



# PROCESS SYSTEMS

TECHNOLOGY TRAINING CONFERENCE



## ABOUT THE PROGRAM

Few individuals are knowledgeable about the complete L0, L1 and L2 systems available today for various mill types. Current technology allows implementation of functionality without regard for the traditional level designations. Effective system maintenance typically requires system-wide knowledge and may cross organizational boundaries. This conference will provide an overview of what is available today, along with details of how individual mills may be configured. This knowledge will be useful for upgrading existing mills as well as new installations.

The intent of this conference is to educate and inform on the various components and systems available, making organizational discussions less stressful and implementation more seamless. The agenda is a single track with time reserved for small group discussions on specific topics of interest.

**2-5 MARCH 2015**  
**MOBILE, ALA., USA**  
THE BATTLE HOUSE RENAISSANCE MOBILE HOTEL

## SCHEDULE OF EVENTS

### MONDAY, 2 MARCH 2015

4 p.m.  
Registration

### TUESDAY, 3 MARCH 2015

7 a.m.  
Registration and Continental Breakfast

8 a.m.  
**WELCOME, INTRODUCTION AND OVERVIEW**  
*CHRIS BURNETT, THERMO FISHER SCIENTIFIC*

8:15 a.m.  
**SPEED AND POSITION SENSORS**  
*BRIAN WINTER, NIDEC-AVTRON*

Real-world applications of speed and position sensors throughout the metals process will be discussed. Selection, maintenance and troubleshooting techniques to improve reliability will be the primary focus of this discussion.

MORE INFORMATION AT  
[AIST.ORG/TECHNOLOGYTRAINING](http://AIST.ORG/TECHNOLOGYTRAINING)

8:45 a.m.

### **VISION SYSTEMS – SURFACE INSPECTION**

*GREGORY GUTMANN, PARSYTEC*

Discussion will include practical use and application of a vision system for surface inspection. The in-depth evaluation of the inspection data to drive process improvement and data quality, along with making quality and production decisions based on inspection data.

9:15 a.m.

### **STRIP WIDTH MEASUREMENT**

*BRIAN SMITH, PRIMETALS TECHNOLOGIES U.S.A. HOLDINGS INC*

9:45 a.m.

Break

10 a.m.

### **SHAPE ROLLS AND FLATNESS MEASUREMENT**

*MARK ZIPF, COLD ROLLING TECHNOLOGIES INC.*

This presentation provides an overview of the fundamental concepts and methods of strip shape/flatness measurement, in applications associated with closed-loop control and process performance/quality monitoring. Emphasis will be placed on the measurement systems and understanding their primary components, theory of operation and system architectures. The presentation begins with a detailed review of the formal definitions of profile, shape and flatness, and their underlying interrelationships. Sources of shape/flatness distortions are introduced, along with methods used to analytically characterize their nature and behavior. Concepts and techniques used to obtain measured indications of the shape/flatness (in both on-line and off-line situations) are presented and examined. Contemporary, commercially available shape/flatness measurement systems are studied and discussed, including their range of applicability, advantages and disadvantages. The presentation concludes by reviewing analytic strategies for characterizing and assessing on-line and off-line shape/flatness performance and quality. Where possible, historic relevance, technology trends and real-world experiences will be intertwined within the discussion.

10:45 a.m.

### **STRIP THICKNESS MEASUREMENT SYSTEMS**

*CHRIS BURNETT, THERMO FISHER SCIENTIFIC*

Real-time dimensional information is essential for process control and optimization. The presenter will review various sensor technologies used in the flat sheet rolling mill and their contribution to process control.

11:30 a.m.

### **STRIP COATING TECHNOLOGY**

*CHRIS BURNETT, THERMO FISHER SCIENTIFIC*

Noon

Lunch

1 p.m.

### **SENSOR ROUNDTABLE/QUESTION AND ANSWER SESSION**

*SENSORS SUBCOMMITTEE*

2 p.m.

### **DRIVES – HOW THEY FIT IN THE SYSTEM LINE TOPOLOGIES**

*RON TESSENDORF, TMEIC CORP.*

2:30 p.m.

### **L1 CONTROLLERS – PROGRAMMABLE LOGIC CONTROLLERS IN CONTROL SYSTEMS**

*REGINALD SNYDER, TMEIC CORP.*

3:15 p.m.

Break

3:30 p.m.

