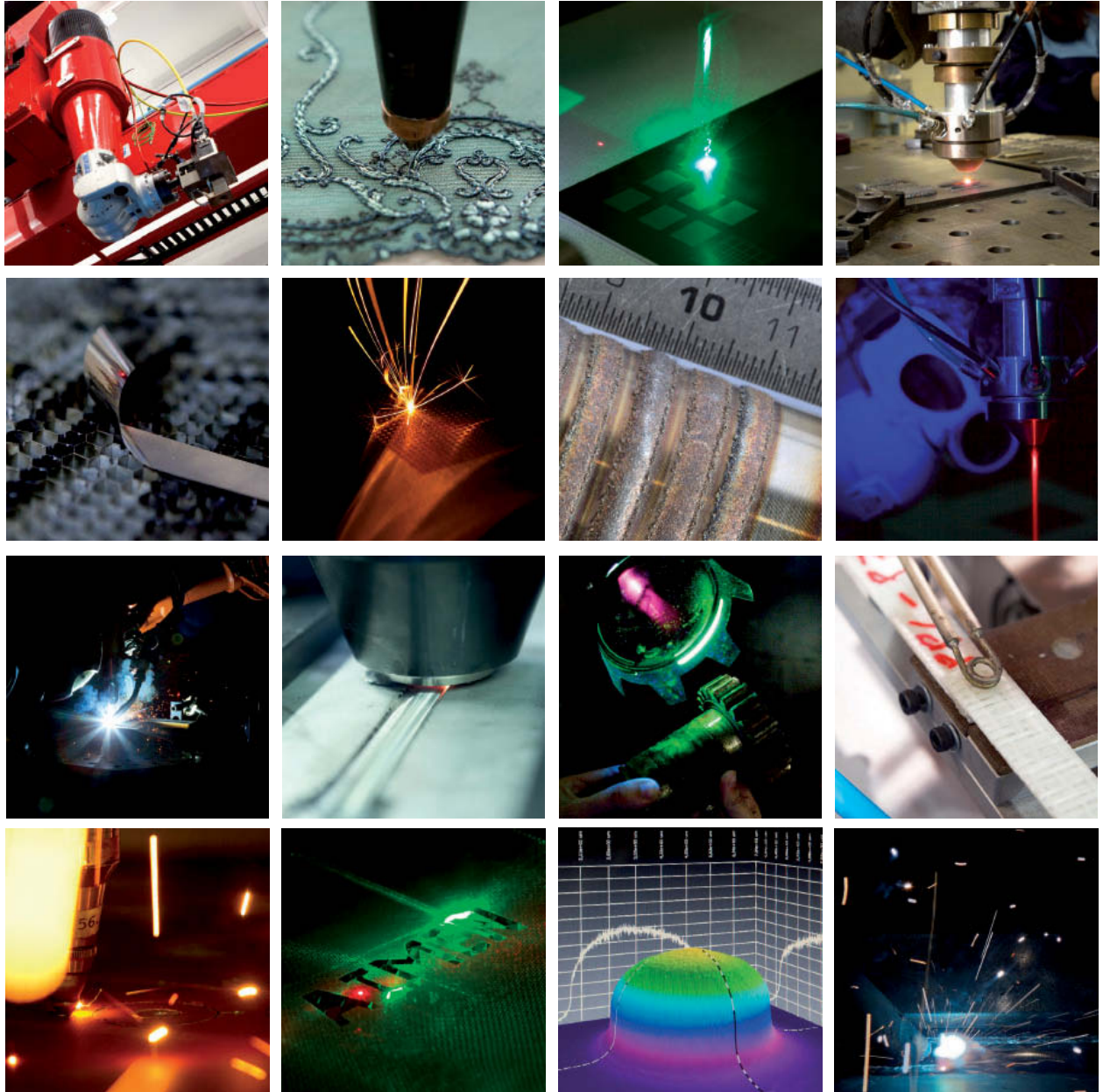


# aimen



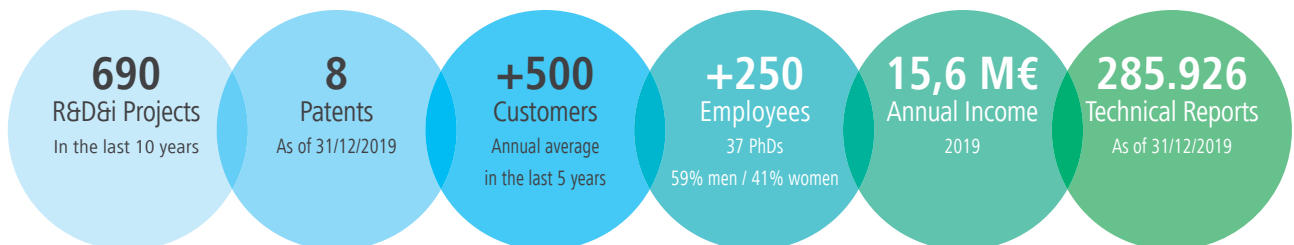
INDUSTRIAL SOLUTIONS & INNOVATION

# About us

AIMEN is an Innovation and Technology Centre founded in 1967 on the initiative of a group of Galician entrepreneurs. Today, we are a national leader in research and in providing technological services in the fields of joining technologies, materials and laser technologies applied to materials processing and industrial robotics.

<b>1967</b> Founding of AIMEN	<b>1995</b> Opening of the Armando Priegue Building in O Porriño	<b>1998</b> Official Recognition as an Innovation and Technology Centre	<b>2002</b> Creation of the Joining Technologies Pilot Plant	<b>2004</b> Setting up of the Laser Technologies Research Unit	<b>2014</b> Opening of the Laser Applications Centre
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Our VISION is to become a strategic technology partner to our associates and clients, contributing to improving their technological capabilities.



Headquarters. Laser Applications Centre



Torneiros Centre. Armando Priegue Building

# Technological Offer

Over 50 years in the service of industry, combined with our technical experts' high levels of specialisation and the unique nature and excellence of our facilities, endorse the quality of our multidisciplinary and multi-sectoral technological offer.

## R&D

We carry out our own research, and also partner with companies on R&D projects aimed at developing new technologies and incorporating technological improvements into their products and/or processes, including the development of prototypes and demonstrators. Aligned with a common purpose: to maximise business and industrial performance.

- Applied research
- Extensive network of industrial and R&D partners
- Management of R&D&i Funding Programmes



### Advanced Materials

Metal matrix composites  
Polymer matrix composites  
Adhesives and Resins  
