TQ11000053

COMTES FHT®
Complete Technological Service - Forming, Heat Treatment

TOPOLOGY OPTIMIZATION FOR INDUSTRIAL APPLICATIONS - PROOF OF CONCEPT

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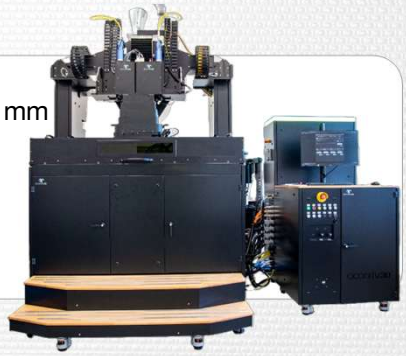
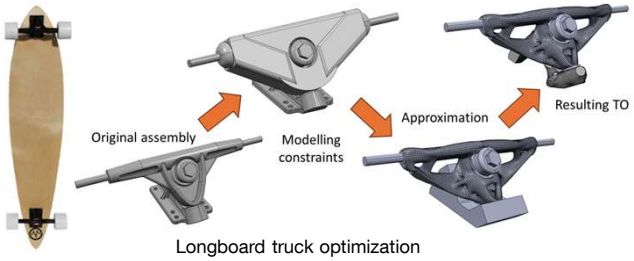
ACONITY TWO
LPBF at COMTES FHT

- 2x 1000W
- Build space D400 x 400 mm
- Reductions
  - D230 mm
  - D140 mm
- Preheating 500°C
- Aconity Infinifilter

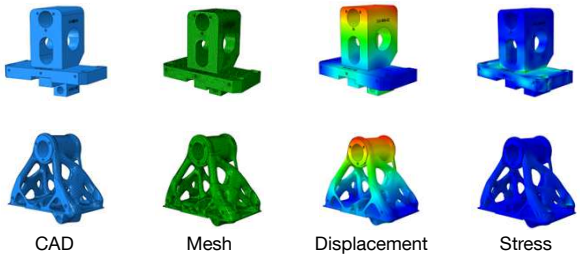


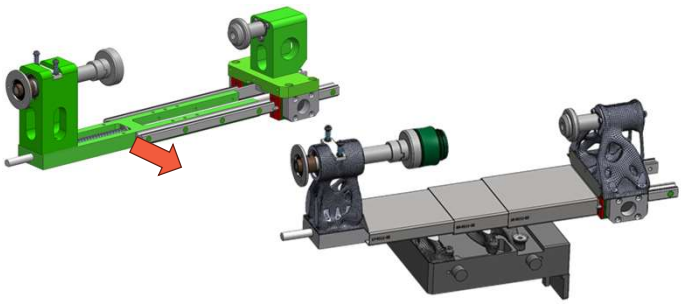
Topological optimization

Topology optimization is used to design lightweight structures with reduced material consumption. Optimized shapes are generated while ensuring required strength and functionality. By these methods, innovative geometries are created that support sustainable and efficient product design.



Longboard truck optimization

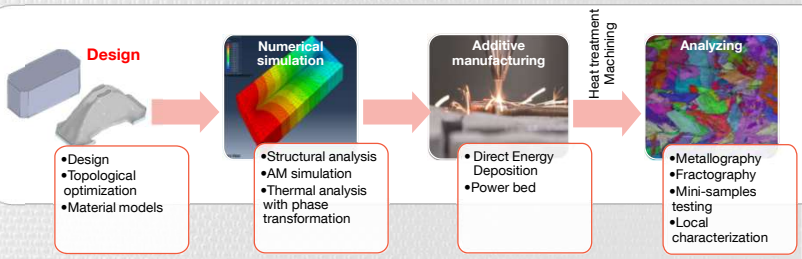




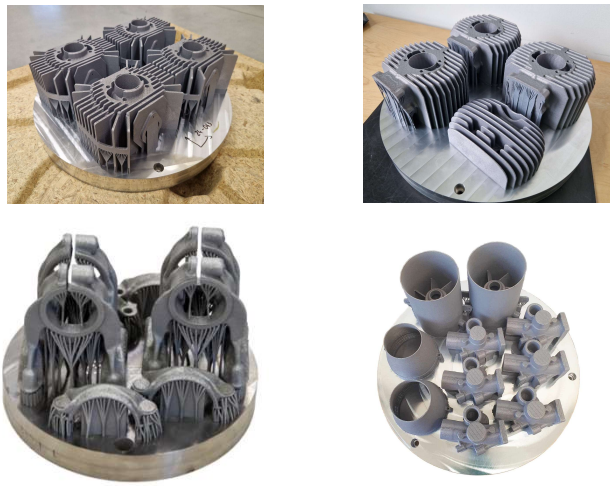
Topological optimization of customer parts

Optimization of AM process

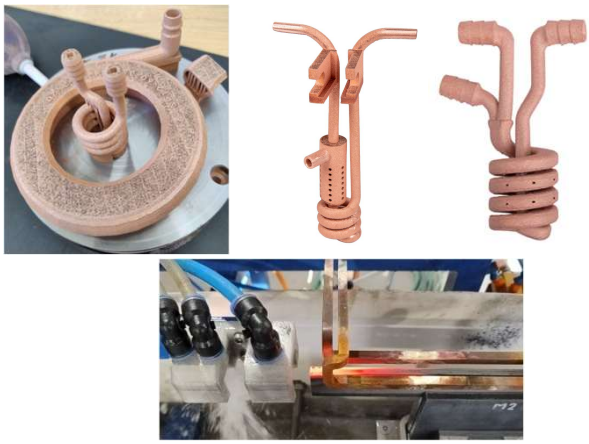
There are plenty of steps which are necessary for obtaining a perfect final model. Firstly, the model has to be topologically optimized and designed; some material models can be tested. After that it is necessary to simulate the whole process, calculate a thermal analysis. Then the printing can start with various ways of post processing as heat treatment and machining. Printed samples are characterized by metallography and various mechanical properties.



Component production



Prototypes made of aluminum alloy for motorsport, sports and industry



Copper inductors for surface heat treatment

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