Attend. Learn. Apply.

“...You have a one-stop shop for all these experts in one event.”

– Ray Ardahji, Michiana Lean

Conference.ReliablePlant.com
WHAT IS RELIABLE PLANT?

For 20 years, the Reliable Plant Conference & Exhibition has proven to be the only place to find technical excellence, cutting-edge technologies and proven solutions for the maintenance and reliability industry. For our platinum anniversary, Reliable Plant heads back to the rock-and-roll capital of the world.

With an established and global reputation for technical excellence, Reliable Plant brings together key plant and maintenance managers, as well as reliability professionals from across the world. Spanning four days, Reliable Plant 2019 includes workshops, learning sessions and case studies designed to upgrade the skills and knowledge of attendees. The conference will also feature approximately 100 exhibitors in a 90,000-square-foot exhibit hall inside the Huntington Convention Center of Cleveland, located minutes from the Rock & Roll Hall of Fame.

In 2018, more than 1,000 attendees from 40 states, 32 countries and 130 exhibition companies came together to share ideas, solutions and information. Join us in Cleveland as we celebrate 20 years of providing maintenance and reliability solutions to our industry.

SCHEDULE

Monday, April 15
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 16
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 in Exhibit Hall
5:30 p.m. – 6:30 p.m. ................. Meet and Greet Reception
6:00 p.m. – 8:00 p.m. ............... SMRP Certification Testing
9:30 a.m. – 6:30 p.m. ................. Exhibition Hours

Wednesday, April 17
7:00 a.m. – 7:50 a.m. ............... Offsite Prayer Breakfast
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 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. – 3:20 p.m. ............... Conference Sessions
3:20 p.m. – 4:20 p.m. ............... Refreshment Break in Exhibit Hall
4:30 p.m. – 5:20 p.m. ............... Conference Sessions
5:30 p.m. – 7:30 p.m. ............... Networking Reception
6:00 p.m. – 9:00 p.m. ............... ICML Certification Testing
9:30 a.m. – 5:30 p.m. ................. Exhibition Hours

Thursday, April 18
7:30 a.m. – 11:00 a.m. .............. Onsite Registration
7:30 a.m. – 8:00 a.m. ................. Continental Breakfast
8:00 a.m. – 8:50 a.m. ............... Conference Sessions
8:50 a.m. – 9:20 a.m. ............ Refreshment Break in Exhibit Hall
9:20 a.m. – 11:10 a.m. .............. Conference Sessions
11:30 a.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
TOP 10 REASONS TO ATTEND

Reliable Plant covers every facet of reliability in one four-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 immediately** – address specific issues

6. **Save money** – deduct conference expenses on your taxes

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

10. **Invest in your company** – capture information and apply what you’ve learned on the job

WHO ATTENDS?

As a reliability professional, 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 20th annual Reliable Plant Conference & Exhibition to network with and gather information from the following attendees:

- Asset Care Planners
- CBM Coordinators & 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 & Reliability
- Mechanical Engineers
- Operations Managers
- PdM Analysts & Specialists
- Planners & Schedulers
- Plant Managers & Engineers
- Project Leaders
- Quality Managers
- Reliability Coordinators
- Reliability Engineers
- Reliability Team Leaders
- Reliability Technicians
- Safety Managers & Directors
- Senior Reliability Engineers
- TPM Coordinators & Facilitators

...and more
Keynote

BATTLE-TESTED PRINCIPLES FOR WORLD-CLASS LEADERSHIP

Mark McGinnis
Tuesday, April 17th
8:00 - 9:20 a.m.

Originally from Monroe, North Carolina, Commander Mark McGinnis began his military career at the United States Naval Academy where he was a four-year member of the varsity football team. After graduating from the USNA in 1993, Commander McGinnis went on to achieve a decorated 17-year career defending his country as a U.S. Navy SEAL. During his time as a SEAL, he led over 400 missions successfully while never losing a member in battle. Following his time in the service, he moved into the public sector, working as a regional sales director for a Fortune 500 medical company. Drawing on his experiences from the military, athletics and the corporate world, he founded SEAL Leadership LLC, through which he advocates a message of communication, accountability and teamwork. Commander McGinnis’ experience allows him to lead his clients through the process of attaining a SEAL-like level of elite performance that is equal parts inspiring, captivating and challenging.

For more about Reliable Plant 2019, visit Conference.ReliablePlant.com.
Reliable Plant Conference & Exhibition celebrates its 20th anniversary in April, and to commemorate the event, we are giving away 20 prizes!

One lucky Reliable Plant attendee will experience the magic at Walt Disney World in Florida by winning the grand-prize package that includes round-trip air fare to Orlando for four people, five nights at a Disney property, four 4-day Park Hopper passes, a dining package and transfers from the airport to the hotel. In addition to the grand prize, 19 Reliable Plant attendees will have the opportunity to win amazing giveaways. Below are a few prizes you could win:

> Echo Spot
> Apple Watch Series 3
> iRobot Roomba 690y
> Ring Video Doorbell 2
> Samsung 55” 4K HDTV
> Fire HD 10 Tablet
> Apple iPad
> Makita 18V 5-Piece Combo Kit
> DEWALT 20V 7-Tool Combo Kit
> And much more!

