exhibition to network with and gather information from the following attendees:

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

WHY ATTEND?

- Gather information, acquire answers and generate ideas to address specific needs
- See new products and developments in the exhibition hall
- Visit with exhibiting companies and colleagues

OPENING GENERAL SESSION

FEATURED KEYNOTE

Jim Morris

"The Power of Dreams and Their Ability to Inspire and Transform Your Life"



The Cinderella story of Jim Morris serves as testimony to the power of dreams and their ability to inspire and transform human life. Morris' meteoric rise from 35-year-old high-school teacher to flame-throwing major-league pitcher in three months made cinematic history with the release of "The Rookie" starring Dennis Quaid. This heartwarming and unforgettable Disney blockbuster about chasing your dreams and keeping your promises won the ESPY award for "Sports Film of the Year." *Sports Illustrated* magazine also voted "The Rookie" one of the "five greatest baseball films ever made."

Originally drafted in the first round in 1984, Morris' had always dreamed of becoming a major-league baseball player, but his career was derailed by a series of debilitating arm injuries before he got out of the minor leagues in 1988. Instead, Morris got married, raised a family and got his college degree before becoming a high-school science teacher and baseball coach in West Texas.

Eleven years after retiring from minor-league baseball, Morris was giving a speech to his high-school team about the importance of dreams and hard work when his high-school players challenged him to pursue his own dream of pitching in the major leagues. Morris made the following bet with his high-school team: if they won the district championship, he would try out for the majors.

Morris' team fulfilled their end of the bargain, which committed him to a big-league tryout, where he threw 12 consecutive pitches at 98 mph. Inspired by his family and students, Morris immediately signed a professional baseball contract. His rise from obscurity became the feel-good story of 1999. After pitching for the Tampa Bay Devil Rays in 2000, Morris signed with the Los Angeles Dodgers and retired from baseball in 2001.



GET A FREE NORIA TRAINING COUPON

{ Valued at \$1,195! }

Full-conference registration includes a \$1,195 training coupon that 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 transferable 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 25, 2014, and April 24, 2015, or online courses purchased prior to April 25, 2014. 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.

PRE-CONFERENCE WORKSHOPS

How to Interpret Oil Analysis Reports and Set Effective Limits

{ Bob Scott - LubeWorks } Monday, April 21, 1:00 p.m. - 4:30 p.m. }



Precisely set alarms and limits are the critical first step to interpreting oil analysis results. With strategically set alarms and limits, costly problems quickly reveal themselves, allowing more time to make adjustments and react. You'll learn how to select the correct types of limits and how to apply those limits to maximize problem detection.

In this workshop, you'll get step-by-step instruction on how to attain maximum value from every oil analysis report you receive. You'll learn exactly what to look

for, how to set strategic alarms and limits, and how to read between the lines so that you can make highly-effective maintenance decisions.

With Full-Conference Registration { \$225 } Workshop Only - \$295 }

Managing the Implementation Stage of a World-Class Lubrication Program

{ Alejandro Meza - Noria Corporation } Monday, April 21, 1:00 p.m. - 4:30 p.m. }



Many organizations struggle when implementing a lubrication program because they have a limited vision of the program's scope or because they have no formal change-management procedures. This workshop will explain the three key factors for implementation of a world-class lubrication program: knowledge/competency for all involved personnel in the organization, technology (lubrication hardware and software), and proper methodology or procedures. Attendees will learn the importance of

defining the optimum reference state (ORS), how to design an effective program with a systematic view and how an appropriate change-management strategy can help you achieve your goals.

With Full-Conference Registration { \$225 } Workshop Only - \$295 }

Beat the Leak: Essential Practices for Connector and Conductor Professionals

{ Donna Pollander - International Fluid Power Society } { Gwyn O'Kane - Pirtek USA } Monday, April 21, 1:00 p.m. - 4:30 p.m. }



The success or failure of any fluid power system depends on four factors: design, installation, start-up (commissioning) and maintenance. Hose and tube assemblies are a vital consideration in each of these factors as well as system and operating personnel safety. Learn the best approach for becoming a CFPC professional along with fundamentals in connector and conductor assemblies:

- Safety procedures - precautions that need attention
- Proper product identification - identify type of hose, fittings and connections, port and fitting threads and flange types
- Assembly component selection - size, temperature, application, material, pressure, ends, delivery hose replacement and tube materials
- Assembly procedures and operation - cut, skive, crimp and clean hose assemblies
- Documentation - identify and use specifications and standards

With Full-Conference Registration { \$225 } Workshop Only - \$295 }

Lubrication Excellence - Manager's Summit

{ Jim Fitch - Noria Corporation } Monday, April 21, 1:00 p.m. - 4:30 p.m. }



There's a revolution occurring. Managers who once desired equipment reliability now demand it. It is a matter of corporate survival in the global economy, and effective machinery lubrication is an essential enabler to success.

This movement has led 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 status 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

With Full-Conference Registration { \$225 } Workshop Only - \$295 }

Fundamentals for Designing & Procuring Equipment to Increase Reliability

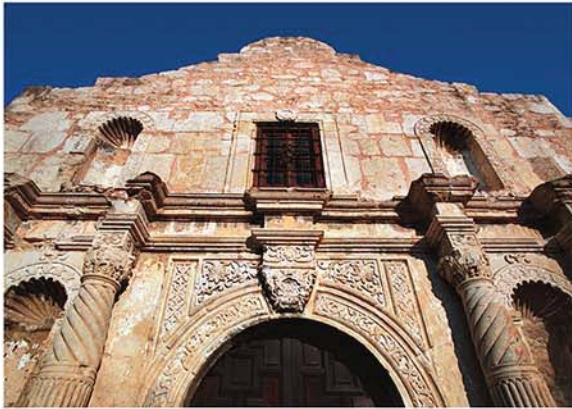
{ Jerry Putt - Noria Corporation } Monday, April 21, 1:00 p.m. - 4:30 p.m. }



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 workshop 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.

