

SATURNE TECHNOLOGY

PRESENTATION



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LUXEMBOURG

TABLE OF CONTENTS

1. **Presentation of the company**
2. **History of Saturne Technology**
3. **Our know-how**
4. **Sectors of activity**
5. **Processes**
 - a) Cutting / drilling
 - b) Cutting / machining / drilling
 - c) Laser cutting
 - d) Welding
 - e) Laser cladding
6. **Production goods**
 - a) Additive Manufacturing (5 machines) + powder cells
 - b) Appendices
7. **Methodes of control**
8. **Quality commitment**
9. **Contact**



PRESENTATION OF THE COMPANY



Creation

2001



Founder

Walter
GRZYMLAS



Localisation

Contern,
LUXEMBOURG



Fields of expertise

- Metal additive manufacturing
- Laser welding
- Laser cutting & drilling
- Laser cladding



Our qualities

- Quality
- Price
- Deadline



Main fields of activity

- Civil & military aeronautics
- Space
- Medical

HISTORY OF SATURNE TECHNOLOGY

Saturne Technology is a Luxembourg company (2001)

Specialization :

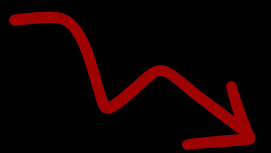
- Study and realization of High Tech Laser applications (cutting, drilling, welding, cladding, laser machining, metal additive manufacturing)
- Electro-erosion
- TIG welding
- 5-axis machining
- Rectification

To be able to offer to different customers: complete service + price + quality + deadline corresponding to their specifications



