



MAINTENANCE SOLUTIONS: FUNDAMENTALS AND NEW FRONTIERS

21-23 SEPTEMBER 2021

Embassy Suites Riverwalk • San Antonio, Texas, USA
Tour: CMC Steel Texas

ABOUT THE PROGRAM

The AIST Maintenance & Reliability Technology Committee, AIST Lubrication & Hydraulics Technology Committee and industry leaders have joined together for Maintenance Solutions: Fundamentals and New Frontiers. This workshop-based training seminar will provide attendees with hands-on instruction, tools, and the best available technologies for mechanical, electrical, lubrication, hydraulics, management system maintenance and reliability solutions. In addition, maintenance and outage planning, system design, and maintenance troubleshooting and techniques will all be covered. Manufacturing reliability is an integral part of sustainability in the metals industry. Improvement in reliability is essential to assuring manufacturing results at the lowest cost. Both operations and maintenance personnel must understand the direction their organizations need to take with respect to improving and managing their equipment maintenance programs.

WHO SHOULD ATTEND

The conference is intended for maintenance, operations and engineering personnel. It is useful for individuals who are in middle management or frontline supervisor positions, as well as maintenance, operational, and reliability personnel responsible for equipment reliability processes, including planners, schedulers, senior tradesmen, maintenance managers, maintenance engineers, plant engineers, project engineers, maintenance superintendents, operators and operations managers. Maintenance technology, equipment and service suppliers should also attend.

ORGANIZED BY

AIST's Maintenance & Reliability and Lubrication & Hydraulics Technology Committees.

SPONSORSHIP OPPORTUNITIES AVAILABLE

Please contact Shannon Kiley at +1.724.814.3064.

SPONSORED BY



UPCOMING EVENTS

Secondary Steelmaking Refractories – A Practical Training Seminar

5–7 October 2021
The DoubleTree Colorado Springs
Colorado Springs, Colo., USA

Digitalization Applications Fundamentals

12–13 October 2021
Renaissance Cleveland Hotel
Cleveland, Ohio, USA

Continuous Casting – A Practical Training Seminar

19–21 October 2021
DoubleTree by Hilton Perimeter Park
Birmingham, Ala., USA

Environmental Solutions: Water Management

9–11 November 2021
Omni Corpus Christi Hotel
Corpus Christi, Texas, USA



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REGISTRATION INCLUDES

Breakfast and lunch Thursday–Friday, reception Wednesday and Thursday, plant tour, and a course workbook or flash drive including presentations.

HOTEL ACCOMMODATIONS

A block of rooms has been reserved at Embassy Suites by Hilton San Antonio Riverwalk. Please call the hotel at +1.800.362.2779 by 30 August 2021 to secure the AIST discount rate of US\$189 for single/double occupancy.

AIST MEMBERS

US\$895

by 9 August 2021

US\$995

after 9 August 2021

NON-MEMBERS

US\$1,110

by 9 August 2021

US\$1,210

after 9 August 2021

Non-member registration fees include membership in AIST through 31 December 2022. Membership is not automatic. A completed membership application must be returned to AIST.

STUDENT RATE

The AIST Foundation is pleased to provide assistance to students interested in attending AIST Technology Training Conferences. Program details are available online at AIST.org > Students & Faculty, or contact Shannon Kiley at +1.724.814.3064.

COMPANY DISCOUNT

Three or more individuals from the same facility attending any one seminar can receive a 10% discount per person. All registrations must be received together along with payment to qualify for the discount. Not applicable with any other discount.

CANCELLATION/SUBSTITUTION

If you must cancel, please email or fax a notice of cancellation to skiley@aist.org or +1.724.814.3064, and a refund will be issued. Cancellations received less than two weeks prior to the event are non-refundable. If you would like to send a substitute, a new registration form must be faxed for that person, indicating the replaced person on the form. Be certain that the membership status is equivalent or note otherwise.

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SCHEDULE OF EVENTS



Tuesday, 21 September 2021

7–8 a.m.
Registration

8 a.m.
Welcome
Jeff Kusnier, Titan Bearing

8:15 a.m.
Safety: It's All About Maintenance and Reliability
Ricky Rollins, Ricky Rollins Safety Speeches LLC

9 a.m.
Break

9:15 a.m.
Reliability Achievement Award Overview
Carl Garringer, Steel Dynamics Inc. – Structural and Rail Division
The Reliability Achievement Award is given by the Maintenance & Reliability Technology Committee to an organization and the individuals involved in improving plant reliability through the implementation of a project or procedural change.

9:30 a.m.
2020 Reliability Achievement Award Gold: Using Pyrometers Instead of Thermocouples for the Ladle Pre-Heat Burner Control
Richard Thomas, Steel Dynamics Inc. – Flat Roll Group Columbus Division
The use of a pyrometer has decreased the maintenance on the application from approximately 100 times a year to almost never. It has also decreased the amount of natural gas used per year by millions of cubic feet.

10:45 a.m.
Journeyman Training
James Sberna, Cleveland-Cliffs Middletown

11:15 a.m.
What Good Looks Like
Randy Heisler, Life Cycle Engineering
An overview of maintenance and reliability best practices will be presented. This presentation covers what organizations should focus on and how to get started on the right track. It includes real-world examples and a road map that many companies have followed to improve reliability in their operations.

Noon
Lunch

1 p.m.
Improving Manufacturing Reliability with Precise Maintenance Activities
Ian McKinnon, Reliability Solutions LLC

4 p.m.
Improving Gearbox Reliability
Mike Allega, The Timken Co.
There are maintenance practices that improve gearbox service. In addition to in-service maintenance best practices, enhancements to the design by adding in features for lubrication, bearing and gear reliability will aid in durability of gearboxes during rebuild.

