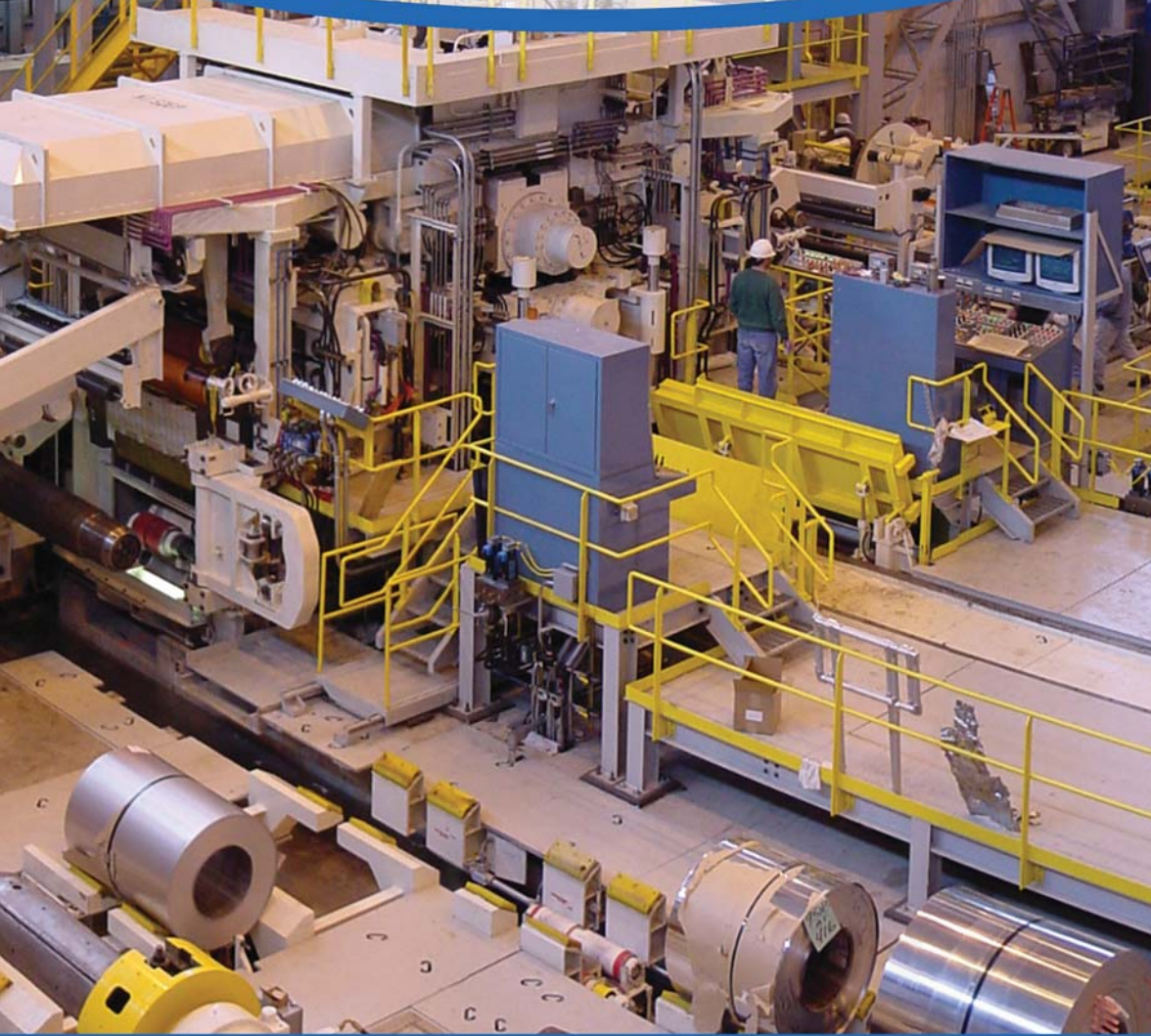


Cold Rolling Fundamentals — A Practical Training Seminar

February 18–22, 2007

Hyatt Regency Orlando International Airport
Orlando, Florida



2007 Specialty Conference

Cold Rolling Fundamentals — A Practical Training Seminar

About the Program

This seminar provides a comprehensive overview of cold rolling. The course covers fundamentals, equipment, rolling theory, control, threading, rolls, lubrication, measurement, safety and new technology. You will leave this course with a better understanding of the basic metallurgy involved, the different types of products and product attributes, the types of mills used and equipment involved with the mills, the theory of rolling, latest technologies involved in cold rolling, safety aspects, rolling solutions, production measures and much more. There will be the opportunity to discuss issues and engage in problem solving during the panel discussions.

Who Should Attend

Anyone who would like to expand his/her knowledge and understanding of cold mills and cold rolling. This includes electrical, mechanical, lubrication and metallurgical engineers, maintenance personnel, operators and those responsible for quality assurance. Equipment manufacturers and service suppliers would also benefit from this course.

Registration Fees

Advance registration by January 25, 2007: Member US\$895, Nonmember US\$1,045. Registration after January 25, 2007: Member US\$995, Nonmember US\$1,145. Registration fee includes Sunday evening welcoming reception, continental breakfast, lunches and continuous breaks Monday through Thursday, Tuesday evening reception and a course workbook.

Hotel Accommodations

A block of rooms has been reserved at the Hyatt Regency Orlando International Airport, located inside the Orlando Airport. Please call the Hyatt at (407) 825-1234 by January 25, 2007, to secure the AIST discount rate of US\$159 per night for single/double occupancy.

Company Discount

Three or more individuals from the same facility attending any one seminar can receive a 10 percent discount per person. All registrations must be received together along with payment to qualify for the discount. Not applicable with any other discount.

