

Heavy Gauge Session Abstracts

Tuesday, September 21

9:30 a.m.-10:30 a.m.

Smart Manufacturing Technologies: The OEM Experience (Panel Discussion)

No less than the customers they serve, thermoforming machinery manufacturers and tool builders were forced to make radical changes to many of their processes, including machine/tool acceptance, remote installations, and virtual monitoring. How do you show your customer that their new equipment can meet all the criteria in a final acceptance test? Our panel of suppliers will discuss how they quickly researched and vetted a variety of technologies newly applied to thermoforming. From FaceTime and WhatsApp to Microsoft Hololens and augmented reality, we explore the nexus of human/machine interface, AI techniques, and remote monitoring tools.

11 a.m.-Noon

Smart Manufacturing Technologies: The User Experience (Panel Discussion)

The coronavirus pandemic of 2020 forced many changes on many people. It also underscored what we have known since the dawn of time: that necessity is the mother of invention. Even though the rise of “Industry 4.0” has been discussed for some time now, in the world of thermoforming, the pace of adoption has accelerated rapidly in the past year as many plastic manufacturers experienced both a spike in demand and a bottleneck in supply. With engineers and technicians grounded across the world, converters have scrambled to adapt to new, smart technologies that seek to replicate the in-person experience when qualifying machines and tools. Our panel will talk about the challenges and opportunities associated with this brave new world.

2:15 p.m.-3 p.m.

Virtual Plant Tour: Styl'monde

3:15 p.m.-4:15 p.m.

How Investing in Automation Can Increase the Competitiveness in the Production of Large Heavy Gauge Thermoformed Parts

Eric Burrill, Cannon USA

In these times of increasing competition within the manufacturing industry, the market is witnessing an increasing demand for the development of advanced, automatic production solutions for the thermoforming of large parts.

In some situations, where manpower cost is increasing, or conversely, the skill level of the workforce is reduced, investing in automation has proved itself as an effective solution to reduce overall production cost and maintain competitiveness.

Furthermore, when handling and managing large thermoformed part, automation can improve the level of safety of the workplace and keep accident risk levels at a minimum.

All of these technological advantages, which require a higher level of initial investment, have proved to be easily amortizable due to the flexibility and versatility of the proposed solutions, where the same plant, properly designed, can be used for multiple production series thanks to the capability for autonomous production over multiple shifts requiring little to no manpower to be carried out.

A case history of a plant that can produce parts up to 4500 x 2500 x 1000 (h) mm [14.7 x 8.2 x 3.3 ft.] with an expected output >1000 kg of plastic parts every hour requiring only supervision and logistic servicing by as little as a single person team, will be presented.

About Eric Burrill

Changes in the economy in 2008 led Eric into the composite plastic industry in 2008, which started his career that has been built working within companies that have built success on controlled manufacturing solutions. From 2 Part Adhesives in the non-porous material composite panel industry, polyurethane foam in rigid part manufacturing to his current position focused on developing the North American Market for Cannon's controlled process heavy gauge thermoforming equipment. Controlled plastics manufacturing equipment is a specialty, as we all know the environmental and working conditions have everyday variables. Eric's focus in the industry since 2008 has been working within Industry leaders to optimize manufacturing environments through material and/or equipment.

4:30 p.m.-5 p.m.

Additive Manufactured Thermoforming Tooling

Darrell Stafford, Catalysis Additive Tooling

Vacuum forming with conventional metal tooling can be expensive and also have a long delivery time. Now, imagine if there was a better tooling method that could actually cut that cost and time nearly in half.

At Catalysis Additive Tooling, we have developed a solution for low-cost 3D printed tooling that enables low volume production parts to be produced in half the time and at half the cost of traditional tooling.

We will review the different options for 3D printed tooling such as either 3D print the part directly and just have the one part or use a 3D printed tool to make thousands of mass-production spec level parts. In addition, we will touch some of the different 3D printing technologies available and how Catalysis Additive Tooling takes an agnostic approach to utilizing these 3d printing technologies.

