

UPCOMING EVENTS

Long Products Rolling – A Practical Training Seminar

11–13 February 2020
Omni Jacksonville Hotel
Jacksonville, Fla., USA

The Making, Shaping and Treating of Steel: 101

25–26 February 2020
Hilton Richmond Downtown
Richmond, Va., USA

Cold Rolling Fundamentals – A Practical Training Seminar

1–5 March 2020
Francis Marion Hotel
Charleston, S.C., USA



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MODERN ELECTRIC FURNACE STEELMAKING

A PRACTICAL TRAINING SEMINAR

3-7 FEBRUARY 2020

The Nines, A Luxury Collection Hotel, Portland, Oregon, USA
Plant Tour: Cascade Steel Rolling Mills, Inc.

ABOUT THE PROGRAM

This course covers safety, the basics of electrical and mechanical features of electric arc furnaces, refractories, and the role of raw materials. The program will explore the fundamentals of electric furnace steelmaking technology, the use of energy inputs, the steelmaking process, electrodes and environmental concerns for electric steelmaking. Attendees will also have the opportunity to learn how their operation compares to industry benchmarks, and to hear about the latest developing technologies. The midpoint of the conference includes a plant tour followed by an expert roundtable and reception with an open forum to discuss questions and challenges.

WHO SHOULD ATTEND

Electric steelmaking attendees who wish to gain a fundamental understanding of the electrical, thermomechanical and technical aspects of modern electric furnace steelmaking. EAF furnace operators, maintenance personnel, upstream/downstream personnel, metallurgists and suppliers would benefit from this comprehensive seminar. Electric steelmaking attendees include meltshop employees, foundry workers, process engineers, new employees and suppliers.

ORGANIZED BY

AIST's Electric Steelmaking Technology Committee.

PROFESSIONAL DEVELOPMENT HOURS

This course may qualify for up to 21.25 Professional Development Hour (PDH) credits. Each attendee will receive a certificate listing the quantity of PDH credits earned for this course. This course is not approved for PDH credit in New York, Florida, North Carolina and Oklahoma.



**BRING YOUR OWN
YOUNG PROFESSIONAL**

Visit AIST.org/byoyp for more information.

REGISTRATION INCLUDES

Welcome reception Monday, breakfast Tuesday–Friday, lunch Tuesday–Thursday, reception Wednesday, plant tour with bus transportation, and a course workbook or flash drive including presentations.

HOTEL ACCOMMODATIONS

A block of rooms has been reserved at The Nines, A Luxury Collection Hotel, Portland. Please call the hotel at +1.888.627.7208 by 13 January 2020 to secure the AIST discount rate of US\$199 per night for single/double occupancy.

AIST MEMBERS

US\$1,195

by 20 December 2019

US\$1,295

after 20 December 2019

NON-MEMBERS

US\$1,440

by 20 December 2019

US\$1,540

after 20 December 2019



FEATURED PLANT TOUR

Cascade Steel Rolling Mills Inc.

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SCHEDULE OF EVENTS



Monday, 3 February 2020

4–6 p.m.
Registration

5–6 p.m.
Welcome Reception

Tuesday, 4 February 2020

7 a.m.
Registration and Breakfast

8 a.m.
Introductions

8:10 a.m.
The Day We Will Remember

Ricky Rollins, Ricky Rollins Safety Speeches LLC

Ricky Rollins will tell the story of how he almost lost his life on a steel mill start-up 25 years ago and how that accident would have affected his family. He will also tell four more stories from the perspective of friend, father, husband, brother, co-worker, supervisor and department manager of things that have affected his circle.

9 a.m.
Break

9:15 a.m.
Chemistry of EAF Steelmaking

Larry Heaslip, Interflow Techserv Inc.

The fundamentals of EAF steelmaking chemistry are presented in a way that will be informative to attendees having little background knowledge as well to those who are completely new to the topic.

10:30 a.m.
Break

10:45 a.m.
Chemistry of EAF Steelmaking (cont'd)

Larry Heaslip, Interflow Techserv Inc.

