

Upcoming Events

Long Products Rolling –

A Practical Training Seminar

25–28 February 2019
Homewood Suites by Hilton
Charleston Historic District
Charleston, S.C., USA

The Making, Shaping and Treating of Steel: 101

26–27 February 2019
Doubletree by Hilton Memphis Downtown
Memphis, Tenn., USA

Specialty Alloy and Foundry –

A Practical Training Seminar

18–21 March 2019
The Hilton Harrisburg
Harrisburg, Pa., USA

Digital Transformation Forum for the

Steel Industry

25–28 March 2019
Omni William Penn Hotel
Pittsburgh, Pa., USA



Plant tour:
AM/NS
Calvert LLC



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Sheet Processing and Finishing Lines

A Practical Training Seminar

17–21 March 2019

The Battle House Renaissance Mobile Hotel
Mobile, Ala., USA



About the Program

This seminar will provide a comprehensive overview of process lines, including pickling, annealing, galvanizing, cleaning, plating, painting, skinpass rolling, leveling, slitting and special processes. This seminar will also focus on terminal equipment for the entry and exit sections, strip quality assessment, industrial hygiene, safety, environmental concerns, overview of modeling for design and line control, operations, maintenance, and factors to consider in configuring a new process line. There will be many opportunities to discuss issues and solve problems during the question-and-answer periods.

Who Should Attend

Those who would like to expand their knowledge and understanding of process lines: new and transferred employees of steel producers; mechanical, electrical, process and metallurgical engineers; software and process control personnel; maintenance personnel; operators; and quality assurance specialists. Equipment manufacturers, **employees from steel processors and steel service centers**, suppliers, and customers of steel producers will also benefit from this seminar.

Professional Development Hours

This course may qualify for up to 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 credits in New York, Florida, North Carolina and Oklahoma.

Organized By

AIST's Rolling and Processing Technology Division.



**BRING YOUR OWN
YOUNG PROFESSIONAL**

Visit AIST.org/byoyp for more information.

Registration Includes

Welcome reception Sunday, breakfast Monday–Thursday, lunch Monday–Thursday, 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 Battle House Renaissance Mobile Hotel. Please call the hotel at +1.866.316.5957 by 25 February 2019 to secure the AIST discount rate of US\$149 per night for single/double occupancy.

AIST Members

US\$1,195
by 4 February 2019

US\$1,295
after 4 February 2019

AIST Non-Members

US\$1,410
by 4 February 2019

US\$1,510
after 4 February 2019



Featured Plant Tour:

AM/NS Calvert LLC

AIST.org

Schedule of Events



Sunday, 17 March

5 p.m.
Reception

Monday, 18 March

8 a.m.
Introduction, Opening Remarks and Overview
Chad Donovan, SMS group Inc.

8:45 a.m.
Process Line Design Fundamentals
Dave Withrow, Allor Manufacturing Inc.
To ensure the success of a process line, its performance requirements must be integrated fully with its setting, and the strip driving power must be ample.

10:15 a.m.
Strip Transport – Entry Equipment
Bob Garness, SMS group Inc.
Function, location and different designs for entry-end terminal equipment in a process line depend on the application and the material to be processed. Types of welders and their use in the various types of lines will be discussed, including other equipment associated with the welder.

11:15 a.m.
Pickling Technology – Carbon and Stainless Steels
Bob Garness, SMS group Inc.
This discussion presents pickling theory for carbon and stainless steel, variables to be considered when sizing a process section, description of equipment required and consideration of the terminal equipment.

Noon
Lunch

12:45 p.m.
Pickling Technology – Carbon and Stainless Steels (cont'd)

1:30 p.m.
Annealing
Bill Lucas, Fives ST
This session will consider various aspects of steel annealing as it pertains to strip. The reasons for annealing, along with the physical results possible with different thermal cycles, will be covered. Equipment employed along with methods of heating, cooling and strip conditioning will be reviewed in greater detail. A brief discussion of materials used and how they influence equipment lifetime and maintenance is included. Processing atmospheres, equipment control methods and safety considerations are also discussed.

3 p.m.
Galvanizing
Gary Dallin, International Zinc Association
Presentation on the coating section of a modern hot-dip zinc coating line, including bath control, zinc wiping practices and galvanneal production.

