fidamc

Corporate Presentation

01

FIDAMC

Who we are

Our objective

We are the leading technology centre for innovation in composite materials in Madrid.

Our goal : to take basic research to its development and transfer to industry.

TRL3 ⟷ **TRL6**

Basic Research

Development. Industrial Transfer

Founders

- AIRBUS **50%**
- CDTI **25%**
- MADRID REGIONAL GOVERNMENT **25%**

Trustees

- AIRBUS
- ACITURRI
- MTORRES
- CDTI
- CAM
- TALGO
- HEXCEL
- POLYTECHNIC UNIVERSITY OF MADRID
- ACCIONA
- NAVANTIA

Mission, vision and values

Mission

Offering cost-effective, lightweight, efficient and sustainable solutions for the mobility of the future.

Vision

To be a national and international benchmark in technological innovation in composite materials..

Values

- **Excellence.** We meet the quality standards required by the aerospace industry.
- **Experience.** Leaders in research, development and application of composite materials.
- **Agile.** We are agile and flexible, offering solutions tailored to the client.

Solutions for a cost-effective, lightweight, efficient and sustainable mobility of the future.

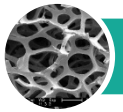
Pioneers of composite technologies for small, medium and large components (from coupons to major flight components and small series)

Technologies


Thermosets


Thermoplastics & Dry Fiber


Additive Manufacturing


Robotics

Services


Engineering


Manufacturing and assembly


Robotics and Automatization


Laboratory & QEM

Headquarters. Tecnocenter Madrid

Illescas.

H2 Tanks Development. RTM. Out of Autoclave Technologies

Brussels.

Business and Public Funding Development

CFA. Centro de Fabricación Avanzada. Cádiz

Advanced Manufacturing Center. Robotics, 3D printing, metrology, AR/VR and drones technology.

Short series & Thermoplastics. Andalucía

UAVs Manufacturing center, Thermoplastics Center of Excellence, Training

Comming soon…

Pioneering future composite technologies for the industry

FIDAMC Technology Center

Delivering manufacturing, assembly and integration solutions for the mobility industry

