



WATER MANAGEMENT SEMINAR

10-12 AUGUST 2014
LOUISVILLE MARRIOTT DOWNTOWN
LOUISVILLE, KY., USA

ABOUT THE COURSE

This program provides a detailed review of one of the most important raw materials used in the steel industry: water. The first day will review water chemistry fundamentals; the physical and chemical treatment processes necessary for treatment of mill makeup water supply; the cause and effect of corrosion; deposition, microbiological fouling and the means to control these issues in cooling water loops; wastewater treatment processes; and other physical-chemical treatment processes. The second day will focus on oil treatment and sludge management topics, water reuse opportunities and reduction strategies for wastewater discharges. A presentation from pump vendors and a discussion of maintenance and operational practices for this key equipment will also take place on the second day. At the end of each day, a question and answer session will be held with the presenters.

WHO SHOULD ATTEND

The program is directed at mill personnel involved in any of the following activities: service water supply and treatment; process water management and treatment; non-contact cooling water management and treatment; wastewater collection and treatment; compliance activities associated with process water, stormwater and pretreatment discharge permits. Presentations have been designed to appeal to operators and supervisors, entry- and mid-level process and environmental engineers and technicians.

SCHEDULE OF EVENTS

SUNDAY, 10 AUGUST 2014

4 p.m.
Registration

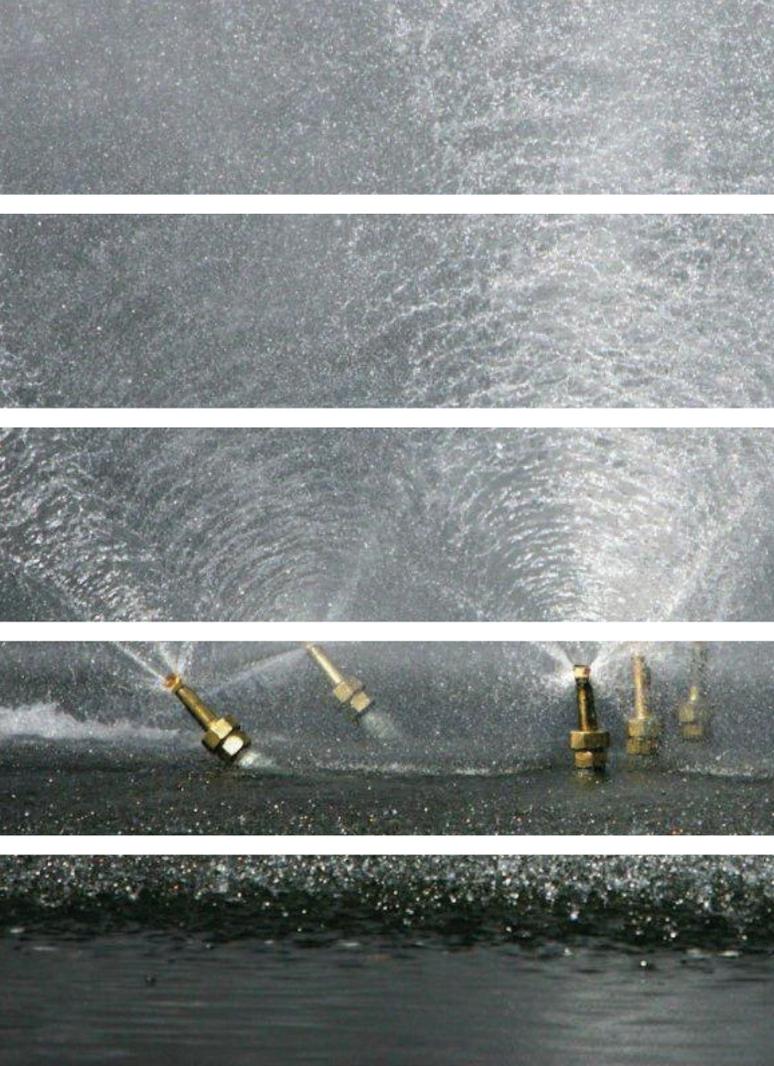
5 p.m.
Reception

MONDAY, 11 AUGUST 2014

7 a.m.
Registration and Continental Breakfast

8 a.m.
**AIST Environmental Technology Committee
Introductions, Welcome and History**
Dejan Zrelec, Tenova Goodfellow

8:15 a.m.
**Water Fundamentals and Water Chemistry
Fundamentals**
Dave Gilles, Sage Environmental Consulting LP
Discussion of the basic water terminology, concepts and parameters used.



