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

Over 10 years of experience.
ADDITIVE MANUFACTURING

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

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.

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

TECHNOLOGIES
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OUR PRODUCTS
- BLADES
- DEOILERS
- DUCTS
- BURNERS
- COILS
- AIRCRAFT STRUCTURES
- SPACE PROPULSION

OUR ADDITIVE MANUFACTURING PLANT IS LOCATED IN:
CAMERI (ITALY)
2,400 Sqm specialised in Additive Manufacturing

CONNECT WITH US
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