

**Steel Founders' Society of America**  
**National T&O Conference – December 12-14 2024**  
**Wright Ballroom, Loews Hotel, Chicago, IL**

**Session 1**

**Thursday Morning – December 12**

**9:00 AM**

- 1.1 The Effects of Pouring Rates  
Greg Raudenbush, Ashland Foundry & Machine Works
- 1.2 Step Cone ID Shrink Factors  
Shawn Martin, Harrison
- 1.3 Using Sensors  
Andrew Francis, Omaha Steel
- 1.4 Collecting Data at the Edge and System Design to Support Industry 4.0  
Shane Rogers, Harrison Steel Castings Company
- 1.5 Systems for Casting Serialization and Park Marking  
Jeff Burek, Josh Rose, DW Clark
- 1.6 Different Types of Marking Equipment used for Casting Identification  
Kyle Smith, Duraloy
- 1.7 Part Tracking Vision System  
Daniel Wile, Southern Cast Products
- 1.8 Non-Serialized Core Room Traceability and Standard Hours  
Payton Altum, Harrison
- 1.9 Advancing Sustainable Heat Treatment Practices in Magotteaux: Benefits and Performance of Bio-Quenchants  
John Cory, Ravichandran Jayaprakash, Magotteaux
- ◻ 1.10 Status of Immersion/Tankless Spray Quenching of Steel  
John A. Griffin, Robin D. Foley, University of Alabama - Birmingham
- 1.11 Adaptive Approach to the Heat Treatment of a Large HY80 Casting  
Samuel Batchelar, Sheffield Forgemasters
- 1.12 Validation Study of Temper Hardness Prediction in Heat Treatment Simulation  
Gerald Richard, MAGMA
- 1.13 US Navy Foundry Supply Chain  
Nickolas Guertin, US Navy

**Industry Luncheon**

- 2.1 Evaluating the Effect of Wash Drying Methods  
Nick Knotts, Temperform, LLC
- 2.2 Using an Alternative Wash Coating Made In-House  
Jorge León Murillo, Fundidora Morelia
- 2.3 Through-Riser Core Venting  
Vasile Ionescu, Bradken - London
- 2.4 Effect of Iron Oxide on Duplex Stainless Steel  
Brad Moore, Badger Alloys
- 2.5 WINDEV Program for Sand Laboratory  
Rémi Godfroy, Ferry-Capitain
- 2.6 The Construction and Commissioning of a Thermal Sand Reclamation System for 3D Printed Sand Systems  
Zed Howel, Derek Mixon, Howell Foundry LLC
- 2.7 Silica to Ceramic Sand Conversion  
Bill Easterly, Effort Foundry
- 2.8 Molding Conversion to Ceramic Sand  
David Sola, Miguel Rota, Jon Galaza, Alberto Manzanares, Magotteaux - Urdiain, Spain
- 2.9 Reverse Engineering 1.0  
Rodrigo Solis Rodríguez, FYMSSA
- 2.10 Casting Redesign  
Trevor Thayer, Naval Foundry & Propeller Center
- 2.11 Work That Fits and Fits That Work  
Mike Gwyn, SFSA Alumni
- 2.12 Economic Forecasting – ITR Method Follow-Up  
Joe Plunger, Midwest Metal Products
- 2.13 SFSA Market Forecast  
Joe Plunger, SFSA

**Discussion Session followed by Industry Reception**

- **3.1 Rigging for Automated Riser Removal**  
George Hartay, SFSA Alumni
- **3.2 Robotic Grinding**  
Chaz Youngblood, McConway & Torley LLC
- **3.3 Implementing a Grinding Robot**  
Larry Buergel, Fisher Cast Steel Products
- **3.4 Bobcat Skid Steer – Applications for a Plant**  
Joe Plunger, Midwest Metal Products
- **3.5 Least Cost Charge Calculation and Charge Material Usage**  
Caroline Woodhead, Andritz
- **3.6 Ladle Preheat**  
Matt Schultz, Waukesha Foundry
- **3.7 Melting Furnace Practice and Benchmarking**  
John Cory, Magotteaux
- **3.8 Basics of Slag**  
Jack Lilley, SFSA Alumni
- **3.9 Benefits of OCP (Coil Protection) Induction Melting**  
Darrin Polic, MetalTek - Wisconsin Centrifugal
- **3.10 The Importance of Knowing Your Mould Weight**  
Andy Williams, Steve Roberts, Kieran Jones, Goodwin Steel Castings
- **3.11 SMS - Safety-Driven Safety Management System**  
Félix Zamorano Oyervides, Caterpillar Ramos Arizpe
- **3.12 One Day at a Time, Safe to Safer and On Our Way to Safest**  
Helena Padilla Ibarra, POK
- **3.13 The Near Fatal Accident of a Molding Machine Operator – Analysis & Findings**  
Peter Macler, SFSA Alumni
- **3.14 Building an Eco-Friendly Quality Foundry through ISO 9001 & ISO 14001 Implementation**  
Lisset Rodríguez, Helena Padilla, Ricardo Loreto, POK Castings

