TECHNICAL PRESENTATIONS & PANEL DISCUSSIONS
SESSION DESCRIPTIONS AND PRESENTER BIOS – THIN GAUGE
Tuesday, September 12, and Wednesday, September 13

TUESDAY, SEPTEMBER 12
8 a.m.-8:45 a.m.
Hunting Unicorns: Talent Acquisition in Today's Plastics Industry
A recent headline in a plastics industry publication stated that there were 20,000 unfilled jobs in Elkhart County, Indiana. The Bureau of Labor Statistics suggests that we are nearing full employment, meaning that everyone who wants a job has one.

So why do surveys continue to suggest that manufacturers struggle to find qualified people? How exactly does one define the “skills gap”? These and other important questions will be discussed in our panel discussion. Representatives from recruitment firms, technical colleges, thermoforming processors and workforce development offices will provide insights and thoughts on this critical topic.

Moderator: Conor Carlin, Editor of SPE Thermoforming Quarterly® magazine
Panelists: Monica Jacobs, KLA Industries
Shannon Munro, Pennsylvania College of Technology
Dan Sproles, Medallion Plastics

10 a.m.-10:45 a.m.
Sushant Jain, PTi
Aurora, Illinois
Thermoforming Techniques’ Profound Impact on PET Container Properties
What has the greatest relevance affecting PET container performance: the resultant intrinsic viscosity (IV) or the thermoforming process itself? The answer to this question and others will be presented in this comprehensive study comparing the physical properties of formed PET sheet, including tensile elongation, crystallinity, clarity/haze as well as solution IV, for containers produced by multiple manufacturers using several different thermoforming techniques. Analyses of these results will provide stunning insight regarding the thermoforming processes’ overwhelming impact on container performance, while demonstrating the minimal influence that sheet IV actually plays.

About Sushant Jain
Sushant Jain is Senior Scientist – Applications and Technology with PTi. He has 30 years of extensive experience in the plastics industry. Mr. Jain has held leadership roles focused on R&D, product development, process development and lean manufacturing with leading packaging companies including Pactiv, American National Can, Amoco Foam Products and Continental Can. He has successfully developed and commercialized containers for food/nutritional products. Mr. Jain earned his M.S. in chemical engineering from Cornell University.
1:30 p.m.-2:15 p.m.
Luca Oliverio and Gregory Romanski, WM Wrapping Machinery SA
Stabio, Switzerland

In-line Co-extrusion and Thermoforming Technology for Bicolor PP Cups with Mineral Fillers Fitting Existing Lids
Final technical product specification, mold samples, trials and production of PP bicolor cups with mineral fillers. How to prevent lid fitting problems due to different material shrinkage and different thermoforming machine parameters. How to define maximum mineral fillers in the material composition. Top load characteristics using calcium carbonate or talc fillers.

About Luca Oliverio
Luca Oliverio has 15 years of experience in international sales with a wide knowledge in new business development and market research of the plastic industry. As a Mechanical Engineer and specialized in plastic materials, he was appointed sales manager at Meico, distributor for extruders, injection molding, blow molding and thermoforming machines. In 2006, as a sales manager for South Europe and responsible for the internal technical sales support at WM Thermoforming Machines, he contributed greatly in developing new technologies and sales strategies prior to being promoted to Sales Director in 2015.

About Gregory Romanski
Gregory Romanski started working as a graduate in Business Administration and a major in strategic marketing at the chemical company BASF where he was responsible for the strategic marketing and communications of Mexico and Central America. In 2008, he successfully obtained projected profit and market share objectives through defining long-term strategies as a brand manager at 3M. In 2010, he joined MAN as a sales manager where he gained new important clients and maximized growth potential in Europe and Asia. After several years of vast international experience in strategic marketing and sales, he incorporated WM Thermoforming Machines in 2015.

2:30 p.m.-3:15 p.m.
Michel Labonte, Solegear Bioplastic Technologies
Vancouver, BC Canada

Study of Different Plug Geometries and Optimization of Wall Thickness Distribution for a Typical 16-Ounce Container Made in PET
Through numerical simulations, different plug designs or shapes were evaluated to observe wall thickness distribution (WTD) in 16 ounce thin-wall thermoformed containers. FormView™ software was used to run the simulations. A continuous plug assisted thermoforming (PATH) process was simulated based on a PET of 23 mils thick sheet, a 6 cavities aluminum mold, plugs in syntactic foam and at 30 cycles/minute.

Several plug geometries have been evaluated: the normal one (REF shape) and 8 different shapes of plug with reduced surface contacts and high rounded corners. Numeric simulations were run and compared for WTD. Most promising shapes for the plugs were machined and tested under real molding conditions. Obtained WTD were compared with simulation’s results. Important discoveries came out of these numerical simulations and production runs to bring some light on that black art of thermoforming.
About Michel Labonte
With over 25 years of teaching plastics processing technologies and plastic parts design, Michel Labonte has been CTO of Solegear Bioplastics, a Vancouver-based company with branches in U.S., for the past five years. Michel holds a Bsc in commerce and a PhD in Chemical Engineering from Polytechnique Montreal.

