



15th WCIC 2022

INVESTMENT CASTING

It's A Small World After All

Receptions

Sunday 5:30 p.m.

Tuesday 6:30 p.m.

Exposition

Monday & Tuesday
2:00 p.m. - 6:00 p.m.

SUNDAY, AUGUST 21, 2022

3:00 p.m. - 7:30 p.m.

5:30 p.m. - 8:30 p.m.

MONDAY, AUGUST 22, 2022

7:00 a.m. - 5:30 p.m.

8:00 a.m. - 8:05 a.m.

8:05 a.m. - 9:05 a.m.

9:05 a.m. - 9:20 a.m.

9:20 a.m. - 9:35 a.m.

9:35 a.m. - 9:50 a.m.

9:50 a.m. - 10:00 a.m.

10:00 a.m. - 10:15 a.m.

10:15 a.m. - 10:45 a.m.

10:45 a.m. - 11:15 a.m.

11:15 a.m. - 11:45 a.m.

11:45 a.m. - 12:30 p.m.

12:30 p.m. - 1:00 p.m.

1:00 p.m. - 1:30 p.m.

1:30 p.m. - 2:00 p.m.

2:00 p.m. - 6:00 p.m.

PRELIMINARY AGENDA

REGISTRATION – Adventure Lawn

WELCOME RECEPTION – Adventure Lawn

WCIC Opening Ceremony & Annual Awards Presentation

REGISTRATION DESK – Disneyland Center Lounge

GENERAL SESSION - Disneyland Center Ballroom *Greeting & Recognitions*

Keynote Address: Lessons from The Miracle on The Hudson
Jeff Skiles, Co-Pilot US Airways Flight 1549

European Market Trends
Carlos Olabe, EICF Executive Director

Asian Market Trend - Across the Far East Region
Akira Yoshizawa, JFS

North American Market Trends
Joseph Fritz, ICI Executive Director

Global Market Trends
Joseph Fritz, ICI Executive Director

BREAK

Investigation on Permeability Measurement Method of Investment Casting Shell Molds and Influencing Factors on Permeability
Ryosuke Naito, IHI Corporation

A New Innovative Way to Melt Metal, *Stan Morrow, New Wave Ceramic Crucibles, Inc.*
Kermit Buntrock, Buntrock Industries **Booth No. 313**

A Novel Prime Coat Slurry Mineral for Aluminum Investment Castings
Kevin Rudolph, O'Fallon Casting; Steven Ashlock, Kyanite Mining Corp. **Booth No. 324**

LUNCH - Disneyland South Ballroom

A Shop Floor Approach to Continuous Improvement in Investment Cast CF8M Components For Biomedical Applications
Dr. Roger Lumley, AW Bell Pty Ltd. **Booth No. 313**

Advanced Plasma Coating of Wax Injection Moulds – Eliminating Release Agents From the Investment Casting Process
Dr. Dirk Lehmkus, Fraunhofer IFAM

Viscosity Control for Consistent Casting Shell Building
Sunil Kumar, Rheonics **Booth No. 222**