Noon
Lunch

1 p.m.
Chemistry of EAF Steelmaking (cont'd)

Larry Heaslip, Interflow Techserv Inc.

2:15 p.m.
Break

2:30 p.m.
Chemistry of EAF Steelmaking (cont'd)

Larry Heaslip, Interflow Techserv Inc.

3:30 p.m.
Break

3:45 p.m.
Chemical and Electrical Energy Inputs and EAF Performance

Sam Matson, Commercial Metals Company

The presentation will cover the timing and relationship between the electrical energy input and chemical energy input. Tracking energy inputs and losses will be discussed, as well as their relationships to the timing and magnitudes of the energy inputs.

Wednesday, 5 February 2020

7 a.m.
Breakfast

8 a.m.
Part I: EAF Designs and Operations

Jeremy Jones, CIX Inc.

Part one of this presentation covers the historical developments in EAF design in the last 25 years.

9 a.m.
Break

9:10 a.m.
Part II: EAF Technologies – The Path to EAF Optimization

Jeremy Jones, CIX Inc.

Part two deals with methods aimed at EAF optimization.

10:20 a.m.
Break

10:30 a.m.
EAF Operations

Mark Trapp, CIX Inc.

Noon
Lunch

12:30 p.m.
Plant Tour of Cascade Steel Rolling Mills Inc. 🏭

4:30 p.m.
Reception and Roundtable Discussion

Moderator: Sam Matson, Commercial Metals Company

Panelists: Eugene Pretorius, Nucor Corp.; Jeremy Jones, CIX Inc.; Harriet Dutka, SANGRAF International; and Stephan Ferenczy, TCI Inc.

Thursday, 6 February 2020

7 a.m.
Breakfast

8 a.m.
Importance of Scrap Residual Controls

Dennis Rodal, ELG Haniel Metals Corp.

Scrap is the key raw material in EAF steelmaking, and controlling residuals is essential to making quality steel.

9 a.m.
Break

9:15 a.m.
Ladle Metallurgy Furnace – LMF

Helmut Oltmann, Nucor Steel–Berkeley

10:15 a.m.
Break

10:30 a.m.
EAF Maintenance Requirements

Stephan Ferenczy, TCI Inc.

Typical electrical, mechanical and water-cooled equipment maintenance requirements will be discussed. Root-cause failure analysis techniques and practical solutions will be presented.

Noon
Lunch

1 p.m.
EAF Industry Perspective – Past and Future

Raymond Monroe, Steel Founders' Society of America

2:15 p.m.
Break

2:30 p.m.
Environmental Operations for the EAF

Sam Matson, Commercial Metals Company

This presentation will review the main gaseous emissions, which part of the steelmaking process is likely to generate, and potential ideas for how to reduce them. Also included will be an overview of air pollution control equipment operation.

3:45 p.m.
Break

4 p.m.
Ore-Based Metallics in the EAF

Zane Voss, CIX Inc.

The use of ore-based metallics brings many advantages to the EAF operator. However, these materials need to be well understood in order to use them properly and obtain the most benefit.

Friday, 7 February 2020

7 a.m.
Breakfast

8 a.m.
The Basics of Arc Furnace Regulation System

Reinzi Santiago, Tenova Core

9:15 a.m.
Break

9:30 a.m.
Gas/Carbon Injection Systems

Mike Grant, Air Liquide Global Management Services GmbH

This lecture will contain a practical (with some theory) description and strategy of the use of oxygen and gaseous fuels in the electric arc furnace. The importance and strategy of use of carbon injection will also be presented. A strong emphasis on the safe use of oxygen will be made.

11 a.m.
Graphite Electrode Manufacture and Use

Theo Kurela, Graftech Internatioanl Ltd.

This presentation will review the graphite electrode manufacturing process, proper field assembly/usage as well as suggested corrective actions when optimum performance is not being achieved.

Noon
Conference Adjourn