### **L2 SYSTEMS: FUNCTION AND DESIGN FEATURES – AN INTRODUCTION**

*PAUL JACKSON, TMEIC CORP.*

4:15 p.m.

### **PROCESS SYSTEMS – INTERFACING CONSIDERATIONS**

*PAT GALLAGHER, MANAGEMENT SCIENCE ASSOCIATES INC.*

This presentation will discuss the considerations involved in interfacing process systems with other systems and devices.

5:30 p.m.

Reception

## **WEDNESDAY, 4 MARCH 2015**

7 a.m.

Continental Breakfast

8 a.m.

### **PROCESS CONTROL SIGNAL REQUIREMENTS**

*BRYAN BEARD, TMEIC CORP.*

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

8:45 a.m.

### **PROCESS MODELS AND SIMULATION**

*MARK ZIPF, COLD ROLLING TECHNOLOGIES INC.*

This presentation provides an introduction to the varied concepts and strategies of mathematical modeling and simulation. The discussion starts off by gaining an understanding of what models are, what simulation is, and how they are combined to provide insight into and predictions of process, machine and control system behavior. The focus then progresses to a review, classification and comparison of the different types of mathematical modeling techniques, and their applicability to certain circumstances and interests. This is followed by an examination of the various forms of model evaluation and system simulation. Strategies of model development are considered, along with model implementation, validation and tuning. Comments on model/simulation capabilities, predictive accuracy/confidence, and practical assessment of results are intertwined throughout the discussion. Incremental case studies are contained within the presentation to illustrate the various concepts and methods. The presentation content is purposefully broad and doesn't attempt to be overly analytic.

9:30 a.m.

### **COMPUTER SOLUTIONS – L1 AND L2**

*BRIAN ALLGAIER, AUTOMATED CONTROL CONCEPTS INC.*

Discussion will focus on today's control system technology and architecture considerations when designing your L1 and L2 computer systems. Topics will include: fault tolerance/reliability thin client technology, virtual machine technology, backup and archiving (test machines), maintenance considerations and obsolescence planning.

10:15 a.m.

Break

10:30 a.m.

### **OPERATING SYSTEMS**

*JOHN MCMILLEN, TMEIC CORP.*

11:15 a.m.

### **INTEGRATED APPROACH TO PROCESS MONITORING**

*SCOTT BOUCHILLON, IBA AMERICA LLC*

An integrated approach to process monitoring will be presented. Drive and automation, video and machine vision, as well as machine condition monitoring can all be integrated using modern technologies.

Noon

Lunch

1 p.m.

### **CSI 5 STAND TCM UPGRADE PROJECT MANAGEMENT**

*ROUNDTABLE DISCUSSION ON UPGRADE PROJECTS*

*TOM RICHARDS, TMEIC CORP.; RAHUL BHATT, PRIMETALS TECHNOLOGIES U.S.A. HOLDINGS INC.; JEFF MASON, INTEGRATED MILL SYSTEMS INC.*

2:15 p.m.

### **MELTSHOP AND CASTER PROCESS SYSTEMS**

*JOHN INGRAM, PRIMETALS TECHNOLOGIES U.S.A. HOLDINGS INC*

3 p.m.

Break

3:15 p.m.

### **REHEAT FURNACE PROCESS OPTIMIZATION**

*BOB ROBISON, PRIMETALS TECHNOLOGIES U.S.A. HOLDINGS INC.*

This presentation will give the attendee an overview of the reheat furnace area of steel processing and the control topics involved. The presentation will also address important system features and give a brief look at where the technology appears to be headed in the future.

4 p.m.

### **CONVENTIONAL HOT MILL APPLICATIONS**

*WLODZIMIERZ FILIPCZYK, TMEIC CORP.*

The hot rolling process of flat products is shown by presenting each of the individual sections of the rolling mill. For each section, the process sensors and actuators, control functions, application features, process merits and control trends are reviewed. Finally, the "global" control system applications and challenges for the future are outlined

## **THURSDAY, MARCH 5, 2015**

7 a.m.

Continental Breakfast

8 a.m.

### **PROCESS LINE TOPOLOGIES,**

*RON TESSENDORF, TMEIC CORP.*

MORE INFORMATION AT  
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9 a.m.