FIDAMC Advanced Manufacturing

Delivering engineering services, laboratory and training solutions

FIDAMC Services

Competence areas

01 Components development

New materials 02

03 Industrial Design

Elements manufacturing and printing 04

05 Materials characterization

Quality Control 06

07 Demo manufacturing

Automation and robotics 08

09 Demos for structural testing

Software optimization and processes control 10

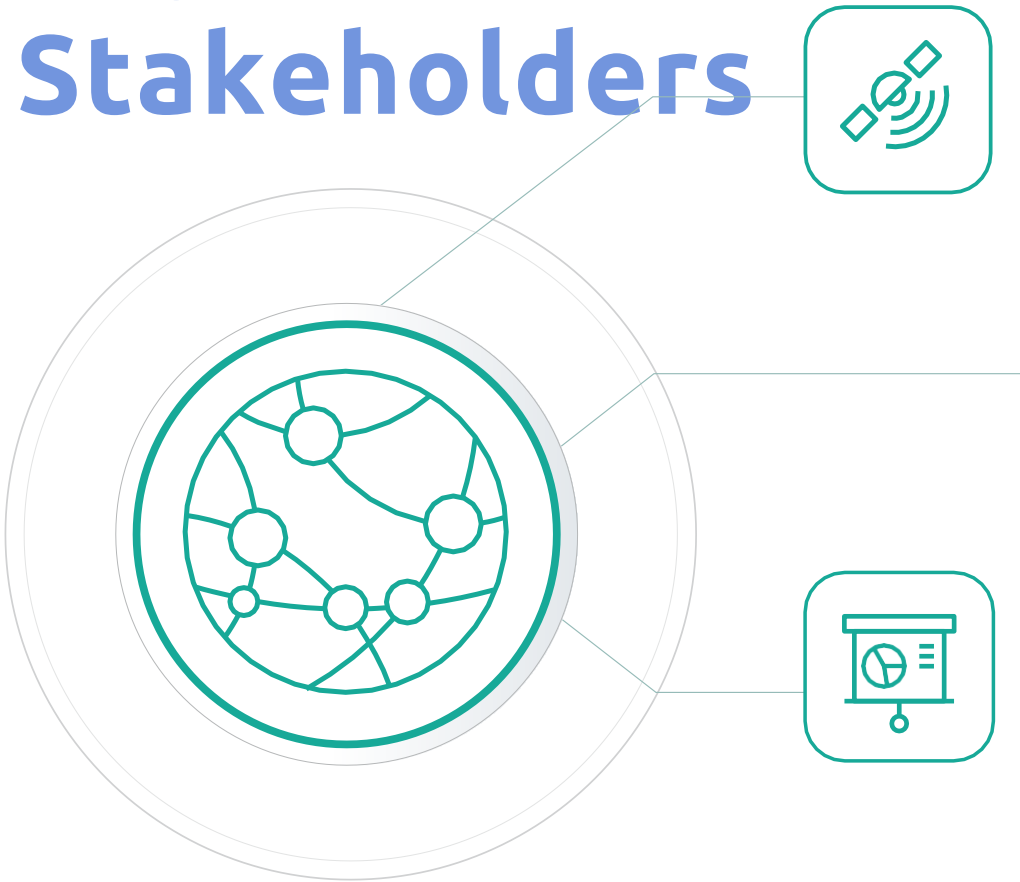
11 Training

Prototypes and small series production 12

02

Our clients, Our partners

Key Stakeholders



AEROSPACE INDUSTRIAL SECTOR

AEMAC
aera
PLATAFORMA TECNOLÓGICA AEROESPACIAL ESPAÑOLA
materplat
EVA

OTHER INDUSTRIES

Fedit Centros Tecnológicos de España
PTEC Plataforma Tecnológica Española de Construcción
PTFE Plataforma Tecnológica Ferroviaria Española
Railway Innovation Hub
Clúster MarítimoNaval Cádiz
Atlas tecnológico
Madrid Network
PIDI información I+D+I
HispaRob

TRUSTEES Sector Leaders.

CDTI
AIRBUS
Comunidad de Madrid
MUTORRES
Universidad Politécnica de Madrid
ACITURRI
Talgo
HEXCEL
acciona
Navantia

Our clients

AIRBUS
ACITURRI
ALESTIS AEROSPACE
MBHA
ITP Aero
Talgo
ArcelorMittal
ZIUR Composite Solutions
URSA
Applus⊕
ARQUIMEA GROUP
CAF
TSRWIND
C|T ingenieros
tecnatom
TEIJIN
TEMAI
DELTA VIGO DELTAGROUPSPAIN
DANOBAT
TORRES
coexpair
ENAER
victrex
AERnnova
HEXCEL
CYTEC SOLVAY GROUP
Grupo INMAPA
SKYDWELLER
ptp.
AIMPLAS
LAVOISIER

03 FIGURES

Income

11 M€ in 2023

Projects

88 I+D ,Training and Manufacturing Projects in 202..

7 European Projects in 2023

- MC4
- HERWINGT
- FASTER H2
- NEWFRAC
- GRAPHENE CORE
- HERFUSE
- ECORES WIND

Funding

23% Public Funding

51% AIRBUS

11% AIRBUS DS

3% ENSIA

4% UpNext

8% Otros

People

80 Specialized profesionals

24 University Graduates (Mostly Engineers)
3 Pre-Doctorates
18 Technicians
5 Doctors

04 Capabilities

TECNOLOGIES

LABORATORY EQUIPMENTS

- Mechanical and physical-chemical tests.
- Sample preparation.
- Non Destructive Test (NDT) .

AUTOMATIC AND FORMING LAY UP EQUIPMENTS

- Thermoset, prepreg material, thermoplastic and dry fiber.

CURING AND CONSOLIDATION EQUIPMENTS

- In oven and autoclave.

ROBOTIC EQUIPMENTS AND AUTOMATION

3D Ultrasonic cutting.

- Induction welding.
- Aplication of paints or sprays.
- Handling and cleaning tools.

FACILITIES

9.000 M²

- 7.000 M2 WORKSHOP COMPOSITES
- 300 M2 LABORATORY
- 636 M2 TRAINING CLASSROOMS
- 1000 M2 WORKSHOP ADDITIVE MANUFACTURING

QUALIFICATIONS

- **ISO/IEC 17025.**
- **NADCAP.**
- **ISO 9100.**
- **EN14001 ND.**
- **AIRBUS COMMERCIAL. AIRCRAFT QSPL.**

FLEXIBLE LAY UP EQUIPMENT

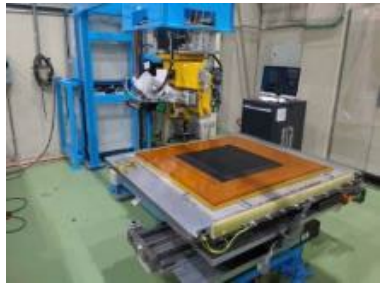
AFP PP+DFP+TP ISC
Column type – MTorres
Tows 8 x ½”

