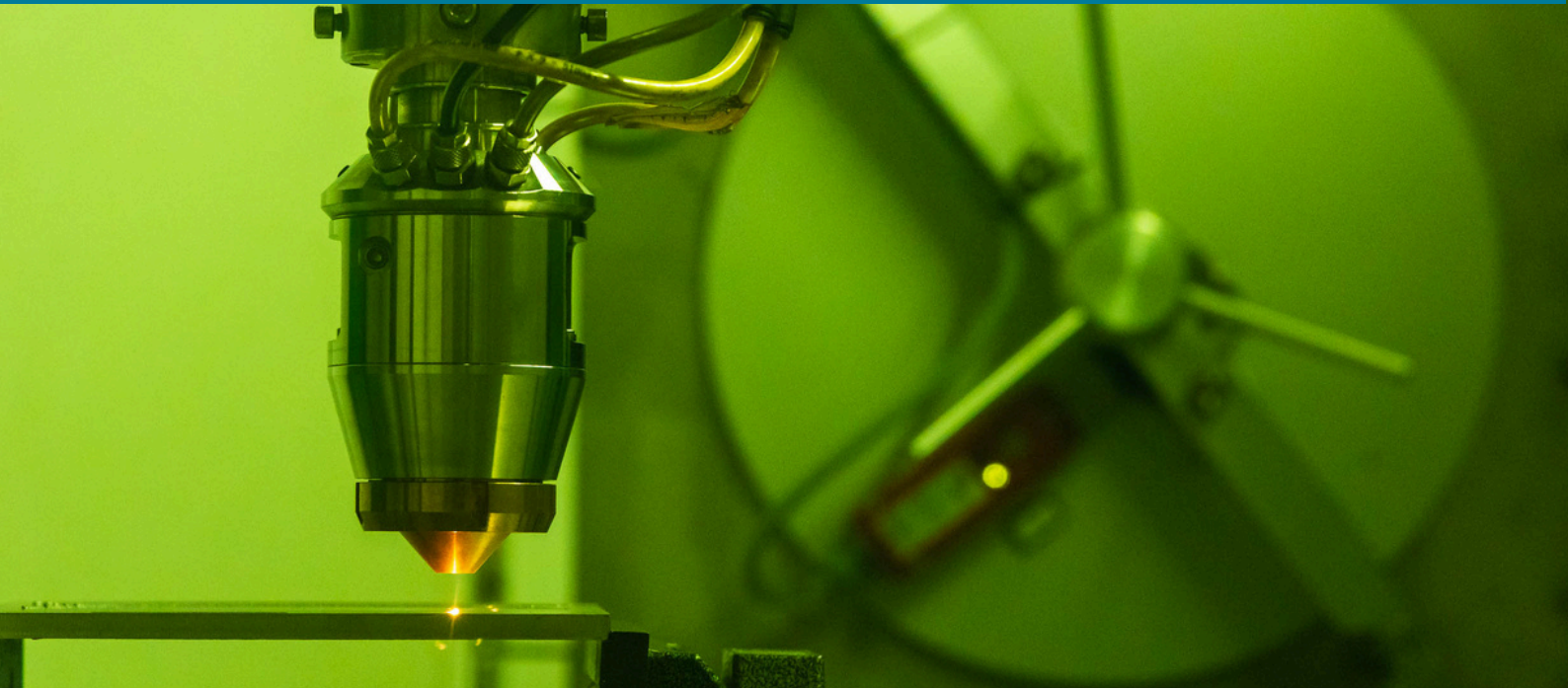




ADDIMADOUR
ADDITIVE MANUFACTURING SOLUTIONS

RESEARCH & DEVELOPMENT | TRAINING | TECHNOLOGY TRANSFER



LARGE-SIZED METAL ADDITIVE MANUFACTURING

Addimadour is an ESTIA engineering school platform dedicated to large-scale metal additive manufacturing, with the aim of supporting industrial players in their research and development projects.

KEYWORDS

Large Dimensional Metal Additive Manufacturing
Adding function / Repairing /
Digital process simulations / DED-LP / DED-LW / WAAM /
Coldspray

RESEARCH TOPICS

- Improving the mechanical properties of additive manufacturing parts
- Co-design and CAD/CAM for robotized additive manufacturing
- Numerical modeling of multi-physics additive manufacturing processes
- In-process process control

SERVICES

Feasibility study

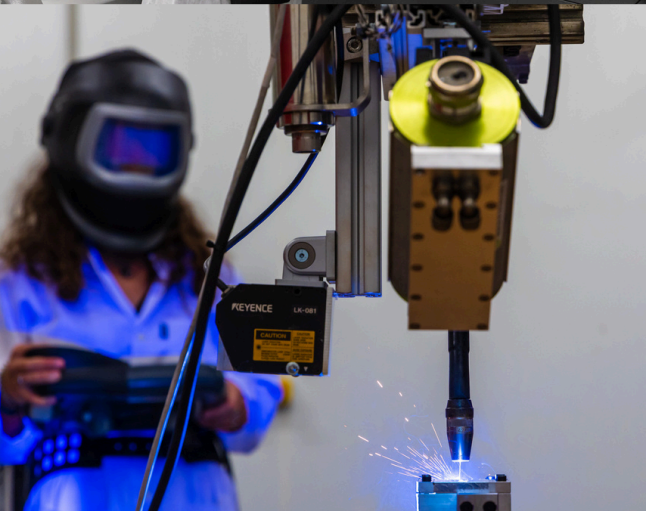
Material and process development

Production of characterisation test piece

Production of a 1:1 scale prototype

Industrialisation study

Training and technology transfer



RESOURCES

Software

Solveur MORFEO®

ANSYS Inc | ANSYS Workbench®

Dassault Systèmes | 3DEXPERIENCE®

Adaxis | AdaOne®

Siemens | Siemens NX®

Equipment

DED-LP process (Direct Energy Deposition) :

- BeAM Magic 800 - double buses, laser 2 kW, 5 axes, inerting chamber 800 x 800 x 1400 mm³

DED-LW process (Direct Energy Deposition- Laser Wire) :

- COMAU NJ165 + positioner ORB1000, Precitec Coaxprinter, laser 6 kW
- KUKA KR60-HA + positioner DKP400, Meltio Engine, laser 6x200W

WAAM process (Wire Arc Additive Manufacturing) :

- Kuka KR50 R2500-HA + positioner KP2 HV1100 HW & Fronius - CMT TPS3200,

FDM process (Fused Deposition Modeling) :

- LYNXTER S600D buse 400°C, temperature-controlled enclosure 80°C, D360 x 600 mm³
- MarkForged Mark two, 320 x 132 x H154 mm³, continuous fiber

ColdSpray - ArcSpray process :

- Plasma Giken PCS-1000 , 1000 x 1000 x 1000 mm³
- Low pressure

Arplus⁺

Process monitoring :

- Cavitax C300 camera
- FLIR A655 SC thermal camera
- NIT Widysens et MC1003 cameras
- Sensotherm and Fluke pyrometers
- Keyence rangefinders

Metallographic analysis laboratory :

- MEB de table HITACHI TM4000 Plus II
- Leica DM750M microscope
- Micrographic cutting: cutting, coating, polishing and macro zoom x0.7-x4.5, Leica microscope x5-x100
- Machine SYNTAX 300 - 3R Labo - 300kN

CONTACT



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R&D Industrial Partnerships

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