



# DOUBLE COEUR

Production & Passion

## SUBCONTRACTOR

of metal parts specializing in

## LARGE DIMENSIONS

Laser welding

Additive manufacturing

FROM DESIGN  
TO PRODUCTION  
SERIES

## Metal parts subcontractor specializing in large dimensions

Committed to innovation and excellence, **DOUBLE COEUR** draws on its recognized laser expertise to mass-produce even the most demanding, robust mechanical parts, essential for the critical applications of modern industry.

As a subcontractor in **Laser Welding** and **Additive Manufacturing**, specializing in **large dimensions**, we offer you the opportunity to turn your ideas into solutions. Our comprehensive, customized production offering is designed specifically to meet your needs, while helping to reduce your carbon footprint.

## From design to delivery of finished parts

At **DOUBLE COEUR**, we are committed to providing complete support, from design to mass production, according to your specifications.

- Co-design and cost optimization
- Production capacity and flexibility
- Responsiveness and leadtime management
- Quality commitment
- Production line management

## A team at your service

Our versatile, highly qualified team of operators, technicians, supervisors, engineers and experts work on every project to guarantee excellence, productivity and cost control.

## Our equipment & digital tools

Special machines

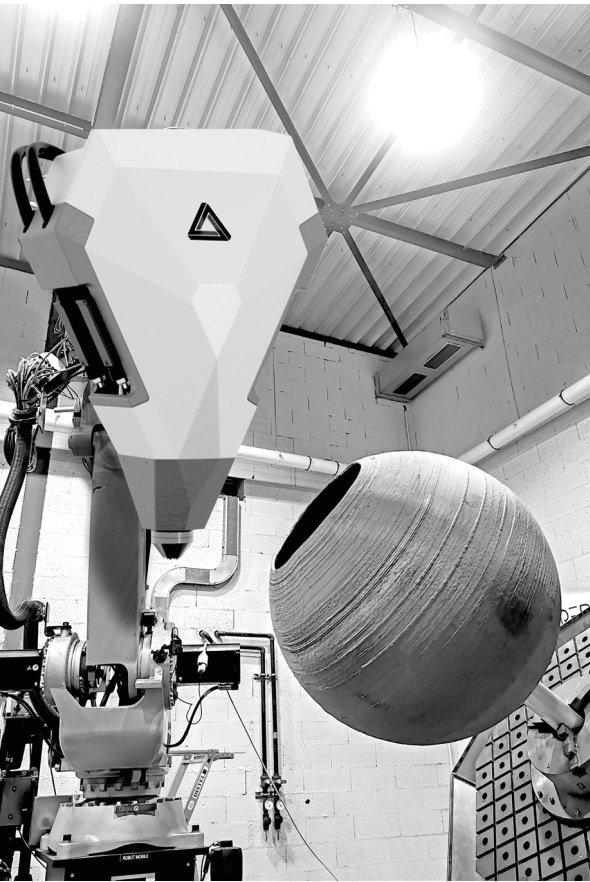
- Lasers up to 10 kW
- AMFREE technology material deposition head
- DED laser wire and DED laser powder
- Multi-axis robots
- 3 m<sup>3</sup> controlled atmosphere chamber
- 3D scanner control
- Thermomechanical simulation
- Metallurgical expertise laboratory
- CAD/CAM Siemens NX software

## Our certifications

- ISO 9001 : 2015 certification
- Qualification to IATF standards
- Specific certifications on request

Specialized in the production of parts for extreme environments, **DOUBLE COEUR** can meet your most ambitious projects.

# Our expertise in Additive Manufacturing



**XXL metal additive manufacturing** makes it possible to produce **custom parts** with **precision**, while optimizing costs and production leadtime. Proven with trusted partners in the aerospace industry, this technology offers a wide range of possibilities for the manufacture of **robust parts**.

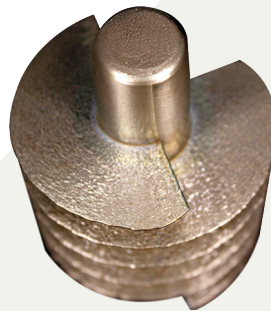
- Small to medium-sized production series
- Large dimensions and extreme environments: volume up to 30 m<sup>3</sup> and length up to 5 m
- 1100 cm<sup>3</sup>/h deposition rate
- Tailored energy management
- Outstanding metallurgical quality

## Additive manufacturing, the advantages of an innovative technology :

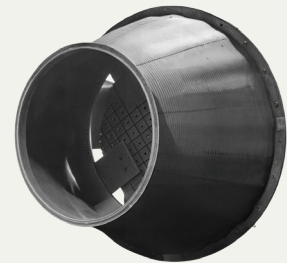
- Lower production costs
- Better buy to fly ratio
- Raw materials in inventory
- Short leadtime delivery
- Customized production and flexibility
- Reduced carbon footprint
- High metallurgical properties