XL Robot + AFP head 4x2”

THERMOPLASTIC

AFP - TP ISC
Gantry – Mtorres
Tows 8 x ¼”

Thermoplastic ISC – Unitow
Mtorres – 1 tow ¼”



THERMOSETS EQUIPMENT

AFP Prepreg - Illescas
Column type – Cincinatti

ATL Prepreg
Gantry - MTorres
Tape width 75 to 300mm.

CURING AND CONSOLIDATION EQUIPMENT

2 AUTOCLAVES
15 bars Max Press.
- 8m x Ø 6m
- 3m x Ø 1,5m

OVEN up to 400ºC
Dim. : 2 x 2 x 2m

HOT PLATE PRESS 1000Tn.
MARZOLA (BIELE GROUP)
- Parts up to 1,5x1,5m
- Temperature up to 450ºC, valid for aerospace thermoplastic parts.

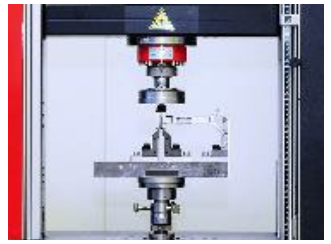
HOT PLATE PRESS 30 Tn., IDEC
- Parts up to 400 x 300 mm
- Temperature up to 450ºC, valid for aerospace thermoplastic parts.

HEATER FOR STAMPING FIDAMC
- Parts up to 400 x 300 mm
- Infrared lamps on both sides covering 600x600 mm. Each one divided in 2 sectors: outer & inner

MECHANICAL TESTING

- MTS 300 kN Criterion Testing Machine Temperature range -55°C to 350°C
- Universal dynamic testing machine MTS 370 100kN (-100°C to 350°C) Allround 10kN ZWICK





CHEMICAL PHYSICAL TESTING

- Differential scanning calorimetry
- Dynamic mechanical analysis
- Thermogravimetric Analysis
- Thermo-mechanical analysis
- Rheology
- FTIR Nicolet iN10 MX
- Conductivity
- Limit oxygen index
- Fiber volume content
- Stereo microscope and Optical microscope
- Fume hood and fume hoods.
- Ovens and temperature chambers
- Scales


PREPARATION

- Specimen preparation
- Dimensional analysis
- Cut off machines
- Surface grinding machine
- CNC coupon trimming machine
- Low-Medium energy impact device


PHYSICALNON-DESTRUCTIVE TESTING AREA

The NDT area 100m2. isolated work room for documentation and engineering work, an automatic inspection work area, and an area for manual inspection.

2 manual equipment, a semi-automatic phased-array equipment and an immersion tank with the following capacities: Pulse-echo: 1 MHz to 5 MHz. Useful sweep: up to 8 m x 3 m.Transmission: 1 MHz to 5 MHz. Useful sweep: 7 m x 1.5 m. Airborne transmission 0.225 MHz. Useful sweep: 7 m x 1.5 m.The equipment and probes, as well as the personnel, are qualified according to Airbus standards.

05 Training

Ad-hoc training

- Aeronautical structures.
- Design principles
- Composite materials.
- Thermoplastics and thermosets
- Manufacturing of composite materials.
- Manual and automatic.
- Machining. Dry method, wet method
- Assembly of aeronautical structures
- Physical-chemical, mechanical and non-destructive testing.
- Characterization of materials
- Composite repair
- Verification and quality
- Multifunctional materials and coatings
- Engineering and simulation
- Digitization and robotics.
- 3D printing, Design, tooling and machine programming

CCMM Training

- Computer Aided Design with CATIA (basic)) (ARGG007PO): 30 h
- Programming and robotics (ELEE019PO): 90 h
- Collaborative Robotics (ELEM002PO): 21 h
- Aeronautical electrical systems(FMEA001PO): 100 h
- Aeronautical sealant assembler (FMEA002PO): 80 h
- Aeronautical structure assemblers (FMEA003PO): 110 h

Professional certificates Community of Madrid

- Manufacturing of aerospace elements 580 h+80 h PNL (FMEA0211)
- Assembly of structures and installation of aircraft systems and equipment 500 h + 80 h PNL (FMEA0111)

fidamc

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