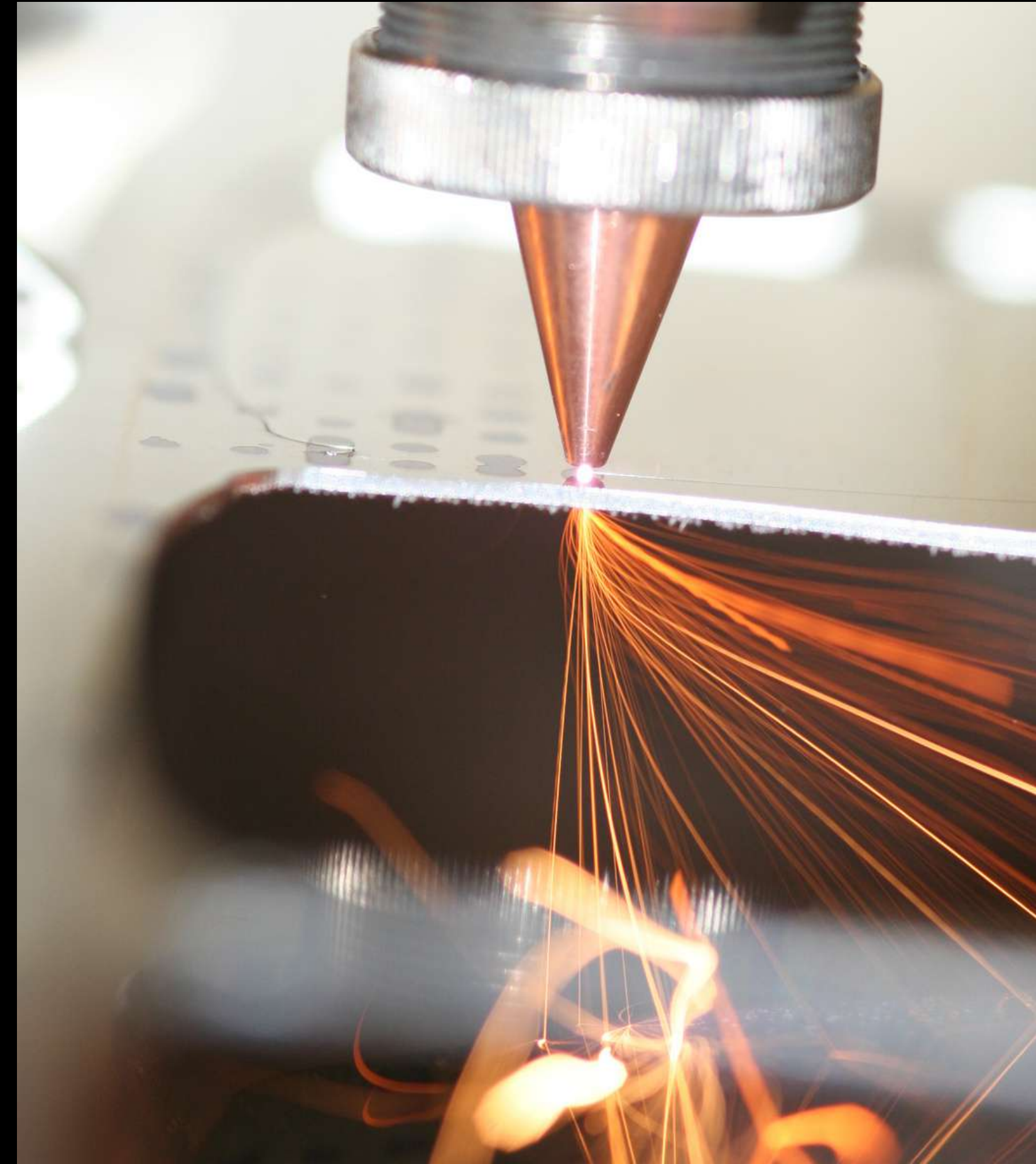
OUR KNOW-HOW

Saturne technology is at your side to make your projects a reality !

- The technical and commercial team of Saturne Technology gives a great flexibility to the means of production  In order to meet the needs of its customers in the appropriate areas of specialization
- Saturne Technology = single point of contact = able to manage parts or complete assemblies integrating different trades while respecting the standards in effect
- Our knowledge in additive manufacturing + mastery of laser technologies + reactivity



Realization of our customer projects from a to z



SECTORS OF ACTIVITY



AERONAUTICS

INDUSTRY



MEDICAL

SPACE



PROCESSES

5-axis laser
machining centre
trump lasma 1054



5-axis laser machining
centre
trump
TRULASER 3000



5-axis laser machining centre
lasertec 130 PowerDril

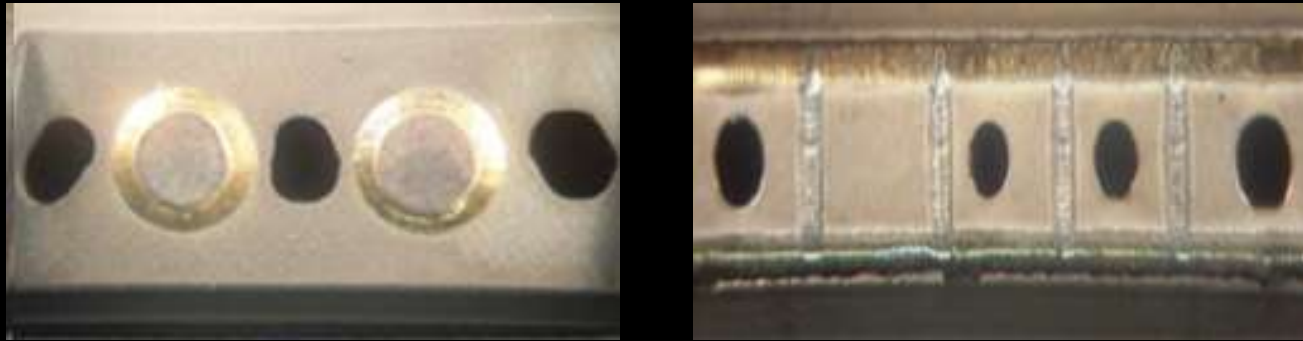


Cutting - drilling - welding - laser cladding

Cutting - machining - drilling

PROCESSES

Cutting and welding of civil and military aeronautical components (tolerance + / - 0,05mm)



Cutting of surgical blades and implants (tolerance + / - 0,03mm)



Diaphragm drilling for special fittings (taps) (tolerance + / - 0,01mm)



Shaped hole and sheet metal laser machining (tolerance + / - 0,01mm)



Cutting



PROCESSES

1 TRUMP HL 353 circular welding machine:

- Nd YAG 350 W laser source, pulsed/continuous mode
- Argon, Nitrogen or Helium inerting
- Welding speed up to 800 rpm
- Ultra thin weld bead
- Controlled weld width and penetration
- Choice of cutting/welding gas (He, N)



