

## Aluminum Body Sheet Course AGENDA

Updated 03/04/2020

March 10-11, 2020 The Inn at St. John's @ 44045 Five Mile Road Plymouth, MI 48170, USA

## Tuesday, March 10<sup>th</sup>

Time	Торіс
7:30 am	Registration & Breakfast
8:30 am	Welcome and Introductions Nate Beavers, Founder & President, Automotive Aluminum Advisors LLC
9:00 am	Putting EV Materials Content in Perspective Abey Abraham, Managing Director, Automotive & Transportation, Ducker Frontier
9:30 am	Aluminum Body Sheet Product Overview Laurent Chappuis, President at Light Metal Consultants, LLC
10:00 am	Break
10:15 am	<ul> <li>Alloy-Temper Definitions</li> <li>Tempers of Heat Treatable Alloys</li> <li>Tempers of Non-Heat Treatable Alloys</li> <li>Michael Bull, President, AIFCC13 Inc.</li> </ul>
10:45 am	<ul> <li>Manufacturing Overview of Aluminum Body Sheet</li> <li>Ingot Casting &amp; Homogenization</li> <li>Cold Rolling and Hot Rolling</li> <li>Continuous Cast Aluminum Sheet (CCAS)</li> <li>Thermal Treatments</li> <li>Michael Bull, President, AIFCC13 Inc.</li> </ul>
11:30 am	Surface and Coatings Judson Delancey IV, Applications Specialist, BASF/Chemetall
12:00 pm	Lunch
1:00 pm	Microstructure and Properties <ul> <li>Property Control of 5xxx Alloys</li> <li>Property Control of 6xxx Alloys</li> <li>Property Control of 7xxx Alloys</li> </ul> Michael Bull, President, AIFCC13 Inc.
1:45 pm	<ul> <li>Corrosion and Corrosion Testing</li> <li>Intergranular Corrosion</li> <li>Filiform Corrosion</li> <li>Other Corrosion Tests</li> <li>Dr. Narsimhan Raghunathan, President, Touchstone Testing Lab, LLC</li> </ul>
2:15 pm	Break
2:30 pm	Product Selection & Applications Michael Bull, President, AIFCC13 Inc.



3:00 pm	Recycling Considerations Laurent Chappuis, President at Light Metal Consultants, LLC
3:30 pm	<ul> <li>Specifications, Qualification and Lot Release</li> <li>OEM Specifications</li> <li>Level 1 Qualification</li> <li>Level 2 Qualification</li> <li>Laurent Chappuis, President at Light Metal Consultants, LLC</li> </ul>
4:00 pm	Questions and Daily Wrap-Up
4:30 pm	Networking Reception
6:30 pm	Event Adjourns

## Wednesday, March 11<sup>th</sup>

Time	Торіс
7:30 am	Registration & Breakfast
8:30 am	Keynote: Materials Innovation Drives the Auto Industry into the Future Abe Vadhavkar, Materials & Manufacturing Engineering Leader, Giraffe LLC
8:45 am	<ul> <li>Materials Handling and Processing</li> <li>Incoming Requirements</li> <li>Flattening, Leveling, Blanking</li> <li>Transportation &amp; Warehousing</li> <li>Don Strugala, Applications &amp; Field Engineering, Automotive Aluminum Advisors LLC</li> </ul>
9:15 am	<ul> <li>Aluminum Formability</li> <li>Forming Limit Diagrams</li> <li>Producibility Assessment</li> <li>Binder and Addenda Design Considerations Laurent Chappuis, President at Light Metal Consultants, LLC</li> </ul>
10:00 am	Break
10:15 am	Tooling, Facilities & Production Considerations Laurent Chappuis, President at Light Metal Consultants, LLC
10:45 am	Elevated Temperature Forming Cliff Butcher, Assistant Professor, The University of Waterloo
11:15 am	Evaluating Mixed-Material Joining for Lightweighting of High-Volume Vehicles George Panourgias, Lightweight Innovations for Tomorrow (LIFT)
12:00 pm	Lunch
1:00 pm	Aluminum Laser Welding in Body-in-White and Closure Applications WeiJie Zhang, Material Joining Manager, Gestamp Autotech Engineering R&D USA Inc.
1:30 pm	Assembly Processes in Multi-Material Applications Bill Cameron, Ford Global Key Account Manager



2:00 pm	Break
2:15 pm	USMCA Update Kristin Dziczek, Vice President, Center for Automotive Research
2:45 pm	Supply Chain Considerations Nate Beavers, Founder & President, Automotive Aluminum Advisors LLC
3:15 pm	<ul> <li>Purchasing <ul> <li>Nomenclature</li> <li>Metal &amp; Conversion Price Determinants</li> <li>Purchasing Models</li> </ul> </li> <li>Nate Beavers, Founder &amp; President, Automotive Aluminum Advisors LLC</li> </ul>
3:45 pm	Review, Questions and Wrap-Up
4:00 pm	Event Adjourns

Register online at <u>www.auto-aluminum.com</u>. Contact us by email at <u>info@auto-aluminum.com</u> or by telephone at 248-736-5649 for any registration questions or issues.

Registration fee includes two-day course topics, hard and soft copies of training materials, breakfast, lunch and networking event.

Automotive Aluminum Advisors reserves the right to make updates to this agenda without notice.