<table>
<thead>
<tr>
<th>Session 1</th>
<th>Thursday Morning – December 7</th>
<th>9:00 AM</th>
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</thead>
<tbody>
<tr>
<td>1.1 Smart Industry Readiness Index (SIRI) Assessment at Magotteaux</td>
<td>Quentin Bindels, Marc Babineau, Magotteaux SA</td>
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<tr>
<td>1.2 Robotically Controlled Oxy-fuel Cutting Robot</td>
<td>George Krummel, Harrison Steel Castings</td>
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<td>1.3 Leveraging Artificial Intelligence for Efficiency and Quality in the Foundry Industry</td>
<td>Doug Imrie, Southern Cast Products</td>
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<td>1.4 Leveraging Cognitive Ergonomics to Combat Changing Labor Demographics in the Foundry Industry</td>
<td>Nick Knotts, Temperform</td>
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<td>1.5 Industrialisation of New Dimensional Inspection Technologies in Foundries</td>
<td>Joe Veale, Joe Cox, Sheffield Forgemasters</td>
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<td>1.6 Selecting and Implementing Optical Scanning Equipment</td>
<td>Tony Badamo, Ashland Foundry</td>
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<td>1.7 3D Printing in the Foundry</td>
<td>Brian Miller, Bradken</td>
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<td>1.8 Use of a Simple 3D Printer for Foundry Prototyping</td>
<td>Daniel Limpert, Ryan Richter, Nicholas Formato, Roman Pankiw, Duraloy</td>
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<tr>
<td>1.9 The Use of 3D Printing in Tooling</td>
<td>Ben Bailey, Jacob Reilly, McConway &amp; Torley</td>
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<td>1.10 A Hybrid Approach Using 3D Printed Ceramic Cores to Enabling Large Sand Castings</td>
<td>Jorge León Murillo, Donald Deptowicz, Fundidora Morelia</td>
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<tr>
<td>1.11 Effort Foundry's Transition from Paper Job Traveler to Virtual Job Traveler</td>
<td>Heather Shuster, Bill Easterly, Effort Foundry</td>
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<tr>
<td>1.12 Process Analysis of Casting Quality - Second Review</td>
<td>Anup Shrestha, Bay Cast Inc.</td>
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<td>1.13 SFSA Update</td>
<td>David Poweleit, SFSA</td>
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**Industry Luncheon**
2.1 Cast in Steel 2023 Winner
   Victor Okhuysen, Cal Poly Pomona

2.2 Developing a Pipeline for Entry Level Trades
   Nate Bird, Naval Foundry and Propeller Center

2.3 Employee Recruitment & Retention—What are Foundries Doing
   Jeanne Wagner, Midwest Metal Products

2.4 Foundry Performance Management 101
   (Or how Eagle Alloy improved performance by 30%)
   John Workman, Eagle Alloy

2.5 Implementing Production Processes in a Job Shop
   Derek Mixon, Howell Foundry

2.6 Management by Walking Around and Daily Management
   George Hartay, SFSA Alumni

2.7 Improvement in Metallurgical Laboratory
   Mario Terrazas, POK

2.8 Building Data Integrity Through a LIMS Implementation
   Aaron Wilkinson, Christian Hartwell, Bradken

2.9 Safe Pour Ladle
   Brian Hudson, ME Global

2.10 Magotteaux's Journey on Sustainability
   Elena Luquin, Marc Babineau, Magotteaux SA

2.11 Cybersecurity - Lessons from the Battlefield
   Lucas Netto, Magotteaux SA

2.12 Cap Ex and the Reality of Foundry Operations
   Ed Kaczmarek, SFSA Alumni

2.13 Design Concept Development Calculations –
   40,000 ton per year Chrome Alloy Cast Metal Plant
   Peter Macler, Peter Macler Consulting

2.14 Investing Through the Ups and Downs of the Industry
   Raymond Monroe, SFSA

2.15 SFSA Forecast
   Mike Maxeiner, McConway & Torley

Discussion Session followed by Industry Reception
Session 3  Friday Morning – December 8

3.1 MMP’s Telefeeder Trials
   Jeanne Wagner, Midwest Metal Products

3.2 Use of Hot Topping for Investment Casting
   Mark Emmendorfer, MetalTek - Wisconsin Investcast

3.3 Use of Hot Topping in Centrifugal Casting
   TAC Chadwick, Bret Enslen, MetalTek - Wisconsin Centrifugal

3.4 Large Scale Water Modeling of a Steel Casting Pouring System
   Andy Williams, Steve Roberts, Kieran Jones, Goodwin Steel Castings

3.5 Modeling / Simulation 1.0
   Raúl García Lazcano, Rodrigo Solis Rodríguez, FYMSSSA

3.6 Validation of an Advanced Shrinkage Porosity Model for Steel Castings
   Christoph Beckermann, Robert Donahue, Christoph Beckermann, University of Iowa

3.7 Impact of Solidification Mode on Porosities Population in G20Mn5 Cast Steel and its Effects on Fatigue Life
   Antonin Bermond, Jean-François Carton, SAFE Metal

