Explosion Testing

ABS Consulting provides explosion testing services to support a variety of programs for commercial and defense related clients. Examples include structural testing, testing in support of product development, and test programs in support of R&D activities.

ABS Consulting’s shock tube facility provides testing of structural targets subjected to blast loads. In addition, ABS Consulting has established partnerships to provide open range explosion testing, with past test events up to 2500 lbs TNT equivalent.

ABS Consulting maintains data acquisition systems and instrumentation to support testing. Personnel have expertise in performing tests, gathering data, high speed video and proper analysis of test data.

Types of Testing
- Shock tube testing
- Live explosives range testing
- Small and large scale testing

Product Testing
- Window/glazing performance testing
  - GSA criteria
  - ASTM F1642
- Blast resistant doors
- Precast concrete panels
- Masonry walls
- Metal wall systems

Blast Resistant Modular Buildings
- Full scale design validation tests
- Blast capacity and failure modes
- R&D testing

Measurement Capability
- Shock pressures
- Gas pressure(s)
- Load cells
- Strain gauges
- Accelerometers
- Deflection(s)
- Thermal emissions
- Acoustic emissions
- High speed video

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ABS Consulting is a leading independent global risk management firm. We provide clients with practical engineering and technology-based solutions to assist in managing operational, security and catastrophic risks. We provide problem solving utilizing advanced modeling and analysis tools plus performing research and development programs.

ABS Consulting has a worldwide network of offices providing a wide range of specialized engineering and risk management services. Included is the Extreme Loads and Structural Risk division with offices throughout the United States specializing in structural assessment for extreme events such as blast, seismic and wind storms. The Explosion Hazards Group, located in San Antonio, Texas, offers services related to blast hazards and associated structural design.

**Technical Capabilities**
- Advanced Structural Analysis
- Hydrocode and Computational Fluid Dynamics (CFD)
- Explosion Hazards and Blast Resistant Design
- Seismic and Conventional Structural Design
- Terrorist Threat Assessment
- Physical Security Design
- Extreme Wind Modeling and Design
- Windstorm and Flood Assessment and Design
- Heavy Lift Systems
- Heavy Load Drop Analysis

**Consulting Services**
- Blast Resistant Design
- Facility Siting
- Explosives Safety and Quantity Distance Siting
- Blast Chamber Design
- Explosion Incident Investigation
- Explosion Testing
- Terrorist Threat Assessment
- Anti-Terrorism and Force Protection (AT/FP)
- Physical Security
- Blast, Debris and Thermal Hazard Assessment