CONTINUOUS CASTING
A PRACTICAL TRAINING SEMINAR

13–15 OCTOBER 2020
Holiday Inn Cleveland South — Independence
Independence, Ohio, USA
Plant Tour: TimkenSteel Corp. or ArcelorMittal Cleveland

ABOUT THE PROGRAM
Developed and presented with the talented resources of the Continuous Casting Technology Committee, this informative program targets the heart of steelmaking: the frontline operator. The key focus of the program is to discuss the practical aspects of casting slabs, billets and blooms, while introducing the theoretical concepts. By achieving the proper teaching balance, attendee understanding of the process is ensured without the need for a technical background. This course is a must for the progressive, informed and educated steelmaker of the future!

WHO SHOULD ATTEND
This training seminar has been designed for the frontline casting employee. It would also be beneficial to individuals newly assigned to work in the casting area, suppliers of casting consumables and services, as well as others wishing to review major variables that impact the quality of as-cast products. The presentations will be geared toward general casting principles, with all machine types represented.

PROFESSIONAL DEVELOPMENT HOURS
This course may qualify for up to 13.5 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.

ORGANIZED BY
AIST’s Continuous Casting Technology Committee.

REGISTRATION INCLUDES
Breakfasts and lunches Tuesday and Wednesday, reception Wednesday, breakfast Thursday, 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 Holiday Inn Cleveland South - Independence. Please call the hotel at +1.216.524.8050 ext. 298 by 19 September 2020 to secure the AIST discount rate of US$105 per night for single/double occupancy.

ATTENTION NON-MEMBERS
Non-member registration fees include membership in AIST through 31 December 2021. Membership is not automatic. A completed membership application must be returned to AIST.

AIST MEMBERS
US$845

NON-MEMBERS
US$1,090

UPCOMING EVENTS
Secondary Steelmaking Refractories — A Practical Training Seminar
6–8 October 2020
Holiday Inn Nashville Vanderbilt
Nashville, Tenn., USA

Environmental Solutions: Meeting EPA Air Emission Requirements
19–21 October 2020
Dearborn, Mich., USA

Steel Mill Combustion and Thermal Systems
27–29 October 2020
AIST Headquarters
Warrendale, Pa., USA

The Making, Shaping and Treating of Steel: 101
4–5 November 2020
AIST Headquarters
Warrendale, Pa., USA
SCHEDULE OF EVENTS

Monday, 12 October 2020
4–6 p.m.
Registration

Tuesday, 13 October 2020
7 a.m.
Registration and Breakfast

8 a.m.
Historical Perspective of Continuous Casting with Design & Technology of Slab and Long Products
Dewey Humes, Primetals Technologies USA LLC

9:15 a.m.
Break

9:30 a.m.
EMBR Technology

10 a.m.
Break

10:15 a.m.
Principles of Mold Flux Technology — An Operator’s Guide to Continuous Casting Flux
Darrell Sturgill, IMERYS Steencasting USA Inc.
Attendees will receive an overview of the design, production and application of continuous casting fluxes.

11 a.m.
Initial Solidification and Oscillation Mark Formation

Noon
Lunch

1 p.m.
Sources of Reoxidation and Why To Avoid
Ron O’Malley, Missouri University of Science and Technology
To produce high-quality cast products, steel must be protected from reoxidation. Reoxidation can occur in the ladle, at secondary ladle metallurgy operations, and also in the transfer operations from ladle to tundish and tundish to the mold. Various techniques will be described that can be used to minimize reoxidation.

2 p.m.
Break

2:15 p.m.
Principles of Mold Flux Technology — An Operator’s Guide to Continuous Casting Flux
Darrell Sturgill, IMERYS Steencasting USA Inc.
Attendees will receive an overview of the design, production and application of continuous casting fluxes.

3 p.m.
Break

3:30 p.m.
Caster Quality Defects and Their Potential Causes
Ron O’Malley, Missouri University of Science and Technology
The surface and internal quality of continuously cast slabs and billets is intimately linked to the caster design and to the operating and maintenance practices employed in the continuous casting process. Common causes for five classes of continuous casting defects (longitudinal cracking, transverse cracking, slivers and lamination defects, internal cracking, and segregation defects) will be reviewed and linked to these design and practice influences.

5 p.m.
Adjourn

Wednesday, 14 October 2020
7 a.m.
Breakfast

8 a.m.
Breakouts and Their Prevention
Bill Emling, SMS group Inc.
This presentation is based on the chapter in The Making, Shaping and Treating of Steels, Casting Volume. A review will be given of various causes for caster breakouts and the systems used to alarm and prevent breakouts.

9 a.m.
Break

9:15 a.m.
Mold and Copper Maintenance and Coating Technologies
Chad Donovan, SMS group Inc.
Discussion of the various types of continuous caster molds and proper maintenance practices, including a variety of mold coating options available to the industry.

10:15 a.m.
Break

10:30 a.m.
Caster Roll Maintenance and Overlay Technologies
Jeff Brower, Primetals Technologies USA LLC
Caster roll and segment life can be significantly increased through the use of customized weld overlays and base materials. This session details the operational impact on caster rolls and technologies developed to improve roll performance.

11:30 a.m.
Boxed Lunch

4 p.m.
Panel Discussion and Reception
Moderator: Jeff Brower, Primetals Technologies USA LLC; Panelists: Ian Deeks, Nucor Steel—Arkansas, Ron O’Malley, Missouri University of Science and Technology

Thursday, 15 October 2020
7 a.m.
Breakfast

8 a.m.
Billet and Bloom Caster Operations and Maintenance
Ian Deeks, Nucor Steel—Arkansas
Lessons learned in the operations of billet and bloom casters.

9 a.m.
Break

9:15 a.m.
Caster Hydraulics — Failure Modes and Preventive Maintenance
Mark Cook, Yates Industries Inc.
This discussion will cover cylinders used in casters, failure modes, preventive maintenance and effective cylinder reconditioning programs.

10 a.m.
Break

10:15 a.m.
Caster Bearings — Types of Bearings, Failure Modes and Preventive Maintenance
Paul Brda, NSK Corp.
Types of bearings used in casters, common failure modes and maintenance best practices.

Noon
Conference Adjourn