Assembly and
welding



Welding

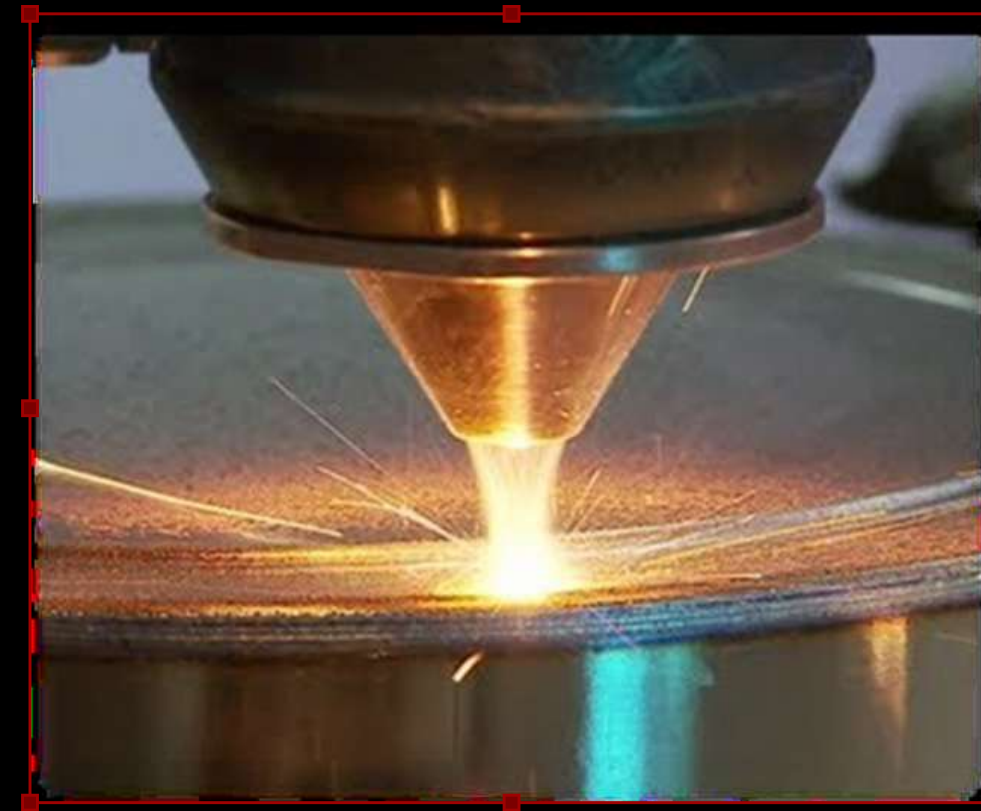
Welding of
gussets



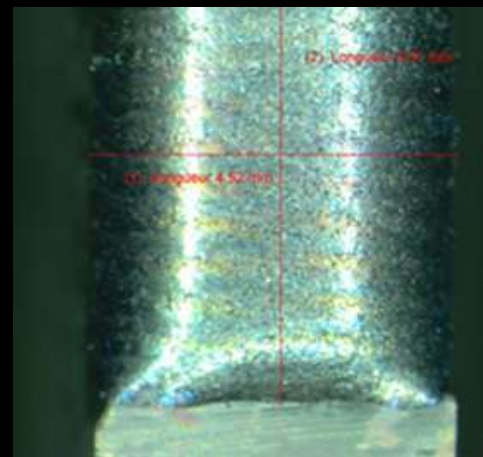
PROCESSES

1 Precitec head of reloading

- Nd YAG 1000 W laser source, pulsed/continuous mode
- Hydraulic cooling
- Coaxial reloading nozzle
- High control of the clamping (cord
- Adjustable working distance



Reloading of civil and military aeronautical components
(tolerance +/- 0,05mm)



1 Zulzer Metko powder mixer:

- Adjustment of the powder transport rate
- Possibility of transport gas / inert gas
- Powder consumption control by weighing

