

Testing Expertise & Experience Beyond the Ordinary



SPECIALIZED TESTING IS OUR BUSINESS. IF IT'S MEASURABLE, SES HAS THE UNIQUE INSTRUMENTATION AND DATA ACQUISITION CAPABILITIES TO CAPTURE THE CRITICAL DATA ... IN THE LAB OR THE FIELD.

Understanding materials & applications

SES serves a broad range of industries including consumer and medical products, pharmaceutical, electronics, packaging, and equipment manufacturing involving plastics, metals, composites, glass, and elastomers. Often these projects are directed at evaluating product or material failures, or focused on determining how long a product will last during use. The materials and application knowledge from this diversified experience base, combined with our multi-disciplinary approach to problem solving, adds a measure of value that makes SES *the industry leader in specialized testing*.



FOR PHYSICS-BASED, PURPOSE-BUILT TEST HARDWARE
WITH UNIQUE PERFORMANCE REQUIREMENTS, THERE ARE
FEW ENGINEERING FIRMS IN THE WORLD THAT CAN
COMPETE WITH SES.

Our lab is equipped with the most advanced instrumentation, monitoring and data-acquisition systems available. Many of these systems have been developed by SES, such as MicroDAQ, MiniDAQ, and PalletDAQ are proprietary, and capable of collecting data that was previously unavailable.

Functional Testing

SES engineers routinely measure and evaluate the performance of new products, components and sub-assemblies. Our flexible facilities include the load frames, environmental chambers and strain gages that you would expect to find, along with specialized equipment for measuring force, pressure, temperature, vibration and displacement not available at other labs.

Custom Testing Solutions

We also provide a variety of custom services aimed at evaluating performance, reliability and safety, including precision testing for low force and sub-micron displacement, noise and vibration. SES tests unique performance criteria on conventional products, or standard criteria on unusual designs, including:

- Life cycle
- Life simulation
- Extreme environment
- Extreme usage

Specialized Test & Fixture Development

The SES expertise that many clients find most valuable is our ability to design the right tests, along with any custom test fixtures and test stands that may be necessary. Our extensive experience includes process monitoring and control, remote data collection and transmission, distributed monitoring systems, and networked database connectivity. In addition to placing thousands of strain gages each year for both static and dynamic measurements, SES offers turn-key instrumentation systems for collecting data from pressure transducers, thermocouples, and virtually any other type of sensor. Our own laboratory test techniques are often leveraged into semi- or fully-automated test systems that are used by clients in their manufacturing or R&D facilities.

Third Party Testing

SES provides third party testing services in accordance with API, ASME, ANSI, ASTM and others. Where agency approvals are needed we can manage outsourcing of those tasks and provide the technical interface.

Testing Challenges an SES Specialty

FORCE & TORQUE



Full pallet unit load test

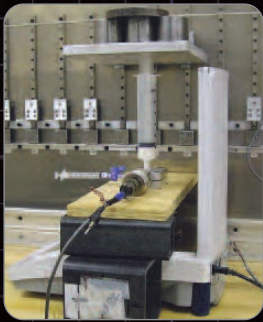


Torque measurement on plastic gear box

PRESSURE & FLOW



PVC pipe testing



Actuation Force vs. Flow Rate

TEMPERATURE



Accelerated aging chamber



Cryogenic material characterization

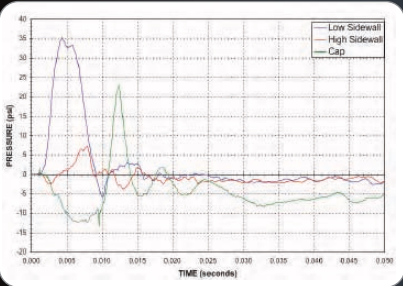


Extreme heat testing

IMPACT



Instrumented bottle drop test



Transient pressure profile of bottle drop

NOISE, VIBRATION & WEAR

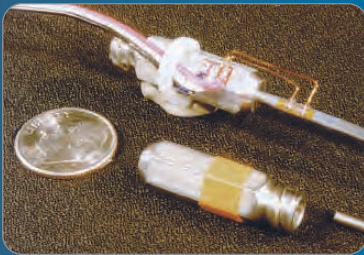


Noise assessment in semi-anechoic chamber

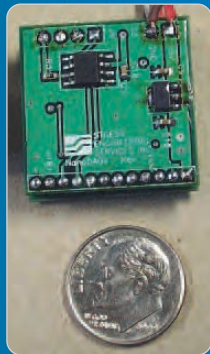
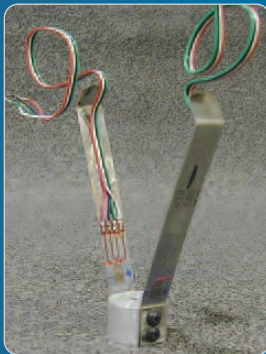


Toothbrush lifecycle testing

GAGES



Strain gage on liposuction needle



Miniature data acquisition system for measuring bottle labeling force

MATERIALS & METALLURGY



Scanning electron microscope inspection

Non-contact optical strain measurement



Fluids characterization

High strain rate tensile test

UNIQUE DATA COLLECTION CAPABILITIES



MicroDAQ installations used to measure force, temperature, acceleration and battery usage



Suspension system testing

SES Offers Experience... Expertise... Technical Excellence

With three U.S. locations, a staff of engineers and technicians representing the full spectrum of engineering disciplines, SES has the testing expertise you're looking for. Employee-owned and in business since 1972, SES applies classical engineering methods, advanced technologies and innovative applications to help our clients solve problems and answer questions. Where others provide academic answers, SES offers applicable, real-world solutions.

**For Solutions to Tough Testing Challenges
Call SES Today at 513-336-6701**

ON THE WEB AT WWW.STRESS.COM

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