Blast Testing

Blast Testing Fast Facts

- Provides engineering analysis and physical testing.
- Modular design provides flexibility to shape the blast profile
- High-speed video up to 6,600 frames/ second and high-speed data capture for 4 channels at 5,000,000 samples per channel per second.
- Quick turnaround specimen loading and unloading.
- Designed for driver pressures up to 3,000 psig
- Currently capable to test up to 7' x 7' specimen with future expansion to 12' x 12'.
- Ten thousand square foot dedicated laboratory with state of the art control room, dedicated customer conference room with Wi-Fi.

Value

During a blast event, almost 75 percent of damage and injury is due to flying and falling glass and related shrapnel. Consequently, building owners, tenants, and building codes require a level of blast resistance for new and renovation projects. Architectural Testing provides engineering analysis and physical testing of fenestration and protective-glazing products. This information is used by designers, architects, consultants, and manufacturers to mitigate glass fragmentation propensity in their designs, projects, and products. Architectural Testing's Professional Engineers have worked closely with AAMA to develop relevant test standards for Blast Hazard Mitigation for Fenestration Systems and for standards under the jurisdiction of ASTM Committee F12 on Security Systems and Equipment.

Architectural Testing's new, state of the art Security Research Center showcases a specialized shock tube used to conduct testing to all commonly specified test methods

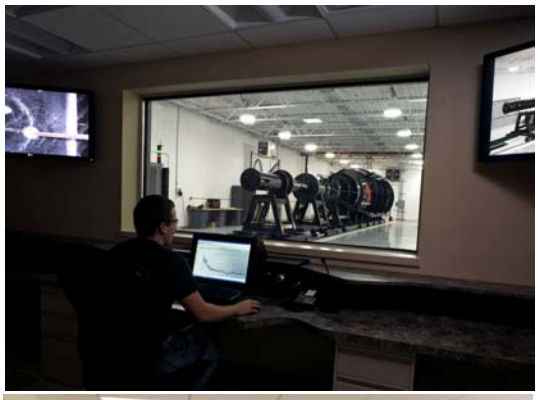
The types of tested materials include:

- Monolithic glass
- Laminated glass
- Insulating glass
- Blast curtains
- Anchoring systems
- Sealants
- Wall Systems
- Miscellaneous Materials
- Complete Installations

The POWER In Performance Testing

Architectural Testing

Blast Testing



Typical testing methods :

ASTM F1642

GSA TS-01

Innovations

Minimizing glass fragmentation caused by explosion is the fenestration industry's most demanding challenge. ATI brings nearly three decades of experience in fenestration-performance testing to blast-hazard analysis and testing. Our experience with curtain-wall products helps us understand the interaction between the system and the overall building enclosure.

To create the test conditions required by relevant standards, ATI has specially designed a shock tube that can evaluate the whole system: glazing, framing, and anchorage points. Our modern, state of the art shock tube is capable of testing specimens up to 7' x 7' with future capabilities up to 12' x 12'.

The shock tube is housed in a dedicated, enclosed facility to allow year-round testing. Additionally, a specially designed material handling system facilitates quick turn around time between tests.

Testing is documented using a color digital video camera that captures images at speeds up to 6,600 frames per second. A high-speed DAQ system enables real-time acquisition of 4 channels of data at over 5 million samples per channel per second.

Insights and Possibilities

Because many factors influence blast protection, customers benefit from the experience ATI has gained from decades of fenestration testing. With insights resulting from ATI blast testing, customers will be able to:

- Evaluate rigid versus flexible glazing protection concepts
- Determine the balance between multi-hazard objectives
- Evaluate impact on sunlight control and thermal performance
- Evaluate durability of protective glazing