4:30 p.m.
Industrial Augmented Reality for Maintenance, Training, Inspection and Management
Eric Almquist, Star Tool & Die
Augmented reality (AR) is a technology that “mixes” digital information within reality for the user. When AR is done well, the user experiences the digital information as if it were real. The user can interact with the technology intuitively, conveniently giving and taking information with the system. AR is the human-machine interface (HMI) of Industry 4.0, the industrial digitalization revolution, and will become the standard digital life HMI for all over the coming decade, eventually replacing phone and computer displays with lightweight glasses. AR will revolutionize the “blue-collar” workplace just as the office PC has revolutionized the “white-collar” workplace since the late 1980s. Recently AR technology, particularly hardware, has become viable for frontline industrial workers. An overview of AR technology will be provided, including a live demonstration of a state-of-the-art industrial AR system.

5 p.m.
Ask the Experts Roundtable Discussion and Reception

Wednesday, 22 September 2021

7 a.m.
Breakfast

8 a.m.
2020 Reliability Achievement Award Silver
David Aguirre, California Steel Industries
This presentation will discuss improving the longevity and safety of the pond crane cables in an unusual design.

8:30 a.m.
Vibration Analysis and Monitoring
Brad Kintner, ITR
Information will be presented explaining the most effective condition monitoring practices and technologies available as well as a look towards the future of PdM in the steel industry.

9 a.m.
Condition Monitoring
Bob Miller, IVC Technologies
This presentation provides straightforward and practical explanations of advances in condition monitoring, as well as real-world examples of properly applying predictive technologies to maximize the takeaway value for attendees.

9:30 a.m.
Break

9:45 a.m.
Roller Bearing Lubrication Basics
Mike Allega, The Timken Co.
This presentation introduces lubrication fundamentals for rolling elements bearings. The target audience is people new to industry or anyone wanting to refresh their knowledge on lubrication basics. Topics covered will include the main functions of a lubricant, how lubrication impacts bearing performance and guidance on how to select the proper lubricant for general industrial applications. The key characteristics of a lubricant will first be established, covering both oil and grease. Then suggestions will be provided on the proper lubricant selection and the best means for lubricant delivery to rolling element bearings with an emphasis on grease.

10:15 a.m.
Digital Transformation of Maintenance and Reliability
Greg Savernik, Quaker Houghton
Looking at the recent shelter-in-place and conditions with a surprise pandemic that occurred, this presentation will discuss how the Industrial Internet of Things and remote interactions help advance maintenance procedures and effectiveness of the essential line personnel that are left to keep a facility running. Discussion includes the common tools that are used as well as the preparation needed by the end user for success.

10:45 a.m.
Automatic Lubrication Systems in the Steel Industry
Jason Craft, DropsA USA
This course will go over the usage, design and troubleshooting of the standard lubrication systems in our industry. This includes the series progressive and dual-line systems.

11:30 a.m.
Level 1/Level 0 - An Overview of PLCs, Networks, Drives and I/O, Reg Snyder, TMEIC
This discussion covers the workhorses of the distributed control system. Controller basics, communication network types and function, and the role and functionality of drives and I/O are explained.

Noon
Lunch

1 p.m.
2020 Reliability Achievement Award Bronze
Jason Vicari, Cleveland-Cliffs Indiana Harbor East
Reliability improvements and energy savings have been achieved in a 55-year-old high-pressure water descaling system through restoration of pump performance, upgrades to pump materials and improvements in descale nozzle technology.

1:30 p.m.
Discounting Your Product... the Unintended Consequence of Contaminated Hydraulic Fluid
Denis Poirier, Eaton Hydraulics Business
This session explains how to quantify hydraulic fluid cleanliness, addresses failures commonly associated with contaminated fluid and explains the most common changes required in hydraulic system when using an alternative hydraulic fluid.

2 p.m.
Laser Deposit Welding Averts a Costly Repair and Mill Shutdown
Ken Babusiak and Bob Jennings, HydroAire Inc.

2:30 p.m.
Break

2:45 p.m.
Introduction to Level 2 - What Is It?
Paul Jackson, TMEIC
This presentation will introduce the purpose of level 2 control systems in a metals control system. This will include a basic introduction to the functions of metals supervisory control systems as well as a discussion of some of the challenges faced by level 2 systems. This introduction is intended to be useful both to those who have no knowledge of the subject as well as those who have some basic knowledge.

3:30 p.m.
Hydraulic Troubleshooting Solutions for Millennials
Brad Jensen, Alloy Technology Solutions
Finding and applying new applications that utilize growing technologies to maintain complex hydraulic systems have a valuable outcome. They bridge the gap for today's millennials who want immediate results in system and device understanding. This presentation will use currently available technologies to troubleshoot four common failures in a complex hydraulic system used in roll bending.

4 p.m.
The Five Things a Hydraulic Troubleshooter Needs to Know
Brad Jensen, Alloy Technology Solutions
Many excellent hydraulic parts changers have worked on or around specific machines for so long that when a certain symptom shows, they know to change a specific part to alleviate the problem. Yet, their understanding of what actually failed and why it failed is limited. Hence, the number of actual hydraulic troubleshooters is small. This presentation will explore the five common gaps of knowledge to help parts changers become hydraulic troubleshooters.

4:30 p.m.
Reception

Thursday, 23 September 2021

7 a.m.
Breakfast

8 a.m.
Depart for Tour of CMC Steel 🌄

Noon
Return from Plant Tour to Hotel & Conference Adjourn