



surface  
technologies

# Aalberts University

OCT. 3 & 4, 2023

LIVONIA, MI

A two-day educational event  
intended for design engineers  
and purchasing agents

Aalberts  
University

This is an invitation-  
only, non-  
commercial event

Aalberts will provide  
continental  
breakfast, a catered  
lunch and dinner

Attendees are  
responsible for their  
own transportation  
and lodging

Space is limited  
Please contact  
Cynthia Crowley  
today at  
734-744-9937 or

[cynthia.crowley@aalberts-st.us](mailto:cynthia.crowley@aalberts-st.us)

Metallurgy, metal casting and heat treatment are complex and technical subjects. The goal of this event is to provide education and inspiration in the areas of casting production and heat treatment of iron, steel, and aluminum components.

Aalberts surface technologies is a global leader in metallurgical technology and training. The world-class instructors at this seminar will help you to meet your design goals. The agenda is as follows:

<b>Night Before</b>
5:00 PM and on (Optional) If you arrive early, join us for dinner and drinks at tbd restaurant
<b>Day 1</b>
8:00 AM Introduction - Steve Metz - Logistics, history, participant introductions
9:00 AM Overview of Heat Treatment - Steve Metz
BREAK
11:15 AM Steel and Iron Production - Jeremy Lipshaw
LUNCH
1:00 PM Travel to TBD Foundry
1:30 PM TBD Foundry Tour
3:45 PM Introduction to Design - Jeremy Lipshaw
5:30 PM Dinner - TBD restaurant
<b>Day 2</b>
8:00 AM Tour Aalberts Plant
9:00 AM Austempering 101 including cast iron and steel - Kathy Hayrynen
BREAK
10:45 AM Marquenching - Kathy Hayrynen
11:15 AM Producers' Panel or Case Studies
LUNCH
1:00 PM Surface Treatments including nitriding and FNC - Bill Baxter
2:00 PM Heat Treatment of Aluminum - Bill Baxter

All education costs and materials will be covered by Aalberts surface technologies. In addition, Aalberts will provide a light breakfast and box lunches both days as well as dinner on the first night. Attendees are responsible for their own transportation and lodging.

**Session Location:**

**Area Lodging:**

**Foundry:**

**Restaurant:**

Note: Attendees are responsible for their own transportation to and from Aalberts surface technologies. Carpooling is encouraged.

## INSTRUCTOR BIOGRAPHIES

**Kathy L. Hayrynen, PhD, FASM** - Kathy has a BS, MS and PhD in Metallurgical Engineering from Michigan Technological University. Her graduate work focused on production of ductile iron and ADI. Following a post-doctoral research position on Ausformed/Austempered Ductile, Kathy joined Aalberts surface technologies (Applied Process) companies in 1995. She is currently the Vice President of Research & Development. Kathy is well known in the Austempering world having authored and co-authored many papers on ADI and frequently speaks on said topics. She is a past Chair of the AFS Cast Iron Division, a former President of the Foundry Educational Foundation and a member of the External Advisory Board for the Department of Materials Science & Engineering at Michigan Tech. Kathy has received several industry/academic honors including: an AFS Award of Scientific Merit, an AFS Ray H. Witt Management Award, the Women in Metalcasting Award of Excellence, 5 best paper awards from the AFS Cast Iron Division, the Ductile Iron Society Annual Award, ASM Fellow, ASM Education Foundation George Roberts Award and induction into the MSE Academy at Michigan Tech. More recently, she received an AFS John H. Whiting Gold Medal for her exemplary work in cast iron research and standards, chairing the AFS Technical Council, leadership in streamlining the AFS Cast Iron Division, as well as for advocacy and mentorship of students and women in metalcasting.

**Steve Metz** - Steve holds a BS and MS degree in Materials Engineering and an MBA from the University of Wisconsin- Milwaukee. He has worked in the metals manufacturing industry for his entire 30+ year career. He was with Kohler Company for 14 years where he gained significant experience in quality systems, pattern and tooling design, process engineering, gating/rising design (using traditional and computer modeling methods) and operations management. He then worked for Castalloy (a division of Wheelabrator) as Director of Engineering for a jobbing foundry specializing in alloy white iron, stainless steel, alloy steel and Manganese steel production. Steve joined Aalberts surface technologies (Applied Process) in 2011 after having been a customer of, or a supplier to Applied Process for 19 years. Steve truly enjoys all aspects of the Aalberts surface technologies value proposition, be it excellence in operations management, assisting customers in developing unique solutions to opportunities or problems as well as direct sales and educating customers through personal visits and presentations.

**Jeremy Lipshaw** - Jeremy received a Bachelor's in Materials Science and Engineering in 2017 and a Master's in Mechanical Engineering in 2018, both from the University of Michigan. In addition to his studies, Jeremy worked at, and eventually managed Joyworks Studio, a prototype foundry specializing in castings education and ductile iron research. After graduation, he joined Aalberts surface technologies (Applied Process) as a Product Development Engineer where he assists with cycle development, designs lightweight and sustainable casting conversions, characterizes novel heat treatments, and improves internal modeling capabilities. Jeremy also serves as the Vice Chair of the Ductile Iron Society Research Committee.

**William Baxter** - Bill has over 35 years of supporting or working directly in the metal heat treating business. He started with dual Bachelor's degrees in Metallurgical Engineering and Biomedical Engineering from Carnegie Mellon University. Upon graduation, he worked 10 years for Air Products and Chemicals supporting the metal processing industry to include heat treating, sintering and brazing atmospheres. He holds two patents with Air Products for rapid gas quenching in vacuum furnaces utilizing gas blends and for uphill quenching of aluminum products using perfluorinated compounds for metal stabilization. His time at Air Products was both on the east and west coast. From there he worked for two other commercial heat-treating companies in both production and multi-facility quality management. He started with Aalberts surface technologies (Premier Thermal) in 2010. His current role is technical sales support, metallurgical plant support, and management of the NitroSteel product line. Bill always loves using his diverse heat-treating background for a good metallurgical challenge and helping customers decide on the proper heat treatment to solve their problems.



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Please return to  
Cynthia Crowley at

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(734) 744-9937

Name:

Title:

Company:

Address:

Phone #:

Email:

(Aalberts surface technologies will not distribute this information to third parties.)

Attendance, please check all that apply:

Evening Before Class: Dinner (Optional)      Yes      No

Day One: Class & Lunch      Yes      No

Day One: Dinner      Yes      No

Day Two: Class & Lunch      Yes      No

Aalberts surface technologies is a Defense Contractor and must know the citizenship status of all visitors. Please check the box which accurately describes your status (required):

United States       Citizen       Green Card Holder       Visa

List type if applicable:

Please report any dietary restrictions, including food allergies. We will do our best to accommodate you.

We reserve the right to publish photos on our website and social media sites.