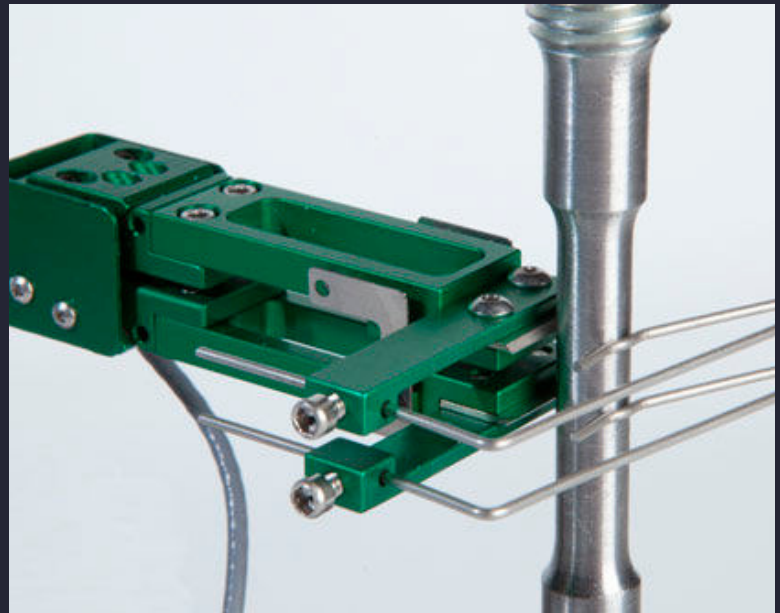
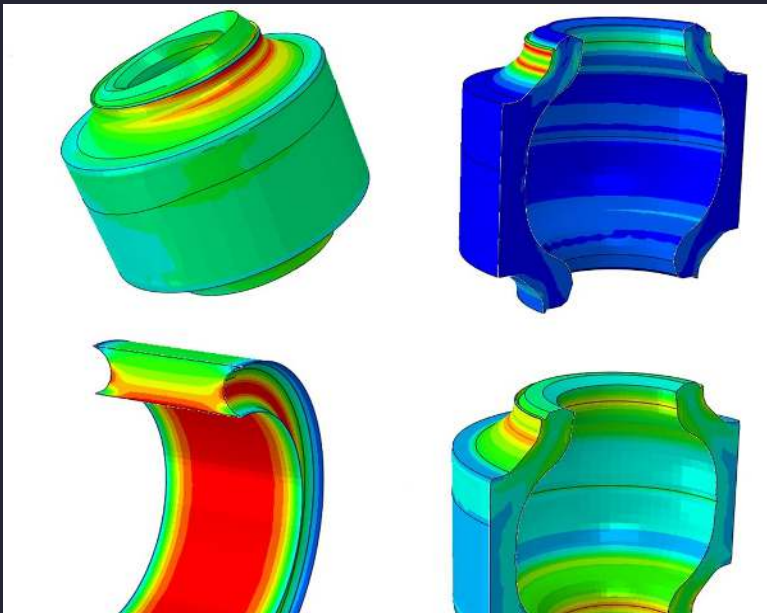
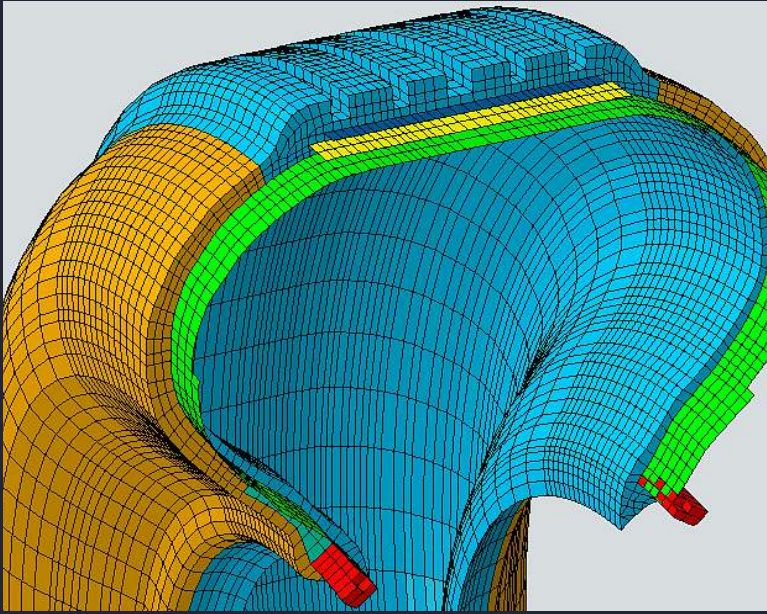


# ADVANCED SCIENTIFIC & ENGINEERING SERVICES (ADVANSES)



## Design, Testing and Analysis Services

Our goal is to provide customers with quality product design, accurate failure analysis, and reliable material and fatigue testing services.