Laser cladding

PRODUCTION GOODS

a. Additive manufacturing
(5 machines) + powder
cells

SLM 500
4 LASERS
IRON MATERIAL
BASE IN CLEAN
ROOM

2 machines



PRODUCTION GOODS

EOS M400-4
MANUFACTURING
VOLUME 400 X 400
X 400 MM
4 LASERS
BASE MATERIAL
NICKEL

2 machines



PRODUCTION GOODS

EOS M300-4
MANUFACTURING
VOLUME 300 X 300
X 400 MM
4 LASERS
BASE MATERIAL
ALUMINIUM

1 machine



PRODUCTION GOODS

VACUUM PACKAGING
CELL FOR POWDERS

3 POWDER STORAGE CELLS
PER MATERIAL BASE

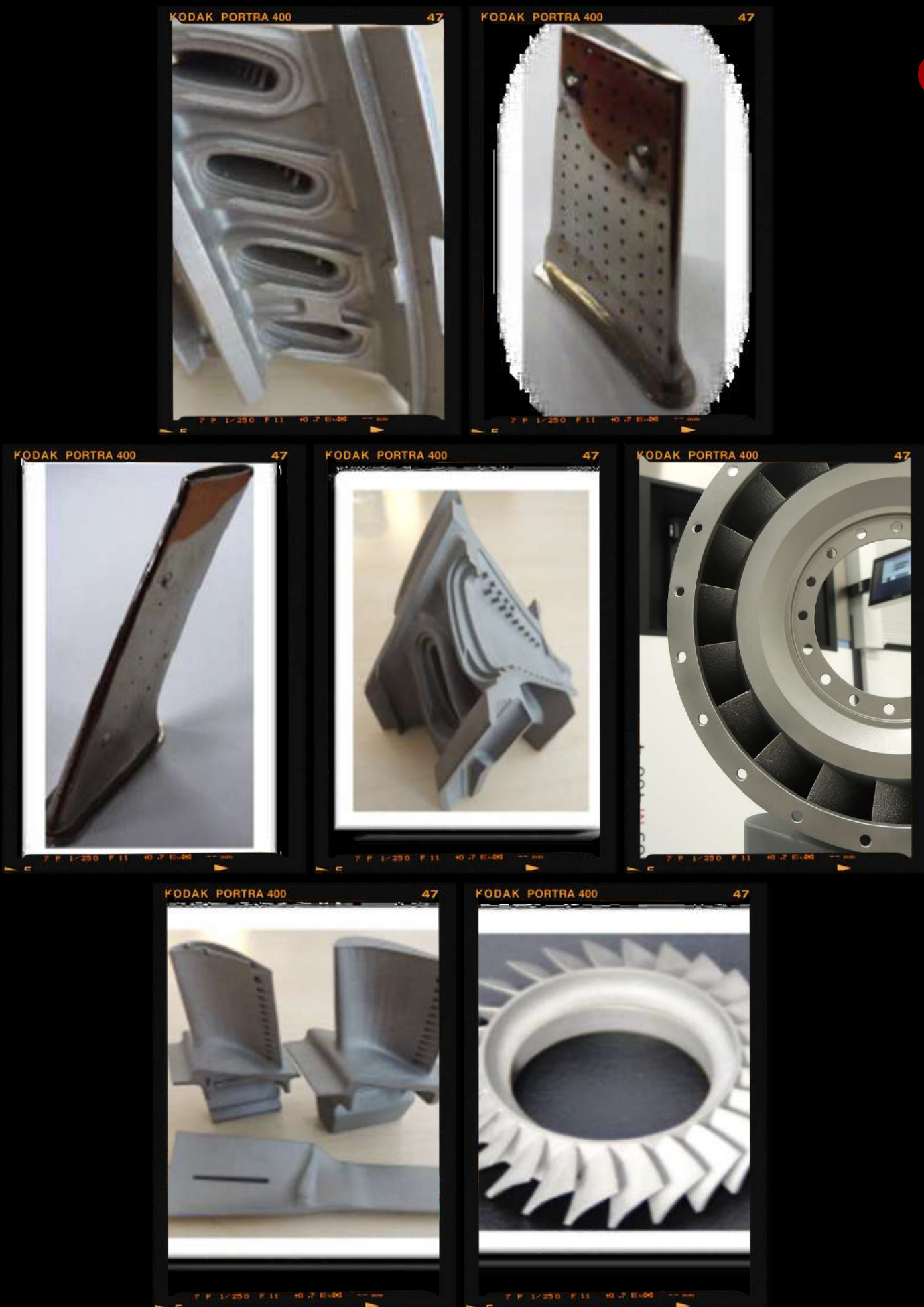


TABLE OF MATERIALS ADDITIVE MANUFACTURING

DAS		Health		Industries								
Secteur		Dental	Medical	Pneumatic	Watchmaking	Aéronautics	Energy	Tooling	Automotive	Packaging	Railway	Space
Types of parts		Tooth Crown	Prostheses and orthopaedic implants	Mould trimmings and strips	Watch dials	Blades and turbine components	Elements for heat exchangers	Moulds & Moulds prints	Various mechanical parts	Forming and injection moulds	Safety part, Aluminium housing	Injector, Combustion chamber
		Bridges										
Materials		Removable chassis										
Aciers/Inox / Base Nickel /Titane	CuCr	X	X	X								
	12343							X	X	X		
	12709			X				X	X	X		
	17-4PH		X			X			X			
	AISI 410			X								
	AISI 316L				X		X		X		X	
	AISI 904L				X		X		X			
	Inconel 625					X						X
	Inconel 718					X			X			X
	RENE 125					X	X					
	RENE 77					X						
	HASTE LLOY X					X	X					
	HA188					X	X					
	RBD61					X						
	17-4 PH					X	X	X	X	X		
	AMPO E185					X	X		X		X	
	30 CAD 6-12					X	X		X			
	35 NCD 16					X	X		X			
	AM1					X			X			
	Aluminium	Nickel 201					X					
Ti4Al6 V		X	X		X	X						
Ti6Al4 V						X	X	X	X	X		X
AlSi7Mg0.6						X		X	X	X	X	X
AlSi10 Mg						X	X	X	X	X	X	X
AlSi12 Mg						X		X	X	X	X	X

