Fastener products testing

Characterization of mechanical and physical properties of fastener products for their suitability for use.

Structural Fastener are subject to mechanical, chemical and physical requirements that may vary depending on their aimed market or industry. Compliance of those requirements shall be verified when a new manufacturing process is started and regularly during production.

Solution

Applus+ has ISO 17025 accredited laboratories and a team of experts for testing fastener products. Our technical team performs standard tests (GB, EN, ISO, DIN, ASTM, among others.) or tests designed according to the client's specific requirements for any type of application. In European Union, fasteners must comply with the Construction Products Regulation 305/2011 and show this compliance with the CE Marking.

We test physical and mechanical properties of all kinds of fastener products:

- Bolts
- Nuts
- Studs
- Washers
- Specific application fasteners and joints

Our fastener products testing service covers:

- Test tool design and manufacture for special tests
- Chemical composition tests
- Physical tests
    - Dimension check, including thread verification and perpendicularity test of nuts
    - Hardness tests

- Coating thickness
- Decarburization and carburization tests
- Retempering test
- Surface discontinuity inspection
- Metallographic analysis
- Mechanical tests
  - Tensile test for finished bolts and screws, on machined test pieces and under wedge load
  - Proof load test for bolts and nuts
  - Head soundness test
  - Impact test (Charpy)
- Aging and corrosion tests – link to specific sheet
- Other related services
  - Quality Control Inspection onsite
  - CE Marking of Fastener products according to EN 14399 and EN 15048*

Benefits

- Ensure the structural integrity and reliability of the components
- Control the quality of fastener products
- Comply with CE requirements to export fastener products to Europe

*Applus+ is the commercial brand of LGAI Technological Center, S.A., Notified body nº 0370