With Full-Conference Registration { \$225 } Workshop Only - \$295 }

**ROOMS GO FAST
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SAN ANTONIO
BOOK SOON!**



TRAVEL

Reliable Plant 2014 will be held at the Henry B. Gonzalez Convention Center in San Antonio, Texas. Specially rated blocks of rooms are reserved at the Marriott San Antonio Riverwalk, directly across from the convention center. You can take advantage of these discounted rates by booking your room(s) directly with the Marriott Riverwalk using the group name "Reliable Plant 2014" at the time of reservation. Availability is limited, and you are encouraged to make reservations early.

Marriott San Antonio Riverwalk

889 East Market Street
San Antonio, Texas
USA 78205
Tel: 1-877-622-3056

RESERVE YOUR ROOM BY APRIL 7, 2014

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RESERVE YOUR ROOM TODAY!

- Call the hotel at 1-877-622-3056
- **Be sure to provide the group code: RELIABLE PLANT 2014**
- Make all hotel reservation changes or cancellations directly with the Marriott Riverwalk
- A short-cut to the hotel registration site is available at Conference.ReliablePlant.com

**All room rates are exclusive of state and local taxes or applicable services, or hotel-specific fees in effect at the time of the meeting. Hotel tax rates are subject to change without notice. Reservation requests received after the April 7, 2014 cut-off date will be based on availability at the hotel's prevailing rates.*

AIRLINE AND CAR RENTAL

Air Travel | American Airlines

American Airlines is offering a 5-percent discount on published fares for attendees of RELIABLE PLANT 2014. Some restrictions may apply for airline tickets, and discounts may not be available on all fares. For reservations and ticketing information, call American's Meeting Services Desk at 1-800-433-1790 from anywhere in the U.S. or Canada (\$25 reservation fee may apply) and reference authorization number: 7744BP.

Discount fares are valid for round-trip travel on American Airlines and American Eagle, and can be booked online at www.AA.com without a ticketing charge. Valid group travel dates are April 19 - April 27, 2014.

Car Rental | Hertz

Discounted group car-rental rates are available from April 12 - May 1, 2014. Reservations can be made by calling 1-800-654-2240 or online at www.hertz.com.

Reference discount code: CV# 0B10003.

NEED A VISA?

Noria welcomes international attendees to the Reliable Plant Conference and Exhibition. Please note that Noria has no influence over the issuance of a visa. When visiting the U.S., we suggest that you carry a copy of your planned itinerary, including your visit to the conference city for Noria's events and any business or vacation that follows. The Immigration and Naturalization Officer at your port of entry will approve the duration of your visit to the United States. To receive an invitation letter to the Reliable Plant Conference and Exhibition, please e-mail registrations@noria.com.

LEARNING SESSIONS



SEE A COMPREHENSIVE LIST OF SESSIONS AT Conference.ReliablePlant.com

LUBRICATION PROGRAM MANAGEMENT

How to Establish Best-practice Lubrication Procedures

Wes Cash, Noria Corporation

Equipment manufacturers provide literature depicting how to maintain equipment, but they are often very generic and leave much to be desired in terms of ease of use. An effective lubrication procedure offers a step-by-step guideline that directs the user through a specific lubrication task and creates the framework for standardizing best practice. In this session, attendees will learn what elements a best-practice procedure contains as well as how to assemble procedures for real equipment.

Case Study: Achieving a World-class Lube Room

Mike Horton, Domtar

Domtar needed a world-class lube room to improve the cleanliness of its lubrication program and prevent unplanned downtime. Several designs were tried and many problems were encountered, but eventually the company overcame all the obstacles on its journey to excellence. This case study will describe the process Domtar implemented to eliminate contamination, improve ISO levels for incoming oil and enhance the ergonomics and housekeeping of its lube room. Discover how the company maintains proper inventories, utilizes best practices that include standard operating procedures and visuals, and uses barcoding within the lube/grease process.

A New Approach for Changing the Lubrication Culture

Marcello Gracia, Confialub

Changing the lubrication culture of an organization is never an easy task. Technical knowledge alone is not enough to guarantee results and behavioral changes. The way you choose to promote the changes has a significant impact on the results. See how a successful initiative was carried out by Confialub in one of the world's largest iron mines. This unique experience clearly demonstrated the power of generating interest and getting people involved, thus facilitating the path to understanding as well as promoting commitment of all lube team members.

Qualifying Your Lubricant Supplier

Doug Sackett, Total Specialties USA

Most end users base their lubricant purchasing decisions on price alone and do not qualify distributors to ensure they know the proper procedures that can prevent cross-contamination. This presentation will explain how to evaluate lubricant distributors in regard to their knowledge of the products and delivery process to assure product integrity. Attendees will learn the right questions to ask and how to balance between the distributor and producer of the lubricants.

Designing Effective Lubricant Storage

Terry Harris, Reliable Process Solutions

Oil storage is a critical aspect of a lubrication program that is often overlooked. In this session, 20 steps for creating a strategy to properly receive, filter and store lubricants will be discussed. Among the topics that will be covered include how to develop procedures for receiving and storing all lube products, the importance of proper lubricant receiving, fundamentals of lube consolidation, requirements of lube filtration and storage, and safety considerations when storing lubricants.

Grease Selection and Its Impact on Energy Losses

Dwaine Morris, Shell

When designing electric motor greases, formulation decisions can have a significant effect on frictional losses generated in the electric motor bearing. It follows that grease selection for electric motor applications can impact energy consumption. This session will discuss how users can increase profitability by making informed decisions relative to which grease they choose. Comparisons will be drawn between various formulary approaches, including mineral base stocks vs. synthetics. Simple soaps will be contrasted with lithium complex and polyurea-thickened products, and theoretical predictions will be compared with measured results under controlled conditions and in-field applications.

Implementing a Training Plan to Support a World-class Lubrication Program

Alejandro Meza, Noria Corporation

When creating a training plan for a world-class lubrication program, the required practices and behaviors for all personnel involved in the program must be considered. New knowledge/competencies will be necessary, from top management to field operators, as well as across the organization. The process should begin with the lubrication program design and continue through purchasing, engineering, maintenance functions, etc. This presentation will describe how to implement an effective training plan to support your lubrication project.

How to Develop a Lubrication Program and Achieve a Change in Culture

Jon McNees, Sinclair Wyoming Refining Co.