Learn more at Conference.ReliablePlant.com/giveaway/.
Certificate Programs

In addition to more than 90 learning sessions, Reliable Plant provides conference attendees with the opportunity to participate in specialized certificate programs. Presented by industry experts, each certificate program offers a customized learning path consisting of a half-day pre-conference workshop and four learning sessions on key topics that every maintenance and reliability professional needs to know. Along with a full-conference registration and workshop, program participants will receive:

> Certificate of Completion
> Noria Bookstore Bundle

Visit Conference.ReliablePlant.com for more information, pricing and details for all certificate programs.

MAINTENANCE MANAGEMENT
Key Principles and Best Practices for Better Maintenance Management
Christer Idhammar and Owe Forsberg, IDCON
Monday, April 15 | 8-11:30 a.m.

Learning Sessions:
> Practical Steps to Optimizing Your Preventive Maintenance Program - Nathan Wright, IDCON
> How to Manage Plant Shutdowns and Turnarounds - Owe Forsberg, IDCON
> Harnessing the Power of Root Cause Investigations - Nathan Wright, IDCON
> Techniques and KPIs for Effective Backlog Management - Owe Forsberg, IDCON

CONDITION MONITORING
How to Integrate Multiple Condition Monitoring Technologies for Maximum Reliability
Walter Barringer, Allied Reliability
Monday, April 15 | 1-4:30 p.m.

Learning Sessions:
> The Power of Integrating Onsite and Offsite Oil Sample Data with Machine Learning and the IIoT - Matt Spurlock, Allied Reliability
> How to Use Vibration Analysis to Identify Equipment Problems - Walter Barringer, Allied Reliability
> Understanding the Complexities of Ultrasound for Machine Condition Monitoring - T.J. Garten, Allied Reliability
> Common Traps of Infrared Thermography and How to Avoid Them - T.J. Garten, Allied Reliability

PLANT MAINTENANCE DIGITALIZATION
Maintenance Digitalization: Improving Workforce Productivity and Compliance
Paul Muir, Mobideo
Monday, April 15 | 8-11:30 a.m.

Learning Sessions:
> Understanding Digitalization and How It Can Optimize Complex Maintenance Activities - Paul Muir, Mobideo
> Strategies for Integrating the Connected Worker, the Connected Manager and the Connected Machine - Paul Muir, Mobideo
> Panel Discussion: Common Questions and Challenges in the Journey to Plant Maintenance Digitalization - Paul Muir, Mobideo
> Exploring the Future of Maintenance - Jeremy Wright, Advanced Technology Services

PLANNING & SCHEDULING
8 Steps to Successful Maintenance Planning
Jeff Shiver, People and Processes
Monday, April 15 | 1-4:30 p.m.

Learning Sessions:
> How to Create an Effective Maintenance Planning and Storeroom Partnership - Jeff Shiver, People and Processes
> Finding True North with Your Maintenance Scheduling - Jeff Shiver, People and Processes
> Maintenance Metrics and KPIs: Drive Behavior by Measuring What You Treasure - Jeff Shiver, People and Processes
> Actionable Approaches for Continuously Improving Your Planning and Scheduling Processes - Jeff Shiver, People and Processes
PRE-CONFERENCE WORKSHOPS
Monday, April 15 | 8-11:30 a.m.

Key Principles and Best Practices for Better Maintenance Management - Christer Idhammar and Owe Forsberg, IDCON
Success in maintenance management requires a framework that must be followed and understood by the organization as a whole. This principle applies whether you are an area supervisor, maintenance manager, plant manager or corporate vice president. Unreliable equipment creates pressure that is felt by everyone in the plant. Most managers in the maintenance profession have a difficult time focusing on the future because they are too busy trying to make the plant run today. There should be a better way. What are the steps for turning around an unreliable plant? This workshop will provide a deeper understanding of the business processes that support effective plant maintenance. Attendees will learn the thought processes to help them hone in on the right things, as well as discover how to implement maintenance management best practices.

PRE-CONFERENCE WORKSHOPS
Monday, April 15 | 1-4:30 p.m.

How to Integrate Multiple Condition Monitoring Technologies for Maximum Reliability - Walter Barringer, Allied Reliability
How do the “big four” condition monitoring technologies work and what can they tell you about your machinery and your equipment's condition? This workshop will focus on the four primary condition monitoring technologies: vibration, infrared thermography, ultrasound and oil analysis. Beginning with an explanation of the applications for each technology, Walter Barringer will cover what the technologies can and cannot do when integrated into a condition monitoring program. Attendees will learn how each of the four primary technologies works, when and where to apply each technology, which technologies to start with first in a new condition monitoring program, and how to choose equipment for inclusion in the program.

