

A Message From the AISTech 2009 Conference Planning Committee Chair

AISTech 2008 in Pittsburgh, the steel city, promises to be another record-setting event. The strength of the steel industry, strong supplier participation, and the overwhelming response from AIST and its members have all contributed to AISTech 2008 as a showcase of the latest iron and steel technologies through forums, presentations and supplier exhibits.

Our industry continues to grow in unprecedented ways. Mergers and acquisitions, the advancement of new technologies, and the changing landscape of the international steel market will provide many exciting challenges and opportunities for the years to come. AISTech 2009, will be held in St Louis, Mo., and will once again provide an unparalleled display of technological developments, best practices and insight to the future of our industry. This would not be possible without the extraordinary efforts of the AIST Operating Committees, membership and staff.

On behalf of everyone involved, I would like to invite the iron and steel industry producers, suppliers and professionals to AISTech 2009 in St Louis. Join your colleagues and take advantage of this unique opportunity to network and broaden your technical horizons.

Jay J. Ondrovic
Castrip LLC
AISTech 2009 Conference Planning Committee Chair

Also coming in 2009...

MS&T'09[®]
Materials Science & Technology
2009 Conference and Exhibition

Organized by: ACerS (The American Ceramic Society), AIST (Association for Iron & Steel Technology),
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STEEL'S PREMIER TECHNOLOGY EVENT FOR 2009

AISTech[®] 2009

The Iron & Steel Technology Conference and Exposition

May 4-7, 2009
America's Center
St. Louis, Mo., USA



2009 Call for Papers

The Association for Iron & Steel Technology (AIST) is an international technical association representing iron and steel producers, their allied suppliers and related academia. AIST is dedicated to advancing the technical development, production, processing and application of iron and steel.

AISTech 2009 — The Iron & Steel Technology Conference and Exposition is scheduled for May 4–7, 2009, at America's Center in St. Louis, Mo. Abstracts for this major international conference are being sought now for technical papers to be presented at the event and published in the proceedings.

AISTech 2009 will feature international technologies from the world over, allowing steel producers to compete in today's global market. If you are involved in the steel industry, you can't afford to miss this event. Whether you present, attend or exhibit, take advantage of this opportunity to discover ways to make your job easier and improve your productivity.

International Exposure

All papers presented at the AIST Conference are considered for publication in *Iron & Steel Technology*, AIST's monthly technical journal, with distribution to more than 10,000 recipients worldwide. All papers presented may be included in the Conference Proceedings.

Program Development

AIST Conference programs are developed by Operating Committee members representing iron and steel producers, their allied suppliers and related academia. Committees focus on ironmaking, steelmaking, finishing processes, and various engineering and equipment technologies.

Call for Papers

The AISTech technical program promotes the transfer of iron and steel technology by providing an international forum for authors to share ideas, experiences and knowledge of the industry. We invite you to submit your abstracts for consideration. Sessions currently being developed focus on the following topics:

COKE PRODUCING

Coal supply sourcing and blending; process improvements; energy optimization; coke quality enhancements; operating cost reductions; new coke production facilities and the refurbishments of existing facilities; refractory materials and installation advancements; repair/maintenance techniques and technology for extending the life of coke oven batteries and ensuring their manufacturing reliability; byproduct efficiency improvements; environmental process improvements; new sulfur removal facilities or reliability improvement projects; wastewater treatment projects; and emissions reduction projects.

IRON PRODUCING

Health and safety issues in the blast furnace; maintenance programs for ensuring manufacturing reliability; hearth management issues (i.e., monitoring and maintenance practices); blast furnace stoves, stove refractory and safe stove operation; alternative ironmaking raw materials; and blast furnace relines and repairs, stack refractory and cooling system maintenance.

ELECTRIC STEELMAKING

Production with a focus on safety and workplace environment practices; radiation detection and remediation; associate development and training; environmental considerations; EAF maintenance, including primary, secondary and tertiary electrical components, lubrication and hydraulics and maintaining the meltshop facility; steelmaking process optimizations to attain the highest levels of efficiency for current processes; novel approaches to material logistics and movement in the meltshop; and resolving the multiple options of EAF arc regulation.

SPECIALTY ALLOY AND FOUNDRY

Foundry operations, especially melting, refractory, environmental and safety; stainless steel; and special alloy (e.g., ferroalloy, nickel-base, cobalt-base, superalloy) production, especially raw materials, melting, refining, casting, finishing, environmental and safety.

