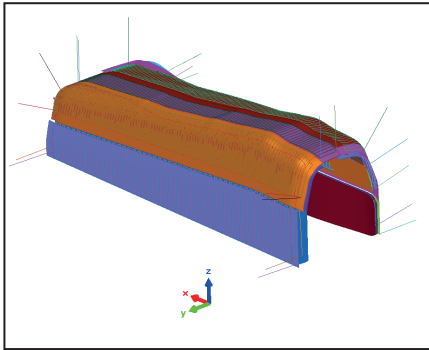
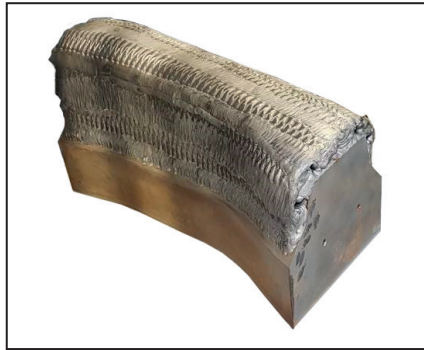


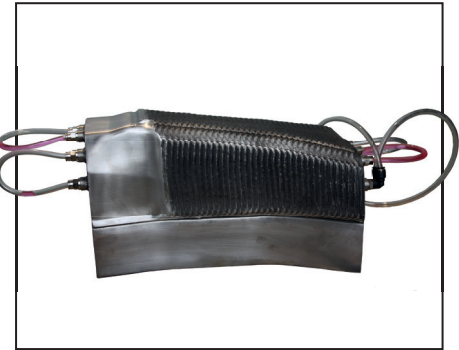
HOT FORMING DIE



CAM model



Metal printed part



Partly finished part

INFORMATION ON THE COMPONENT PART

- Application: Hot forming die
- Current challenge:
 - Segmentation of the die into single segments necessary
 - Why multiple segments?
 - Near-net-shape and under the surface running cooling channels must be drilled mechanically
 - Sealing between the segments is required
 - Hardening process after mechanical processing leads to shape distortion
 - Complex assembly of the individual segments to the entire tool

TECHNICAL DATA

- Machine:** arc405
- Dimensions [mm | inch]:**
 - L = 400 | 15.7
 - W = 187 | 7.4
 - H = 214 | 8.4
- Wire:**
 - Cooling channels
1.4370 | Ø 1.0 mm
 - Surface: 1.2343 | Ø 1.0 mm
- Printing mass:**
 - 1.4370 – 11.3 kg | 25.1 lb
 - 1.2343 – 3.1 kg | 6.8 lb
- Printing time:** 7.00 h

ALTERNATIVE TO THE CONVENTIONAL MANUFACTURING STRATEGY

- Additive manufacturing of the entire tool on cost-effective near-net-shape pre-milled base material
 - No Segmentations
 - Integrated cooling channels
 - Constant distance between cooling channels and surface
- Combination of the functionalities of individual materials possible
 - No hardening process required as the outer die layer is made of hard material
- Increase in tool life-time
- Reduction of assembly effort

BENEFITS OF 3DMP®

-  Reduction of manufacturing time
-  Cost savings
-  Multi-materials
-  Material savings
-  Extension of life-time

ANY QUESTIONS?