Attention Nonmembers

Nonmember registrants will have the opportunity to join AIST on-site at the conference with 2007 membership dues waived. Membership is not automatic. A completed membership application must be returned to AIST.

Registration Confirmation

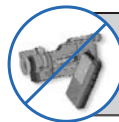
You will receive a confirmation letter in the mail once your registration has been paid in full. Please contact AIST at (724) 776-6040, ext. 642 if you have not received written confirmation two weeks prior to the conference.

Cancellation/Substitution

If you must cancel, please fax a notice of cancellation to (724) 776-6619 and a refund will be issued. Cancellations received less than two weeks prior to the event are nonrefundable. If you would like to send a substitute, a new registration form must be faxed for that person, indicating the replaced person on the form. Be certain that the membership status of each person is equivalent or note otherwise.

Sponsored By

AIST's Sheet Rolling Operating Committee.



Any audio and/or video recording of sessions is strictly prohibited.

Program at a Glance

Sunday, February 18

4–6 p.m.
Registration

5–6 p.m.
Welcoming Reception

Monday, February 19

7–8 a.m.
Registration and Continental Breakfast

8–8:15 a.m.
Opening Remarks

8:15–9 a.m.
Overview – Cold Rolling Fundamentals

John Speer, Colorado School of Mines

General overview of products, metallurgy and processing from steelmaking to finishing, including product properties, end-users and applications.

9–10:30 a.m.
Cold Rolling Fundamentals

John Speer, Colorado School of Mines

Deformation and metallurgical properties, iron-carbon phase diagram, grain size, stress-strain relationship, work hardening, effects of annealing, effect of percent reduction on R and N values, and effect of composition on properties.

10:30–10:45 a.m.
Break

10:45 a.m.–Noon
Hot Band Requirements
Brian Nelson, Dofasco Inc.

Noon–1 p.m.
Lunch

1–2:30 p.m.
Introduction to Rolling Mill Designs and Line Arrangements
Michael Peretic, SMS Demag Inc.

This presentation will begin with a brief history of the development of rolling technology, leading to a discussion of how mate-

rial and process needs drove the development of various roll stack designs. Examples of 2-hi, 4-hi, 6-hi, MKW and cluster mill stack designs will be discussed with regard to their product applications. Various line configurations will also be presented to show relative production volumes for single-stand/single-pass mills, single- and two-stand reversing mills, tandem mills, continuous tandem mills and coupled tandem mills.

2:30–2:45 p.m.
Break

2:45–4 p.m.
Overview of Auxiliary Mill Equipment
Michael Peretic, SMS Demag Inc.

This presentation will provide an overview of a number of components of auxiliary mill equipment that support the rolling process. Topics will include various drive configurations, actuators for thickness and flatness control, payoff reels, tension reels and coolant application systems. A short overview of coil transport and storage equipment will also be presented. The presentation will conclude with a brief outlook to expected future developments in cold rolling.

4–5 p.m.
Panel Discussion

Tuesday, February 20

7–8 a.m.
Registration and Continental Breakfast

8–9:15 a.m.
Rolling Theory
Dale Guidry, TM GE Automation Systems

9:15–9:30 a.m.
Break

9:30–11:30 a.m.
Rolling Theory (continued)

11:30 a.m.–12:30 p.m.
Lunch

12:30–2:15 p.m.

An Introduction to Automatic Gauge Control

2:15–2:30 p.m.

Break

2:30–4 p.m.

Flatness Measurement and Control

4–5 p.m.

Panel Discussion

5–6 p.m.

Reception

Wednesday, February 21

7–8 a.m.

Continental Breakfast

8–10:15 a.m.

Lubrication Fundamentals in Cold Steel Rolling

Charles Varga and Nico Broekhof, Quaker Chemical Corp.

Outline and discuss the fundamental aspects of cold rolling lubrication. Outline and discuss practical impact of lubrication in the cold rolling process.

10:15–10:30 a.m.

Break

10:30 a.m.–Noon

Roll Specifications

George Ott, Union Electric Steel Corp.

Roll performance can be optimized by the proper selection of roll specifications and roll maintenance process.

Noon–1 p.m.

Lunch

1–2 p.m.

Threading of Tandem Cold Mills

Luis Montano, Luis Montano Consulting

2–2:45 p.m.

Edge Drop Actuators and Control

Michael Peretic, SMS Demag Inc.

Side trim yield losses can result from the edge drop characteristic that is commonly experienced in the cold rolling of sheet steel

products. This presentation will provide a definition of edge drop and will discuss its importance in terms of the ASTM 568 full width thickness tolerance. Design and testing of unique edge drop actuators will also be discussed, along with the results of several edge drop control simulations. A tandem mill installation with an edge drop control system will be shown, and the tight edge characteristic that is often observed in aluminum sheet will be noted and contrasted with the edge drop characteristic. This presentation will conclude by stressing the importance of having comprehensive mathematical process models for both design and control functions to achieve critical sheet tolerances in the rolling process.

2:45–3 p.m.

Break

3–4:30 p.m.

Selection of Optimum Mill Configurations for Cold Rolling and North American Capabilities

Eric Thokar, Danieli Corp.

4:30–5 p.m.

Question and Answer Session

Thursday, February 22

7–8 a.m.

Continental Breakfast

8–10:15 a.m.

Safety

10:15–10:30 a.m.

Break

10:30 a.m.–Noon

Chatter/Vibration Overview

Stuart Critchley, Dofasco Inc.

Noon–1 p.m.

Lunch

1–3 p.m.

Sheet Quality and Operational Issues — Open Forum

3–3:30 p.m.

Wrap-up and Conference Conclusion



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