Development of solutions for extreme conditions (high temperature, corrosion, wear)

### Robotics and Control

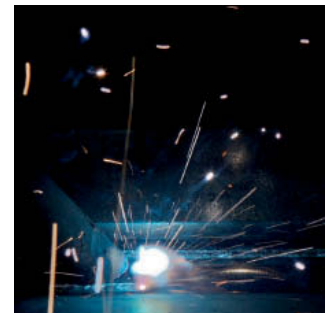
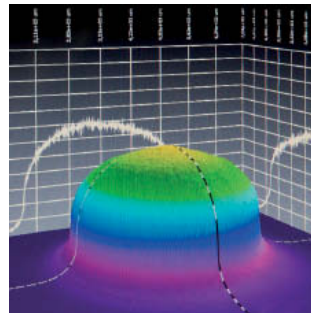
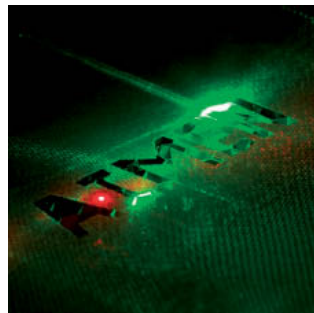
Cooperative mobile robotics applied to industry  
Flexible robotised cells  
Real-time process monitoring and control  
Development of optical sensors  
Automated inspection systems

### Advanced Manufacturing Processes

Advanced joining processes (Laser, FSW, brazing, induction, hybrid joints, etc)  
Surface processing for functionalisation (laser cladding and heat treatment, FSP, laser texturing, etc)  
Thermally assisted forming (induction, laser)  
3D laser micro machining

### Environment

Waste treatment and waste recovery  
Water quality and treatment  
Energy and Waste Efficiency





## Industrial Services

Our unique services offer advanced, innovative and differentiating solutions that add value to products and processes and, ultimately, help to our clients become more competitive.

- Results-oriented
- Extensive knowledge of Spanish and international regulations and standards
- Customised services

### Manufacturing Engineering

Welded joint and process design  
 Production quality assurance  
 Regulations and codes  
 Manufacturing procedures  
 Process implementation and improvement

### Numerical Calculation and Simulation

PRODUCT design  
 PROCESS design  
 Calculation of structures  
 FEA Analysis  
 Certification of conformity and legalization

### Mechatronics

Process monitoring and automation  
 Artificial vision and industrial software  
 Mechanical design

### Turnkey Projects

Prototype Development

On-site Technical Support

Training



**aimen**

INDUSTRIAL SOLUTIONS & INNOVATION



# Testing and Analysis

Our laboratories are backed by many official accreditations and recognitions that guarantee our impartiality and technological capabilities.