8 Steps to Successful Maintenance Planning - Jeff Shiver, People and Processes
Studies have shown that only one in 10 maintenance planners and schedulers is utilized effectively. Often these individuals are distracted by almost everything but planning, such as shagging parts for jobs in progress, performing fire-extinguisher inspections or managing contractors. In this workshop, you will discover how to establish business processes for better maintenance planning and scheduling, including how to define roles and responsibilities, train and coach the planner function, create partnerships with specific stakeholders, develop and organize precision job plans, and leverage feedback for continuous improvement. In addition to learning how to minimize distractions, attendees will also gain insights for developing and improving their planning performance regardless of the current state of their maintenance planning.
Successful deployments of the internet of things (IoT) typically are difficult, fragmented, impractical and messy. A holistic approach is often required to overcome the barriers to IoT development and achieve a connected reliability environment. This workshop will explain why you should not just be looking to connect one asset or one level of operation, but how managing connected assets should be the new standard for reliability practices in the future. You will hear how organizations are reaping the benefits of data-connected reliability applications that involve critical assets, as well as how data aggregation can boost reliability.

POST-CONFERENCE WORKSHOPS
Thursday, April 18 | 1-4:30 p.m.

Designing andProcuring Equipment to Increase Reliability - 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 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.

SuccessIRies 201: Hands-on Thermography Workshop - Jim Seffrin, Infraspection Institute

One of the most challenging steps for a thermographer is leaving the classroom and using an infrared imager in the real world. While thermography is a science, it is also an art or craft requiring a skilled human operator for both conducting the inspection and interpreting the data obtained. This workshop will provide hands-on time with infrared imagers to help attendees learn more about infrared thermography. Participants will work with an experienced instructor in small groups while focusing on basic infrared techniques, common applications and infrared support, including standards, program management and development, and reporting techniques.

DON’T MISS INSIGHTFUL CASE STUDIES FROM THESE INDUSTRY LEADERS...
Here's a quick look at some of the more than 70+ learning sessions. New sessions are being added weekly, so stay up-to-date by visiting Conference.ReliablePlant.com.

**Operational Reliability: What It Is and How You Can Achieve It** - George Williams and Joe Anderson, B. Braun Medical

Maintenance departments are often the scapegoat for plant problems, but without the support of operations, maintenance cannot be successful holistically. This presentation will explain what operational reliability is and how it can be used to help knock down the silos on your journey to a more reliable plant. You will discover how to get your operations group engaged in maintenance, which tasks operations can perform to alleviate strain on maintenance resources and how to develop basic preventive maintenance procedures for operators.

**Driving a Maintenance Culture Change Through Strategic Supplier Partnerships** - Douglas Smith, Conagra Foods, and Conor Flaherty, Rilco Fluid Care - Predictive Services

This case-study presentation will detail the journey the Conagra Foods’ plant in Fort Madison, Iowa, took to become more proactive with its maintenance practices. Douglas Smith and Conor Flaherty will share how the plant has built a strategic partnership with its vendors and how that partnership has been used to create a culture change within the maintenance group and beyond. Attendees will hear real-life examples and learn the keys to making a vendor partnership work, the difference between a vendor supplier and a vendor partner, and how to overcome past failures and turn them into successes.

**Root Cause Analysis and Implementation: A Case Study** - Ashley Troyer, Lockheed Martin

This case-study presentation will explain how root cause analysis was performed on a 10-year-old cooling tower to identify the real issues behind the recent failures and related costs. Lockheed Martin's Ashley Troyer will describe the evidence found during root cause analysis and the actions taken to improve the reliability of the cooling tower along with its current performance. Attendees will learn the importance of using forensic evidence to steer maintenance actions in the right direction and prevent or minimize future equipment failures, which is key in changing your maintenance efforts from reactive to proactive.

**Case Study: How Saudi Aramco Performed a Successful Plant Turnaround and Inspection** - Omar Alsahlawi, Saudi Aramco

This case-study presentation will detail Saudi Aramco’s journey to plant turnaround and inspection (T&I) success. Even with proper planning and effective leadership, most plant turnarounds and inspections can be challenging. However, Saudi Aramco’s T&Is had become more difficult, as they were aligned with several capital projects, including vessel replacements where huge pressure traps were being changed out. Attendees will hear the processes, procedures, best practices, new technologies and innovations that helped Saudi Aramco achieve improved results with its safety, productivity, maintenance and reliability.

**From Firefighting to First-class Maintenance: A Never-ending Battle** - George Miconi and Don McDaniel, Worthington Industries (Steel Division)

This case-study presentation will provide a detailed roadmap to a sound maintenance program so you can improve machine uptime at your organization. Join Worthington Industries' Don McDaniel and George Miconi as they share the path their company took to transition from being reactive to becoming more proactive and achieving greater uptime. You will hear why communication is key, how to determine the root cause of problems, why change is your friend and how anyone can develop a team of first-class maintenance technicians.

**How to Develop and Implement Better Maintenance Processes** - Dave Ashbourne, EPCOR

This case-study presentation will explain how you can drive continuous improvement at your plant by developing and implementing better maintenance processes. Whether you are a maintenance leader or are aspiring to become one, you will want to join EPCOR's Dave Ashbourne as he describes how his plant was able to achieve a dramatic increase in reliability and key performance indicators (KPIs), along with an engaged workforce. Attendees will learn specific ways to improve maintenance performance, become a better leader and manage change at their facility.
Advantages of Predictive Energy Management - Kevin Grider, General Motors
In this case-study presentation, General Motors’ Kevin Grider will discuss utilizing predictive technologies to identify and mitigate energy waste, especially as it relates to compressed air and steam heat. Attendees will see how the General Motors Marion Metal Center developed a process for reporting, verifying, quantifying and compiling results, as well as the communication with the utility company that has resulted in incentives. You will learn what waste is, what it costs, what you can do about it and which technologies to use to detect it.

