

2018 PEI Manufacturing Symposium

Advancing Porcelain Enameling into Industry 4.0

Thursday 10-18-18 Registration, Board of Directors and Annual Membership Meetings

- 12:00 PM – 3:00 PM MFG Symposium Registration
- 3:00 PM – 5:00 PM PEI Board Meeting – Glenn Pfenndt (A. O. Smith - PCD)
Anti-trust Guidelines Review - Bill O’Bryan & Hunter Brush (Butler Snow)
Secretary’s report – Cullen Hackler (PEI)
Treasurer’s report – Michael Cukier (Whirlpool Corporation)
2018 YTD performance
2018 YTD Raymond James Fund performance
24th IEI Congress financial results
Committee reports
Annual Meeting – Cullen Hackler (PEI)
Environmental – Jack Waggener (AECOM)
Marketing/Membership – Brittany Voss (A. O. Smith Corporation)
Technical Affairs – Charles Baldwin (Ferro Corporation)
Unfinished Business
2019 Tech Forum Proceedings
B2B “on the road”
China Enamel Exhibition (12/8/18)
New Business
2019 Preliminary Budget
Future PEI office space – lease vs. own
2019 and 2020 MFG Symposia – site selection
Adjourn
- 5:00 PM – 5:30 PM PEI Membership Business Meeting – Jeff Robenson (Drennan/Ronalco)
Election of 2019 Officers and Directors
Other Institute business
President’s Remarks – Jeff Robenson (Drennan/Ronalco)
- 6:30 PM – 9:30 PM Group Reception and Dinner

Friday 10-19-18 Manufacturing Symposium and Spouse Program

Spouse Tour and Lunch

- 9:30 AM – 12:00 PM Pat Conroy’s Beaufort Tour
- 12:00 PM – 2:30 PM Lunch and free time in Beaufort, SC

Manufacturing Symposium

- 7:15 AM – 8:15 AM Continental Breakfast
- 8:30 AM – 8:45 AM Welcome and Introductions – Jeff Robenson (Drennan/Ronalco)

8:45 AM – 9:45 AM

Advanced Analytics with “on-machine” Artificial Intelligence – Steve Marshall (Rockwell Automation)

Steve is the Global Engineering and Technology Leader for Rockwell Automation’s Engineered Solutions Business. Rockwell Automation supplies custom designed automation systems for almost all industries. These range from metals, mining, automotive, life sciences, food & beverage, transportation petrochemical and general Infrastructure.



Prior to joining Rockwell Automation 10 years ago, Steve worked in various roles in companies that range from metals manufacturer, metals machine builder, EPC and commercial OEM manufacturer. He has worked throughout the world on large complex Engineering projects. Steve has a BS degree in Electrical & Electronic Engineering from Strathclyde University in Glasgow, Scotland.

Lately we often hear about our newly connected world and how IOT/Industry 4.0 will revolutionize the manufacturing world. Assuming we can access all the new information/data, the prospect of making use of the data is daunting. He will discuss advancements in technology that take advantage of Artificial Intelligence that can be deployed at various levels in the overall control architecture. By deploying AI at the machine layer (Edge) it is possible to interrogate live streaming machine data and make real time analysis with both predictive and prescriptive outcomes.

9:45 AM – 10:30 AM

Enamel Finishing Washer Controls - Using Key Predictive Automation Information to Help Control Washer Chemistry and Mechanics – John O’Connor (Atotech USA)

In today's push for "GREEN" technology, new cleaning chemistries are emerging where the benefits of long lasting, phosphate free, low temperature is the goal. With this technology comes tighter control specifications, as companies that enamel are looking at this chemistry for cost savings without increasing defect rates. This talk will focus on what data is key and how automation can be predictive of changes necessary to maintain quality.

John has overseen the engineering, system design, and implementation of process control systems in over 100 plants. These systems cover finishing washers, paint rooms, waste Water Treatment, as well as other plant operations for over 20 years. His first enamel control system was completed in 2000 for Weber Stephens and he has done several other enamel and paint line systems for companies such as HON, John Deere, Pella Window, Electrolux, as well as several GE plants where he has been involved with their Brilliant Factory process. His background includes work with ECC Controls, Coral Chemical Co., Calvary Industries, Inc. and currently Atotech (USA) as Business Development Manager, North America.

10:30 AM – 10:45 AM

Break

10:45 AM – 11:30 AM

Challenges in Industrial Internet of Things (IIoT)– Michael Cukier (Whirlpool Corp.)

The hype surrounding the Industrial Internet of things (IIoT) makes it seem like the systems are simple, plug and play installations. All that’s required is some software and an internet connection and you are part of the IIoT world. Most discussions do not focus on the real challenges associated with IIoT implementations in large scale manufacturing. This presentation will cover a short introduction to the IIoT space, review a typical Proof of Concept (POC) project and discuss the challenges faced; technical, structural and cultural, during scale up a POC in a large manufacturing facility. We will conclude with some tips to help meet and prevent some of the typical challenges encountered.

Mike spent 22 years working for General Motors in the Paint and Process group; he also managed paint shop construction and start up projects globally. Since 2010 he has been with Whirlpool in the Advanced Manufacturing group, covering paint, porcelain, specialty coatings and new process development. During the last 2 - 3 years Mike has specifically working in the Industry 4.0 / Smart Factory space focused on additive manufacturing and plant floor equipment / data acquisition.

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| 11:30 AM – 12:00 PM | Environmental Compliance Issues and Updates for the PE Industry - Jack Waggener (URS Corporation) |
| 12:00 PM – 1:00 PM | Lunch |
| 1:00 PM – 2:00 PM | Economic Issues Facing US and Global Manufacturers - Chris Kuehl (Armada Executive Intelligence) |
| 2:00 PM – 2:30 PM | Leveraging the Sustainability and Environmental Responsibility of Porcelain Enamel – Set-up and Group Brainstorming – Cullen Hackler (PEI) |
| 2:30 PM – 3:15 PM | Small Group Brainstorming |
| 3:15 PM – 3:45 PM | Break |
| 3:45 PM – 5:00 PM | Small Group Brainstorming and Summary Reporting on Potential Initiatives for PEI in 2019 and Beyond |
| 6:30 PM – 10:00 PM | President’s Awards Reception and Banquet |

Saturday 10-20-18 Social Activities and Free Time

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| 7:30 AM – 8:30 AM | Breakfast (on your own) |
| 9:00 AM – 2:00 PM | Golf, tennis, spa, etc. |
| 9:00 AM – 6:00 PM | Free time to enjoy the Sonesta Beach Resort and Hilton Head |
| 6:00 PM – 9:00 PM | Dinner - we will have several restaurant suggestions for small groups, etc. (Please note that this dinner is “on your own” and not a PEI group function) |

Sunday 10-21-18 Free Time and Departures

Free time to enjoy the amenities of the Hilton Head Island, SC area