3.8 A Design of Experiments for a Platypus
   Paul Rudd, Victor Hernandez, SFSA Alumni

3.9 Effects of the Thermo-Physical Properties of Exothermic Sleeves on Solidification Modeling of Steel Casting: Experiment and Simulation
   Amir Baghani, Sarah Lemesh, McConway & Torley

3.10 Phased Array Ultrasonic Testing for Flaw Detection in Castings
   Robert Cutone, McConway & Torley

3.11 Challenges and Lessons in Attempting to Reduce Cleaning Room Hours in Steel Castings
   Jacob Melvin, Harrison Steel Castings

3.12 Crack Defect Resolution through Simulation Software and Metallurgical Analysis
   Iván Martínez Salazar, Caterpillar

Industry Luncheon
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<tr>
<th>Session 4</th>
<th>Friday Afternoon – December 8 1:30 PM</th>
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<tr>
<td>4.1 Data Modelling for O$_2$ Injection</td>
<td>Isaac Clyde, Harrison Steel Castings</td>
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<tr>
<td>4.2 The Effects of High Temperature Aging on Carbide Morphology in Low Carbon Heat Resistant Austenitic Stainless Steel</td>
<td>Adam Falk, MetalTek - Wisconsin Centrifugal</td>
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<tr>
<td>4.3 Optimization of Steel Castings Through Solidifications Software</td>
<td>Josh Gerrans, Eagle Alloy</td>
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<tr>
<td>4.4 Etchants to Reveal Secondary Phases in a Mo-Containing 12% Cr Martensitic Stainless Steel</td>
<td>Hannah Muschinski, MetalTek - Wisconsin Centrifugal</td>
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<td>4.5 Risk Abatement - Applications in a High Alloy Foundry</td>
<td>William Porfilio, Stainless Foundry</td>
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<td>4.6 Melting Procedures for High Alloy Materials and Associated Documentation</td>
<td>Evan Stachowiak, Stainless Foundry</td>
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<td>4.7 Metal Delivery System Organization Effort using 5S as a Continuous Improvement Tool</td>
<td>Logan Wehrli, MetalTek - Wisconsin Centrifugal</td>
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<tr>
<td>4.8 Phenolic Urethane vs Phenolic Ester for Steel Castings: Pros, Cons &amp; Cost at two Steel Job Shop Foundries</td>
<td>Guillermo &quot;Willy&quot; Oyarzabal, Fimex, Oscar Bautista, POK</td>
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<td>4.9 Sand System Control</td>
<td>Chase Fisher, ME Global</td>
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<td>4.10 Sculpting Efficiency: Integrating Automation into the No-Bake Casting Process</td>
<td>Brandon Roy, Jerrod Miller, Wear-Tek</td>
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<td>4.11 Implementation of an Electric Heat Treat Furnace to Increase Efficiency and Energy Saving</td>
<td>Eugenio Longaretti, FGS</td>
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<td>4.12 Upgrading Investment Foundry to Modern Cut-off Saw</td>
<td>Nick Gerdes, Fisher Cast Steel Products</td>
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<td>4.14 Ladle Stopper Rod Investigation</td>
<td>Bryan Staha, Newport News Shipbuilding</td>
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<tr>
<td>4.15 The Design Methods Used Producing Foam Cast IN100 at Waukesha Foundry</td>
<td>Scott Hanson, Waukesha Foundry</td>
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<td>4.16 Monel</td>
<td>Charles Werner, Stainless Foundry</td>
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</table>
5.1 Metallurgy or Meteorology - Improving your Chance of Success in Humid and Moist Environments  
John Cory, Magotteaux

5.2 Pouring Manganese Steel Part by Shroud Technic  
Rémi Godfroy, Eric Fleurigeon, Ferry Capitain

5.3 Clean Steel Program at Keokuk Steel Castings (1992 T&O Paper)  
Shrirang Kulkarni, Allan See, Bill McTavish, SFSA Alumni

5.4 Measurement and Modeling of Oxide Inclusions in Steel Casting: Production Casting Case Study  
Richard Hardin, Christoph Beckermann, University of Iowa

5.5 Mechanical Properties of WCB with Hot Isostatic Pressing  
Elliott Yarwood, Bradken

5.6 Pressurized Solidification of Steel Castings  
Nathaniel Bryant, Jerry Thiel, University of Northern Iowa  
Robin Foley, John Griffin, University of Alabama - Birmingham

5.7 Toughness Factors in Low Alloy Steel  
Jack Lilley, SFSA Alumni

5.8 Optimization of HY-80/100 Steel using Computational Design Principles  
Clay Houser, Greg Olson, QuesTek

5.9 Toughness Enhancement by Retained Austenite  
Emmanuel De Moor, John D. Galuardi, Stuart Miklas, John G. Speer and Kip O. Findley, Colorado School of Mines

5.10 Measles Defects in Duplex Stainless Steel Castings  
Justin Chamberlin, Badger Alloys

5.11 Failure Analysis of Large Alloy Steel and White Iron Castings  
Robert Schrock, ME Global

Adjourn