How to Implement an Effective Machine Alignment Program - Joe Anderson, B. Braun Medical, and Frank Seidenthal, Ludeca
Precision machine alignment is a critical ingredient in your reliability efforts. A good alignment program can identify and eliminate misalignment as a cause of equipment failures, resulting in more uptime, reduced repair and labor costs, and increased profits. However, implementing an effective alignment program poses many challenges. This presentation will discuss the importance of establishing proper alignment procedures and employing best practices. When employees receive thorough training and detailed job specifications, they will be prepared to safely complete tasks correctly. Attendees will hear lessons learned from failed and successful programs as well as find out how to gain buy-in to sustain a best-in-class program.

Case Study: How to Develop and Manage Your Plant’s Maintenance Strategy - Gilberto Rodriguez Ledezma, M&G Resins
This case-study presentation will describe the process of developing and managing a maintenance strategy for the world’s largest polyethylene terephthalate (PET) plant. Join Gilberto Rodriguez Ledezma of M&G Resins as he explains the difference between the perception of what’s happening in the maintenance department versus the reality in order to help you define the right strategy for your plant. You will gain a better understanding of the best practices and lessons learned using different maintenance methodologies, key performance indicators (KPIs) for maintenance, and what the next generation of maintenance may hold.

Leading Your Team to Greater Reliability - Terry Harris, Reliable Process Solutions
To have an effective reliability process, you must have effective leadership. This session will look at all the areas that should be addressed to lead your team to greater reliability. Attendees will gain a better understanding of the value and payback of training programs, the importance of skills audits to develop employee training, how to get people engaged in the reliability process, and how to become a true leader and not just a manager.

Maximizing the Potential of Underutilized Maintenance Team Members - Michael Mazur, Schwan’s Global Supply Chain
In plants that operate around the clock, the night-shift crew can be a source of exceptional accomplishments, but not if they are unrecognized, unsupported or even diminished in standing by other team members. This case-study presentation will explain why the probability of turnover will be high if personnel are not properly trained, directed and supported. Schwan’s Michael Mazur will reveal how small actions and inactions over time can lead to a state of unfulfilled potential. You will find out why communication is key and how management, supervisors, team leaders and other plant departments can support and position the third shift for success.
Maintenance Metrics and KPIs: Drive Behavior by Measuring What You Treasure
- Jeff Shiver, People and Processes
Do you have valid and actionable metrics? Some companies don’t know where to start, while others are simply overwhelmed, leading to analysis paralysis. The focus must be on tying maintenance metrics, especially those from a planning and scheduling perspective, to business objectives in a holistic strategy. With the right metrics, you can measure the collective success of the organization and the individual contributions of the planner/scheduler function. This presentation will identify metrics that can do both. You will learn which metrics are leading and which are lagging indicators, as well as how to define meaningful measures that drive the right behaviors and yield actionable results.

Case Study: Transforming Your Maintenance Storeroom from an Expense to an Asset
- Ryan Botelho, Home Market Foods
This case-study presentation will detail Home Market Foods’ journey to reliability with its maintenance storeroom management. Cost-saving activities had been focused on unit costs instead of value, while inefficient inventory practices were limiting the ability for maintenance technicians to find the right part when they needed it. Labor and material costs also continued to rise. See how supply chain management techniques were used to gain better control of the maintenance storeroom as well as how proper inventory management improved the organization’s ability to provide job plans and become more task-based. This planning has increased uptime and maintenance labor productivity.

IoT Fundamentals for Non-IT Reliability Professionals
- Mary Jo Nye, On Now Digital
Industrial organizations are increasingly integrating internet of things (IoT) technologies. Unfortunately, these implementations can often create ambiguity or confusion among operations and reliability departments. Plant professionals who are interested in using IoT technologies to monitor or control their devices must be familiar with the nuances and viability of different types of products. This panel discussion will act as a platform for learning practical and quantifiable selection criteria geared toward operations and reliability professionals. Bringing expertise and experience from different industries, the panelists will discuss IoT device selection, security considerations, resource requirements, interoperability and total cost of ownership, with a special focus toward industrial applications.

How to Monitor and Analyze Gearboxes with Vibration and Ultrasonic Inspections
- Mario Guilherme Silva Rupf, FLSmidth
This case-study presentation will reveal the results from monitoring gearboxes used for general mining applications in Brazil. You will gain a better understanding of the relationship between vibration, ultrasound and viscosity, as well as the impact of contamination on a gearbox. Attendees will learn how to utilize proper condition monitoring tools to identify failure modes and avoid damage to gears and bearings, along with why it is important to use the data collected in predictive maintenance for successful proactive maintenance.

9 Steps to a High-Performance Maintenance Team
- Simon Murray, YourMaintenanceCoach
The maintenance department is critical to any organization, but in many instances, it is seen as just a cost to the business. However, in successful organizations, the maintenance department leads the way with excellent teamwork and demonstrates how it adds value every day. This presentation will outline the key steps to creating a high-performance maintenance team, including identifying a common purpose, processing job requests, utilizing the team to scope the work and getting more done with less. At the conclusion of this session, attendees will walk away with a nine-step model that they can use to quickly lift the performance of their team to the next level.