To develop a good lubrication program, there must be a culture change. Buy-in from all aspects of the organization will be required. Ultimately, it must start at the top, which typically is the hardest sell. To change the culture, personnel must be aware of the changes that will take place. The greatest resistance to changing the culture will come from those who are not informed or misinformed. This presentation will explain the steps and processes Sinclair used in developing its lubrication program and how the culture at its refinery was changed successfully.

PREDICTIVE MAINTENANCE

Vibration Analysis for Improved Maintenance and Profitability

Dennis Shreve, GE-Bently, Eric Snyder, Emerson

Various predictive maintenance tools and technologies will be discussed in this presentation, with special emphasis on data collection for vibration analysis as a leading indicator of potential machinery health problems. Best practices for obtaining the tools and training to get a predictive maintenance program up and running will be covered along with how to classify and select equipment for inclusion in the program. Key steps in problem detection, analysis, correction and verification for achieving a "zero breakdown" performance record will also be included.

Engaging Manufacturing Operators in Predictive Maintenance

Jay Edwards, MillerCoors

A new way of thinking about predictive maintenance (PdM) increases the involvement and engagement of operations and improves the overall equipment reliability levels in plants. This session will cover some historical methods of implementing PdM and show how it is now feasible to put it into the hands of operators for a better first line



of defense on equipment problems. Learn the methods for engaging operations in the value and benefits of PdM, using operator PdM to flag the need for higher level analysis and examples of PdM tasks that operators can perform.

How Vibration Can Trick You

Karl Hoffower Condition Monitoring Solutions Inc.

Vibration analysis is an excellent tool for monitoring the condition of rotating equipment. However, an improper configuration setting can hide the true condition of your machine. This presentation will review the basic rules for optimum vibration data collection to reveal the possible fault frequencies a machine can exhibit. A case study analyzing both vibration spectrum and time waveform will also be presented demonstrating how incorrect vibration configuration settings failed to show what was truly happening with a critical pump. Learn key points about data-collection settings and how to diagnose a bad bearing, mechanical looseness and rotor rub.

Taking Predictive Maintenance to the Next Level

Mark Latino, Reliability Center Inc.

This presentation explores how a technician/analyst can identify a failure mechanism from a fractured component's surface. Find out how failures occur as well as the surface features that distinguish the physical mechanism. Attendees will learn the differences between primary and secondary failures, how long different components should last, how poor installation practices affect component life and how to recognize fatigue failures, overload failures, corrosion failures and erosion failures.

Innovative Predictive Maintenance Techniques for Reciprocating Compressors

Michael Boken, Reciprocating Network Solutions

This presentation will address the issue of data analysis and failure modes of large reciprocating compressors operating in pipelines, refineries and chemical facilities. The various methods used to detect deterioration in reciprocating compressors will be explained, as well as how to apply specific condition monitoring techniques to reciprocating compressors while considering both the mechanical condition and performance. Attendees will learn about valve dynamics and failure modes, how to interpret pressure volume and pressure time curves, basic condition monitoring analysis for compressors and new cloud-based data networks for third-party diagnostics.

3 Reliability Keys for Electric Motor Testing

Noah Bethel, PdMA Corporation

This session will focus on the three reliability keys for electric motor testing and how they should be applied to drastically improve your return on investment. Among the topics that will be discussed include electric motor fault zone analysis, quality control testing of new/refurbished motors and the distribution systems that supply power to them, the importance of trending electric motor test data, the recommended testing frequency, and end-of-life troubleshooting strategies and approaches.

LUBRICATION EXCELLENCE

Achieving Lubrication Excellence with a Six Sigma Approach

Leon Reed, GenesisSolutions

Many organizations are mired in old cultures and legacy practices when it comes to machinery lubrication and reliability. In fact, it is estimated that 40 to 60 percent of all equipment failures can be attributed to improper lubrication. Today's modern equipment requires precision lubrication with specific lubricants administered through best practices to sustain reliability, maximize life cycles and generate profits. This presentation will detail how to use a Six Sigma approach to identify your lubrication program's current state, measure progress to a desired state, properly develop your program and transition your organization to an award-winning lubrication excellence facility.

Choosing the Right Chain Oil for Elevated Temperatures

Toby Porter, Kluber Lubrication

Temperature is an important factor that must be taken into account when selecting the proper lubrication for a component. Certain machinery operates at higher temperatures, which can significantly reduce the life of a chain if it is not adequately protected. Choosing an improper lubricant for a chain operating in high temperatures can result in higher maintenance costs as well as a decrease in manufacturing output due to downtime. Understanding how a lubricant reacts to varying temperatures will help you select the appropriate chemistry for a chain application.

Lubrication Excellence Case Study: Increasing Wind Turbine Availability with an Effective Lubrication Program

William Berger, Duke Energy

Wind energy is a unique market segment that is just beginning to achieve a reliability mindset. Having a lubrication excellence program can help make wind more competitive with other forms of energy. This case study details how a lubrication excellence program was employed to increase and maintain wind turbine availability, lessons learned along the way and the program's current status. Attendees will discover the reliability challenges associated with wind energy, key elements of a lubrication excellence program, and equipment improvements and upgrades that can reduce risk.

Natural Gas Engine Oils: Applications in Oil and Natural Gas Production

Robert Scott, Noria Corporation

Within the crude oil and natural gas production industry, several applications require unique lubrication solutions. In this presentation, stationary natural gas engines and their lubrication will be discussed, including air/fuel ratios (lean burn engines), oil oxidation and nitration, oil change intervals, OEM requirements for viscosity and ash levels, oil cleanliness and filtration requirements, as well as used oil analysis.

Fill-for-life Turbine Oil: Fantasy or Reality?

Greg Livingstone, Fluitec

Turbine oils generally fail for one of three reasons – they degrade and form deposits (also known as sludge and varnish), they become contaminated, or they fail due to additive depletion. However, if all of the bad chemistries are removed from the turbine oil and the good chemistries are replenished, is it possible for turbine oil to last indefinitely? This session will detail the benefits and risks of additive replenishment and when to consider this approach.

Friction's Nemesis: Proper Lubrication

Bennett Fitch, Noria Corporation

Friction is a double agent for good and evil. Without friction, you wouldn't be able to perform critical tasks like slowing down a car or striking a match. However, friction also plays an antagonistic role in making it challenging to operate machines smoothly without any wear from contacting surfaces. In such instances, lubrication comes to the rescue. This session will cover the core basics of what friction is and why lubrication is so important.

