

AZTERLAN

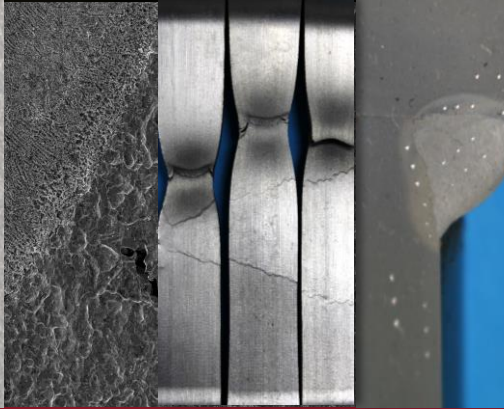
TECHNOLOGICAL SERVICES

TECHNOLOGICAL

SERVICES

WELDING

PROCESSES



Among the joining technologies, welding processes play a fundamental role for the metal-mechanic industry.

From the manufacture of large structures for sectors as relevant as Oil & Gas, Marine, Energy, Railway, Civil Works, to carrying out simple repairs on components deteriorated by use, the application of robust and innovative welding processes is key to answer to the multiple needs posed by the different industrial sectors.

UNE-EN ISO 9000 standard considers the welding process as a special process since, once executed, their quality cannot always be fully verified. Hence, the importance of the correct definition of the procedures, controls and characterization tests to ensure their correct execution and subsequent performance.

AZTERLAN HAS THE TECHNICAL AND MATERIAL MEANS, AS WELL AS QUALIFIED PERSONNEL, TO RESPOND TO THE NEEDS OF THE INDUSTRY:

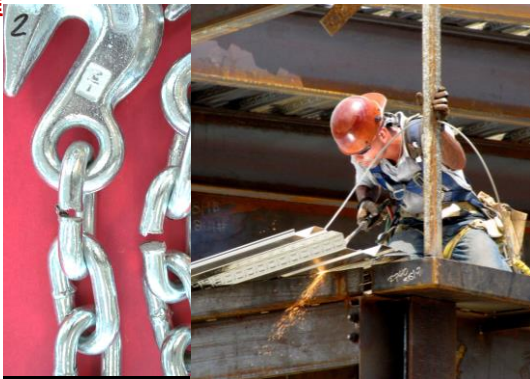
- INSPECTORS IN THE FIELD TO CARRY OUT NON-DESTRUCTIVE TESTS, LEVELS 2 & 3
- INTERNATIONAL WELDING ENGINEERS (IWE)
- MEANS AND KNOWLEDGE TO CARRY OUT DESTRUCTIVE TESTS UNDER ENAC ACCREDITATION (ISO 17025)

TECHNOLOGICAL SERVICES

- QUALIFICATION TESTS FOR WELDING PROCEDURES AND CERTIFICATION OF WELDERS & OPERATORS
- METALLURGY OF WELDED JOINTS AND CORROSION PHENOMENA
- ANALYSIS OF FAILURE IN SERVICE, DEFECTOLOGY AND CUSTOM STUDIES
- INSPECTION OF COMPONENTS AT THE CUSTOMER'S PREMISES
- PLANT CONSULTING



- ENAC accreditation
- Deadlines adjusted to customer needs
- Confidentiality guarantee
- Independent laboratory with more than 35 years of experience in the sector
- Highly trained and qualified team



COMPONENTS · STRUCTURES

SECTORS

TRANSPORT

Automotive, Railway, Marine, Aerospace

ENERGY GENERATION AND TRANSPORTATION

Wind energy, Solar energy, Oil&Gas, Combined Cycle, Nuclear energy

CIVIL WORKS

Bridges, Viaducts, Structural elements

CHEMICAL INDUSTRY

EQUIPMENT GOODS

METALLIC TRANSFORMATION

NON DESTRUCTIVE TESTING

The END team evaluates the correct execution of the welding processes, according to the standards or specifications established in each case, in order to reveal possible anomalies that could cause failures in service.

The tests are carried out by certified personnel (AEND).

- VISUAL INSPECTION
- ULTRASONIC TEST
- MAGNETIC PARTICLES TEST
- PENETRANT TEST

MECHANICAL PROPERTIES TESTING

Destructive tests are carried out according to international standards ISO, ASME, AWS and customer specifications.

- TENSILE, BENDING, CHARPY TESTS
- MACRO AND MICROSCOPIC EXAMINATION
- HARDNESS AND MICRO HARDNESS TESTS
- METALLURGICAL CHARACTERIZATION
- POSITIVE MATERIAL IDENTIFICATION (PMI)
- POST WELDING HEAT TREATMENTS (PWHT)
- FRACTURE TOUGHNESS TESTS (CTOD)
- AD HOC TESTS

OTHER SERVICES

- INSPECTION OF WELDED JOINTS AND CONSTRUCTIONS
- ADVICE ON WELDING APPLICATIONS
- IWE QUALITY INSPECTION
- DEFINITION AND CONTROL OF PLANT PROCESSES
- WPS REVIEW, WPQR, WELDING RECORDS
- DEFECTS IDENTIFICATION
- FAILURE IN SERVICE ANALYSIS
- DOCUMENTARY REVIEW OF CUSTOMER REQUIREMENTS
- ADVANCED METALLURGICAL CHARACTERIZATION
- DEVELOPMENT OF AD HOC TESTS

**WE EVALUATE THE
INTEGRITY OF
WELDED COMPONENTS,
EQUIPMENT AND
STRUCTURES**

**WE ENSURE THE
RELIABILITY OF
THE WELDING PROCESS
AND STAFF
QUALITIFICATION**



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For more than 40 years, AZTERLAN has accompanied companies in the metal-mechanic industry with a comprehensive offer of metallurgical characterization services aimed at ensuring their quality and performance.

We have the most advanced means, with a robust quality system (accredited by ENAC) aimed at responding to the requirements of highly demanding sectors such as automotive, aerospace, naval, oil & gas or energy production. Our team is specialized and has profound knowledge in the transformations that are generated in the metallic alloys, as well as in the manufacturing processes of metallic components (casting, forging, stamping, lamination, additive manufacturing, joining processes, etc.).

The portfolio of metallurgical inspection and characterization services offered by AZTERLAN TECHNOLOGICAL SERVICES is complemented by the activity of AZTERLAN R&D&i, a member of the Basque Technology and Research Alliance (BRTA), the offer of which focuses on the development of new materials and on the optimization of manufacturing processes to produce advanced products of higher performance.

Under the same philosophy, AZTERLAN TECHNOLOGICAL SERVICES and AZTERLAN R&D&i shape together an advanced and innovative technological proposal for the companies that design, produce and use metallic components.

The logo for AZTERLAN, featuring the word "AZTERLAN" in a bold, sans-serif font. The letter "A" is white and set within a white rectangular box, while the remaining letters "ZTERLAN" are dark red.

AZTERLAN METALLURGY RESEARCH CENTRE

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