OVERVIEW OF OUR ACHIEVEMENTS IN VARIOUS FIELDS

AERONAUTICAL COMPONENTS

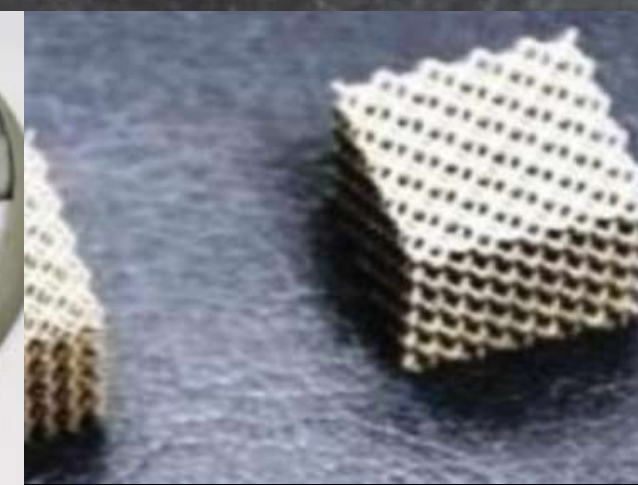


MEDICAL COMPONENTS





SPACE COMPONENTS



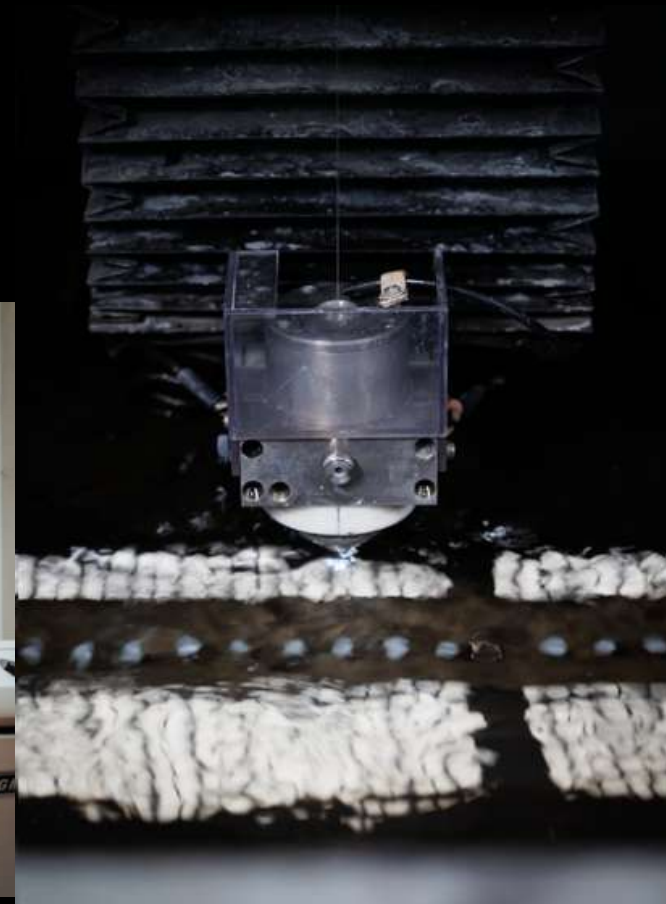
INDUSTRIAL
COMPONENTS



PRODUCTION GOODS

b. Appendices

- 1 3-axis machining centre
- 1 5-axis machining centre
- 1 Grinding machine
- 2 EDM cutting equipment
- 1 EDM drilling equipment
- 1 heat treatment furnace
- Surface treatment equipment



METHODS OF CONTROL

In dimensional



- Scanner arm / probe
- 3 profile projectors
- Three-dimensional machine (CMM)

In micrography



Microscope & binocular



METHODS OF CONTROL

In mechanical testing



- Tensile testing machine
- Micro durometer

Other features



- Spectrometer
- Laser diffraction particle size analyzer

QUALITY COMMITMENT

Continuous improvement and
compliance with standards:

- ERP monitoring of production
- Compliance with specifications (CDC)
- EN 9100: 2018 standard
- ISO 9001: 2015 standard
- SAFRAN Supplier Performance, Awards: 2015 & 2017
- Made in Luxembourg 2022



CONTACT US



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