**PRODUCTION PLANNING AND SCHEDULING IN STEEL**  
*PERRY ZALEVSKY, SAP AMERICA*

Steel companies are faced with increasing demands to satisfy customers while maximizing the efficiency of their operations. With continued consolidation of the steel industry and the growth of multi-plant companies, the need to plan and schedule across plants has increased. This presentation will discuss the issues of single- and multi-plant planning and scheduling, the various types of solutions in use, and some practical examples based on existing steel companies.

10 a.m.

Break

10:15 a.m.

**ROUNDTABLE: PROCESS SYSTEM SECURITY**  
*BRIAN ALLGAIER, AUTOMATED CONTROL CONCEPTS INC.*

Noon

Lunch

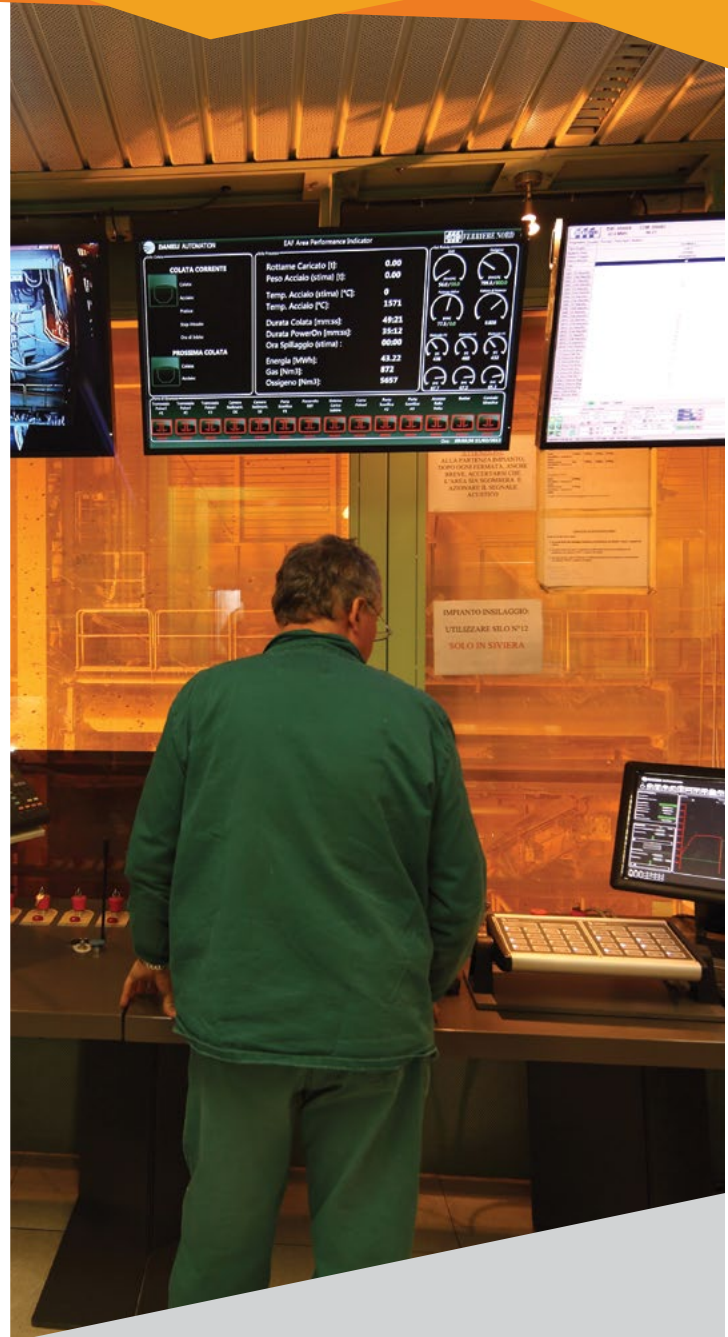
1 p.m.

**PLANT TOUR OF AM/NS CALVERT LLC  
COLD MILL**



5 p.m.

Return From Plant Tour and Adjourn



## REGISTRATION FEES

Advance registration by 20 January 2015: Member US\$795, Non-member US\$1,010. Registration fees after 20 January 2015: Member US\$895, Non-member US\$1,110. Registration fee includes continental breakfasts, lunches, and continuous breaks Tuesday, Wednesday and Thursday, reception Tuesday, plant tour and a course workbook or flash drive including presentations.

MORE INFORMATION AT  
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**REGISTER NOW**