9:15 a.m.

Mill Makeup Water Supply: Solid and Liquid Separation — Mechanical and Gravity Systems

Marcus Allhands, Orival Inc.

The fundamentals of mechanical (screens, bags, cartridges, etc.) and gravity (clarifiers, basins, etc.) filtration will be reviewed, along with their appropriate applications. Parameters to be considered in choosing the appropriate method of solid/liquid separation will be addressed.

10:15 a.m.

Break

10:30 a.m.

Mill Makeup Water Supply: Ion Exchange and Softening

Tom Bache, Western Reserve Water Systems

Ion exchange is utilized in various systems throughout the mill, such as preconditioning the makeup supply water to boilers, mold systems and electromagnetic stirrers. This presentation will focus on the various types of ion exchange, their differences and their benefits. The presentation will focus on the softening and demineralization processes.

11:15 a.m.

Mill Makeup Water Supply: Membrane Separation Processes

Tom Bache, Western Reserve Water Systems

Makeup water supply can be purified by a number of different methods. This presentation will focus on the removal of impurities through the membrane separation process. The presentation will cover various equipment such as reverse osmosis, nanofiltration and ultrafiltration, and will explain the differences between them.

Noon

Lunch

1 p.m.

Case Study: Application of Process Water Treatment and Reuse Technologies to Minimize Mill Makeup Water Supply Needs

Gary Amendola, Amendola Engineering Inc.

Presentation will focus on steel finishing mill upgraded process water treatment facilities and include the following aspects: water supply from local municipality; municipal sewer use requirements; NPDES permit direct discharge requirements; advanced end-of-pipe treatment system; experience with treated effluent recycling and reuse; and effluent reduction benefits.

1:30 p.m.

Cooling Water Systems: Corrosion: Cause, Effect and Control

James Gleason, GE Betz

Discussion on corrosion to include the cause, effects, and control in both non-contact and contact cooling systems in the steel industry.

2:15 p.m.

Cooling Water Systems: Deposition — Cause, Effect and Control

James Hatcher, ChemTreat Inc.

The purpose of a cooling water treatment program can be summarized as the proper management of the cooling water triangle. Deposition is part of this triangle and is system fouling that occurs by either soluble ion precipitation or by the dissolution of insoluble particles that are transported by the cooling water. This presentation highlights the mechanism of deposit formation for typical foulants, system impact, and what can be done to protect cooling water systems.

3 p.m.

Break

3:15 p.m.

Cooling Water Systems: Microbiological — Fouling and Control

Darrel Wynkoop, Nalco Co.

Controlling microbiological activity in cooling water systems is central to the operation of a good water treatment program. During the discussion, the presenters will focus on the basics of microorganisms and the implications of each to cooling water systems. The discussion will also include available control strategies with various types of biocides, along with the advantages and disadvantages of each approach.

4 p.m.

Understanding Your Cooling Water System

Chris Edmondson, James M. Pleasant Co.

4:30 p.m.

Question and Answer Session

5:30 p.m.

Reception

6:30 p.m.

Keynote Speaker and Dinner

Marianne Eaves, Brown Foreman, representing Woodford Reserve

TUESDAY, 12 AUGUST 2014

7 a.m.

Continental Breakfast

8 a.m.

Water and Wastewater Treatment: Heavy Metals Treatment

Chuck Blumenschein, Veolia Water Technologies

The presentation will outline current state-of-the-art treatment technologies for the removal of heavy metals from wastewater. Topics will include: hydroxide/carbonate and sulfide precipitation, iron co-precipitation adsorption, sludge densification and ballasted flocculation.

8:45 a.m.

Case Study: Mercury Removal in Coke Plant Wastewater

Frank Jere, DTE Energy Services

In 2008, EES Coke Battery commissioned a new biological wastewater treatment plant with pretreatment for mercury removal. This presentation provides an overview of the technology and process employed, and results from six years of operation.

9:15 a.m.

Break

9:30 a.m.

Strategies for Removing Oil and Solids From Water

Thomas Hennessy, ChemTreat Inc.

Steel mill recirculating water systems will experience contamination from oil and grease. Effectively removing the oil and oil-coated solids is essential to maintaining good scale and corrosion control, as well as enhancing production. Theory and application of oil removal will be discussed.

10:15 a.m.