- Materials Characterisation
- Technical Support and Consultancy
- Specialised Technical Services

**Study of in-service behaviour and causes of failure**

Breakage  
Corrosion  
Wear

**Characterisation of compound materials, non-metallic and metallic materials**

Metallographic analysis, including on-site metallographic replicas

Chemical composition

Static and dynamic mechanical testing

Residual stress measurements

Physical properties

**Special and Customised Testing**

Corrosion and wear testing

Mechanical and thermal fatigue testing

Simulation of service conditions

Useful and remaining life studies

**Non-Destructive Testing and Inspection**

Radiography, including fluoroscopy and digital radiography

Ultrasonic testing, including TOFD and Phased Array

Verification of ultrasonic equipment

Computerised axial tomography

Visual inspection

Magnetic particles

Liquid penetrant testing



ER-0372/2011



GA-2012/0258



OP-0008/2014



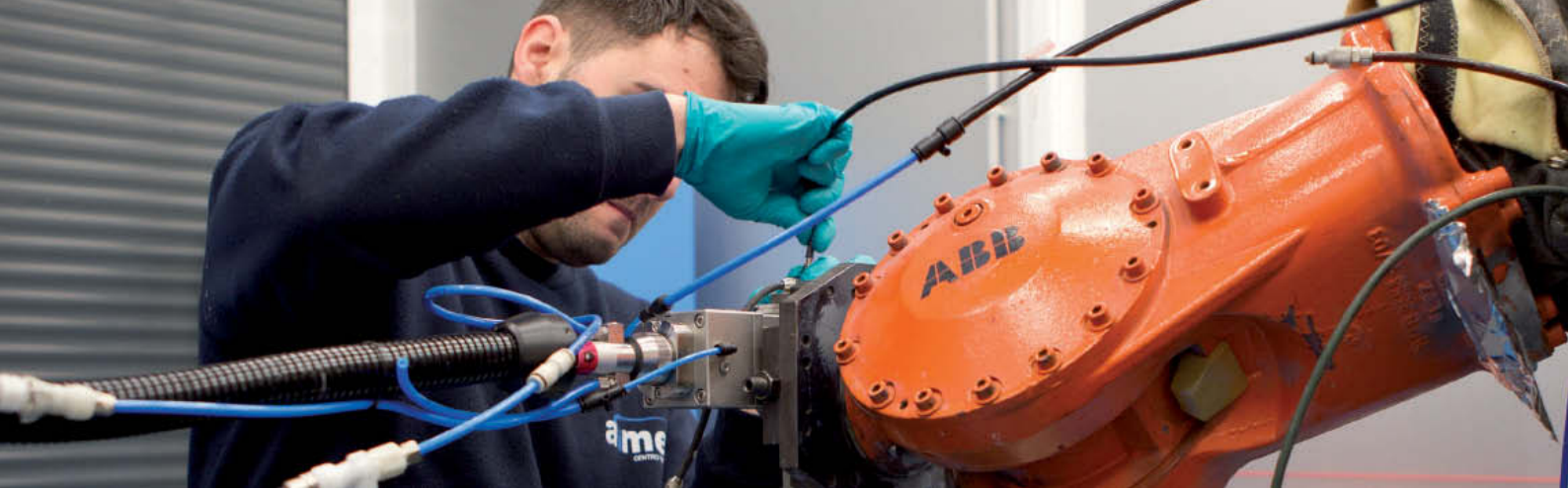
SST-0042/2017



LRE/15085/CL1/0048/1/17



LRE/0038/0108/0/19



## Training

Our training is differentiated by our cutting-edge equipment, extensive industry knowledge and our instructors' high levels of technical specialisation.

