

UGM 2024 - Day Three

Thursday, October 10th



Agenda

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8:00-8:30AM	Registration
8:30-8:45AM	Welcome Remarks
8:45-10:00AM	Industry Keynote Matthias Schmidt-Lehr, AM Power
10:00-10:15AM	Coffee Break
10:15AM-12:15PM	Breakout Slot 1
12:15-1:30PM	Lunch Break
1:30-3:30PM	Breakout Slot 2
3:30-4:00PM	Closing Remarks
4:00-4:30PM	Coffee & Snacks to Go

*Shuttle bus departing at 4:30 back to the hotel

Breakout Sessions in Slot 1

M2 Roadmap

Join the Colibrium Additive M2 roadmap breakout and hear from our product management team about development plans for the M2 and find out from our services team which upgrades you can activate for your M2s. Tell us live—at the printer—about your current pain points and what future improvements you would like to see. This interactive, two-hour session aims to be a productive exchange of thoughts, a dialogue on challenges, and improvement potentials – we want to hear from you!

Additive Journeys

Premium AEROTEC

A decade ago, first 3D printers were selected to gain the advantages of additive manufacturing for Aerospace applications. Concerning printer technology a trip from one galaxy - producing one-off parts as models or unique parts in tooling - to a completely different universe - highest quality serial production focussed on reproducibility and productivity - had been launched. New challenges on the printers came up, e.g., calibratable sensors, reproducible material properties all over the build chamber, optimized parameters for higher productivity, automated solutions instead of manual work etc. This session reflects the common journey of printer manufacturer Colibrium Additive and Aerospace parts manufacturer Premium AEROTEC as entrepreneurs for Ti6Al4V serial part production at highest quality and very competitive costs.

Customer speaker: Thomas Bielefeld, Premium AEROTEC

M Line Roadmap

Join the Colibrium Additive M Line roadmap breakout and hear from our product management team about development plans for the M Line and find out from our services team which upgrades you can activate for your M Line printers. Tell us live—at the printer—about your current pain points and what future improvements you would like to see. This interactive, two-hour session aims to be a productive exchange of thoughts, a dialogue on challenges, and improvement potentials – we want to hear from you!

Process Monitoring – Laser

Join us for this interactive classroom session, relevant for L-PBF users, where we will discuss some of our latest in situ process monitoring capabilities including:

- Powder Bed Monitor Anomaly Detection (M Line)
- High Resolution Imaging (M2)

This session is relevant for L-PBF users.

Point Melt and PlateFree Printing

Join the EB-PBF Point Melt Breakout to hear from our subject matter experts on how to leverage Point Melt for alloys other than Ti64 and find out how Avio Aero is exploring Point Melt to improve its TiAl EB-PBF series production.

Customer speaker: Andrea Palumbo, Avio Aero

Binder Jet: How and why it could win for you

Have problematic castings? Need a lower cost and/or higher throughput for a viable additive business case? Binder Jet could be for you.

Whether you are a complete Binder Jet beginner, have some experience, or simply want to find out more about our approach and solution and how it might be a fit for your additive strategy – then this session is for you.

Deep dive on Powders – Standards, testing, characteristic and impact on end part

Metallic powders are the foundational materials for metal additive technology. But powder is often, to the user, a new type of raw material which might bring new risks to address and controls to implement. This session will provide an in-depth exploration of the various aspects of metal powder including available standards, testing methods, key characteristics and how they can impact end part properties.

The focus will be on titanium powder and to complete the session, you are invited discovering how coarser Ti6Al4V powder, typically used for EB-PBF or DED, can also be used to produce high quality parts on the Colibrium Additive M2.

Analytics for Monitoring Build & Machine Health

Join us for this classroom session with software demonstrations and real-world case discussions of analytics capabilities for monitoring build and machine health.

Capabilities enable:

- Variability analysis to compare a new build to known good builds, significantly quickening troubleshooting, continuous improvement, process substantiation
- Real-time detection of undesirable trends in a build to avoid or minimize cost of poor quality in a printed part or printer downtime

This session is relevant for L-PBF, EB-PBF and Binder Jet users.

Breakout Sessions

in Slot 2

Improving your M2's OEE

Overall Equipment Effectiveness (OEE) of your printers is top of mind for both you and us. Join this interactive, two-hour breakout to define OEE, get a common understanding of what can be done to increase the printer's OEE. Share your best practices with fellow users live at the printer, show us your quick fixes and tell us how we can support you with solutions.

WRX3 for M Line and M2

Join this interactive classroom session with software demonstrations of WRX3 build preparation and machine control software. Relevant for all L-PBF users, we will discuss recent advances in WRX3 workflows to enable faster and better builds on the M Line and the M2 platforms.

Capabilities include:

- Improved WRX3 Office user experience (M Line and M2)
- Enhanced laser misalignment mitigations (M Line and M2)
- Optics calibration workflows (M Line)
- Use of custom power measurement devices (M Line)

Customer speaker: Alex Devon, Protolabs

Stitching

Improving productivity is a fundamental and necessary step to enable additive manufacturing business cases and compelling rationale to displace conventional manufacturing techniques.

As a result of increasing the number of energy sources to increase productivity, a myriad of challenges can arise, potentially impacting multi-laser machine performance, accuracy, or long-term stability.

In this session we will discuss:

- The fundamentals of multi-laser processing and stitching need with real part examples
- Current M Line capabilities, including data and experiences from GE Aerospace
- GE Aerospace's wider approach to industrialize and qualify the M Line with stitching for various parts
- The future of multi-laser processing and stitching, what's on the technology roadmap

Customer speaker: Nick Buhr, GE Aerospace

Cybersecurity

This interactive session explores Colibrium Additive's approach to printer cybersecurity. The team will outline a nine-step 'Chain of Trust' model that drives our printer security program and strategies used to mitigate threats facing the additive manufacturing industry. The session will briefly cover ongoing security research underway at Colibrium Additive. Security is a team sport and none of us can go at it alone. Let's learn from each other and build a more secure future for additive manufacturing!

EB-PBF data handling

Data creation and data management continues to grow in importance within the additive manufacturing industry. Our EB-PBF portfolio features tools such as Build Performance Analyzer, Defect Detector and LogStudio to assist your EB-PBF production in data analysis and data creation. Join this session and share your learnings and your pain points and what improvements you would like to see in the future. This two-hour session is planned to be an interactive exchange of thoughts, challenges, and improvement potentials – we want to hear from you!

Industrialization of EB-PBF

Join the EB-PBF industrialization Breakout to hear about current challenges and valuable insights when scaling up an EB-PBF additive production. What challenges are you facing as you scale your EB-PBF production? What improvements would you like to see from Colibrium Additive? This two-hour session is planned to be an interactive session and should allow discussion and thought exchange.

Customer speaker: Riccardo Toninato, Enovis

Powder life cycle management and safe handling

In this session we will review the key metrics that define powder reactivity. You will learn how to classify powder reactivity and how to interpret the results. This will allow you to be connected to Colibrium Additive's vision on the critical aspects of printer and plant safety. Finally, as understanding the entire life cycle of metal powder is crucial to optimize your manufacturing process, we will review powder recycling and end of life powder management from a materials point of view and review the impact of oxygen homogeneity in Ti6Al4V powder.

Business Case Building

Join this workshop to hear from Colibrium Additive's AddWorks™ consulting about identifying a new market and growth opportunities as well as establishing a business case accordingly.

This session will increase your knowledge about additive business case development and the strategies to minimize costs. It will also provide new ways of looking at your components and systems. Come join us for this two-hour discussion and interactive learning opportunity.