OXYGEN STEELMAKING

BOF environmental controls, vessel slopping, secondary emissions, tapping practices and yield improvement, endpoint predictions, charge management, blast furnace/BOF strategies and coordination, plant culture, maintenance practices, and planning and energy conservation.

LADLE AND SECONDARY REFINING

The processes of heating/cooling, chemistry control, slag treatment, desulfurization/decarburization, degassing, stirring, shape control and inclusion modification; utilizing the support systems of ladles; refractories and refractory repair; ladle transport; flow control; stirring systems; utilities; fume control; additions.

CONTINUOUS CASTING

Thin and thick slab, bloom, beam blank and billet casting machines; caster modeling; new and emerging innovations and technology in continuous casting; and improvements in machine design, operation, quality, productivity, reliability, energy and maintenance.

SHEET ROLLING

Sheet and tin rolling mills and facilities: new, revamps or modernizations. Including: ferrous-based (carbon, silicon, titanium or stainless steel) flat rolling and/or processing with new or revised technologies in width, thickness, shape, flatness, surface, temperature, productivity, yield and quality control. Other topics of interest include (but are not limited to): equipment design improvements; roll coolant and roll bite lubrication (both hot and cold); processing new steel chemistries (TRIP, TWIP and dual-phase steels); steering and camber control; slab sizing and width control; descaling and surface improvement systems; edge drop control; productivity improvement and start-up learning curve programs; sensors and gauge systems specifically relating to rolling and processing; furnace issues relating to the rolling process.

PLATE ROLLING

New plate rolling and finishing installations; discrete Steckel processing; mill modernization; new equipment and technologies; automation upgrades; model developments in rolling and finishing; thickness, width and crown control; flatness control, measurement and correction; surface quality and inspection; scale removal; plan views; and thermal mechanical rolling developments, including accelerated cooling.

LONG PRODUCTS ROLLING

New equipment and technologies; new installations and revamp of existing facilities; process and auxiliary equipment, including gauging systems; shearing and handling equipment, guide systems and control systems; process and product development; defect inspection and product quality.

COATING AND PROCESS LINES

Coating (metallic, organic and chemical) and processing lines (including annealing, pickling, slitting, leveling, etc.), facilities and modernizations, productivity improvement, coated product substrate quality, defect prevention and detection, and surface treatments free of hexavalent chromium.

ROLL TECHNOLOGY

Innovative roll manufacturing and roll testing, roll maintenance and inspection practices, roll use in the ferrous and nonferrous industries, roll performance improvements, the relationship between rolls and product attributes (profile, flatness, surface, etc.), and roll surface defects and their effect on sheet quality.

PROCESS AND PRODUCT METALLURGY

The implications of metallurgy on production practices, as well as the consequences of specific processes and practices on the properties of steel products. Topics of particular interest for AISTech 2009 include: high-strength steel production issues from casting through coating, the implementation of ferritic rolling practices, and thin-slab/strip cast processing and products.

PROCESS TECHNOLOGY

Use of any system, approach, methodology or equipment to improve product quality, production and/or costs.

SENSORS AND INSTRUMENTATION

Application of sensors for process control; efficiency and cost-effective solutions; on-line and off-line shape and flatness measurement; mechanical properties testing; automated surface inspection; oil thickness measurement; surface cleanliness; soft sensors (i.e., modeling of a variable that cannot be measured directly); and other unique sensors that provide new and innovative uses to the primary and finishing sides of the steelmaking process.

ELECTRICAL ENGINEERING

Process control technology from the sensors to the process computers.

COMPUTER APPLICATIONS

New and existing uses of computers to control, monitor and interface steel-making processes; impact of human factors in process control (such as users, engineers and support personnel); network/wireless communications; the application of advanced process modeling and control (including artificial intelligence technologies); emerging trends in hardware and software related to process control, including operating systems, software products, security and open source code; automation planning and software development methodologies; database, data warehousing and data mining systems.

MATERIAL HANDLING

Product tracking and identification; fleet management strategies; new material handling equipment; equipment/vehicle maintenance strategies; scrap handling; government regulations impacting material handling; communication technologies; infrastructure maintenance of roads, tracks, bridges, etc.; or outsourcing of services.

ELECTRIC OVERHEAD TRAVELING CRANES

Case studies detailing specific experiences with reducing costs; maintenance statistical data; new technology, installations and product applications resulting in productivity gains; better lubrication systems; latest global crane standards for overhead traveling cranes; and crane machinery replacements, modifications or improvements.

MILL BUILDINGS

Projects utilizing a unique design approach for mill buildings; recent developments in structural steel fabrication processes; retrofit or upgrade projects involving modifications to existing mill buildings or applications for metal buildings in the steel industry; inspection and maintenance of crane runway structures.

