

# FINITE ELEMENT ANALYSIS

## YOUR CHALLENGES

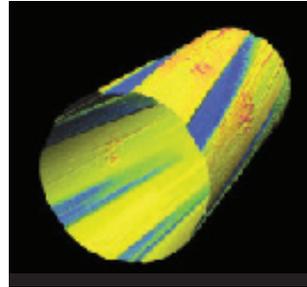
The path to market for your product is not always a smooth one. You are faced with numerous challenges along the way. Challenges such as:

- Shorter market windows compressing development cycles
- Shorter product life cycle increases warranty and service cost
- Lack of internal technical and equipment resources

## SMART SOLUTIONS

NTS engineers are ready to help you accelerate your time to market while reducing product development costs. Our integrated engineering services are provided by Subject Matter Experts with years of experience in their respective fields. Whether you need help on a single project with an accelerated deadline, or require an outsourced engineering team to work with you on a sustained basis, NTS can help.

Using Finite Element Analysis (FEA) techniques, our engineers will help you to dramatically reduce development time, rework and quality issues, while accelerating the design process through rapid optimization. By modeling through ANSYS, NASTRAN and other FEA tools, our mechanical engineers will verify analysis findings against empirical test data, simplified models, and classical calculations to ensure accuracy. Our expert test engineers will verify findings in simulated settings in our laboratories to ensure product compliance.



We provide 3D visualization and analysis of the barrel



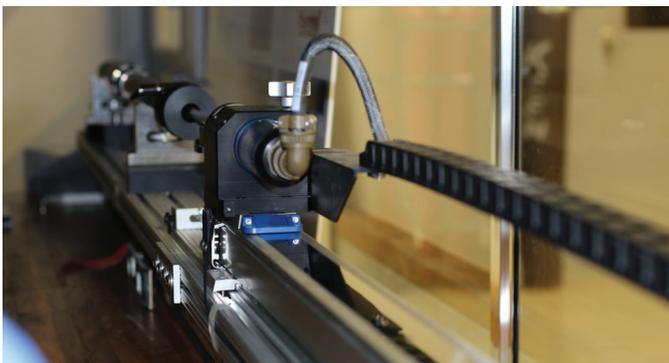
High Resolution LaserVideo™, creates camera-like images

### Available Services Include:

- Stress Analysis
  - » Static Analysis
  - » Linear/Non-linear Analysis
  - » Multi-part Analysis and Failure Analysis
  - » Component Life Prediction
- Dynamic Analysis
  - » Modal Analysis
  - » Forced Response
  - » Random Vibration
  - » Shock and Rotor Dynamics
- Thermal Analysis
  - » Steady State
  - » Transient
  - » Radiation and Convection
  - » Stress & Deflection
- Mechanical Design
  - » Conceptual Design
  - » Product Design & Development
  - » 3D Solid Modeling and Assembly Modeling
  - » Detailing/Drafting

## ABOUT NTS

Since opening our doors in 1961, NTS has become one of the largest commercial test laboratory networks in North America. Our test, inspection and certification services span environmental, dynamics, EMC, wireless, product safety, materials, ballistics and much more. And NTS engineers and technicians have exceptional knowledge in all test and conformity requirements in both domestic and international arenas. Our client partners in Aerospace, Defense, Telecom and Energy rely on NTS to deliver quality products to market quickly and efficiently, and so can you.



Eliminate user-error and get your inspection performed within minutes