



Upcoming Events

Maintenance & Reliability for the Next Generation

10-12 September 2019
Embassy Suites by Hilton Indianapolis Downtown
Indianapolis, Ind., USA

Pipe and Tube – A Practical Training Seminar

23-26 September 2019
DoubleTree Birmingham Perimeter Park
Birmingham, Ala., USA

Secondary Steelmaking Refractories – A Practical Training Seminar

14-17 October 2019
Hilton Palacio Del Rio
San Antonio, Texas, USA

26th AIST Crane Symposium

2-4 June 2019
The Seelbach Hilton
Louisville, Ky., USA



Association for Iron & Steel Technology
186 Thorn Hill Road
Warrendale, PA 15086-7528 USA
+1.724.814.3000 • Fax +1.724.814.3005 • AIST.org

NON-PROFIT
U.S. POSTAGE
PAID
Pittsburgh, PA
Permit No. 498

About the Program

The symposium will deliver practical information and experiences from crane maintenance personnel, crane manufacturers, equipment manufacturers and engineering consultants who strive to make electric overhead traveling (EOT) cranes and their runways the safest, most reliable, durable machinery and equipment in the industry. This two-day program will include presentations focused on safe work practices and ergonomics; electrical, mechanical and structural maintenance techniques; crane inspection technologies; and best practices in EOT crane modernizations. As part of the Crane Symposium program, the Charlie Totten Crane Innovator of the Year Award winner will be announced, recognizing the individual who has brought forth the latest in technology, or increased efficiencies in operational and maintenance practices for the continuous improvement of heavy industrial cranes.

Who Should Attend

Plant maintenance staff; applications, electrical, mechanical, safety, service and design engineers; operations and maintenance personnel and management; and those people who supply parts, equipment and services to the industry. Anyone who has responsibility for cranes and crane service and is interested in improvements and incidents in this area should attend.

Professional Development Hours

This course may qualify for up to 14 Professional Development Hour (PDH) credits. Each attendee will receive a certificate listing the quantity of PDH credits earned for the course. This course is not approved for PDH credit in New York, Florida, North Carolina and Oklahoma.

Organized By

AIST's Cranes Technology Committee.

Registration Includes

Sunday reception, breakfasts and lunches Monday and Tuesday, a dinner Monday evening, and a course workbook or flash drive including presentations.

Hotel Accommodations

A block of rooms has been reserved at The Seelbach Hilton. Please call the hotel at +1.800.333.3399 by 10 May 2019 to secure the AIST discount rate of US\$159 per night for single/double occupancy.

AIST Members
US\$895 by 22 April 2019
US\$995 after 22 April 2019

AIST Non-Members
US\$1,110 by 22 April 2019
US\$1,210 after 22 April 2019



**BRING YOUR OWN
YOUNG PROFESSIONAL**

Visit AIST.org/byoyyp for more information

AIST.org

Schedule of Events



Sunday, 2 June 2019

4–6 p.m.
Registration

5–6 p.m.
Reception

Monday, 3 June 2019

7 a.m.
Registration and Breakfast

8 a.m.
Introduction and Opening Remarks

8:15 a.m.
2019 Charlie Totten Crane Innovator Award: Proper Crane Rigging Training
Heath Hooker, Nucor-Yamato Steel Co.

8:45 a.m.
Crane Emergency Brakes in Critical Lift Applications
Mike Astemborski and Joel Cox, Pintsch Bubenzer USA

9:15 a.m.
How to Give a Technical Presentation
Tom Berringer, Gantrex Inc.

9:45 a.m.
Break

10 a.m.
Benefits of Weight Measurements on an Overhead Crane
Bob Wynnyk, BLH Nobel Canada
This presentation discusses the benefits of having a weight measurement system on cranes.

10:30 a.m.
The Standard Is Safety
Todd Cook, Hoosier Crane
This presentation will discuss changes in the U.S. Occupational Safety and Health Administration's standards for fall protection and the impact of those changes on the crane industry.

11 a.m.
A Look Six Years Later at a Fully Autonomous AIST Class 4 Hot Mill WIP Crane
Steve Herron, Morgan Engineering and Jared Gilpin, Nucor Steel–Berkeley
Automated cranes, whether operated in full auto or semi-auto, can provide the user with increased throughput, repeatability, reliability, reduced operator error and improved safety. As with any project, the road to success is full of obstacles, big and small, with the end result being certainly worth the effort. This presentation will explore the project dimensions of a fully automated, non-manned EOT overhead bridge coil-handling crane, including system hardware, motion controls, automated sequence, ground-based safety designed into programmable logic controllers and intelligent controls with intellectual coding, level 2 interface and reporting. The presentation will conclude with lessons learned.

11:30 a.m.
Hooke's Law: How Does It Apply to Crane Runway Design?
Tom Cunningham and Alex Tadia, Simmers Crane Design & Services Co.
The presentation will focus on how Hooke's Law plays a crucial part in proper crane runway design.

Noon
Lunch

1:15 p.m.
Signaling Confusion and Crane Safety
Jacob Vernon, Pfannenbergl Inc.
This presentation will provide a deeper explanation into the understanding of operating an overhead crane with regard to the audible and visual signals throughout a steel mill. Discussion will cover the technical measurement of how sound travels (different frequencies) and the misinterpreted signals that can lead to an injury on the shop floor. The presentation ties together collision avoidance systems, start-up and running alarms, overhauling VHDs and the loud environment in steel production.

1:45 p.m.
A Buyer's Guide to Cranes
Alan Horgan, Whiting Corp.
An overview look at current crane specifications (AIST, CMAA, DIN EN 13001) and interpretations as they apply to various steel mill crane applications as seen through the eyes of an integrated crane manufacturer. This abbreviated discussion highlights considerations for a long-term material handling strategy.