We will share some of our latest projects and success stories.

About Darrell Stafford

Darrell is a mechanical engineer with over 31 years of experience at Honda of America Manufacturing. Over the course of his career with Honda, Darrell worked in Auto Assembly and Equipment Development before ultimately wrapping up his last five years with the company serving as the Honda North America Lead for Additive Manufacturing across all Honda Business Teams (Styling, Development, Manufacturing, Tooling, End Life Parts).

Wednesday, September 22

9:30 a.m.-10:30 a.m.

Plastics Supply Chain Disruptions in the Wake of COVID-19 Panel Discussion

Session Moderator: Phil Karig, Mathelin Bay

From resin producers to plastics processors to end-users of plastic products, the pandemic and its aftermath have wreaked havoc all along the plastics supply chain. This panel will provide an overview of what happened, as well as a look at where things are likely to be going forward. Panelists from various segments of the plastics supply chain will share their personal experiences, what went right and wrong in their individual organizations, what they might have changed and what their expectations are for the future.

Panelists include:

Materials: Phil Karig, Mathelin Bay

Processor: Juliet Goff, Kal Plastics

Extruder: Paul Uphaus, Primex Plastics

11 a.m.-Noon

Distributed Intelligence (Multiple independent sub-systems coordinated in a large project)

Claudio Bottos, SELF GROUP; Fabio Gaiazzi and Ken Burleson, CMS

A vision for ultra-efficient electric vehicles with the best-in-class forming technology available on the market lead to CMS fully automatic thermoforming production cells and to dedicated SELF GROUP aluminum molds and trimming fixtures. Collaboration begins with project assessment and carries through with coordinated project management.

From flat sheets to trimmed parts without operator interventions in order to achieve the maximum productivity and efficiencies. The process requires team collaboration and early idea sharing. This results in processing that reflects competence, confidence, and enthusiasm from all team members.

Starting from an ARCIMOTO project, an interesting case history for a successful project with the right partners.

About Claudio Bottos

After his studies in engineering, Claudio Bottos started to work in SELF Group, in the thermoforming division, in 2006. He was in charge of a project aimed to study the main factors that influence the plastic thermoformed parts: plastic shrinkages, aluminium shrinkages for cast moulds, surface roughness and the distribution of the temperature on the mould surface.

After this first job, he continued to work in the technical area as a proposal engineer where he was in charge to propose technical solutions for thermoforming applications. Then, in the 2014, he moved to the sales area as technical sales manager, and two years later he became business development manager. Claudio is in charge of market analysis and sector trends, development of new markets, budgeting, developing and increasing of target markets (Geographic - Technologic).

About Fabio Gaiazzi

After his studies in informatics, Fabio started working as a software developer. In 2004, he began working in Villa company as a software developer following automation for thermoforming machines introducing a redesigned HMI and brushless motors integration. In the next years, Fabio switched to the after sales department following all the customer support and operations activities. By operating side by side with most experienced customers, his experience in the thermoforming process grew. After moving to CMS (member of SCM group), he was in charge of the technical support to selling network for thermoforming products.

Today, Fabio is the product manager for thermoforming machines for CMS. He is responsible for all the technical development and market positioning of all the thermoforming machines made by CMS. He's the inventor of different patented solutions connected to this technology.

About Ken Burleson

Ken is currently the Plastic Product Manager for CMS in USA and Canada. Ken has been working in the Automation and Manufacturing Segment for 15 years and has primarily supported Top Tier OEMS in their efforts to procure machinery designed for their specific projects.

Following a business degree from the University of Missouri, Ken started in the Industry at Boeing in St. Louis. He later transitioned to machinery sales at KMT Waterjet where he was responsible for Western USA and Canada. He later advanced his career managing the Western States for Multicam CNC where he was responsible for two direct offices and distribution. His journey has afforded him the opportunity to work in the most advanced applications in aerospace, automotive, space, power and agriculture.