Lubrication Case Studies: 30 Years of Real-world Experiences

Jorge Alarcon, IK4-Tekniker

These amazing case studies will allow attendees to see lubrication from many different points of view and in a variety of industries. Real-world situations will be presented where proper lubrication was the key to greater success and improved results. From lubrication fundamentals to proposed solutions, learn practical and theoretical lessons from each case study while discovering the effects and economic impact of a good lubrication program.

CERTIFICATION

Release your inner hero and set yourself apart as a leader among peers!

The International Council for Machinery Lubrication (ICML) will offer certification exam opportunities during RELIABLE PLANT 2014. Advanced registration is required. All exams will be conducted at the Henry B. Gonzalez Convention Center on Monday, April 21, from 5:30 p.m. to 8:30 p.m. and on Wednesday, April 23, 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 www.LubeCouncil.org or call 1-918-259-2950.

LEARNING SESSIONS



Should I Change My Oil?

Dave Wooton, Wooton-Consulting

When deciding whether to change your oil, there will be many questions that you will need to answer. These include how and when you should change your oil, as well as questions about alternative approaches such as top-up or bleed-and-feed methods and fluid remediation. The real question is what do you need to know for the change-out itself. This involves issues like flushing, oil selection, lube oil assessments, compatibility and testing requirements. After the oil change has been completed, you must then consider what is needed to determine its success. This session will offer guidance for these important operation questions.

Secrets to Attaining Lubrication Excellence

Jeremy Wright, Noria Corporation

Have you ever wondered what industry leaders are doing and what makes them leaders? In this presentation, the five main attributes of world-class organizations will be revealed. You will also learn what many companies do wrong when trying to transform to lubrication excellence so you can be sure to avoid the same mistakes and reap the benefits of becoming a top performer in the lubrication field.

Innovative Predictive Maintenance Techniques for Reciprocating Compressors

Michael Boken, Reciprocating Network Solutions

This presentation will address the issue of data analysis and failure modes of large reciprocating compressors operating in pipelines, refineries and chemical facilities. The various methods used to detect deterioration in reciprocating compressors will be explained, as well as how to apply specific condition monitoring techniques to reciprocating compressors while considering both the mechanical condition and performance. Attendees will learn about valve dynamics and failure modes, how to interpret pressure volume and pressure time curves, basic condition monitoring analysis for compressors and new cloud-based data networks for third-party diagnostics.

MAINTENANCE MANAGEMENT

Planning and Scheduling: A Case Study of Implementing a Planning and Scheduling Process at a Remote Gold Mine Operation

Mark Pliska, Sumitomo Metal Mining Pogo

The planning and scheduling process is an important aspect of any maintenance program. For a new gold mining operation in Alaska, it was crucial to the mine's success. This presentation looks at the planning and scheduling process that was implemented at the Pogo gold mine and the positive impact it made on the mine's operation. Attendees will learn the key aspects of planning and scheduling, the importance of having the operations team actively participate, utilizing a CMMS for planning and scheduling activities, and establishing KPIs to monitor the effectiveness of the process.

Creating a World-class Organization

Christopher Ahoy, Performance Management Consulting

What is world class? Why is it important to become a world-class organization? How can you achieve world-class status? How do you raise the bar in an organization to create high-level performance? This session will answer these questions as well as detail the benefits an organization can realize through lean and Six Sigma methodologies. Attendees will learn how implementing these processes will remove waste and why zero variance is important in developing products and services.

Employee Engagement: Driving Your Own Success

Thomas Hiatt, Covance Inc., Diane Closser, Closser Lubrication Services

Employee engagement is critical to the success of any business, but how can employees become engaged to better their career as well as the company's bottom line? This session will present the steps employees should take to become actively engaged in their company, including how to talk with management about career expectations, how to get yourself engaged in your current job, how to mentor others to become more engaged and what the payoff is for becoming engaged.

The Petrochemical Processing Instrumentation Crisis

Jason Deane, WIKA Instrumentation

As early alarm devices, gauges are highly important in detecting hazardous situations before they erupt. Failure or misapplication inhibits danger detection and turns the gauges into ticking time bombs, making accident prevention difficult. Due to decades of replacement with electronic sensors, most processing plants have lost knowledge on properly applying and maintaining mechanical gauges, leading to a dangerous situation where the readings have become unreliable. This presentation will explain the direct impact failing gauges have on productivity and safety, how and why mechanical gauges fail, dangers of inexperienced technicians conducting instrumentation maintenance, and the role of gauges in disaster prevention.

Steps to Audit and Benchmark Your Maintenance Planning and Scheduling Culture

Jeff Shiver, People and Processes Inc.

All too often organizations staff the maintenance planning and scheduling role without providing expectations. They also typically fail to train the rest of the organization on these roles and the required interaction for success. Remember, planning is about eliminating avoidable delays and driving craft efficiencies, while scheduling is all about setting an expectation of activities to be completed in the next schedule period. Both work together to drive equipment reliability. How effective is your organization in achieving these concepts? This presentation will describe an in-depth process to benchmark the maintenance planning and scheduling function within your organization.

A New Look at Criticality Analysis for Lubrication-enabled Machine Reliability

Jeremy Wright, Noria Corporation

How critical is your machine's reliability? What would be the consequences if it failed suddenly and catastrophically? Criticality is the logical starting point for all reliability initiatives. Once you understand machine criticality and a machine's risk profile, you can work smarter to customize improvements. This presentation will discuss the basics of lubrication-enabled machine reliability, the optimum reference state, the reliability-risk connection, associated calculations and how to de-risk a plant.

PM Optimization: An EAM Best Practice Overview

Mike Greenholtz, GenesisSolutions

Following asset criticality ranking, a preventive maintenance optimization (PMO) effort is the next step in achieving world-class reliability standards for a successful enterprise asset management program. The purpose of PMO is to refine maintenance tasks and frequencies in supporting a particular physical asset. In simple terms, PMO is performing the right work at the right frequency in the right way. Although there are a number of benefits of PMO, increasing your mean time between failures is one that will have a tremendous impact on the entire operation. This presentation will provide an overview of the PMO process, the expected outcome and the advantages of a successfully executed PM optimization effort.