The Benefits of Transforming Your Lubrication Program: A Case Study
- Roger Story, Owens Corning
Lubrication excellence can be the inflection point of change in a plant’s maintenance culture. The implementation costs can be relatively low in comparison to predictive technologies, and the results can be immediate and measurable. The crown jewel of any lubrication excellence program is often a world-class lube room. This case-study presentation will detail the lube room transformation at the Owens Corning composites plant in Aiken, South Carolina, including the processes, lessons learned and benefits of having world-class practices on display. Hear how an upgraded lube room led to measurable gains on the company’s bottom line.

Actionable Approaches for Continuously Improving Your Planning and Scheduling Processes
- Jeff Shiver, People and Processes
Are you struggling to sustain results with your maintenance planning and scheduling? Although you may have invested in training for your planner/scheduler, remember that it took some time to get everyone onboard. While the people in these roles may remain the same, change is happening everywhere. Sure, you have key performance indicators, but are those metrics driving the right behaviors? This session will help you verify your actual practices and develop an auditing plan to maintain and continuously improve planning and scheduling. You will walk away with actionable approaches for auditing your processes and performance with a focus on sustaining the planning and scheduling function over time.

How to Establish an Electric-Motor Testing Program
- Dave Sirmans, The Snell Group
Implementing an electric-motor testing program can
Exploring the Future of Maintenance
Jeremy Wright, Advanced Technology Services

Many factors will help guide the future of maintenance, including automation, staffing shortages, big data, artificial intelligence, sensor technology, constrained budgets, cultural shifts, etc. In this special roundtable discussion, Jeremy Wright of Advanced Technology Services will explore the current status of several of these key issues and speculate what the future will usher into the maintenance industry. By joining this conversation about the future of maintenance, you will be better prepared for the upcoming changes and understand how to capitalize on them if and when they occur.

The Role of Big Data in Plant Reliability
Noah Bethel, PdMA Corporation

What is “big data” and how does it affect your plant’s reliability? Big data is a term used to refer to data sets that are too large or complex for traditional data-processing application software. This presentation will discuss the history of big data and its progression in today’s industrial market. Join PdMA’s Noah Bethel as he explains best-in-class analytics and integration, reviews the dashboard integration efforts for data analytics, and details various implementations of big data for improved plant reliability.

Case Study: Best Practices for Achieving Hydraulic Oil Cleanliness - Jeffrey Evans, Trinity River Lumber Co.

Industrial processes and environments often make it difficult to achieve and maintain the desired cleanliness levels with your hydraulic equipment. This case-study presentation will identify the steps required to meet your cleanliness goals and what each step involves. Attendees will get a clear picture of the practices and processes that can lead to improved cleanliness, including the correct filter and breather application, proper fluid handling, and routine oil analysis. You will also discover how clean oil can prolong component life as well as how to clean bulk oil and avoid purchasing pre-cleaned hydraulic oil.

How Oil Sampling and Filtering Can Save Money and Reduce Your Carbon Footprint - Scotty Briner, Advanced Composites, and Bernie Hall, Checkfluid

This case-study presentation will demonstrate how proper oil sampling and filtration can minimize contamination, leading to increased savings and reducing your company’s carbon footprint. Attendees will get a before and after look at Advanced Composites’ oil sampling program to see the impact of improved filtering and sampling practices. You will learn the best methods for keeping critical equipment up and running, from extracting an oil sample to issuing and scheduling work orders, as well as managing and coordinating the completed work.

Condition Monitoring Techniques for Reciprocating Compressors - Amir Basyouni, BHGE

Reciprocating compressors are among the most expensive assets in a plant. Despite their criticality and importance, they often are overlooked by condition monitoring teams because the primary predictive maintenance tool is not well-suited for these types of machines. This results in the overall machine health being ignored and not diagnosed until damage occurs. This presentation will explore why condition monitoring should not only be used to protect reciprocating compressors from catastrophic failure but also to predict and diagnose any equipment abnormality to sustain reliability. You will learn how this can be accomplished by monitoring all machine components simultaneously and recording their performance along with the operating parameters and overall machine health.

How to Use KPIs to Align Your Organizational Objectives - Joe Lonjin, Cohesive Solutions, and Zach Solis, Lockheed Martin

With so many metrics available today, it is important for maintenance organizations to ensure their key performance indicators (KPIs) are transparent so all personnel, ranging from front-line workers to the boardroom, can understand and implement the chosen metrics to make better decisions. This case-study presentation will detail how Lockheed Martin uses data from its enterprise asset management and computerized maintenance management systems to align its organizational objectives for fleet and plant engineering with KPIs. See how data not only was utilized but also improved through active cooperation and communication of performance expectations and transparent decision-making. Attendees will learn how data confidence and quality were derived and how these measures can support initiatives to better use existing processes or improve them to drive the organization forward.

