

Blast Containment Design

Containment structures are required for explosives processing, testing and demilitarization. Southwest Research Institute (SwRI®) has the expertise in blast effects, field testing, numerical modeling, fabrication, and environmental monitoring needed to solve unique blast containment problems. The Engineering Dynamics Department staff can handle a containment problem from conceptual design through fabrication, proof testing, and installation.

Capabilities

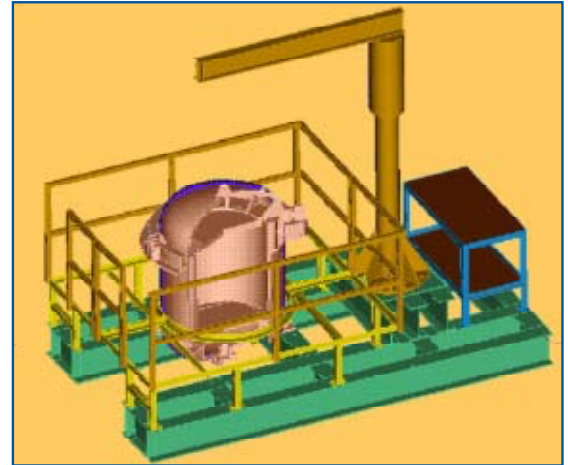
- Blast-resistant design
- Explosives testing
- High-speed data recording
- High-speed photography
- Design-build capability
- Dynamic finite element analysis (FEA)
- Hydrocode analysis
- Heavy structural fabrication

Experience

- Design, fabrication and testing of portable demilitarization container
- Design, fabrication and testing of 22-lb high explosives (HE) test chamber
- Chamber life extension studies
- Containment design for melt-pour HE production facilities
- Development of TOW missile shields for Bradley fighting vehicle

Facilities

- Ballistics and explosives test ranges
- Remote test sites
- Testing up to 1000 lbs HE
- Fabrication and machine shop facilities



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CAD model of portable blast chamber for munitions disposal

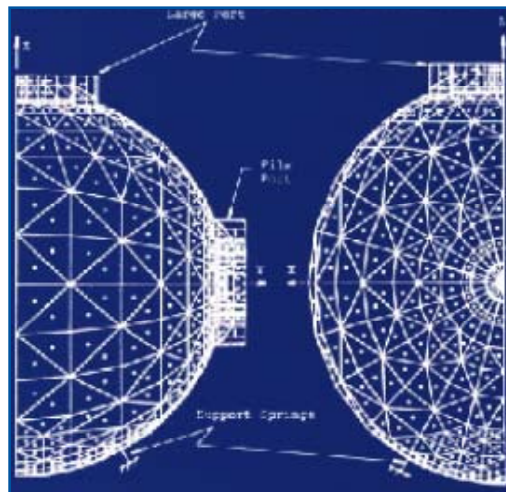


Los Alamos National Laboratory (LANL) blast chamber



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FEA grid of LANL spherical test vessel



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KEYWORDS

High Explosives

Containment Design

Blast Resistance

Hazards Evaluation

Ballistics

Missile Shields

Finite Element Analysis

Hydrocodes

Life Extension Study

Fabrication

Proof Testing

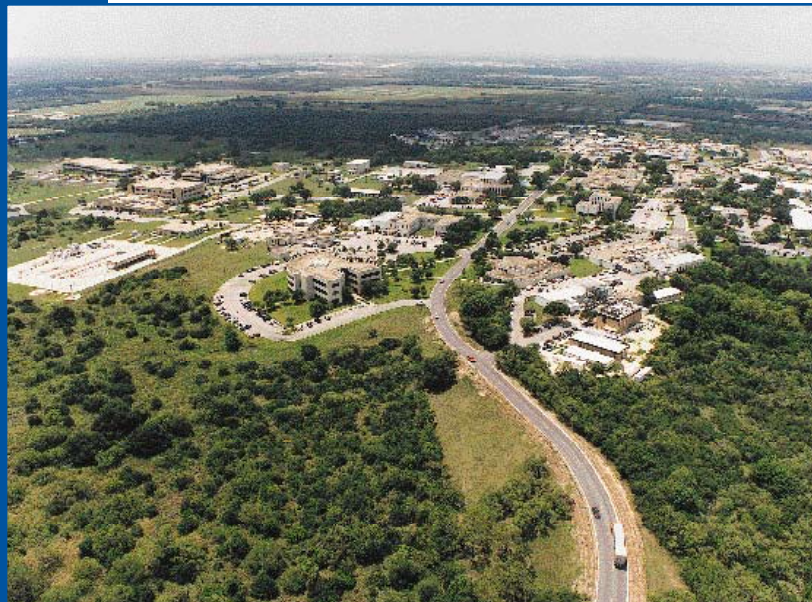
Field Testing

Homeland Security

The SwRI Engineering Dynamics Department provides solutions for blast containment problems including blast-resistant design, fabrication, and verification testing. SwRI engineers also address environmental concerns related to explosions such as noise abatement and pollution control.



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Southwest Research Institute is an independent, nonprofit, applied engineering and physical sciences research and development organization using multidisciplinary approaches to problem solving. The Institute occupies 1,200 acres in San Antonio, Texas, and provides more than 2 million square feet of laboratories, test facilities, workshops and offices for more than 3,300 employees who perform contract work for industry and government clients.

**We welcome
your inquiries.**

**For additional
information,
please contact:**

P. A. Cox
Staff Engineer
(210) 522-2315
pcox@swri.org

Scott A. Mullin
Manager, Ballistics and Explosives Engineering
(210) 522-2340
smullin@swri.org

Engineering Dynamics Department
Mechanical and Materials Engineering Division
Southwest Research Institute
6220 Culebra Road • P.O. Drawer 28510
San Antonio, Texas 78228-0510

Southwest Research Institute Website: www.swri.org
Engineering Dynamics Department Website: www.engdyn.swri.org