**Industry Luncheon**

- 4.1 **Cast in Steel**  
Russ Rosmait, Pittsburg State University
- 4.2 **Using Mold Monitoring Devices to Track the Effects of Environmental Conditions on Mold Conditions and Casting Quality**  
Johnathan Thompson, Harrison Steel Castings Company
- 4.3 **ACM Vibration Analysis**  
Ryan Bergeman, MetalTek - Wisconsin Centrifugal
- 4.4 **ERP System in a High Mix-Low Volume Foundry**  
Roberto Aguilar, RAMSA Steel Foundry
- 4.5 **Duraloy's Odyssey with Odyssey: A Summary of Our Experience with B&L's ERP**  
Fiona Carter, Duraloy Technologies
- 4.6 **Data-Driven World: The Era of Artificial Intelligence and Machine Learning**  
Anup Shrestha, Bay Cast, Inc.
- 4.7 **Using AI in a Steel Foundry**  
Doug Imrie, Southern Cast Products
- 4.8 **Hot Tears**  
Paul Rudd, SFSA Alumni
- 4.9 **Foundations of an NDT Program**  
Aaron Wilkinson, Bradken - Tacoma
- 4.10 **Built in Quality (BIQ): CRA Quality Improvement Methodology**  
Brenda Monsivais, Caterpillar Ramos Arizpe
- 4.11 **Defect Automated Recording and Tracking: Initial Deployment Findings and Results**  
Phillip Deierling, David Jaramillo, Deierling Engineering Consultants
- 4.12 **Comparison of Phased Array and X-ray for Internal Casting Defects**  
Johan Speekhout, McConway & Torley LLC
- 4.13 **Reducing Measurement Error in Magnetic Particle Inspection**  
Frank Peters, Sharon Lau, Colton Richardson, Frank Peters, David Eisenmann, Iowa State University
- 4.14 **Effectively Onboarding, Training and Supporting Today's Workforce**  
Patrick Frazier, Matt Christenson, ME Global
- 4.15 **The Importance of Employee Engagement**  
Jason Beck, Harrison Steel Castings Company

## **Discussion Session**

- 5.1 What's next after SIRI? It's All About Implementation!  
Quentin Bindels, Magotteaux
- 5.2 Automation in Investment Casting  
Michael Balsewicz, MetalTek Investcast
- 5.3 Implementation of Auto Viscosity Sensing in Investment Casting  
John Mortimer, MetalTek Investcast
- 5.4 Fiber Optic Sensors for 3D Sand Printing and Foundry 4.0 Initiatives  
Laura Bartlett, Doug Imrie, Grant Whitham, Ben Hilgers, Koustave Dey, Rory Saha, Missouri University of S&T, Southern Cast Products (Jonesboro, AR)
- 5.5 Automated Arc Air Cutting  
Matt Frank, Michael Ginther, Justin Reed, Jakob Hamilton, Frank Peters, Matthew Frank, Iowa State University
- 5.6 Sketch and Grind  
Jake Hamilton, Randev Goondeskere, Walter Glockner, Peyton Weisbeck, Matthew Frank, Frank Peters, Iowa State University
- 5.7 Improvement in Metallurgical Laboratory - Part II  
Mario Terrazas, POK Castings
- 5.8 Duplex Stainless Steels: Strong and Corrosion Resistant  
Jeff Slaughter, Slaughter Metallurgical and Corrosion Consulting
- 5.9 Development of Advance Casting Solutions for Walking Beam Furnace Components  
Federico Prandi, Paola Polignano, Tanya Ros (Cleveland Cliffs), FAI-FTC
- 5.10 Calculating the Larson Miller Parameter  
Joshua Pichette, MetalTek - Wisconsin Centrifugal
- 5.11 Reducing Non-Metallic Inclusions in the Steel Sand Casting Process  
Amir Baghani, Benjamin Bailey, McConway & Torley LLC
- 5.12 ISO 9001 and AAR M-1003 comparison  
Thomas Simpson, Bradken - Atchison
- 5.13 Pressure Codes Comparison - ASME, EU PED, and UK PESR  
Michael Porfilio, Stainless Foundry & Engineering
- 5.14 Pressurized Riser Test – Shop Floor Approach  
Joe Plunger, Midwest Metal Products
- 5.15 Pressure Casting - Round 2  
David Poweleit, SFSA, UI, UAB

**Adjourn**