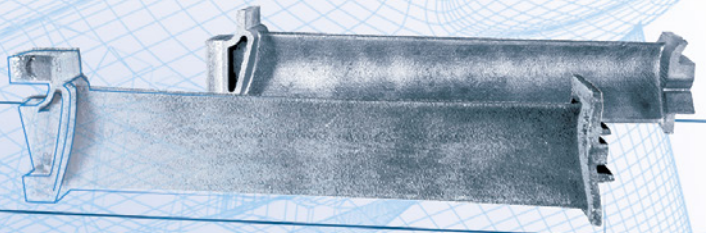
ADDITIVE MANUFACTURING

OVER
10
YEARS OF EXPERIENCE

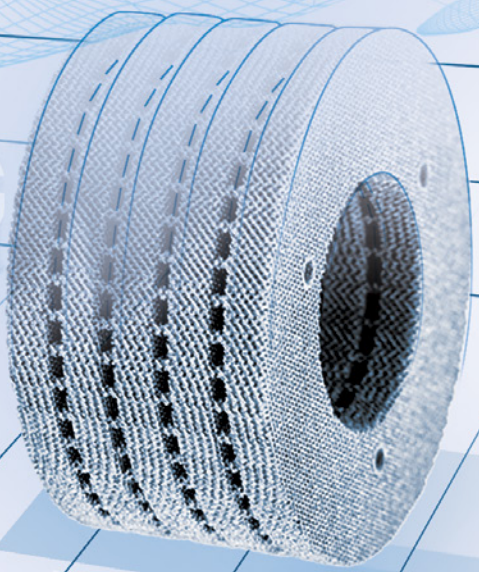
DESIGN, MANUFACTURING AND TESTING

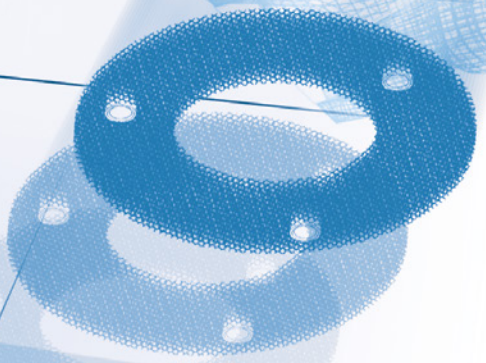
ELECTRON BEAM MELTING TECHNOLOGY



DIRECT METAL LASER SINTERING TECHNOLOGY

A RELIABLE PARTNER





ON BOARD WITH US
Avio Aero is strongly active in the value chain and controls the entire qualification process

THEY'VE ALREADY CHOSEN US
Agusta Westland
Alenia Aermacchi
GE Oil&Gas
Selex

Avio Aero
A GE Aviation Business

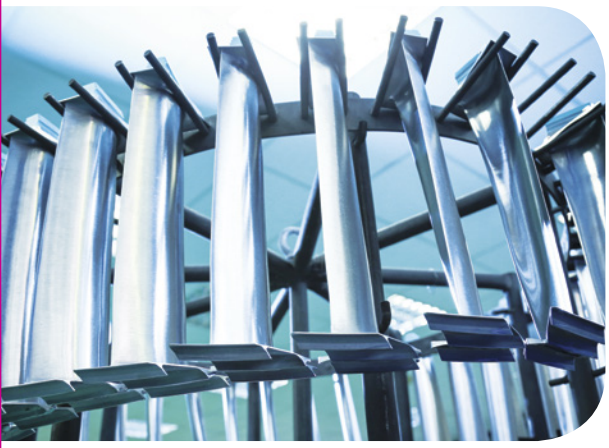
POWDER MANUFACTURER › MATERIAL DEALER › SYSTEM › PART PRODUCTION › PART FINISHING

ADDITIVE MANUFACTURING

DID YOU KNOW?

We offer proven leadership in Additive Manufacturing processing, using DMLS (Direct Metal Laser Sintering) and EBM (Electron Beam Melting) technologies.
A leading player in Europe as regards the use of these technologies in the aerospace field.
We exclusively use ultra-light alloy TiAl (Titanium Aluminide) with the EBM technology. For us, Additive Manufacturing is already a process for mass production, not just prototyping.
We offer complete service, including designs in concurrent engineering, for custom-designed components produced using Additive Engineering technology.

10 YEARS EXPERIENCE



TAKE A LOOK AT WHAT WE CAN DO

OUR PLANT

We use two different technologies in our plant:
EBM (Electron Beam Melting) using an electron beam to melt the material
DMLS (Direct Metal Laser Sintering) using a laser beam source to melt the material

EBM

- Only applicable to electrical conductive materials
- High Power (3 kW)
- Relative hot process (700-1000°C)
- Less stress, less distortion
- Fine microstructure
- Better material properties
- Under vacuum
- Recyclability of powders
- No contamination
- Stable process
- Surface finishing c. Ra 15 µ

DMLS

- Low Power (400W)
- Relative cold process (30-200°C)
- No vacuum (controlled atmosphere)
- Rich material portfolio
- Surface finishing c. Ra 4 µ

OUR PRODUCTS

BLADES
DEOILERS
DUCTS
BURNERS
COILS
AIRCRAFT STRUCTURES
SPACE PROPULSION

ALL AROUND DESIGN

- Total freeform without design limits (Design For Functionality instead of Design for Manufacturing)
- Production of pieces with undercuts and complex features difficult to produce with traditional production systems
- Reduced project and manufacturing times and costs
- As designers and producers we are able to redesign your product and suggest more efficient and decisive solutions

BEHIND THE PRODUCTION PROCESS

- In aviation, we design components such as TiAl turbine blades for aircraft engines and deoilers. We have recently started working in the helicopter market, producing exhaust and intake ducts
- Our portfolio includes examples of important supplies to various OEM sub-contractors primarily fixed-wing and rotorcraft
- Our non-aeronautical customer portfolio is highly diversified: from the Oil & Gas sector to the Racing segment (F1 and MOTO GP)

ADVANTAGES

FREEDOM OF DESIGN

- AM can produce an object of virtually any shape
- Increasing object complexity will not increase production costs

WEIGHT REDUCTION & PERFORMANCE IMPROVEMENT

- AM adds material only where it is needed
- AM enables weight reduction via topological optimization
- Integration of multiple part numbers in one

COST REDUCTION

- Significant scrap rate reduction vs. traditional casting
- ...lighter means cheaper
- No vendor tooling

MECHANICAL PROPERTIES

- Mechanical properties better than casting

LEAN MANUFACTURING

- Lead Time reduction
- WIP Optimisation

CONNECT WITH US

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AvioAero @AvioAero AvioAero

OUR ADDITIVE MANUFACTURING PLANT IS LOCATED IN:

CAMERI (ITALY)
2,400 Sqm specialised in Additive Manufacturing