2:15 p.m.-3 p.m.

Laser Technology Advancements

Rich Rohn, COMI Americas

COMI has spent years understanding and applying their laser cutting technology into many different market sectors and applications including the cutting of plastics and acrylic.

Laser Technology Advantages:

- o Design and production flexibility
- o Ease and minimized cost of product changeover
- o Drastically decreased maintenance costs
- o Elimination of secondary operations
- o Cleaner work environment
- o Conversational programming
- o In-line automation or stand-alone systems

During our presentation we will provide the technical aspects and benefits that our laser cutting technology can provide that will include case studies, videos, and detailed information to inform our market here in the US of what cutting-edge technology can do for them.

About Rich Rohn

Rich has been providing customers with the latest technologies in manufacturing solutions for the past 25 years and has been given the opportunity to lead the growth of the COMI brand here in the Americas through their newest subsidiary, COMI Americas.

3:15 p.m.-4:15 p.m.

Leveraging Digital Tools to Solve Your Productivity Challenges

Jeff Waters, Rockwell Automation

Join Rockwell Automation as we discuss current manufacturing hurdles and how digital production tools are being used to work with smart devices and control systems to provide insights for you and your customers. By leveraging these tools, you can expect to see a boost in productivity and growth in business.

You will learn about:

- Current manufacturing hurdles and industry challenges
- How digital tools can be used to address these challenges
- The impact solving these challenges will have on business growth and productivity
- An overview of Rockwell Automation's solution offerings in this space
- Examples of how customers are already experiencing success

About Jeff Waters

Jeff Waters is a Solution Consultant for Rockwell Automation who focuses on smart machine design and industry 4.0 Solutions. He helps OEMs and machine builders address industry challenges and manufacturing hurdles through smart machine design concepts and digital tools. Jeff has been with Rockwell Automation for five years, starting as a Field Service Engineer before becoming a Solution Consultant. He has a broad background of technical and application expertise in Rockwell's FactoryTalk industrial automation software suite.

4:30 p.m.-5 p.m.

From Industrial Design to Final Package

Jon Novitt, Wilbert Plastics

This presentation will highlight the steps required to bring a complex thermoformed part assembly from the industrial design phase to final packaging. The example will be associated with a medical application that utilizes multiple thermoformed components along with numerous fabricated hardware. The case study will include:

- The approach to customer expectations related to color/texture/materials and solution for selected process
- Tooling requirements related to forming, trimming, and assembly
- Processing plan related to forming, trimming, and assembly (vision/projected work instructions)
- Packaging solution related to WIP, kitting, and service
- Infrastructure needs such as employee training, ERP, and real time production monitoring

About Jon Novitt

Jon C. Novitt is the Vice President and General Manager of Thermoforming at Wilbert Plastic Services, headquartered in Belmont, NC. Jon manages engineering, estimating, sales, and marketing for the thermoforming business. Before his role as Vice President and General Manager of Thermoforming, Mr. Novitt began his career at Wilbert as a Project Engineer in 1997. He then advanced to Director of Engineering in 2009. In 2016, Jonathan added manufacturing responsibilities as he became a plant manager of Wilbert's White Bear Lake facility.

Throughout his tenure at Wilbert, Jon has led several notable engineering and manufacturing projects that involve advancements in tooling technology and adopting new manufacturing processes. He has also developed hundreds of plastic solutions for major medical, industrial, and agricultural manufacturers.

Mr. Novitt earned a Bachelor of Science degree in Industrial Technology from the University of Wisconsin Stout. He also possesses extensive experience with mechanical, electrical, machining, and fabrication from a small business he has operated since 2001.

Mr. Novitt also serves the community as a mentor and industry partner through regular interaction with students at a local college and high school program.