The Importance of Precision Machine Alignment

Steve Lochard, LUDECA Inc.

Precision machine alignment can benefit an organization in four areas: energy savings, machine life, product quality and maintenance savings – all of which are essential toward achieving plant reliability and efficiency. This session will discuss the fundamentals of alignment as well as machine installation, soft foot conditions and developing true alignment targets. Learn how precision machinery alignment resolves premature failure and provides an important ingredient in reliability efforts for rotating equipment.

Solutions for Baby Boomer Retirement and the New Workforce

Bruce Wesner, Life Cycle Engineering

Concerned about your operation and the impending wave of Baby Boomer retirees? Troubled by the millennial generation and their perspective on tenure and job shifting? You're not alone. Your workforce is changing, and your ability to meet production and profit targets will be taxed as employees-for-life transition to employees with differing perspectives on tenure. A reliance on tribal knowledge and informal work practices will no longer suffice. This presentation will help managers address solutions to standardize operating procedures and maintenance processes. It will also include change management strategies for transferring knowledge and data in order to create an operating culture better designed to thrive during higher turnover.

Case Study: A Lean Journey with Continuous Improvement Tools and Methodology

Subramaniam Manivannan, Franklin Electric

Why should your organization be focused on continuous improvement? Why does a lean journey take so long and why is it so difficult? This case study will detail a new lean methodology for continuous improvement, including the various steps and tools required. Gain an understanding of how this new methodology can be applied for continuous improvement and integrated with Six Sigma, as well as how it can help facilitate solutions to an organization's most-challenging problems.

Minimize Downtime and Improve Safety by Preparing for Incidental Spills

Karen Hamel, New Pig

Incidental spills cause unplanned and unexpected downtime that alters production schedules and can lead to unsafe working conditions. Recognizing problem areas, training employees and stocking absorbents in key spill-prone areas will enable employees to respond to spills quickly, safely and effectively. In addition to offering good housekeeping practices that take less than five minutes a day, this presentation will explain the difference between incidental and emergency spills, why planning for incidental spill response is just as important as planning for worst-case spills, and how to train employees to respond to incidental spills safely and efficiently.

The Importance of Performing an Asset Criticality Ranking

Quinton GoForth, GenesisSolutions

The philosophy of improving the performance of critical assets is common knowledge when it comes to asset management. However, many organizations fail to fully understand the methodology behind formally ranking an asset as critical. Through proper development of an asset criticality ranking model, reliability engineering concepts can be applied to determine at what level each asset should be managed based on criticality. This is why asset criticality ranking is a key component to achieving enterprise asset management, as it is the primary mechanism needed to prioritize improvement activities when time and resource availability are limited.

Lessons Learned in Developing a Maintenance Program

Jay Edwards, MillerCoors

From concept through continuous improvement, see the different steps MillerCoors went through when developing its maintenance program for a new brewery, including what went right, what went wrong and how the organization grew from the lessons it learned. Find out how to evaluate current maintenance systems, the major processes that must be defined in order to build a maintenance system, what is required from engineering and OEM partners in the project, and the importance of standardization for equipment, training, PMs and schedules.

OIL ANALYSIS

Moisture Analysis of Lubricants Using Relative Humidity Sensor Technology

James Moore, Arizona Instrument

For oil-based lubricants, the presence of water is a significant concern, as it can decrease the lubricant's efficiency and cause premature wear. For these reasons, the water content in lubricants must be monitored. This presentation will describe a unique method for lubricant analysis that can help prevent machine breakdowns and reduce downtime, maintenance costs and throughput times for manufactured or processed goods. Discover the advantages of using relative humidity sensor instrumentation to monitor and measure moisture content in lubricants.

Making the Most of Your Oil Analysis Data

Gene Wagenseller, Analysts Inc.

Many organizations performing oil analysis don't utilize the data as effectively as possible. This session will review case studies on how trending oil analysis data can identify root causes and will explain how to optimize oil drain intervals using oil analysis. Attendees who are currently performing oil analysis will gain an understanding of how to better use the data they already have, while those not performing oil analysis will discover its benefits.

Advanced Oil Analysis Data Interpretation

Evan Zabawski, Fluid Life

Oil analysis data can be confusing, but it can be deciphered if you have the right information and tools. This session will discuss the various types of alarm limits, how they are applied and how to derive better ones. It will also explain how better alarm limits can enable deeper interpretation such as identifying patterns and trends, isolating bad actors and erroneous data. Attendees will learn about the inadequacies of the present reporting format of most used oil analysis reports and be shown an example of a much more efficient format that allows for easy data interpretation.

Using Online Particle Counting as a Condition-based Maintenance Tool

Steffen Nyman, C.C. Jensen

Particle counting is a valuable condition-based maintenance tool, but can the information be trusted? Errors can occur when performing manual oil sampling with bottles and sampling valves. Most of these uncertainties are addressed when monitoring particles continuously by means of a stationary online particle counter. In this presentation, several case studies will demonstrate how online particle counting can reduce operation and maintenance costs associated with downtime, component wear and oil replacement. Real-life examples will be included from power generation, wind and marine lubrication systems where online particle monitoring was used to foresee machine wear, avoiding large breakdowns.

Demystifying Varnish Analysis

Axel Wegner, C.C. Jensen

For more than a decade, much work has been done to study, interpret and explain varnish problems and their remedies. This presentation cuts through the fog of overwhelming information with a proven hands-on, real-life approach. In addition to the tools needed to evaluate, plan and execute oil conditioning programs, attendees will learn how to interpret lab reports, shorten planned outages, minimize unplanned outages, choose a good oil analysis provider and the right oil conditioner, as well as validate the benefits of a clean oil system for their machines.

Who Should Test and Evaluate Oil Samples?

Michael Hooper, Noria Corporation

Traditionally, oil analysis was handled by the original equipment manufacturer (OEM) or an independent commercial laboratory. Oil companies also offered the service, using either their own laboratory or a contracted commercial lab. Recently, portable, hand-held instruments have been developed for the military that are now affordable to industry. This presentation will describe the main options available for an oil analysis program, including the advantages and disadvantages for each choice.