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[www.advanses.com](http://www.advanses.com)

# We Provide Answers to the Following Questions

- 1) What are the mechanical properties of the material I am using?
- 2) Will my product endure the service loads for the required duration?
- 3) Why is my material/product failing?
- 4) What can I do to satisfy my customers' load and service requirements?
- 5) How can I ensure longevity of my material/product ?
- 6) Can I replace Cast Iron with Aluminium in my product?

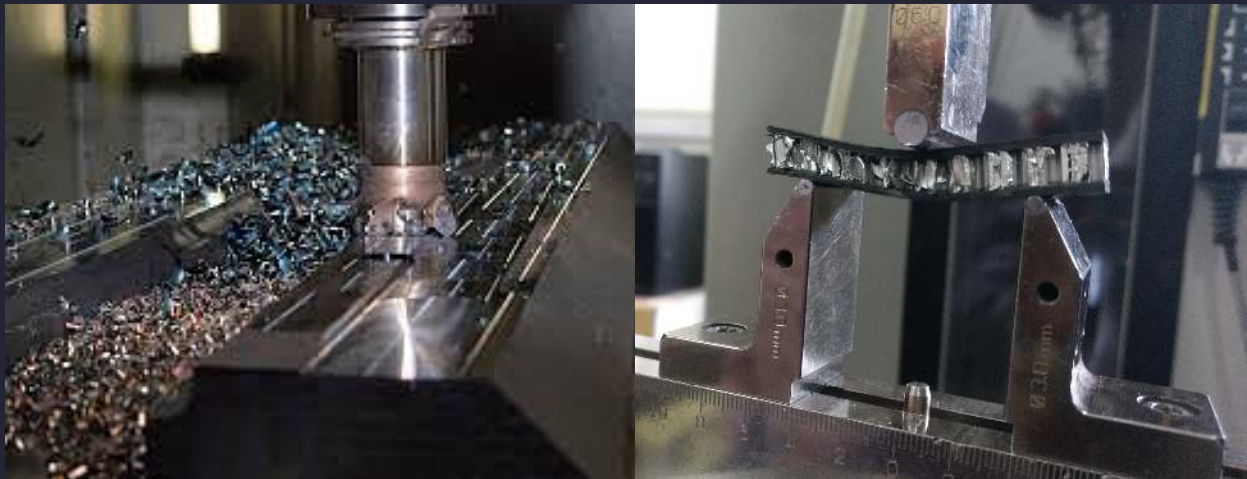


At AdvanSES, we provide solutions for companies and industries that require expert technical knowledge and proven performance in the field of engineering design and analysis, materials and product characterization and fatigue testing.

**An Independent Material Testing Lab.**

AdvanSES has a well established reputation across the globe for providing reliable and professional material characterization, mechanical testing and FEA services. All of our engineering and testing services are provided using state of-the-art servo operated equipments under stress and strain controls with contact and non-contact measurements.

- 1) Yield stress (0.2%, 0.5% and 1%)
- 2) Ultimate Tensile Stress (% Elongation)
- 3) Load Vs Displacement Curve
- 4) Reduction in Cross-sectional Area
- 5) Stress Vs Strain Properties Curve