How to Create an Effective Maintenance Planning and Storeroom Partnership - Jeff Shiver, People and Processes

The Power of the Right Maintenance Schedule - Frank Pereira, Coleman Consulting Group

Secrets of Effective Leaders: It’s All About Connecting - Jeff Parker, John Maxwell Team

Finding True North with Your Maintenance Scheduling - Jeff Shiver, People and Processes
Learning Sessions

A Day in the Life of a Maintenance Planner
- Doc Palmer, Richard Palmer & Associates

How to Manage Plant Shutdowns and Turnarounds
- Owe Forsberg, IDCON

Practical Steps to Optimizing Your Preventive Maintenance Program
- Nathan Wright, IDCON

Efficiency Improvements Through Streamlining Maintenance Processes
- Dr. Holger Streetz, Bathan AG

Techniques and KPIs for Effective Backlog Management
- Owe Forsberg, IDCON

Autonomous Robotics and Their Role in Industrial Inspections
- Jonathan Lenoff, VTRUS

4 Key Elements for Maintenance Program Success
- Daniel Roessler, Accruent, and Andy Ruse, Maintenance Connection

Leak Detection Techniques for Preventive Maintenance and Diagnosis
- John Duerr and Gabriel Dash, Spectronics Corporation

Digital Plant Maintenance and Reliability Best Practices
- Christopher Pham, Santa Clara County

Using the IIoT to Advance Oil Analysis Effectiveness
- Matt Spurlock, Allied Reliability

Strategies for Digital Asset Management
- James Kovacevic, Eruditio

The Digital Factory: How to Transform Your Plant Floor for Industry 4.0
- Francesco Benvenuto, OverIT

Panel Discussion: Common Questions and Challenges in the Journey to Plant Digitalization
- Paul Muir, Mobideo

The Industry 4.0 Evolution: Taking Advantage of Connected Reliability
- Gregory Perry, CMRP, CRL, Fluke Corporation

How to Identify Cybersecurity Issues in Your Facility
- James Houston II, Facilities and Building Management Software Commission

Reliability in the Cloud: How to Deploy Cloud-based Maintenance Solutions
- Eric Whitley, Leading2Lean

Understanding Digitalization and How It Can Optimize Maintenance and Reliability
- Paul Muir, Mobideo

The Basics of Electric Power System Reliability
- Alan Ross, SDMyers

Harnessing the Power of Root Cause Investigations
- Nathan Wright, IDCON

Using Motion Amplification as a Root Cause Analysis Tool
- Jeff Hay, RDI Technologies

How to Use Vibration Analysis to Identify Equipment Problems
- Walter Barringer, Allied Reliability

Lube Techs: Your Hidden Resource for Condition Monitoring
- Forrest Pardue, 24/7 Systems

Understanding the Complexities of Ultrasound for Machine Condition Monitoring
- T.J. Garten, Allied Reliability

Hitting Production Goals Using Remote Condition Monitoring of Troubled Assets
- Abhishek Jadhav, Dynapar

Taking Oil Condition Monitoring to the Next Level
- Andy Lantos, Laboratorio Dr. Lantos - Wearcheck Argentina, and Dave Wooton, Wooton-Consulting

Common Traps of Infrared Thermography and How to Avoid Them
- T.J. Garten, Allied Reliability

How to Catch Failures Before They Occur with Thermal Imaging Technology
- Leonard Harrington, FLIR Systems

Integrating Condition Monitoring with CMMS to Maximize Uptime and Reliability
- Frank Harmuth, DPSI

Using Oil Analysis to Identify the Root Cause of Maintenance Problems
- Randy Clark, Polaris Laboratories

Utilizing Smart Systems to Establish Oil Analysis Alarms
- Michael Holloway, ALS Tribology

Using Infrared Spectral Microscopy for Equipment Failure Analysis
- Dave Wooton, Wooton-Consulting, and Cory Schomburg, PerkinElmer

Visual Oil Analysis Made Easy
- Chris Haught, Esco

Using SEM/EDS Technology for Better Wear Debris Analysis
- Mindy Villalba, SGS North America

How to Identify, Control and Remove Contaminants from Your Oil
- Peter Smyth and Tom Janikis, C.C. Jensen

Best Practices for Controlling Varnish in Hydraulic Systems
- Kristine Mikulan, Schroeder Industries/HYDAC, and Matt Brown, Schroeder Industries

Controlling Water in Oil Contamination
- Scott Howard, Hy-Pro Filtration

Increasing Equipment Reliability with Higher Viscosity Lubricants
- Yvette Trzcinski, Petro-Canada America

For more information, visit Conference.ReliablePlant.com
Special Events

**ALS TRIBOLOGY LAB TOUR**
*Monday, April 15*
Join us for a private, after-hours guided tour of ALS Tribology’s laboratory facility.

- Round-trip transportation provided
- Drinks and appetizers provided
- Additional cost, limited availability

*Note: Add to your conference registration. Participants must wear full-coverage, close-toed shoes and pants that cover ankles. Safety eyewear provided.*

**TESTOIL LAB TOUR**
*Tuesday, April 16*
Join us for a private, after-hours guided tour through the TestOil laboratory facility.

