



Specialty Alloy and Foundry

A Practical Training Seminar

13–16 March 2017
Mobile, Ala., USA
The Admiral Hotel Mobile, Curio Collection by Hilton





About the Program

This two-and-a-half-day seminar provides an overview of melting, refining, and solidification in stainless and specialty steel mills and foundries. On the first two days, products, process cycles and safety will be discussed. Alloy chemistry, material selection, induction furnace melting, refractories, refining, ingot casting and remelting will also be covered in detail. The newest and largest stainless meltshop in the world will be toured on the final half-day.

Who Should Attend

This seminar is geared toward mill or foundry meltshop managers, engineers, operators, suppliers, and students who need an introduction to stainless and specialty steel melting, refining, ingot casting and remelting.



**BRING YOUR OWN
YOUNG PROFESSIONAL**

Visit AIST.org/byoyp for more information

Organized By

AIST's Specialty Alloy & Foundry Technology Committee.

Schedule of Events

Monday, 13 March 2017

4 p.m.
Registration

Tuesday, 14 March 2017

7 a.m.
Registration and Continental Breakfast

8 a.m.
Keynote Presentation
Joachim Stolz, Outokumpu Stainless USA LLC

8:30 a.m.
Markets and Applications for Foundries and Specialty Steels
Raymond Monroe, Steel Founders' Society of America

9:30 a.m.
Break

9:45 a.m.
Induction Melting Furnaces
Charles Fink, Inductotherm Corp.
This presentation will provide a basic overview of the designs and types of induction melting furnaces that have been and are being used for ferrous melting. This will include theory of induction, furnace construction, electrical power supply design, basic operation, safety features such as ground leak detector systems and leak detector probe testing. Associated equipment used in conjunction with the induction furnace and auxiliary equipment to make the melt deck safer will be mentioned.

10:45 a.m.
Break

11 a.m.
Induction Melting Practices
Raymond Monroe, Steel Founders' Society of America

Noon
Lunch

1 p.m.
The Elements
Maria Diana David, Steel Founders' Society of America
This presentation will cover the alloying additions in making steel and specialty alloys and their effects on the microstructure and properties. Tramp elements and gases will also be discussed.

2 p.m.
Break

2:15 p.m.
Material Selection
Dennis Rodal, ELG Haniel Metals Corp.

3:15 p.m.
Break

3:30 p.m.
Non-Induction Melting
Allen Chan, Praxair Inc.
This presentation will briefly review melting processes other than induction furnaces such as cupola and electric arc, with discussion of chemical energy, raw materials, slags and slag foaming.

5 p.m.
Reception

Wednesday, 15 March 2017

7 a.m.

Continental Breakfast

8 a.m.

Steel Refining

Allen Chan, Praxair Inc.

The discussion will focus on the fundamentals of degassing, decarburization and desulfurization.

9 a.m.

Break

9:15 a.m.

Solidification and Casting: Foundry

Maria Diana David and Raymond Monroe, Steel Founders' Society of America

This presentation will talk about the metallurgy of steel castings. An overview on foundry engineering will be given. The filling and solidification of steel in molds will be discussed. Typical microstructures and casting defects will also be presented.

10:15 a.m.

Break

10:30 a.m.

Solidification and Casting: Ingots

Mark Suer, AK Steel Corp.

Noon

Lunch

1 p.m.

Remelting Ingots

Mark Suer, AK Steel Corp.

This presentation will give an overview of the electroslag remelting (ESR) and vacuum arc remelting (VAR) processes.

2 p.m.

Break

2:15 p.m.

Basic Refractories

Timothy Leisure, HarbisonWalker International

3:15 p.m.

Break

3:30 p.m.

Refractory Shapes

Andrew Pinsky, Holland Manufacturing Corp.

4:30 p.m.

Seminar Wrap-Up

Thursday, 16 March 2017

6 a.m.

Continental Breakfast

7 a.m.

Plant Tour of Outokumpu Stainless USA LLC



Noon

Return From Plant Tour and Adjourn

Registration

AIST Members

US\$745

by 30 January 2017

US\$845

after 30 January 2017

Non-Members

US\$960

by 30 January 2017

US\$1,060

after 30 January 2017

Registration Includes

Continental breakfasts, lunches, and continuous breaks Tuesday and Wednesday; reception Tuesday; 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 Admiral Hotel Mobile, Curio Collection by Hilton. Please call the hotel at +1.251.432.8000 by 13 February 2017 to secure the AIST discount rate of US\$124 per night for single/double occupancy.

Featured Plant Tour

Outokumpu Stainless USA LLC



Upcoming Events

- > Modern Electric Furnace Steelmaking — A Practical Training Seminar
6–10 February 2017
The Dallas/Fort Worth Marriott Solana > Fort Worth, Texas, USA
- > Scrap Supplements and Alternative Ironmaking 7
19–21 February 2017
Wyndham Lake Buena Vista > Orlando, Fla., USA
- > Rod and Bar Rolling
20–23 February 2017
The Atlanta Marriott Marquis > Atlanta, Ga., USA
- > Cold Rolling Fundamentals — A Practical Training Seminar in conjunction with System Automation Fundamentals
5–9 March 2017
Hyatt Regency Indianapolis > Indianapolis, Ind., USA



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