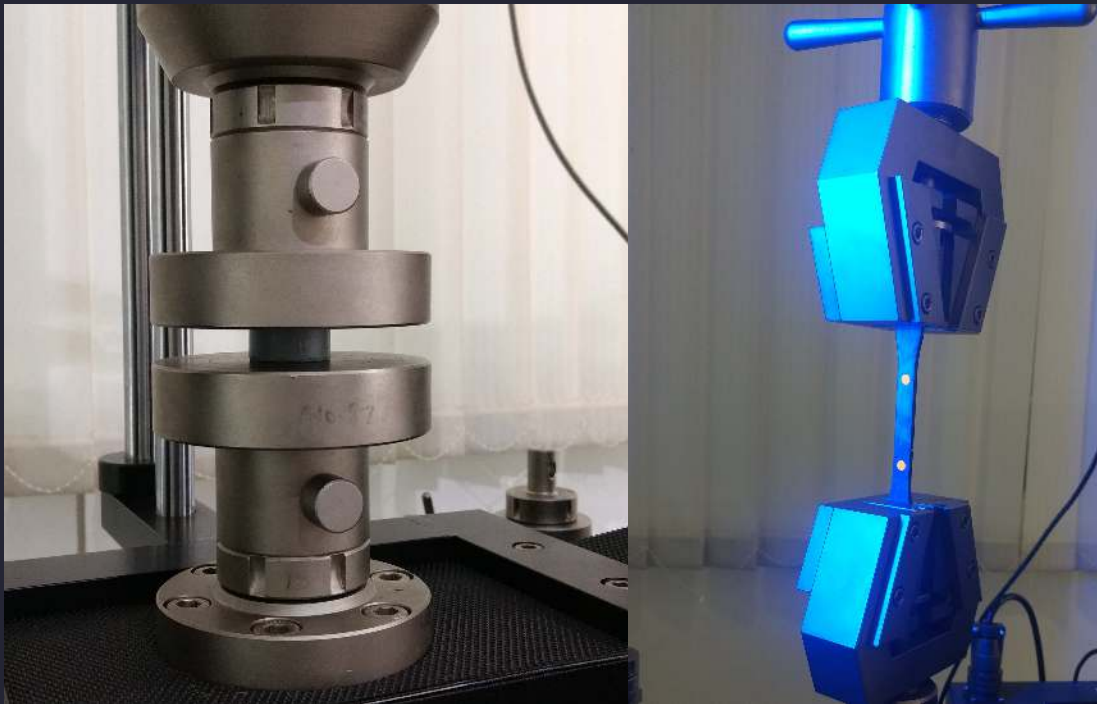


**Mechanical Testing**

**An Independent Material Testing Lab.**

We have full capabilities to characterize any kind of non-linear, rate dependent materials. AdvanSES provides material and product testing services for CAE engineers and analysts. The focus is on the characterization of non-linear materials such as rubber elastomers, plastics and composites for users of CAE softwares as Abaqus, Ansys, MSC Marc, and LS-Dyna.

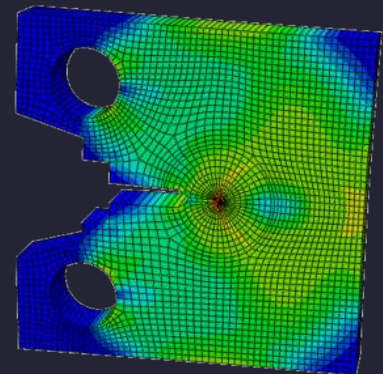
- 1) Hyperelastic Material Characterization
- 2) Thermoplastic, Hypoelastic and Foam Material Characterization
- 3) Viscoelastic Material Characterization by Stress Relaxation and Creep
- 4) Plasticity and Cyclic Loads



**FEA CAE Material Characterization Testing**  
**An Independent Material Testing Lab.**

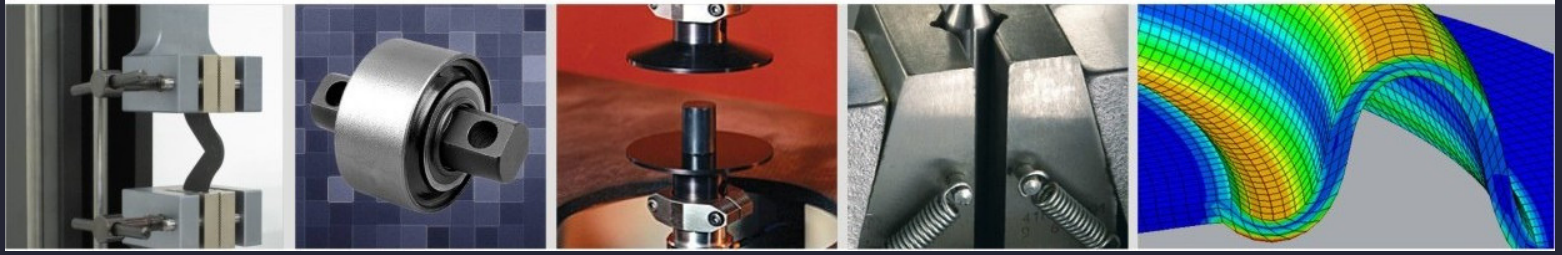
High cycle fatigue tests are conducted on specimens and components to study the endurance and durability of the materials and components under field service conditions. Stress-Life (S-N) curves are further developed. An S-N Curve is generated by testing samples and recording the number of cycles to failure and it establishes a relationship between stress level and the fatigue life of the material.

AdvanSES has expertise in carrying out Fracture toughness tests and high cycle fatigue testing on components as well as material samples as per established standards.



**Fatigue and Fracture Testing**

**An Independent Material Testing Lab.**



Finite element analysis serves to model the mechanical behavior of products. Our portfolio in FEA consultancy projects includes a variety of industries including biomedical, automotive, and aerospace especially involving non-linear metals, polymeric and composite materials.

## Structural Stress Analysis

- Geometric Nonlinear (Large deflection, large strain, etc.)
- Material Nonlinear (creep, plasticity, viscoelasticity, hyperelasticity, etc.)
- Contact Nonlinear

## FEA Dynamic Analysis

- Transient Impact Analysis
- Modal Analysis
- Harmonic Analysis
- Steady State Dynamics

**Finite Element Analysis FEA Services**

**An Independent Material Testing Lab.**

# Company Profile

AdvanSES is an engineering services company specializing in mechanical and materials testing, Finite Element Analysis FEA consulting services. Founded in 2002, We are now in 17th year of business and continue to grow.

The ever increasing demand for precise material and product engineering in the fast growing industries of today necessitates accurate material properties testing. Our micro firm located in a 6000 sq. ft. facility is certified as an MSME laboratory, and is one of the few to offer an entire spectrum of material testing, fatigue testing and engineering services.



Engineering with Rubber & Product Failure Analysis, 21-22 August @ Bangkok

**An Independent Material Testing Lab.**



**Laboratory & Workshop Address:**

Plot No. 49, Mother Industrial Park, Zak-Kadadara Road, Kadadara, Taluka-Dehgam,  
District-Gandhinagar, Gujarat-382305, India.

**Registered Office Address:**

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380005, India

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