LEARNING SESSIONS



Analytical Ferrography and Patch Analysis: A Case Study Review

Aaron Black, Polaris Laboratories

This presentation will discuss the use of microscopic analysis for fluid analysis purposes and review multiple applications of the technology through individual submitted samples. Attendees will be able to see real-world application of the technology and some of its capabilities as well as learn why you might request a microscopic analysis and why a given microscopic analysis type is selected.

How to Develop a Winning Relationship with Your Oil Analysis Lab

Cary Forgeron, Analysts Inc.

A surprising number of oil analysis practitioners rarely develop a working relationship with their oil analysis lab of choice. This leaves a large void in the lubrication program, which results in missed opportunities and prevents the program from truly becoming world class. When users express frustration with their oil analysis program, it is often due to a lack of understanding and communication between the user and their lab. This session will address how to avoid this trap and give attendees insight into how commercial oil labs operate so they can get the most out of the relationship.

Hydraulic Particle Counter Sample Preparation

Bill Bars, Hach Corporation

Inaccurate or inconsistent results during particle counting analysis are most often related to sample handling. These results can falsely indicate contamination levels that are either too low or too high. This presentation will provide several examples of incorrect sample preparation and subsequent solutions that will help remove variability and errors from the reported results. Walk through the fundamental elements of a petroleum-based fluid sample preparation and see some of the common mistakes made while collecting fluid samples.

How Oil Analysis Can Extend Machine Life

Loren Green, Noria Corporation

This session will describe how many organizations draw an oil sample from a piece of equipment, conduct a visual analysis of the sample and then consider it satisfactory if the sample is clear and bright. Discover why this method is not nearly good enough and how particles that cause the majority of equipment damage are smaller than can be seen with the naked eye. Attendees will also learn how lube oils can contain up to 0.1 percent water and still be bright, yet 75 percent of the bearing life may be lost with this level of water contamination.

Tricks, Tips and Traps of Oil Sampling

Bernie Hall, Checkfluid

Why should you use an oil sampling valve? Sampling valves allow you to sample oil anytime as well as more consistently, economically and conveniently. They also offer a faster, safer and cleaner method. This session will review the challenges of different oil sampling approaches and describe how using sampling valves can offer an opportunity for enhanced results. Attendees will also learn how data-rich samples deliver more reliable sample reports.

How to Calculate Viscosity Requirements for Rolling-element Bearings

Wes Cash, Noria Corporation

Viscosity is the most important physical property of a lubricant, but how does it really protect bearings and how much viscosity is enough? Errors in viscosity selection can translate into huge wear and energy losses over time. This session will explore the science behind viscosity as well as what influences it and how to calculate the viscosity needs of a rolling-element bearing.

Automated Wear Debris Analysis Case Studies

Sue Benes, FEI

Until recently, only limited insight into what might be taking place inside an engine, turbine or gearbox was available. Exact particle-by-particle sizing with related chemical composition has traditionally been out of reach. However, a new automated particle analysis technique vastly improves the sheer number of particles that can be analyzed while offering reproducibility. This new approach to wear debris monitoring can help predict future failures, leading to increased cost savings. In this session, distinct differences in particle trending will be demonstrated, as well as sensitivity to elemental detection or individual particle chemistries.

Oil Analysis Case Studies: Overcoming Common Problems and Challenges with Lube Oil Condition Monitoring

Saeed Asiri, Saudi Aramco

Based on Saudi Aramco's experiences over the past few decades, these interesting case studies show the importance of oil analysis as a proactive and predictive maintenance tool. Discover the benefits of lube oil condition monitoring, the types of oil and equipment to monitor, and how to overcome common oil analysis challenges. This session will also cover equipment selection criteria, making continuous improvement, how to manage data to ensure all remedial actions are taken in a timely manner and the usefulness of oil analysis in detecting equipment operating problems.

Determining the Best-practice Oil Sampling Location and Procedure

Bennett Fitch, Noria Corporation

This presentation will explain what you should consider when taking an oil sample. Among the topics to be discussed include where and when samples should be taken based on the type of machine and operating conditions, as well as the proper way to obtain an oil sample so you can get the most value for your money without wasting time.



How to Introduce a Reliability Program

Paul Bonorden, INVISTA

What does a company need to consider before implementing a new reliability program? There are many justifications and benefits that can be used to sell a program other than the data you get from your computerized maintenance management system (CMMS). Changing the organization's culture is a key component that is often not addressed and is a primary reason for a program not taking permanent root. This session will detail the important elements that must be addressed early in the development of a new program. Learn how INVISTA implemented a reliability program that has been going strong for five years and how it spawned additional reliability endeavors.

Strategic vs. Tactile Reliability

Jay Shellogg, Consultant/Civil Engineer

Reliability is not driven by software or technology but rather by people who know that the principles of reliability-centered maintenance accurately model how assets behave. Indeed, there must be a change in focus from implementing software and technology to educating your team on the principles of reliability that should govern their decision-making. This session will discuss the battle between strategic application of reliability principles and the application of tactical fixes centered on process-driven changes without first establishing the foundational principles of reliability.



Improving Equipment Reliability Through Root Cause Failure Analysis

Allan Andreycak, W.R. Grace, Chris Nowlen, Lubrication Engineers

Many plants experience premature bearing failures on machines due to corrosion and lubricant contamination. This presentation will show how root cause failure analysis and modern technologies such as specialized bearing construction and automatic lubrication can help reduce these bearing failures. Attendees will learn not only how this approach can be applied to the challenges they face with their equipment but also how selection of the appropriate construction materials can have a positive impact on machinery reliability.

Root Cause Analysis: From Detection to Implementation

John Martinez, Tate & Lyle, Justin Stover, C.C. Jensen Inc.

Follow the struggles Tate and Lyle's manufacturing plant experienced when addressing its root cause problems and see how it overcame the roadblocks. This case-study presentation will show how to create a root cause analysis program, including how to detect and track problems, gather information, write reports, conduct meetings and implement changes. Attendees will also learn how to obtain buy-in for changes, how to get more people involved in the solution process, how to avoid finger-pointing and how to determine when to consider a failure a root cause problem.