- Round-trip transportation provided
- Dinner provided
- Additional cost, limited availability

*Note: Add to your conference registration. Participants must wear full-coverage, close-toed shoes and pants that cover ankles. Safety eyewear provided.*

**NON-DENOMINATIONAL OFFSITE PRAYER BREAKFAST**
*Wednesday, April 17*

- Cleveland Marriott Downtown at Key Tower
- Full, hot buffet breakfast, coffee, juices
- Opening remarks, prayer and closing ceremony
- Keynote address
- Free entry with pre-registration

*Note: Add to your conference registration.*

**ROCK & ROLL HALL OF FAME TOUR**
*Wednesday, April 17*
Get an exclusive tour and galley talks with docents, followed by a chance to independently browse exhibits and galleries such as the Roots of Rock Gallery, the Elvis Exhibit and the Beatles Exhibit. All guests will receive a commemorative gift on the bus trip back.

- Round-trip transportation
- Dinner and non-alcoholic beverages
- Commemorative gift
- Additional cost, limited availability

*Note: Add to your conference registration.*
EXHIBITOR LIST
Key Sponsors Shown in Blue (As of 1/04/19)

- A.W. Chesterton
- Accruent
- Alliance for American Manufacturing
- Allied Reliability
- ALS Tribology
- AMETEK Arizona Instrument
- Andromeda Systems Incorporated
- Augury
- BECHEM Lubrication Technology
- Beckman Coulter Life Sciences
- Bekaworld LP
- C.C. Jensen, Inc.
- Cannon Instrument Company
- CheckFluid, Inc.
- Chemours (The Chemours Company)
- Chevron Lubricants
- Closed Loop Recycling
- Connection Technology Center (CTC)
- Coupling Corporation of America
- Densil Corporation
- DPSI
- DropsA USA
- DuPont Sustainable Solutions
- Dynapar
- Engineered Lubricants
- Envirotech, USA
- Enrudio LLC
- Esco Products, Inc.
- Filtertechnik
- Filtration Group
- Fluid Technologies, Inc.
- FS-Curtis
- FS-Elliott
- Generation Systems
- GenesisSolutions, An ABS Group Company
- Gill Sensors & Controls Ltd
- Graco
- GTI Predictive Technology, Inc.
- Hamar Laser Instruments
- Hanil Lubtec Co., LTD
- Harvard Corporation
- HENEK FLUID PURITY SYSTEMS
- HENEK Manufacturing, Inc.
- Henkel Corporation (LOCTITE)
- Hilco Filtration Systems
- Hy-Pro Filtration
- IDCON INC
- IJSSEL
- IMI Sensors, a PCB Piezotronics Division
- Inpro/Seal
- Intertek
- IOW Group
- I-Rod Pipe Supports
- LGC Standards
- Listen Technologies
- LubricationPlus
- Ludeca, Inc.
- Midland Manufacturing Company, Inc.
- Mighty Lube
- Mobideo
- Monroe Infrared Technology
- National Filters, Inc.
- Nikola Labs
- No Limit Oil Filtration Technologies LLC
- Noria Corporation
- Oil Filtration Systems
- Pall Corporation
- PdMA Corporation
- People and Processes, Inc.
- PerkinElmer
- Petro-Canada Lubricants
- PFP USA (Precision Filtration)
- Phillips 66 Lubricants
- POLARIS Laboratories®
- PRUFTECHNIK, Inc.
- R&G Laboratories, Inc.
- RDI Technologies, Inc.
- Reliability Concepts
- Royal Purple
- Schroeder Industries / HYDAC
- SDMyers, Inc.
- SGS North America (Herguth)
- Shinkawa
- Simatec, Inc.
- Specialty Manufacturing, Inc.
- Spectro Scientific
- Spectronics Corporation
- SPM Instrument, Inc.
- Superior Environmental Solutions, Inc. (SES)
- Swift Filters, Inc.
- Tenneco Co. & King Refrigeration
- Tennessee Bottle Company / Indiana Bottle Company
- TestOil
- Total Specialties USA, Inc.
- TTI-Todd Technologies Inc
- UE Systems, Inc.
- US Lubricants
- ViewTech Borescopes
- VTRUS
- Whitmore
- Wilcoxon Sensing Technologies
- Y2K Filtration

Make your conference experience as valuable as possible. Wander the expansive exhibit hall and discover tools and solutions among this comprehensive group of global suppliers representing various disciplines of reliability and industrial lubrication. With more than 90,000 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. Network with colleagues during lunch breaks and receptions, gather hands-on information and generate ideas to address specific needs.

For more information, visit Conference.ReliablePlant.com
Networking

EXHIBIT HALL RECEPTION
Tuesday, April 16, 5:30-6:30 p.m.
Gather with fellow attendees and exhibitors for the evening reception in the exhibit hall.

> Appetizers, bar and entertainment
> Open to all Reliable Plant attendees and exhibitors

EVENING RECEPTION
Wednesday, April 17, 5:30-7:30 p.m.
Join us in the Atrium for an evening of networking, fun and food with colleagues.

> Appetizers, bar and entertainment
> Open to all Reliable Plant attendees and exhibitors

TOP 10 MUST-DOS IN CLEVELAND

1. Spend some time at the Rock & Roll Hall of Fame and view a diverse array of rock memorabilia and artifacts such as Michael Jackson’s white-sequined glove, Elvis Presley’s motorcycle, Jerry Lee Lewis’ piano and guitars from Jerry Garcia, Billie Joe Armstrong and Mike McCready.

