# Additive Manufacturing WG meeting

Chair: Ludo Bautmans, Oerlikon

# Agenda of the Meeting

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1. Results of 2024 & Learnings from Day 1
2. Activities for 2025 (What, How, Why)
3. Thematic Presentation
4. Q&A

# Results of 2024 & Learnings from Day 1

# Results of 2024

## Summary

| 2024 Activity | Status and current results achieved |
|---|---|
| Industrial initiative on the High Temperature Alloys | - Scheduled for Q1/2024, delayed due to administrative issues (NDA, CA signatures)<br>- The project will start in Q4/2024 |
| L-PBF Machine Evaluation initiative | - Confidential Report finalise<br>- Public report under finalisation (Q4/2024) |

# Activities for 2025

## What, How, Why

# Activities for 2025

## What, How, Why

| Problem statement | Proposed activities |
|---|---|
| The material portfolio for AM is currently rather limited, especially for high temperature applications e.g. first stage blades of gas turbines. | Ideation of an alloy with equivalent performance as alloy247 and parameter window development revealed microcrack free printable potentials. The working group could jointly [up to a defined TRL (4?)] characterize /bench mark such alloy in as build condition, while analysing in-process monitoring behaviour. High temperature performance could be considered in a later phase. |
| Process quality & closed loop control in the AM technologies (potentially leading to NDT for AM) are currently in very early development stage. | The working group could align forces to evaluate breaking edge strategies:<br>▪ Assessment of the various strategies<br>▪ Implementation / case study of the chosen concept up to TRL 6<br>▪ Development of a requirement set demanded by our vertical |
| NDT (non-destructive testing) is costly and time consuming, putting pressure on economic viability of AM components | The working group could align forces to evaluate the use of (existing) in-process monitoring capabilities to inspect for defects. This can reduce NDT requirements and with that, reduce cost and lead time. |