Value Delivery Through Reliability Leadership

Terrence O'Hanlon, Reliabilityweb.com

Reliability is an important part of an asset management plan and a key enabler of effective value delivery from assets. For more than 30 years, most of the modern approaches to reliability and effective maintenance service delivery have been well-documented, yet most organizations fail to achieve sustainable value delivery from these activities. Many stakeholders may not fully appreciate how their work fits into asset reliability and what role their work plays in supporting the aim of the organization in the context of its asset management activities. This session will provide a holistic system for reliability and a new way of thinking about delivering value from assets.

Techniques for Improving Machinery Reliability

Ian McKinnon, Reliability Solutions

How is it that we fail to recognize the value of further asset improvements to gain reliability, production enhancement, manufacturing cost and energy conservation with correct application of on-the-floor skill sets? We need to consider how "mechanical" failures can be much more than just mechanical craft issues and how these failures also include electrical, instrumentation, production, engineering, purchasing and other groups. This session takes a brief glimpse into how maintenance and reliability professionals continue to concentrate on technologies to find failures with little or no emphasis on real and measurable asset improvement.

Autonomous Maintenance for Better Plant Reliability

Pruet Kampee, PTT Public Co.

When autonomous maintenance was implemented at the PTT gas separation plant, the goal was to eliminate the root causes of equipment failure by improving the skills of operations personnel. The success of the 10-year project was attributed to the continuous improvement and culture change that occurred at the plant, which resulted in greater reliability. Learn the tricks and traps that PTT discovered along the way as well as the recommended practices for developing total productive maintenance.

Best Practices for Electrical System Reliability

Alan Ross, SD Myers

A significant and growing risk for unplanned outages and lost production has been on the increase over the past decade due to critical power transformer failures. This session will examine the root causes of these increasing failures and describe how

proper testing, maintaining and monitoring of critical transformers can lead to a more reliable, low-cost electrical system for reduced downtime and better asset management. Attendees will learn best practices for transformer oil testing, how to maximize the cost-effective life of an electrical system and how to avoid unplanned outages

CONTAMINATION CONTROL

What to Consider Before Changing Your Vehicle's Oil and Filter

Jerry Putt, Noria Corporation

This presentation will explain what you should consider in order to select the appropriate lubricant and filter for your vehicle, as well as what drives the timing for an oil change. There are many misconceptions about this basic task that is performed on one of our most valuable possessions. While this session will focus on vehicle

maintenance, much of what will be covered will be relevant to a wide range of machinery lubrication applications. Among the topics discussed will include how various lubricant types influence engine life, whether OEM filters are the best choice, how to read an oil can, what additives do in oil and how they are impacted by extended oil change intervals.

Methods for Evaluating Oil Filter Performance

Kal Farooq, Pall Corporation

Understanding the performance characteristics of filters is essential for providing the best protection for fluid power and lubrication systems. The multi-pass test (ISO 16889) is the most widely used filter performance test method. Due to its limited scope, this test method does not capture some of the key filter characteristics that are important in modern systems, such as removal efficiency under cyclic flow conditions. This presentation will describe the multi-pass test and a relatively new test method (SAE ARP 4205) that is designed to examine filter performance under cyclic flow conditions.

Roll-off Cleanliness: An Important Factor to Control Cost

Dan Zoller, Schroeder/HYDAC

Contamination control is an important part of the manufacturing and assembly process. Fluid cleanliness has a direct influence on system efficiency, warranty and operating costs. This session will outline strategies to improve fluid and hydraulic system condition in order to achieve lower costs and extend the life expectancy of fluid and equipment. Discover how to identify contamination levels in hydraulic fluids and the sources of contamination during manufacturing and assembly, as well as how to effectively control contamination.

A More Cost-effective Alternative for Flushing Turbine Oil Systems

Greg Livingstone, Fluitec

An effective technique for flushing deposits out of turbine oil systems employs the use of a detergent/dispersant cleaning solution. The downside of this method is that the cleaning agent is incompatible with the turbine oil, destroying its water and air separation characteristics. This presentation will describe the less expensive option of using a compatible cleaner to remove oil degradation products from a turbine oil system. Case studies will show when this method is appropriate and which system problems should be matched with other oil flushing techniques.

Using ISO Standards for the Selection and Application of Hydraulic Filters

Eric Krause, Pall Corporation

Many end users do not know which hydraulic filter to choose based on their application. This session will explain how to use ISO standards to select the proper filtration for hydraulic systems. Among the topics discussed will be the ISO cleanliness coding system, filter-sizing criteria, how to determine a system's required cleanliness level and the minimum recommended filter rating based on various environmental factors.

Why Today's Regulations Demand a Comprehensive Fuel Filtration Approach

Kristine Mikulan, HYDAC

Reducing particle and water contamination in diesel fuels is essential to fulfill the latest EPA standards and ensure uninterrupted, cost-effective operation. Today's high-pressure common-rail diesel engines have been designed specifically to meet Tier 4 emission levels and demand complete particulate and water removal. This session will show how filter systems can achieve the required low diesel fuel contaminating levels, why fuel filtration is needed, how to remove particles and water from diesel fuel, and strategies for an effective diesel fuel conditioning process.

Understanding Filter Debris Analysis

Scott Shoemaker, Analysts Inc.

Wear metals and contaminants are sometimes overlooked in routine oil analysis due to the size and source of material. Many people are not aware of the options offered by filter analysis for identifying larger debris that is not detected through routine spectroscopy. This session will discuss the history of filter debris analysis, how to identify contaminants and sources of filter debris, and how to choose the right test procedure based on detection limits.

2
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WHO?

All registered attendees can participate in the GARAGE TOOL KIT show-prize giveaway. This year, **TWO LUCKY WINNERS** will receive extreme tool kits worthy of outfitting the most spectacular garage or shop.

HOW?

Check out the latest products and services from sponsoring companies in the exhibit hall – just stop by each sponsoring company's booth during the show, get your entry card stamped and turn in your completed card by 11 a.m. on Thursday, April 24, 2014.

WHAT?

TWO Reliable Plant 2014 attendees will win an **EXTREME GARAGE TOOL KIT INCLUDING WORKBENCHES, PREMIUM HEAVY-DUTY TOOL CHESTS, ROLLING CABINETS AND LOTS OF EXTRAS!**

Every hero has an arsenal of tools in his "bat cave" – here's a chance to outfit yours!

