# 7–11 February 2022 Sheraton Orlando Lake Buena Vista Resort Orlando, Fla., USA ern Electric Furnace Steelmaking

# gital Transformation Forum for the Steel

The Westin Indianapolis ndianapolis, Ind., USA 4-16 March 2022

# ergy and Utilities Workshop **Energy Efficient, Sustainable and** I Roadmap

Oak Ridge National Laboratory and Embassy Suites by Hilton Knoxville West Oak Ridge, Tenn., USA 4-17 March 2022 Steel Industry

# neet Processing and Finishing Lines 20–23 March 2022 actical Training Seminar

ndianapolis, Ind., USA Sheraton Indianapolis City Centre Hotel



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# ABOUT THE PROGRAM

This seminar will give an introduction to the process, equipment and ancillaries utilized to produce long products; the primary focus is on the process and equipment customarily found within the rolling mill building, i.e., reheat furnace, rolling mill and finishing end. The seminar will contain both theoretical presentations and real-world case studies from long products producers in North America. The presenters represent a cross-section of industry experts in equipment, process, operations and maintenance. The seminar aims to expand an attendee's knowledge of the complete process and how safety, quality, yield, and facility utilization can be affected at each step.

Plant Tour: Gerdau Long Steel North America Cartersville Mill

22-24 FEBRUARY 2022

Sheraton Atlanta Hotel • Atlanta, Ga., USA

A PRACTICAL TRAINING SEMINAR

Personnel involved in the production or promotion of long products, i.e., mill managers, rollers, roll shop, floor operators, maintenance, sales, downstream processors and other support personnel who wish to gain a better understanding of the long products production process and final end products.

AIST's Long Products Technology Committee.

# ATION INCLUDES

Breakfast and lunch Tuesday–Thursday; reception Tuesday; plant tour with bus transportation; and a course workbook or flash drive including presentations.

# MMUUATIONS

A block of rooms has been reserved at the Sheraton Atlanta Hotel. Please call the hotel at +1.404.659.6500 by 1 February 2022 to secure the AIST discount rate of US\$139 per night for single occupancy.

Non-member registration fees include membership in AIST through 31 December 2023. Membership is not automatic. A completed membership application must be returned to AIST.

# **AIST MEMBERS**



### FESSIONAL DEVELOPMENT HOURS

This course may qualify for up to 18.25 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 credits in New York, Florida, North Carolina and Oklahoma.



# **US\$1.290**

Before 11 January 2022

After 11 January 2022







# SCHEDULE OF EVENTS



## Monday, 21 February 2022

4–6 p.m. Registration

## Tuesday, 22 February 2022

7 a.m. Registration and Breakfast

8 a.m. Introduction Kevin Barbee, Danieli Corp.

8:05 a.m. Welcome and Overview of Cerdau Long Steel North America Cartersville Mill Rodrigo Canova, Gerdau Long Steel North America Cartersville Mill

8:30 a.m. Changing the Mindset for a Safer Environment

9:30 a.m. <mark>Break</mark>

#### 9:45 a.m. Rod/Bar Products and Applications

Bob Cryderman, Colorado School of Mines The multitude of rod and bar applications will be illustrated, along with the customer requirements and expectations for each type of application.

#### 10:45 a.m. Rolling Mill Metallurgy

Andrew Schless, Nucor Steel–South Carolina A practical training on rolling mill metallurgy.

Noon Lunch

#### 1 p.m. Pass Design and Rolling Theory

Joe Kennedy, Quad Training Pass design terminology, basic rolling principles and examples of their application, and how an operator can use rolling theory to improve decisions made in the mill.

2 p.m. <mark>Break</mark>

2:15 p.m. Pass Design and Rolling Theory (cont'd)

3:15 p.m. <mark>Break</mark>

#### 3:30 p.m. Overview of Nucor Steel Kankakee Inc. Mill #2 Start-Up Jarrod Prill, Nucor Steel Kankakee Inc.

4:30 p.m. Question-and-Answer Session

5–6 p.m. Reception 2:30 p.m. Descaling and Spray in Hot Rolling Lesli Peterson, Spraying Systems Co. Topics will include descale theory and nozzle selection for descale applications in hot rolling.

3:15 p.m. Technology of Section Mills

Mario Fabro, SMS group Inc. This presentation will cover the technology and challenges for medium and heavy section rolling mills, from reheat furnace to shipping.

4:30 p.m. Question-and-Answer Session

5 p.m. <mark>Adjourn</mark>

# Thursday, 24 February 2022

7 a.m. Breakfast

8 a.m. Torque and the Rolling Stand

Kevin Barbee, Danieli Corp.

This segment provides a comprehensive description of the mechanical components of a rolling mill stand, how they function and how they handle the stress of rolling. An in-depth investigation of both the driveline and the mill stand will include how the components work together, common failure modes, preventive and predictive maintenance strategies, early indicators of functional failures, and product quality problems that can stem from driveline wear.

9:15 a.m. <mark>Break</mark>

#### 9:30 a.m.

Work Rolls William Posey, SinterMet LLC A look at multiple roll types and materials for hot rolling.

#### 10:45 a.m.

Motors, Drive and Speed Control Christiano Justen, Russula Corp.

This presentation will go over typical control principles, the most used architectures employed in long product rolling mill control systems, and common upgrade phase approaches to revamping.

Noon Lunch

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#### 1 p.m. Saw Cutting Technologies

#### Peter Haas, Haas Saw

This presentation will analyze various saw cutting methods used by long products rolling mills. The discussion will include a detailed review of safety issues, cost calculations, varieties of saw cutting machines and saw blade designs, saw blade operation and maintenance, troubleshooting guidelines, and cutting parameters. Information will also be provided on saw blade tracking, performance analysis, wear life, creating benchmarks for improvement, and planned saw blade changes to reduce mill downtime related to cutting issues.

2:45 p.m. <mark>Break</mark>

# Wednesday, 23 February 2022

#### 7 a.m. <mark>Breakfast</mark>

#### 8 a.m. Plant Tour of Gerdau Long Steel North America Cartersville Mill 🔍

#### Noon <mark>Lunch</mark>

#### 1 p.m. Reheat Furnace Basics

John Chrobak, Andritz Metals USA Inc.

This presentation will cover uniform heating, combustion basics, emissions and scale generation.

2:15 p.m. <mark>Break</mark>

#### 3 p.m. Bar Finishing

Kevin Barbee, Danieli Corp.

A brief overview of the various layouts, process and equipment in finishing of hot-rolled bars as they pertain to typical rolling mill installations. The product range covered includes rebar, merchant shapes and flats, beams, and special bar quality, including comparison and contrast of which processes and equipment are needed for the different product types.

#### 4:15 p.m.

#### Predictive Maintenance Tools and Strategies for Long Products

Dan Phillips, Regal Rexnord Corp.

Proactive maintenance programs have been shown to be 77% less than the cost of a reactive program. Beginning with a foundation in reliability-centered maintenance, the methods for achieving these financial results will be presented with a focus on monitoring critical asset health. Advanced technologies well suited for low and varying speeds, intermittent loading, process variability, etc., are often necessary as opposed to traditional techniques to ensure that the equipment function is maintained. Proper selection and implementation of those technologies with real-world examples will be included.

5 p.m. Conference Adjourn

