EUROMAT 2017 / Symposia Structure / Area C

C4

Title: Additive Manufacturing

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Summary

Additive Manufacturing (AM) is an emerging manufacturing technology driven by both consumer market and industry. The public perception is dominated by the consumer market. However, the more demanding requirements and applications can be found in industry regardless of the material utilized. In order to generate a viable product many aspects along the process chain need to be considered and are thus areas for research and development. This symposium aims to cover all aspects related to the latest developments in AM from specific material development (polymers, resin, metals, ceramic, bio-compatible, …) to the latest advances in processing:

- Base material characterization and impact to consolidated material properties Process development and material properties of AM materials
- Development of advanced machine concepts (4D printing, productivity, materials, …)
- Design for AM
- NDE of AM materials and products
- Thin structures and their properties (thin walled parts, lattice structures, porous materials, …)
- In-line monitoring
- Process modelling
- Management of stress and distortion
- Post processing (heat treatment, surface refinement, etc. …)
- Relationships between process parameters, microstructure and properties
- The structural metastability of materials processed by EBM and SLM
- The anisotropy of microstructure of AM components
- Residual stresses and heat treatments
- Surface microgeometry and finishing
- Structural materials by AM
- Functional materials by AM
- Sintering shrinkage and dimensional stability of binder-jet printed components

The session organisers will invite a selected number of authors to submit their full paper for consideration in a special issue of Powder Metallurgy