Giveaway tool prizes may be different from what is depicted in the photo above. Tool ensembles will be purchased in advance and provided by a dealer of Noria's choice. Winning entrants are responsible for 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 prizes onsite in San Antonio, Texas.

WHEN & WHERE?

A random drawing will take place at 11:15 a.m. on Thursday, April 24, 2014, at the Noria 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, just one more great reason to attend Reliable Plant 2014 in San Antonio.

Giveaway sponsored by:

Air Sentry, ALS Tribology, Analysts, Inc., Argo-Hytos, Inc., A.T.S. Electrolube International, Inc., Azima DLI, CheckFluid, Inc., Emerson Process Management, Esco Products, Inc., FEI, Fluidall, Fluitec International, Harvard Corporation, HYDAC/Schroeder Industries, Hy-Pro Filtration, Indiana Bottle Company, Inpro/Seal Company, Intertek, Liquiddynamics, Lubrication Engineers, Inc., Ludeca, Inc., MP Filtri USA, Nexus Global Business Solutions Inc., Noria Corporation, Oil Filtration Systems LLC, Pall Corporation, PerkinElmer, Inc., Plews Edelman/Ultralube, POLARIS Laboratories, Royal Manufacturing, SD Meyers, Inc., SGS Herguth Laboratories, Inc., Shell Lubricants (Sopos Products US), SKF USA, Inc., Specialty Manufacturing, Inc., SPM Instrument, Total Lubrication Management/Colfax Fluid Handling, Y2K Fluid Power

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 or
 Local: 1-918-749-1400
 Monday through Friday
 8:00 a.m. to 5:00 p.m. (CST)

Mail:

Send your registration form
 with payment or purchase order to:
 Noria Corporation
 1328 E. 43rd Ct.
 Tulsa, OK 74105 U.S.A.

Onsite:

Monday, April 21 7:00 a.m. – 6:00 p.m.
 Tuesday, April 22 7:00 a.m. – 6:00 p.m.
 Wednesday, April 23 7:00 a.m. – 6:00 p.m.
 Thursday, April 24 7:00 a.m. – 11:00 a.m.

REGISTER NOW AND SAVE!	Full-Conference Registration	
	On or before February 20, 2014 . . . \$795	After March 20, 2014 \$1,095
	On or before March 20, 2014. . . . \$895	

Full-Conference Registration Includes:

- Admission to all conference sessions (Tuesday-Thursday)
- Conference proceedings in CD-ROM format
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- Lunches in the exhibit hall (Tuesday-Wednesday)
- Daily refreshment breaks (Tuesday-Thursday)
- Daily continental breakfasts (Tuesday-Thursday)
- Networking receptions (Tuesday-Wednesday)
- FREE Noria training coupon, valued at \$1,195

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- Lunch in the exhibition hall for one day (Tuesday or Wednesday)
- Day's refreshment breaks
- Day's continental breakfast
- Day's reception (Tuesday and Wednesday)

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With exhibitor guest pass (all 3 days) FREE
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Pre-Conference Workshops

Monday, April 21
 Half-day workshop (with full-conference registration) \$225
 Half-day (workshop only) \$295

Workshop registration includes:

- Course materials
- Refreshment breaks
- Opening general session (Tuesday only)
- Exhibition hall access

Spouse/Family Registration \$195

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- Exhibition hall access
- Daily lunches in the exhibition hall (Tuesday-Wednesday)
- Daily continental breakfasts (Tuesday-Thursday)
- Receptions in the exhibition hall (Tuesday-Wednesday)

Group Discounts

3 to 9 attendees: Purchase three or more full-conference registrations for only \$595 each, plus a 30 percent discount on all pre-conference workshop fees.

10 or more attendees: Purchase 10 or more full-conference registrations for only \$495 each, plus a 30 percent discount on all pre-conference workshop fees.

Cancellations must be in writing and postmarked by March 24, 2014. 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.

REGISTRATION FORM



4 WAYS TO REGISTER

ONLINE: Conference.ReliablePlant.com

BY FAX:

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

BY PHONE:

Mon - Fri, 8 am - 5 pm (CST) 800-597-5460 or 918-749-1400

BY MAIL:

Send this form and payment: c/o Noria Corporation 1328 E. 43rd Ct. Tulsa, OK 74105 U.S.A.

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 _____

First Name for Badge _____

Title _____

Company _____

Address 1 _____

Address 2 _____

City _____ State/Province _____

Zip/Postal Code _____ Country _____

E-mail (required) _____

Phone Number (required) _____

CONFERENCE FEES

Individual Full Conference

- 2/21/14 - 3/20/14.....\$895
- After 3/20/14\$1,095

Individual 1-Day

Guest

- Individual 1-Day.....\$395
- Guest/Spouse/Family.... \$195
- Exhibition Hall Only.....\$65 (Must accompany paid attendee)

BEST VALUE! Group Discounts

3 to 9 full-conference registrations for only \$595 each; **10 or more** \$495 each. Group discounts include a 30-percent discount on pre-conference workshop fees. Group registrations must be purchased at the same time. Call 800-597-5460 to take advantage of this offer.

PRE-CONFERENCE WORKSHOPS

SAVE with Full Registration

Monday, April 21

- Managing the Implementation Stage of a World-Class Lubrication Program.....\$295..... **\$225**
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- Interpreting Oil Analysis Reports.....\$295..... **\$225**
- Lubrication Excellence Manager's Summit ..\$295..... **\$225**

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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.
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Cancellations/Substitutions: Cancellations must be in writing and postmarked by March 15, 2014. 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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registrations@noria.com

Exhibit Space Sales & Sponsorship

Tim Davidson
Toll Free: 1-800-597-5460
or 1-918-392-5052
tdavidson@noria.com

Marketing Support

Gina Godfrey
Toll Free: 1-800-597-5460
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2014 ADVISORY COUNCIL

The Reliable Plant Advisory Council is comprised of industry experts who share their knowledge, experience, opinions and time to assure that the annual conference exceeds attendee and exhibitor expectations. These individuals convene to advise, share fresh perspectives, gauge future trends, evaluate and debate issues, and arrive at a mutual consensus for enhanced programs and strategic approaches. The advisory council is integral to the continued success of the 2014 Reliable Plant Conference and Exhibition.

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