



Modern Electric Furnace Steelmaking

A Practical Training Seminar

1-5 February 2016 - Jacksonville, Fla., USA - The DoubleTree Hotel by Hilton Jacksonville Riverfront

About the Course

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.

Registration Fees

Advance registration by 21 December 2015: Member US\$995, Non-member US\$1,210. Registration after 21 December 2015: Member US\$1,095, Non-member US\$1,310. Registration includes welcome reception Monday, continental breakfasts Tuesday through Friday, lunches Tuesday through Thursday, continuous breaks, reception Wednesday, plant tour, and a course workbook or flash drive including presentations.

Sponsored By

AIST's Electric Steelmaking Technology Committee

Monday, 1 February 2016

4–6 p.m.
Registration

5–6 p.m.
Welcome Reception

Tuesday, 2 February 2016

7 a.m.
Registration and Continental Breakfast

8 a.m.
Keynote Speaker
Bill Rider, steelmaking manager, Gerdau Long Steel North America
Jacksonville Mill

8:30 a.m.
Safety – Past/Present/Future
John Panconi, BISCO Refractories Inc.

9:30 a.m.
Break

9:40 a.m.
Chemistry of EAF Steelmaking
Lawrence Heaslip, Interflow Techserv Inc.
This presentation has been developed to provide attendees with an insight into the chemistry of liquid steel production in the electric arc furnace and is designed to be of interest to both those persons completely new to this topic as well as those having a background in process metallurgy and/or those having experience in steel melting.

10:50 a.m.
Break

11 a.m.
Chemistry of EAF Steelmaking (cont'd)
Lawrence Heaslip, Interflow Techserv Inc.

Noon
Lunch

1 p.m.
Chemistry of EAF Steelmaking (cont'd)
Lawrence Heaslip, Interflow Techserv Inc.

2:15 p.m.
Break

2:30 p.m.
Chemistry of EAF Steelmaking (cont'd)
Lawrence Heaslip, Interflow Techserv Inc.

3:30 p.m.
Break

3:45 p.m.
Chemical and Electrical Energy Inputs and EAF Performance
Sam Matson, CMC Americas

Wednesday, 3 February 2016

7 a.m.

Registration and Continental Breakfast

8 a.m.

Part I: EAF Designs and Operations

Jeremy Jones, CIX Inc.

9 a.m.

Break

9:10 a.m.

Part II: EAF Technologies – The Path to EAF Optimization

Jeremy Jones, CIX Inc.

10:20 a.m.

Break

10:30 a.m.

Ladle Metallurgy Furnace – LMF

Helmut Oltmann, Nucor Steel–Berkeley

11:30 a.m.

Boxed Lunch

Noon

 **Depart Hotel for Tour of Gerdau Long Steel North America Jacksonville Mill**

4 p.m.

Return From Plant Tour

4:30 p.m.

Reception and Roundtable Discussion

Moderator: Brett McGee

Panelists: Harriet Dutka, Magnesita Refractories, Sam Matson, CMC Americas, Eugene Pretorius, Nucor, and Jeremy Jones, CIX Inc.

Thursday, 4 February 2016

7 a.m.

Registration and Continental 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.

Environmental Operations for the EAF

Sam Matson, CMC Americas

10:15 a.m.

Break

10:30 a.m.

Gas/Carbon Injections Systems

Mike Grant, Air Liquids Global Mangement Services GmbH

This lecture will contain a practical scope describing the use of oxygen and gaseous fuels in the electric arc furnace (EAF). The importance and use of carbon injection will also be presented. The presentation will include the latest technologies of EAF burner, oxygen and carbon injection systems, as well as the general theory and strategy of their use. The lecture will be presented with strong emphasis on the safe use of oxygen.

Noon

Lunch

For more information, visit

AIST.org/technologytraining

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.

Electrical Engineering 101

Fernando Martinez, AMI GE

3:45 p.m.

Break

4 p.m.

Tap-to-Cast Operations

Harriet Dutka, Magnesita Refractories

A brief overview that is focused on answering the “why’s” of certain practices and procedures in steelmaking. If you are new to steelmaking or are in a non-technical role, this presentation will answer many of the questions you would like to ask.

Friday, 5 February 2016

7 a.m.

Continental Breakfast

8 a.m.

The Basics of Electric Arc Furnace Regulation

Reinzi Santiago, Tenova Core

Describes the concept of the arc furnace regulation system, with emphasis on its performance relationship with harmonics, flicker and energy consumption.

9 a.m.

EAF: Graphite Electrode Manufacture and Use

Theodore Kurela, GrafTech International Holdings Inc.

9:45 a.m.

Break

10 a.m.

The Overview of the Refractory Technology From the Mini-Mill Application Perspective

Tomas Richter, HarbisonWalker International

The chemical, physical and application attributes will be presented for refractories used during the electric arc furnace steelmaking process. Proper refractory selection will be summarized in relationship to the operational and metallurgical parameters of the EAF process.

10:45 a.m.

Break

11 a.m.

Offgas Monitoring and Optimization Using EFSOP

Doug Zuliani, Tenova Goodfellow

Noon

Conference Adjourn

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