2. View one of the largest Egyptian relic collections in the world, along with approximately 45,000 other pieces, at the Cleveland Museum of Art.

3. Relive a beloved holiday movie by paying a visit to A Christmas Story House, located in Cleveland’s Tremont neighborhood.

4. Spend some time relaxing along the shore of Lake Erie or partake in stand-up paddle boarding or kayaking.

5. Set aside an afternoon to visit the 80-plus family-owned booths at the historic West Side Market.

6. Interested in historical Cleveland figures? The Lake View Cemetery contains the graves of several notable residents including President James A. Garfield, Eliot Ness and John D. Rockefeller.

7. Looking for libations? Stop by the Great Lakes Brewing Company, which now houses the original bar that Eliot Ness visited and even see the bullet his gun discharged into the mahogany bar.

8. Seeking diverse food? Make lunch or dinner plans for Sokolowski’s University Inn, a cafeteria-style restaurant featuring authentic Polish cuisine.

9. Want to check out the host city? Spend some time in Downtown Cleveland and visit all the different neighborhoods, including East 4th Street and the Warehouse District.

10. Check out the 183-acre Cleveland Metroparks Zoo that features several areas, including Australian Adventure, African Savanna, The Rain Forest and Asian Highlands.
Reliable Plant Conference & Exhibition 2019 will be held at the Huntington Convention Center in Cleveland, Ohio. Specially rated blocks of rooms are reserved at the Cleveland Marriott Downtown. You can take advantage of these discounted rates by booking your room(s) directly with them using the group code “RELIABLE PLANT 2019” at the time of your reservation. Availability is limited, so you are encouraged to make reservations early.

Full-conference registration includes a $1,495 training coupon which can be used toward Noria’s lubrication or oil analysis training courses. Use it yourself or give it to a co-worker. It’s like attending the conference and getting Noria training for free!

**GET TO KNOW CLEVELAND**

Situated on the southern shore of Lake Erie, Cleveland has a long manufacturing history. Starting with its emergence as an important American manufacturing center in the early 20th century, Cleveland remains the home to several Fortune 500 companies that serve several strategic industry sectors such as automotive manufacturing, electric and light, food processing, and metal production and fabrication.

**Cleveland Marriott Downtown at Key Tower**

127 Public Square, Cleveland, Ohio 44114  
1-800-228-9290

- Call toll-free 1-800-881-1523 to reserve your room by March 25, 2019  
- Single occupancy is $175  
- Use group code: RELIABLE PLANT 2019  
- Make all hotel reservation changes and cancellations directly with your hotel  
- Visit Conference.ReliablePlant.com for a shortcut to the hotel registration site

**GET A FREE NORIA TRAINING COUPON**

*Valued up to $1,495!*

Full-conference registration includes a $1,495 training coupon which can be used toward Noria’s lubrication or oil analysis training courses. 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. No cash value. Coupon is transferable within your organization and must be presented when registering for the training. Coupon is valid for Noria public training courses in the United States taking place between April 2019 and April 2020, or online courses purchased prior to April 2020. 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.
2019 Pricing & Discounts

**REGISTER NOW & SAVE $200 (UNTIL MARCH 13)**

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**Add a Workshop**

$245 REGULARLY $295

**HOW TO REGISTER**

- **Online:**
  Find the most up-to-date information by visiting 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

**WHAT’S INCLUDED?**

**FULL-CONFERENCE REGISTRATION INCLUDES:**
- Admission to all conference sessions
- Conference proceedings
- Opening general session and keynote address
- Exhibition hall access
- Daily breakfas ts, refreshments and lunches
- Networking receptions
- FREE Noria training coupon, valued up to $1,295

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

**BRINGING THE CREW? GET A DISCOUNT.**

- **3 to 9 attendees:** Get three or more full-conference registrations for only $995 each.
- **10 or more attendees:** Get 10 or more full-conference registrations for only $895 each.

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Registrations canceled before March 1, 2019, will receive a full refund. Cancellations made after March 1, 2019, are subject to a $75 administrative fee. Cancellations after March 15, 2019, are not eligible for refunds. However, you may send a colleague in your place. If you are unable to send a colleague, the entire registration fee will be forfeited.
WANT TO SPONSOR?
It’s not too late to consider a sponsorship. Sponsorship packages are sold on a first-come, first-served basis. A few premier sponsorships remain. Increase your visibility and put your marketing dollars to work for you by joining this prestigious group of Reliable Plant 2019 sponsors.

READY TO EXHIBIT?
Prime booth locations go fast, so reserve your exhibition space now! Spending three days on the Reliable Plant exhibit hall floor is equivalent to months of travel and hours of phone calls and meetings. Reliable Plant 2019 will provide the perfect setting for prospective customers to come to you.

For more information, call 1-800-597-5460 or visit Conference.ReliablePlant.com.
Attend. Learn. Apply.

- 90+ Learning Sessions
- 100+ Exhibitors
- 30+ Case Studies
- 4 Certificate Programs
- 7+ Networking Events
- 7 Workshops
- Plus Much More!

100% SATISFACTION GUARANTEE

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