



SPECIALTY ALLOY AND FOUNDRY

A PRACTICAL TRAINING SEMINAR



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. A steel mill and a foundry will be toured on the final half day.

20-23 JULY 2015
MONROEVILLE, PA., USA
THE DOUBLETREE BY HILTON HOTEL PITTSBURGH -
MONROEVILLE CONVENTION CENTER

SCHEDULE OF EVENTS

MONDAY, 20 JULY 2015

4 p.m.
Registration

TUESDAY, 21 JULY 2015

7 a.m.
Registration and Continental Breakfast

8 a.m.
Welcome and Introductions

8:15 a.m.
STAINLESS AND SPECIALTY STEEL MARKET AND APPLICATIONS
RAYMOND MONROE, STEEL FOUNDERS' SOCIETY OF AMERICA

9 a.m.
SAFETY IN SPECIALTY STEEL PRODUCTION
DAVID MCLAUGHLIN, CARPENTER TECHNOLOGY CORP.

MORE INFORMATION AT
AIST.ORG/TECHNOLOGYTRAINING

9:50 a.m.

Break

10 a.m.

SCRAP SELECTION FOR QUALITY SPECIALTY STEELS

DENNIS RODAL, ELG HANIEL METALS CORP.

Producing quality specialty steel requires care in proper scrap selection and use.

10:50 a.m.

Break

11 a.m.

ELECTRIC ARC FURNACE SPECIALTY STEELMAKING

TOM KANTOR, CARPENTER LATROBE OPERATIONS

This presentation will give an overview of the role of the electric furnace in specialty steelmaking.

11:50 a.m.

Lunch

1 p.m.

CORELESS INDUCTION FURNACE FAILURE MODES

MARK KOHLER, AJAX LECTROTHERM

A photographic and narrative summary that encompasses the most common and some not-so-common coreless induction failure modes. The elements that contribute to or cause the majority of coil failures fall into three categories: exposure to excessive thermal load, material and/or chemical deposition, and mechanical damage. A fourth category related to refractory failure is also touched on, primarily bridging and superheating, with some eye-opening photographic examples and stories.

1:50 p.m.

Break

2 p.m.

ALLOY STEEL CHEMISTRY: 101

DAVID KUNDRAT, SGL CARBON CORP.

Introduction to thermodynamics of steel chemistry by the use of the Ellingham Diagram and alloy phase diagrams. Beginning with the base system FE-C-O in Part 1, then considering alloying elements in Part 2, key thermodynamic relationships are explored.

2:50 p.m.

Break

3 p.m.

METALS IDENTIFICATION – A PRACTICAL APPROACH

DREW BOLLENBERG, ELG HANIEL METALS CORP.

3:50 p.m.

Break

4 p.m.

RECEPTION AND PANEL DISCUSSION

RAYMOND MONROE, STEEL FOUNDERS' SOCIETY OF AMERICA; MARK KOHLER, AJAX LECTROTHERM; TED KLEMP, CAYENNE SYSTEMS INC.; AND DENNIS RODAL, ELG HANIEL METALS CORP.
MODERATOR: ALLEN CHAN, PRAXAIR

WEDNESDAY, 22 JULY 2015

7 a.m.

Continental Breakfast

8 a.m.

STEEL AND REFRACTORIES

JAMES CONRAD, FEDMET

8:50 a.m.

Break

9 a.m.

INDUCTION FURNACE REFRACTORIES

ANDREW PINSKEY, HOLLAND MANUFACTURING CORP.

Monolithic furnace liners, crucibles and other special shapes.

9:50 a.m.

Break

10 a.m.

INDUCTION PROCESSES

TED KLEMP, CAYENNE SYSTEMS INC.

Noon

Lunch

1 p.m.

REFINING OF SPECIALTY STEELS

ALLEN CHAN, PRAXAIR INC.

This session introduces the fundamentals of refining, especially decarburization, degassing and desulfurization.

1:50 p.m.

Break

MORE INFORMATION AT
AIST.ORG/TECHNOLOGYTRAINING

2 p.m.

INTRODUCTION TO INGOT CASTING OF SPECIALTY STEEL INGOTS

MARK SUER, SPECIAL METALS CORP.

The principles of casting specialty steel ingots will be presented. This presentation will focus on the operational aspects of the bottom-pour casting process.

