



Mechanical systems: industrials and R&D players, how about validating your products?

# Mechanical systems: SGS laboratories offer a multidisciplinary and complete range of services



- Performance of products
- Resistance to aging
- Resistance of assemblies

Our functional testing range concerns subsystem components and complete systems

- You are
- Components supplier?
  - Supplier of mechanical subsystems like chassis or connecting parts?
  - Complete systems provider?

## WE VALIDATE COMPLETE SYSTEMS AND SUBSYSTEMS:

- Quality of manufactured parts
- Assembly of parts
- Resistance to environmental and accelerated aging
- Conformity to regulations

*"Our development strategy: covering the entire cycle design / validation, from materials to complete systems, appearance, assembly and operation."*

**SYLVIE TEISSANDIER**  
KEY ACCOUNT AND INNOVATION MANAGER

## OUR QUALITY APPROACH:

- 1 Internal audit: more than 30 audits per year
- 2 Cross-tests with external organisms
- 3 Audit and cross testing with French and international OEMs
- 4 ISO 17025 and NADCAP accreditations

## OUR TESTING CAPACITIES ON MECHANICAL SYSTEMS

As your products will be subjected to severe environmental conditions and aging, we can support you with various testing techniques and technologies to predict the behavior of your mechanical systems.

### MECHANICAL TESTS

- Strength resistance
- Resistance to mechanical frictions
- Resistance of connecting parts
- Resistance of bonded assemblies

### CLIMATIC AGING

- More than 150 chambers up to 83 m<sup>3</sup>
- Hot/cold/humid cycles
- High temperature change
- Thermal shocks

### CORROSION

- Neutral salt spray
- Cycled corrosion
- Gas Corrosion
- Saturated humidity

### VIBRATIONS & SHOCKS

- Single axis shakers with tables
- Combination with temperature cycles
- Shocks in 6 directions

### HYDRAULIC TESTS

- Air / fluid pressure cycle
- Air tightness
- Liquid/liquid thermal shocks
- Fluid circulation

### IP TESTS

- Dust
- Water ingress

### RESISTANCE TO FLUID

- Drop, aspersion, brush application
- Cataplasma
- Immersion

### CLEANLINESS

- Ultrasound
- Rinsing
- Agitation

### RESISTANCE TO MANIPULATIONS

- Pullout
- Endurance

### MATERIAL ANALYSIS

- Metallurgical analysis : welding resistance, brazing, bonding,...
- X-rays
- Optical microscopy, MEB

### MATERIAL PROPERTIES

- Mechanical properties
- Thermal properties
- Metallographic analyses
- Chemical analyses



CORROSION LABORATORY

As part of major strategic issues, we offer personalized monitoring of your projects including live videoconferences from the laboratory, technical follow-up calls, and daily or weekly reporting.

Let us know what you need, and we'll build this tailor-made offer together.

## CONTACT US

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WHEN YOU NEED TO BE SURE