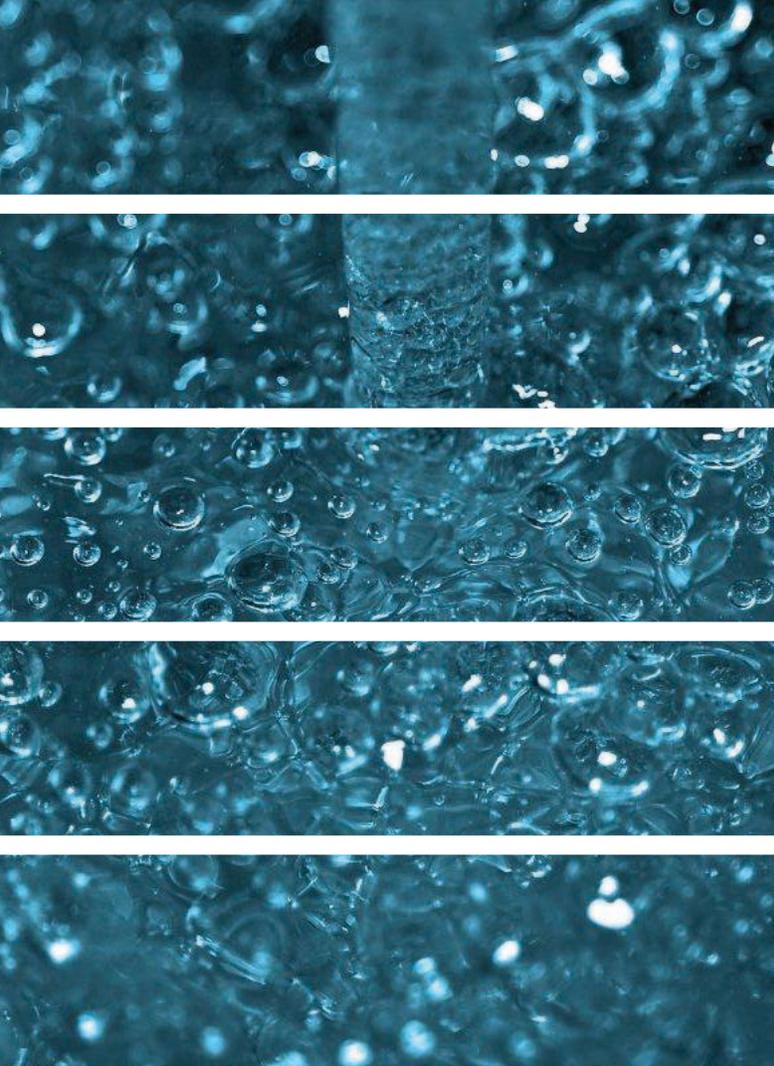
Case Study: Oily Wastewater Treatment Flotation

Eric Zubovic, GE Power and Water

10:45 a.m.

Break





1 p.m.

Water Reuse/Recycle Opportunities and Several Case Studies

Dave Gilles, Sage Environmental Consulting LP, and Gary Amendola, Amendola Engineering Inc.

2:15 p.m.

Break

2:30 p.m.

Water Equipment or Maintenance Topic — Show and Tell

Rich Nardone and Robert Lax, ITT/Goulds

Hands-on display and explanation of various types of pumps and pumping equipment, including static and dynamic displays, equipment cutaways and related pump design discussion.

4 p.m.

Question and Answer Session

5 p.m.

Conference Adjourn

11 a.m.

Water and Wastewater Treatment: Dewatering

Dan Fronhofer, BDP Industries

This presentation will cover various types of mechanical dewatering, their respective benefits and drawbacks. The discussion will also cover the larger scope of the entire dewatering process, including feed slurry delivery, chemical conditioning, conveyance and water usage.

11:30 a.m.

Case Study: ArcelorMittal Dofasco New BF/BOF Sludge Processing Facility

Robyn Dufresne, ArcelorMittal Dofasco Inc.

ArcelorMittal Dofasco Inc. has installed two belt filter presses. The presses process BF and BOF sludge from the wastewater treatment plant. The presentation will highlight operational experience over the past year with these new assets.

Noon

Lunch

REGISTRATION FEES

Advance registration by 18 July 2014: Member US\$795, Non-member US\$1,010. Registration after 18 July 2014: Member US\$895, Non-member US\$1,110. Registration fees include continental breakfasts, lunches, and continuous breaks, dinner Monday and a course workbook.

>> REGISTER NOW

COMPANY DISCOUNT

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