2:50 p.m.

Break

3 p.m.

INTRODUCTION TO REMELTING OF SPECIALTY STEEL INGOTS

MARK SUER, SPECIAL METALS CORP.

The principles of remelting as-cast electrodes into ingots will be presented. This presentation will focus on the remelting processes of vacuum arc remelting (VAR) and electroslag remelting (ESR).

3:50 p.m.

Break

4 p.m.

Seminar Conclusion

THURSDAY, 23 JULY 2015

7 a.m.

Continental Breakfast

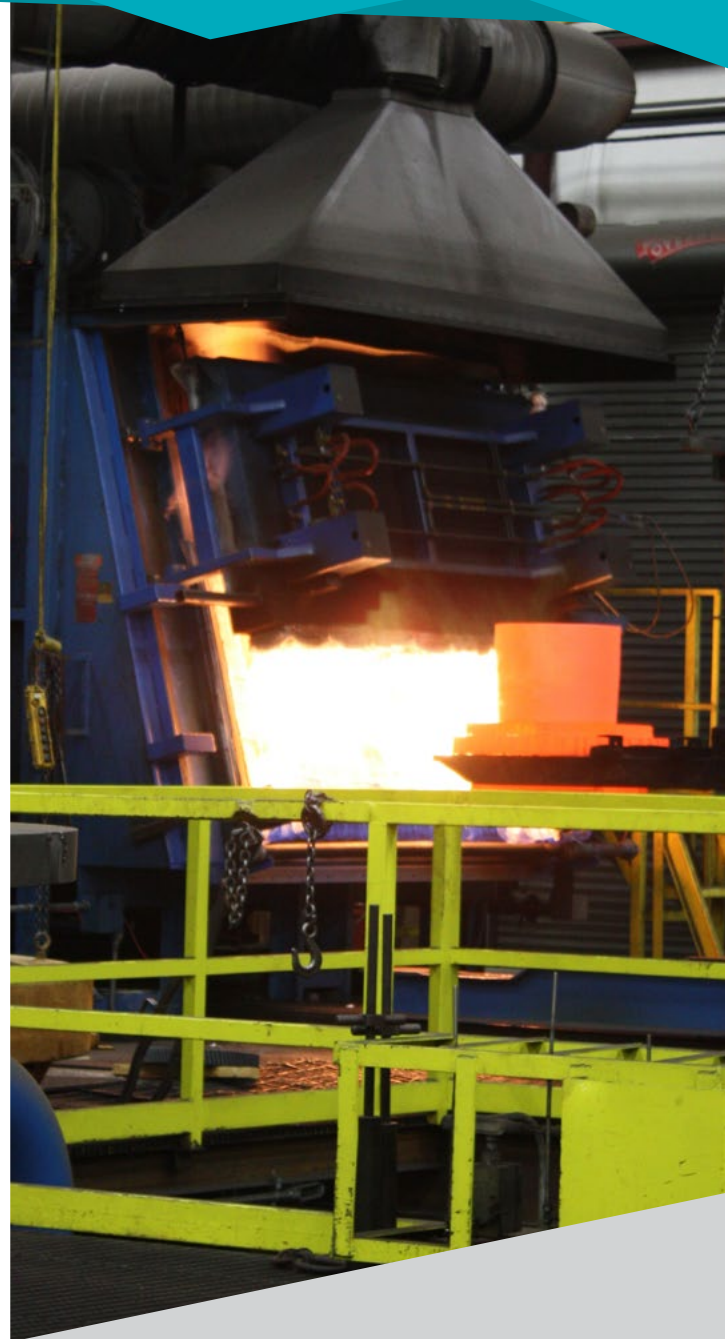
8 a.m.

PLANT TOUR OF CARPENTER LATROBE OPERATIONS



Noon

RETURN FROM PLANT TOUR AND ADJOURN



REGISTRATION FEES

Advance registration by 9 June 2015: Member US\$745, Non-member US\$960. Registration after 9 June 2015: Member US\$845, Non-member US\$1,060. Registration fee includes continental breakfasts, lunches and continuous breaks Tuesday and Wednesday, reception Tuesday, continental breakfast Thursday, plant tour, and a course workbook or flash drive including presentations.

**MORE INFORMATION AT
AIST.ORG/TECHNOLOGYTRAINING**

REGISTER NOW