4:30 p.m.
Question-and-Answer Session

Tuesday, 19 March

8 a.m.
The Chemical and Mechanical Process of Steel Strip Cleaning and How to Enhance Performance
Stephanie Williamson, Quaker Chemical Corp.
Steel strip undergoes cleaning for the removal of process fluids, metal fines and surface residue prior to various downstream processing and finishing applications. A clean metal surface is necessary for these applications, which include annealing, metallic coating and painting. Before enhancing cleaning performance, it's important for operating personnel to understand the general framework for chemical and mechanical strip cleaning. Once this general framework is learned, ways to optimize cleaner performance through solution chemistry control and equipment design will be discussed.

9 a.m.
Conversion Coatings
Stephanie Williamson, Quaker Chemical Corp.

10:15 a.m.
Coil Coating
Mark Slawikowski, Precoat Metals

11:15 a.m.
Skinpass/Temper Rolling
Michael Peretic, SMS group Inc.
This presentation will discuss objectives for skinpass/temper rolling. It will also give an overview of typical mill equipment and recent developments to enhance sheet quality and productivity.

12:15 p.m.
Lunch

1:15 p.m.
The Latest Roller, Stretcher and Tension Leveling Technology
Dave Withrow, Allor Manufacturing Inc.
The three primary types of levelers now in common use will be described, including their theory, performance, benefits and shortcomings. Also discussed will be the impact the new high-strength metals impose on the existing machines, and what new machine parameters will be required to effectively process these new materials.

2 p.m.
Slitting and Sidetrimming
Cesar Martin, SES-Salico
This presentation will feature a description of the slitting/sidetrimming process, typical layout and operation considerations. Challenges of market trends (materials, legislation) on designs and new solutions derived from these will also be discussed.

3:30 p.m.
Entry Equipment – Coil Joining
Matt Keller, Taylor-Winfield Technologies Inc.
This presentation gives an overview of processes and equipment utilized in the coil joining process in sheet processing and finishing lines, including resistance seam and spot, plasma, MIG, and laser welding.

4:15 p.m.
Welding Inspection for Coil Joining
David Mann, Innerspec Technologies Inc.
This presentation will discuss electromagnetic acoustic transducer ultrasonic testing inspection and the advantages it provides for automated weld inspection in industrial environments.

5 p.m.
Reception

Wednesday, 20 March

8 a.m.
Strip Transport and Post-Treatment Equipment for Sheet Processing Lines
Bob Garness, SMS group Inc.
This presentation will discuss exit equipment and ancillary treatments, including strip coiling, used in sheet processing equipment.

9:30 a.m.
Health Safety and Environment

11:00 a.m.
Automated Coil Marking and Tagging
Bill Smith, Tebulo Industrial Robotics
This technical presentation discusses the types and procedures for identification of coils at the exit point of mills as well as the safety benefits that automation can bring, including legible marking, scannable and radio frequency identification labels, fast cycle time, reliable equipment, and increased operator safety. Steel producers are increasingly relying on automation to fulfill these needs in a cost-effective manner.

11:30 a.m.
Automated Surface Inspection of Sheet and Finished Product
Greg Gutmann, ISRA Surface Inspection
This technical presentation will discuss basic automated surface inspection systems technology and how it can be applied. Among the discussion topics will be the use of inspection data to assess product quality and assist in decision-making, as well as understanding the potential return on investment.

Noon
Lunch

1 p.m.
Modeling for Control
John Ingram, Primetals Technologies
This presentation is an introduction to control concepts used on process lines, with practical examples to illustrate control design.

2:45 p.m.
Strip Quality Panel Discussion
Moderator: Mark Marietti, AK Steel – Dearborn Works
Panelists: Abhilash Dash, Nucor Steel Decatur LLC
Stavros Fountoulakis, ArcelorMittal Global R&D
Nikhil Kulkarni, Steel Dynamics Inc.—Flat Roll Group—Jeffersonville Plant
Kevin Siebeneck, U. S. Steel – Great Lakes Works

4 p.m.
Question-and-Answer Session

Thursday, 21 March

8 a.m.
Service Centers

10:45 a.m.
AM/NS Calvert LLC Presentation

11:45 a.m.
Boxed Lunch and Plant Tour of AM/NS Calvert LLC 

4 p.m.
Conference Adjourn