4 p.m.-4:45 p.m.
The Blame Game
In this technical session, we will tackle complex quality issues that have plagued both thin gauge and thick gauge molders for years. We have assembled an expert panel to debate these issues representing companies that compromise the thermoforming supply chain, including resin compounders, extruders, processors, a color house and tool maker. Assigning blame may not be a simple answer, but it will be hotly debated.

Topics include:

- I have gels and pits in my decorative or clear sheet: who is at fault?
- My sheet has inconsistent forming, resulting in thinning and webbing: who is at fault?
- The color and gloss of my thermoformed parts does not match the standard: who is at fault?
- I have stress whitening or whitening in my thermoformed parts: who is at fault?

Moderator: Ed Probst, Probst Plastics Consulting
Processors: Steve Murrill, Profile Plastics, Evan Gilham, Productive Plastics
Extruders: Matt Vandivier, Primex Plastics, John Thibado, Advanced Extrusion Inc., Eric Short, PMC
Resin: Steve Lacock, Arkema, Sunit Shah, Lyondellbasell
Color House: Nick Gaudino, Standridge Color
Tooling: Ken Griep, PCM

WEDNESDAY, SEPTEMBER 13
10 a.m.-10:45 a.m.
Dr. Amitkumar Dharia, Transmit Technology Group, LLC
Irving, Texas
Thermoforming - Art, Science or Both!
Thermoforming is exceptionally well suited for producing parts with large surface area/weight ratio. Despite its long history, relatively simple setup, and commercial success, the thermoforming process is still an art. In-line radiation heating and high-speed free-surface stretching below material’s melting temperature makes thermoforming quite different than the other melt-processing methods such as extrusion or injection molding which begin with pellets and are carried out in the melt state. Because of this, material properties, standard test methods, and models used in extrusion and molding cannot be extended to characterize and analyze thermoforming. The absence of standardized test specific to thermoforming has resulted in a communication gap between the resin suppliers, sheet producers, and thermoformers: between the research, part design, production, and QC functions. Expensive and time-consuming trial and error is mostly the modus operandi. Over the years, several analytical tests have been developed, but not standardized. There is clearly a need for a quantitative test which everyone in the value chain can understand and use. In this presentation, various analytical test methods and criteria to assess and optimize thermoforming will be presented with examples.
**About Amitkumar Dharia**

Amit has over 30 years of experience in product and process R&D. After getting his Ph.D. from UML in 1986, and working in R&D, in 1999, he started Texas-based Transmit Technology Group, LLC, which provides contract R&D and testing. He has over 26 publications and 20 issued patents. He has developed a testing machine to study thermoformability. Amit is a registered U.S. patent agent who is passionate about innovation. His motto is, "In God we trust, everyone else needs to bring data."

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**1:30 p.m.-3:15 p.m.**

*The War Room: Where Thermoforming and Design Meet!*

Our diverse and talented team of processors will meet with the customer to win some new business:

- **The Confident Industrial Designer:** Michael Paloian, Integrated Design Systems
- **The Clever Problem Solver:** Ed Probst, Probst Plastics Consulting
- **The Arrogant Engineer:** Steve Zamprelli, Formed Plastics
- **The Outspoken Director of Sales:** Jim Arnet, Hagans Plastics
- **The Crafty Mold Maker:** Mauro Fae, SELF SRL
- **The Witty Processor:** Eric Short, PMC

Our team will use their on-the-spot thinking skills to develop an approach to the project that will suit the customer’s needs. Use your skills and love of the thermoforming process to help the processors convince the designer to use your process and to win some highly-coveted projects. This fun and informative session will provide insight on problem solving, opportunities for cost reduction, and the overall design process. It will also address the challenge that business owners face daily: “Do we really want to take on this job?”

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**4 p.m.-4:45 p.m.**

**Meagan Marko, Noble Polymers**

**Grand Rapids, Michigan**

*Getting More Out of Acoustic Barrier Materials*

Filled EVA is widely used in thermoformed acoustic barrier applications, but are you getting the most out of your material? This presentation will focus on various functionalities that can be incorporated into a filled EVA system. The solutions available in each area are targeted at meeting the increasingly stringent needs of OEMs, while maintaining cost competitiveness. Case studies will be presented to highlight how these solutions are already providing value in real-world applications. The purpose of this overview is to inspire out-of-the-box thinking, and to create value by showing ways to improve traditional acoustic materials.

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**About Meagan Marko**

Meagan Marko is the Sales and Business Development Manager for Noble Polymers, LLC, a custom compounding of TPO and polyolefin based products. She has been with Noble Polymers since 2008, and has held various roles in Engineering and Material Development.
Meagan received a bachelor’s degree in Chemical Engineering from Ohio University, and a master’s degree in Polymer Engineering from the University of Akron. She lives with her husband and three daughters in Grand Rapids, MI.