

AZTERLAN

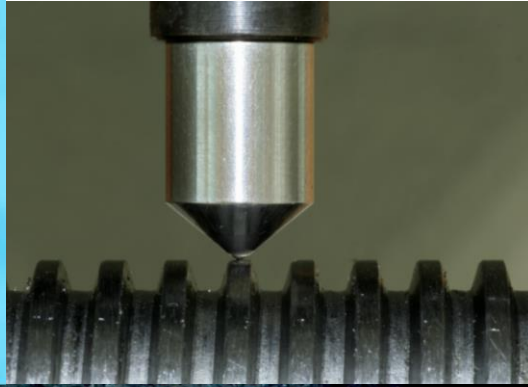
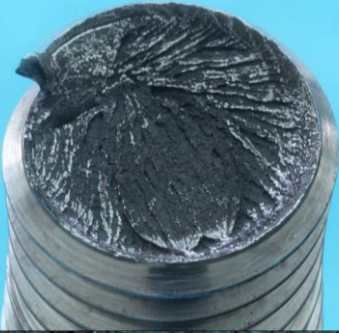
TECHNOLOGICAL SERVICES

TECHNOLOGICAL

SERVICES

THREADED

FASTENERS



2 mm

Within joining technologies, fixing elements play a fundamental role for the metal-mechanic industry. The joints that are designed using threaded elements of high mechanical properties present a high performance and an easy assembly with a low cost, in comparison with other joint techniques.

Currently threaded joints are, along with welded joints, the main method used to connect structural steel elements in facilities and equipment, fulfilling in many cases a critical function from a structural point of view.

Hence the importance of correctly defining a threaded joint and ensuring that all the elements used in said union process comply with the defined quality.

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

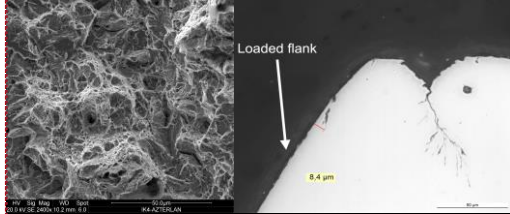
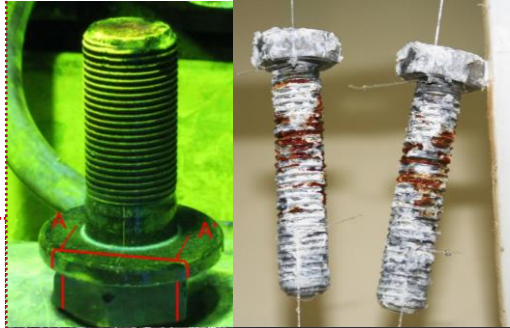
- ENAC CERTIFICATION (ISO 17025) IN MECHANICAL CHARACTERIZATION TESTS.
- TEST BENCHES TO SIMULATE REAL JOINTS AND DETERMINE THE OPTIMUM TIGHTENING TORQUE OF THREADED PARTS.
- DYNAMIC TEST DEVICES.
- NON-DESTRUCTIVE TESTING (LEVELS 2 AND 3).
- CHAMBERS FOR ACCELERATED CORROSION TESTS.

COMPONENTS · STRUCTURES



TECHNOLOGICAL SERVICES

- CERTIFICATION OF FASTENERS.
- TIGHTENING TORQUE TESTS (PRELOAD UP TO 3,000KN AND MAXIMUM TORQUE 30,000 NM).
- IN-SERVICE FAILURE ANALYSIS, DEFECTOLOGY AND CUSTOMISED STUDIES.
- HYDROGEN EMBRITTLEMENT DETECTION (PARALLEL PLATES METHOD).
- VALIDATION OF SURFACE TREATMENTS (COATINGS).



- 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

SECTORS

TRANSPORT

Automotive, Railway, Marine, Aerospace, Lifting

ENERGY GENERATION AND TRANSPORT

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

CIVIL WORK

Bridges, Viaducts, Structural elements

CHEMICAL INDUSTRY

MACHINE TOOLING

EQUIPMENT GOODS

METALLIC TRANSFORMATION

NON DESTRUCTIVE TESTING

Surface discontinuity inspection of the fixing elements once manufactured, or in the state of supply. The controls are executed according to the standard, or the specifications established in each case, in order to reveal defects that could cause catastrophic failures in service.

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

- VISUAL INSPECTION
- MAGNETIC PARTICLES TESTING
- PENETRANT TESTING
- ULTRASONIC TESTING

MECHANICAL PROPERTIES TESTING

These tests are carried out mainly, according to the families of international standards ISO 898, ISO 3506, EN 14399 and EN 1090, the ASTM A370, ASTM F606 standards, and customer specifications.

- TENSILE TESTS ON FINISHED BOLTS, SCREWS, AND STUDS, WITH OR WITHOUT WEDGE, AND ON MACHINED TEST SPECIMENS.
- PROOF LOAD TESTS.
- IMPACT TESTS (CHARPY).
- HARDNESS AND SURFACE HARDNESS TESTS.
- DECARBURIZATION AND CARBURIZATION TESTS.
- TORSIONAL TESTS AND DETERMINATION OF THE OPTIMUM TIGHTENING TORQUE OF THE ASSEMBLY.
- HEAD SOUNDNESS TEST.
- RETEMPERING TEST.
- DYNAMIC TESTS / FATIGUE STRENGTH.
- FRACTURE TOUGHNESS TESTS (CTOD).

OTHER SERVICES

- FAILURE ANALYSIS STUDIES.
- METALLOGRAPHIC EVALUATION OF SURFACE DEFECTS.
- ADVANCED METALLURGICAL CHARACTERIZATION.
- DEVELOPMENT AND DESIGN OF AD-HOC TEST.
- SALT SPRAY TESTS.
- ADHESION AND COATING THICKNESS TESTS.
- SCC AND HIC TESTS.

WE EVALUATE THE QUALITY OF THREADED FASTENERS AND THE INTEGRITY OF BOLTED COMPONENTS AND STRUCTURES



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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 letters "A", "Z", "T", "E", "R", "L", "A", and "N" are white, while the letter "I" is red. The letters are set against a white rectangular background.

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