## Materials

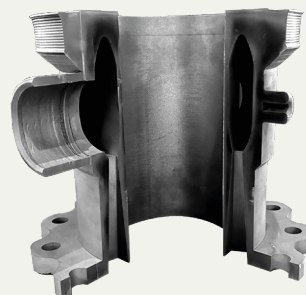
- Aluminium alloy (Powder/Wire)
- Aluminium bronze alloy (Powder/Wire)
- Titanium alloy TA6V, TiAl (Powder)
- Nickel based alloy Ni625, Ni718, Ni690 (Powder/Wire)
- Stainless steel 316L and other grades (Powder/Wire)
- Molybdenum mix (Powder)
- Anti-friction alloy or Regula (Wire)
- Tungsten carbide (Powder)
- Cored Wire for hardfacing (Wire)



Screw feeder – DED-p –  
Stainless steel 316L



Tank – DED-w – Stainless steel 316L



Nozzle – PBF & DED-p –  
Nickel based alloy Ni718



# Our technical know-how

## Laser welding

- Transparent, butt or angle welding



- Deep penetration welding
- Assembly of thin-walled parts
- Sealing housings under controlled atmosphere
- Laser welding in ESD environments



## Additive Manufacturing

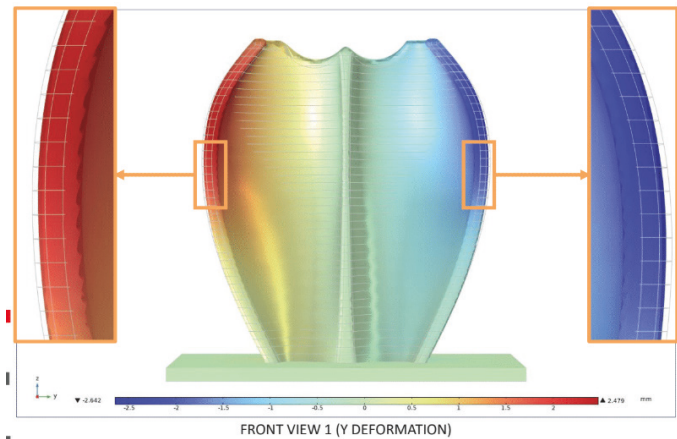
Full service from design to delivery of the finished part.

### MANUFACTURING OF FUNCTIONAL PARTS OR PREFORM TO ME MACHINED

- Precise preliminary studies
- Design of customized solutions
- Development of adapted tooling
- Scanning of existing parts
- Simulation
- Machining
- Heat treatments
- Non-destructive testing

### FEATURES ADDING

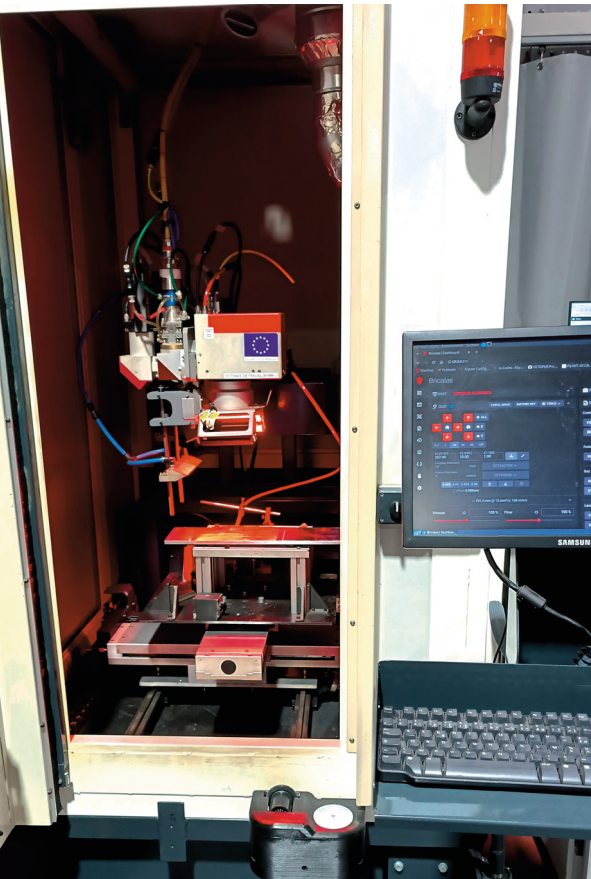
### REMANUFACTURING OF WORN OR DAMAGED PARTS



Fast distortion prediction using thermomechanical simulation



# Our expertise in Laser Welding



**Laser welding** is a state-of-the-art technology that ensures **unrivalled precision** and **exceptional weld seam quality**. Ideal for applications requiring **tight tolerances** and **flawless finishes**, this method is particularly well suited to projects demanding high productivity at controlled costs.