- Highly Specialised Technical Programmes
- Extensive Catalogue of Specialised Training
- Accredited Training Centre

### High Tech Specialisation

IWE – International Welding Engineer  
 FROSIO – Paints and Coating Inspector  
 EAB – European Adhesive Bonder  
 Non-Destructive Testing, levels I, II, III

### Ongoing Training

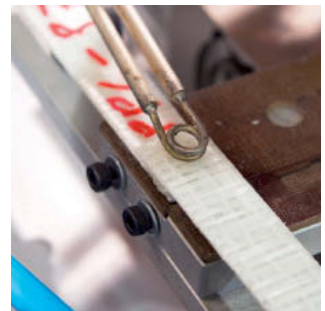
In-company training to meet each company's needs  
 Annual training programme of open courses

### Professionalism Certificates

Coated Electrode and TIG welding  
 Oxy-gas and MIG/MAG welding  
 Organisation and Control of Non-destructive Testing

### Specialisation Fields:

Materials, Analysis and Testing, Non-destructive Testing and Inspection, Metallography, Failure Analysis, Corrosion, Joining Technologies and Laser Technologies.





## Facilities and Technological Equipment

Our facilities are unique and innovative, with cutting-edge equipment to offer our clients and partners fully guaranteed technology services.

- 2 centres: Armando Priegue Building and Laser Applications Centre
- 9,000 m<sup>2</sup> of technological and scientific infrastructure
- Cutting-edge equipment

### Joining Technologies

MIG/MAG/TIG/PAW/SAW  
Arc-welding Equipment

MIG/MAG Fronius Twin Arc  
TPS 7200

CMT and CMT Advanced  
Fronius

Fronius Multi Welding  
System track-mounted 4 m  
length and handling capacity  
workpieces up to 1500 kg

Resistance Welding

Friction Stir Welding &  
Processing

Brazing & Soldering:  
furnaces, induction, flame

Mechanical Joints

Adhesive Joints

Plastic cutting and welding  
equipment

### Laser Technologies

Laser - Macro-processing

- ROFIN DC035 CO<sub>2</sub> source 3.5 kW
- Direct Diode laser source:
  - LASERLINE LDL 160 DE 3.3 kW
  - LASERLINE de 6 kW
- TRUMPF TruDisk Disk Laser System 16 kW

Laser - Microprocessing

- SPECTRA PHYSICS Pulsed Nd source: YAG PRO-290-30
- Fibre source:
  - TRUMPF TRUFIBER 400 W
  - ROFIN 1.5 kW
- Pulsed sources: Nd YV04
- 3D Laser Micro machining System
- TRUMPF TruMark 6350 Ultraviolet Laser with processing cabin
- EOLITE HEGOA IR40/G20/UV10 - 30 ps Picosecond Laser
- AMPLITUDE SATSUMA HP2 Laser (IR, GREEN and UV) 400 fs - 10 ps
- CryLaS MOPA 266-50 pulsed laser, 266 nm - 950 ps

Manipulation: CNC gantries,  
robots and servo-controlled tables

### Laboratory

Mechanical Testing

- Universal testing Machines, up to 1000 kN
- Resonance testing machine for fatigue testing

Microstructural Characterisation

- HITACHI S-4800 II field emission scanning electron microscope with EDS and EBSD microanalysis systems
- JEOL JSM 6400 scanning electron microscope with EDS microanalysis system

Physical-chemical testing

- VARIAN VISTA-MPX simultaneous ICP plasma spectrometer
- BRUKER S4 Pioneer X-Ray Fluorescence Spectrometer
- PROTO iXRD portable residual stress measurement equipment using X-Ray diffraction
- Dektak 8CSM profilometer

Non-destructive Testing Radiographic  
- Ultrasonic

- X-CUBE Compact Radioscopy Cabin from GE Inspection Technologies with 160 kV X-ray source
- Computerised Axial Tomography System (patent no. ES 2341833 B2)
- Gamma Radiography and X-Ray equipment
- PERKIN ELMER XRD 1622 A014 Digital X-Ray Flat Panel Detector
- DÜRR HD-CR 35 NDT Computer Radiography System
- ISONIC digital equipment for UT and TOFD with graphic register
- OLYMPUS OMNISCAN MX equipment for TOFD, PHASED ARRAY and UT

Dimensional Metrology

- Mitutoyo EUROC 122010 Coordinate Measuring Machine 1200 x 2000 x 1000 mm



#### Headquarters

**Laser Applications Centre**  
Polígono Industrial de Cataboi  
SUR-PPI-2 (Sector 2), Parcela 3  
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Pontevedra - Spain  
Phone +34 986 344 000  
Fax. +34 986 337 302

#### Torneiros Centre

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Fax. +34 986 337 302

#### A Coruña Office

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Mobile Phone +34 637 127 253

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