Student Papers

Graduate or undergraduate students may present findings on completed research, research in progress, summer internship experience, university projects or co-op experiences on any of the subjects listed above. Although there will not be a separate student session, student papers will be included in the most appropriate technical session.

Abstracts must be received by July 31, 2008.

Once selected, you will be notified with a letter of invitation from AIST headquarters in November 2008. If your paper is not one of our committees' original selections, we will retain your abstract in the case of cancellations in the program. Your paper would also be a candidate for other upcoming programs sponsored by AIST.

Presentations

Must be technical in nature; commercial presentations are not permitted. Subject matter should be of current interest to those in the iron and steel industry and should present new developments, methods or applications. A total of 30 minutes is allotted for each presentation. It is suggested that the formal presentation be approximately 20 minutes long, allowing 10 minutes for questions and discussion.

Please limit your abstract to 100 words and include the following information:

- Paper Title
- Author's Name
- Job Title
- Company Affiliation
- Address
- City, State/Province
- ZIP/Postal Code
- Country
- Telephone
- Fax (if applicable)
- E-mail
- Co-author Name(s)
- Company Affiliation(s)
- Job Title(s)

Conference Proceedings

Papers presented during the technical program and submitted to AIST by Feb. 13, 2009, will be made available to the conference registrants via CD-ROM. Once selected for the technical program, you will be sent additional information on how to prepare your paper for electronic publication.

MAINTENANCE PROCESSES

Reliability, planning, and scheduling with maintenance activities; leadership, human resource development and training; contractual support; maintenance outsourcing; maintenance improvement initiatives; CMMS; predictive and preventive maintenance technologies or condition monitoring.

LUBRICATION AND HYDRAULICS

Bearing technology; lubrication systems; lubricant technology (greases, oils, solid lubricants); hydraulic fluids and systems; fluid filtration and filter media; oil reclamation and refining; condition monitoring; plant lubrication programs; lubricant life and testing methods; sealing technology, gearing technology; electric motors lubrication; coupling lubrication and auto lube technology.

PROJECT AND CONSTRUCTION MANAGEMENT

Capital effectiveness; project safety performance; project management approaches for new installations, retrofits and maintenance projects; project team alignment/teambuilding; new technologies to aid the project team; and pre-project planning and risk assessment.

ENERGY AND UTILITIES

New developments and applications that promote increased productivity and energy efficiency in the generation, distribution or use of purchased fuels and combustion; byproduct gases; steam; industrial gases, compressed air, hydrogen, oxygen, etc.; electricity; lighting; heat recovery systems; boilers/furnaces; power plants; and water systems.

SAFETY AND HEALTH

Contractor safety (drug testing, auditing, fall protection, hearing conservation, respiratory protection), railroad safety, NFPA 70E, confined space, lockout/isolation and best practices.

ENVIRONMENTAL TECHNOLOGY

Environmental issues (water, air, solid waste) as they relate to the steel industry. Such topics could include: greenhouse gases; carbon footprints; sustainability, recycling, reuse and water minimization; PM-2.5 and mercury issues; effluent limitation guidelines; recycle/reuse programs; NSPS for EAFs; ISO 14000 and life cycle assessment; CAM rules; RCRA corrective action or multimedia audits. Additional subjects would relate to MACT for iron and steel, new technology for recirculating water systems, storm water pollution prevention, NOx and SOx, fugitive emissions, TMDL program, noise and odor control or contaminated sites cleanup.

Publication

Papers presented during the Conference are subsequently considered for publication in the AIST monthly technical journal. Selection of papers for publication is based on the following factors: recommendations from sponsoring Operating Committee members; technical content, quality and current interest; quality of figures (should not require extensive reworking); and peer review evaluations.

Extended Abstract Submissions

An extended abstract can now be submitted for AISTech 2009. An extended abstract will be made available online, as submitted, to the conference attendees for 30 days following AISTech 2009. The submission must be 2 pages or less and include an introduction, proposal of project or technology, confirmed results and a conclusion. PLEASE NOTE: Extended abstracts will not be published in the AISTech 2009 Conference Proceedings, will not be eligible for publication in the AIST *Iron & Steel Technology* monthly magazine, and will not be eligible for any AIST Awards or Recognitions. Only full, written papers will qualify for these items.

**The preferred method of submission is online at:
www.aist.org**

**Abstracts may also be submitted by mail to:
AIST
186 Thorn Hill Road
Warrendale, PA 15086**

**or by e-mail to:
abstracts@aist.org**