



ZARE[®]



PRES**X**

Latest Challenges in Metal AM: BEAMIT group

Martina Riccio - R&D Manager
e. m.riccio@beam-it.eu

EPIC Online Technology meeting on Advanced and Additive Metal Manufacturing October 19,2020

Solution provider for AM

Manufacturing Site

PlantA
Fornovo diTaro StradaPrinzera n.17
(PR) - Italy

PlantB
Rubbiano diSolignano Via Volta n. 3
(PR) - Italy

PlantC & D
Via IV Novembre, 37/A,
42022 Boretto
(RE) - Italy

PlantE
Via Mascagni 3
42048 Rubiera
(RE) - Italy

Manufacturing Capabilities

Production figures

- 58 Additive Manufacturing Systems
- 40 Metals of which 2 EBM, 38 LPBF
- 18 Polymers - R&D
- 7 CNC systems

Additive Systems

- 9 AM Systems have large dimension
- 2 Vacuum Hardening Furnaces
- 1 Air Furnace
- HIP-quench
- Machining

Capital Investment & HR

- Investments: 37 M€ (2016-2019)
- Total amount machine hours: >300k
- Employees: >100

Material Capabilities

The highest number of materials qualified as AM player in EU

- Stainless Steel 17-4 PH, 15-5 PH, AISI 316L, M789, W360
- CoCrMo
- AlSi10Mg, AlSi7Mg
- Scalmalloy
- Ti6Al4V
- Inconel 718, Inconel 625, Inconel 939, Hastelloy X
- Silver, Copper, Bronze
- Polymers

R&D Materials

- High Strength-High Temp Aluminum Alloys
- High Strength-High Temp Titanium Alloys
- Nickel-based superalloys
- Zirconia (NPI)
- Tungsten

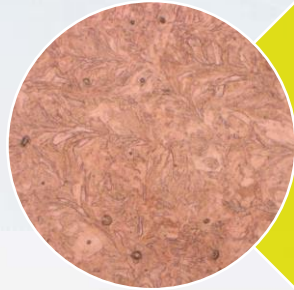


Martina Riccio - R&D Manager
e. m.riccio@beam-it.eu

EPIC Online Technology meeting on Advanced and Additive Metal Manufacturing October 19, 2020

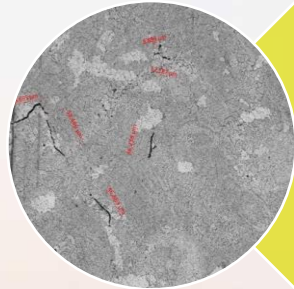
Challenges in Metal AM

Materials



NIR LASER high reflective materials

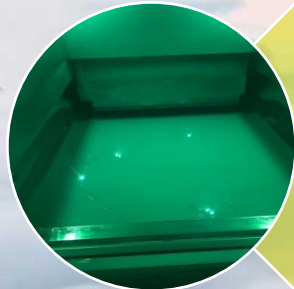
- Unstable process/porosities



«Non weldable» materials

- Hot tailoring/cracking

Process

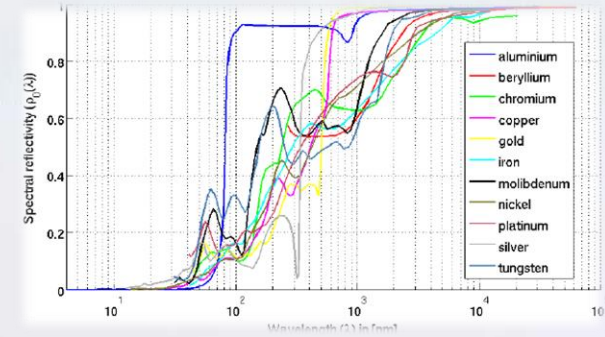


Small LASER spot

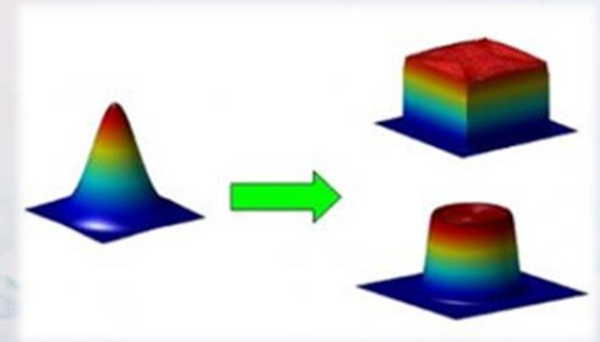
- Low productivity even with multiLASER system

Possible solutions:

➤ Different LASER λ



➤ Beam shaping



What we offer and what we are looking for...



We offer:

- L-PBF «Frankenstein» machine R&D dedicated
- Process and material development know-how
- Customer need-driven projects

We are looking for:

- Partners for/and grant calls
- R&D Collaborations
- Ideas or solutions to develop and test

Q&A

ZARE®



PRESX

Martina Riccio

R&D Manager

e. m.riccio@beam-it.eu

m. +39 338 9519805

THANK YOU



Martina Riccio
R&D Manager
e. m.riccio@beam-it.eu
m. +39 338 9519805