EXPO – Disneyland Exhibit Hall & Disneyland North Ballroom

TUESDAY, AUGUST 23, 2022

- 7:00 a.m. – 5:30 p.m. REGISTRATION DESK – Disneyland Center Lounge
- 8:00 a.m. – 8:05 a.m. GENERAL SESSION - Disneyland Center Ballroom
Greeting
- 8:05 a.m. – 9:00 a.m. Panel Discussion: Process Control Standards (PCS) for Investment Castings – Global Rollout
Tom Planz, Kovatch Castings Inc.
Nip Singh, S&A Consulting Group LLP
Joseph E. Fritz, Investment Casting Institute
- 9:00 a.m. – 9:30 a.m. Enablers for Driving Forward a Precision Investment Casting World Class Foundry
Carlos Olabe, EICF Executive Director
- 9:30 a.m. – 10:00 a.m. Casting Industry Megatrends
Diran Apelian, University of California, Irvine
- 10:00 a.m. – 10:15 a.m. BREAK
- 10:15 a.m. – 10:40 a.m. ICI Intern Project Report
- 10:40 a.m. – 11:10 a.m. Evaluation of Printed Wax Pattern Molds
Tom Mueller, Mueller Additive Manufacturing Solutions
- 11:10 a.m. - 11:50 a.m. How It Is Made – Ceramic Shell Raw Materials Produced by The Fusion Process
Michael Weissenbacher, IMERYS
- 11:50 a.m. – 12:30 p.m. LUNCH - Disneyland South Ballroom
- 12:30 p.m. – 1:00 p.m. Development of Ni Based Superalloy with High Temperature Strength, Low Density & Excellent Castability for Turbine Wheel
Tomoyuki Chihara, Daido Steel Co., Ltd.
- 1:00 p.m. – 1:30 p.m. Wireless Sensors for Investment Casting Shell Data Acquisition
Nathaniel Bryant, University of Northern Iowa
- 1:30 p.m. – 2:00 p.m. An Investigation into Thermal & Mechanical Stresses on an Investment Cast Shell
Gerald Richard, MAGMA Foundry Technologies, Inc. [Booth No. 234](#)
- 2:00 p.m. – 6:00 p.m. **EXPO** – Disneyland Exhibit Hall & Disneyland North Ballroom
- 6:30 p.m. – 8:00 p.m. **RECEPTION – Adventure Lawn**

WEDNESDAY, AUGUST 24, 2022

- 7:00 a.m. – 12:00 p.m. REGISTRATION DESK – Disneyland Center Lounge
- 8:00 a.m. – 8:05 a.m. GENERAL SESSION - Disneyland Center Ballroom
Greeting
- 8:05 a.m. – 8:35 a.m. Process Cycle Time Analysis & Optimisation For Efficient Vacuum Precision Investment Casting Furnaces
Iñaki Vicario, Consarc Engineering **Booth No. 324**
- 8:35 a.m. – 9:05 a.m. Shifting the Engineering Focus of Back-up System Design (Novel Backup Binder for Investment Casting)
George Salomon, David Scott, Nalco Water – An Ecolab Company **Booth No. 320**
- 9:05 a.m. – 9:35 a.m. Meeting The Challenge
Jack Ziemba, Aristo Cast
- 9:35 a.m. – 10:05 a.m. Autoclave Technology
Michael Kugelgen, MK Technologies **Booth No. 308**
- 10:05 a.m. – 10:20 a.m. BREAK
- 10:20 a.m. – 10:50 a.m. Advanced Analysis Techniques of Slurry Stability Utilising Zeta Potential Testing of Colloidal Silica
Gavin Dooley, Remet UK **Booth No. 217**
- 10:50 a.m. – 11:20 a.m. A Scabbing Defect Investigation
Andy Bomberger, Tech Cast LLC
Chris Whitehouse, 3M Technical Ceramics Inc. **Booth No. 320**
- 11:20 a.m. – 11:50 a.m. Thermal Properties Evaluation of Investment Casting Shell by Hot Disk Transient Plane Source Method
Nip Singh, S&A Consulting Group LLP
Artem Trofimov, Orton Ceramic Foundation **Booth No. 523**
- 11:50 a.m. – 12:30 p.m. LUNCH - Disneyland South Ballroom
- 12:30 p.m. – 1:00 p.m. Investment Casting Metrology Growth and Sustainability
Tim Ruland, Chris Tinker, Alexander Hautanen, Hitchiner Manufacturing, Inc.
Josh Sullivan, Capture 3D
- 1:00 p.m. – 1:30 p.m. Advanced Core Removal for the Modern IC Foundry
Howard Pickard, LBBC Technologies **Booth No. 409**
- 1:30 p.m. – 1:45 p.m. Announcement of 16th WCIC Venue & Closing
- 5:30 p.m. – 8:00 p.m. **GALA BANQUET – Sleeping Beauty Pavilion**

THURSDAY, AUGUST 25, 2022

- 8:00 a.m. – 5:00 p.m. **FOUNDRY & SUPPLIER FACILITY TOURS**