2:15 p.m.
Break

2:30 p.m.
Methods for Monitoring Crane Magnet Operation and Condition
Brian Kath, Nucor Steel–Berkeley
Magnet systems are critical tools for many applications in the steel industry. Magnet failures place employees at risk, and can cause damage and impact productivity. This presentation offers some tools that can be used to verify that design parameters are not being exceeded and determine the operational health of the complete magnet system.

3 p.m.
Crane Cab in Hell
Timothy Boyd, Steel Dynamics Inc. – Roanoke Bar Division
This presentation details a before-and-after window systems upgrade. Discussion will include going from normal glass windows to ones designed for safety and comfort.

3:30 p.m.
Remembering Charlie Totten
Rich Warriner, Foley Material Handling Co. Inc./Virginia Crane

4 p.m.
Panel Discussion

5:30 p.m.
Dinner on the Belle of Louisville Riverboat

Tuesday, 4 June 2019

7 a.m.
Breakfast

8 a.m.
Introduction and Opening Remarks

8:15 a.m.
DIY EOT Crane Inspection Programs That CYA
Larry Dunville and Tad Dunville, Overhead Crane Consulting LLC
Nowhere does the U.S. Occupational Safety and Health Administration (OSHA) say exactly what's required for EOT crane inspections. Well, that's not exactly right, it does have 667 words, which is hardly enough to cover the multitude of issues involved in crane inspection. Further, if you ask 10 inspection professionals, you'll probably get 10 different answers as to the requirements! This presentation will show you how to put together an EOT Inspection presentation that will help you keep production running and your people safe as well as work with any OSHA requirements. In the event of an unfortunate accident, this program should provide you with a firm foundation from which to begin the accident investigation process.

8:45 a.m.
Integrated Autonomous Crane System at Baosteel (Six Cranes, Three Bays)
Steven Friscia and Jean-Francois Carvalho, Schneider Electric
Autonomous crane operations in the steel industry are critical to achieving production goals. Innovative new technology is available to run steel facilities completely autonomously, providing greater efficiency, accuracy, productivity and quality in the handling of coils and slabs. They can also be integrated into the supply chain within the plant by the use of a warehouse management system, allowing yards to run fully unmanned and completely automated, from steelmaking plant to shipping. This presentation will present these new technologies as well as a case study of an integrated autonomous crane system in Baosteel.

9:15 a.m.
Cable Carriers – 21st Century Solutions for Cable Management
James Weston, Igus Inc.
This presentation will provide a look into the evolution of technology to better guide and protect cables and hoses in motion. Attendees will discover solutions to extend the life of cables and hoses and receive an introduction to "smart plastics" that enable real-time condition monitoring and provide predictive maintenance capabilities.

9:45 a.m.
Break

10 a.m.
Ladle Cranes and Cracks: Challenge of a Reliable Operation
Antonio Pena and Flavio Franco, ArcelorMittal Tubarão
Presented is a case study about the engineering developments, technologies and maintenance routines to keep three hot metal ladle cranes (480-t) with substantial structural cracks scenario on full capacity and reliable operation at ArcelorMittal Tubarão.

10:30 a.m.
Weld Joint Design: A Key to Understanding Weight Differences
Scott Zilke and Matt Jones, Morgan Engineering

11 a.m.
Implementation of Continuous Crane Electrification Systems
Adrian Sanchez, U-S Safety Trolley
Continuous conductor crane electrification systems provide an alternative, jointless solution that maximizes reliability and reduces ongoing maintenance costs. This system eliminates electrical joints, which are recognized by personnel with extensive crane experience as one of the most common sources of crane electrification problems. However, an overall unawareness on how to implement these systems resides among potential users. This presentation intends to illustrate its ease of installation and revisit its benefits.

11:30 a.m.
Maximize Safe Operation of DC Cranes Utilizing Drive Technology
Casey Cummins and Bob Schmitt, Magnetek Inc.
This presentation will explore how DC control technology and diagnostics can improve the safe operation of DC cranes.

Noon
Lunch

1:15 p.m.
Cranes, Cameras, Action!
Twan Pelders, Ametek

1:45 p.m.
Isolating Conductor Rails for Crane Maintenance Areas
Pete Kirst, Conductix Inc.
This presentation covers a new method for safely isolating runway conductor rails to create designated maintenance areas for crane runways with multiple cranes. This method provides for maintenance area to be safely shut down and prevent being energized by tandem collectors.

2:15 p.m.
Break

2:30 p.m.
CMAA Duty Cycle Criteria for Specifying Cranes
Rich Warriner, Foley Material Handling Co. Inc./Virginia Crane
This presentation explores the impact on CMAA duty cycle designation on crane design and subsequent results in reliability and life cycle cost. It will also present additional factors other than duty cycle that should be considered when specifying cranes.

3 p.m.
The Human Impact of Cameras on Cranes
Chris Machut, Netarus LLC
This presentation provides an overview of situational awareness and the impact visual aid technologies have on cranes. An in-depth look at the pros, cons and unintended consequences of visual aid technologies will also be given, along with various applications of how these solutions can be deployed on cranes.

3:30 p.m.
Crane Automation/Intelligent Crane Systems
Edgardo La Bruna, Janus Automation LLC
New technologies applied to crane automation, operation assistance, safety and maintenance will be discussed. The presentation will describe new technologies used in cranes utilized in the metals industry that facilitate crane automation, operation, safety and maintenance.

4 p.m.
Panel Discussion

4:30 p.m.
Conference Adjourn