## Laser welding, the benefits of high-performance technology :

- No filler metal
- Unrivalled precision
- Ideal for applications with tight tolerances and flawless finishes
- Exceptional weld seam quality
- Hermeticity of the weld joint
- Little or no deformation : low HAZ
- Excellent mechanical strength
- Controlled penetration depth

## Matériaux

- Aluminium Alloy
- Titanium Alloy TA6V, TiAl
- Copper Alloy
- Nickel based Alloy ( Ni625 )
- Low- and high-carbon steels
- Stainless steel 316L, 304, 304L, 309, etc.



Complex steel assembly



Stainless steel

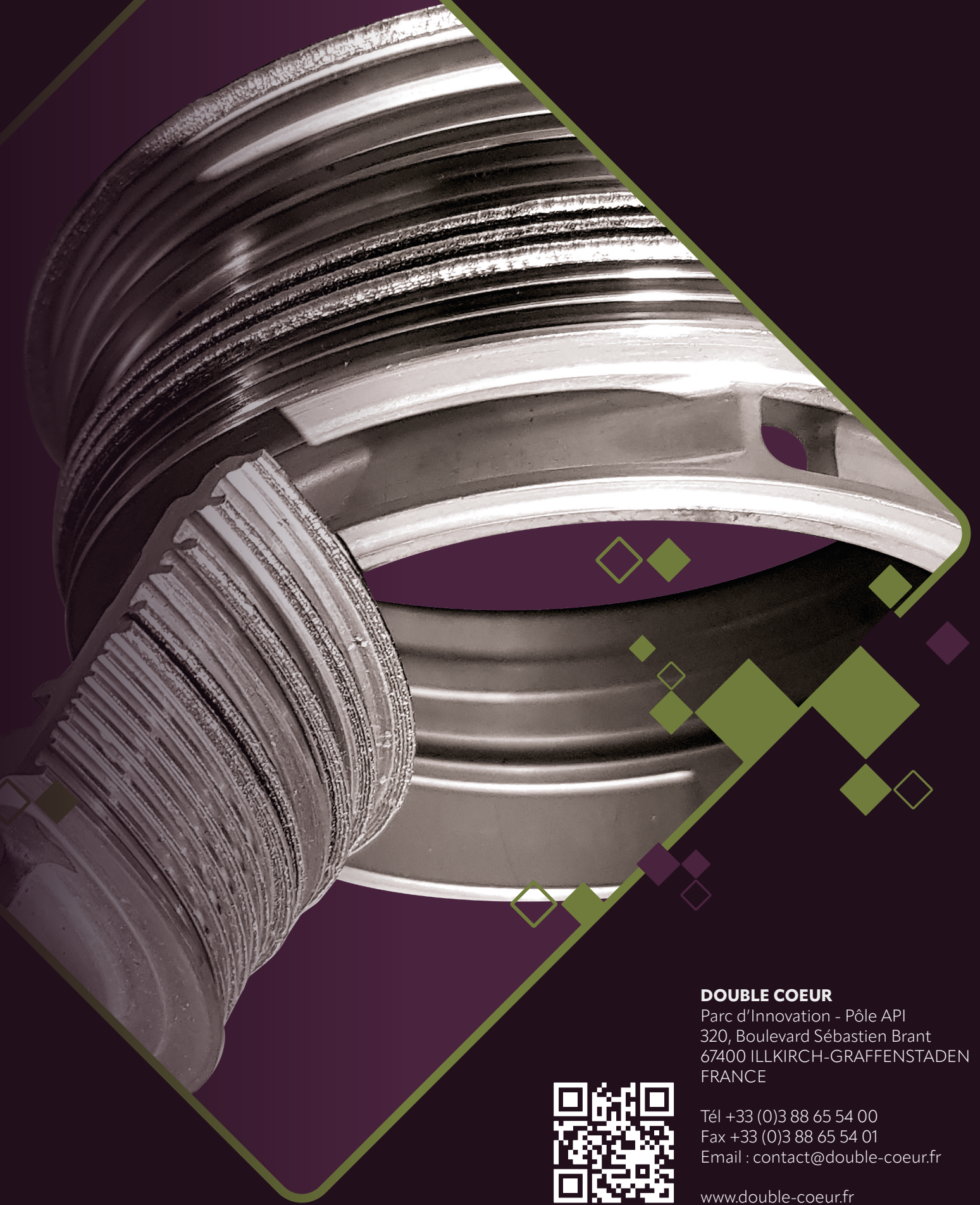


Stainless steel



# DOUBLE CŒUR

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