Virtual Tour

Small Scale Laboratory (SSL) at Colorado School of Mines Golden, Colorado USA
Explosive Research and Education Center

Colorado School of Mines
Advanced Explosives Processing Research Group (AXPRO Group)
Small Scale Laboratory (SSL), Colorado School of Mines, Golden, CO, USA

Golden, CO

8 miles from Denver
25 miles from DIA
Colorado School of Mines Campus

The AXPRO Small Scale Laboratory is located on the first floor of Brown Hall on the CSM Campus. The SSL consists of one blasting chamber, one vacuum chamber, a machine shop and preparation lab, AXPRO staff offices, and an AXPRO conference room. Support facilities include one indoor type two magazine and flame-proof cabinet, two outdoor type two magazines, administrative support through the CSM Mining Department, and access to teleconferencing facilities. Additionally, significant additional diagnostic and materials testing capabilities can be arranged through AXPRO’s partnerships with the Metallurgical and Materials Engineering, Physics, and Engineering Departments.
Small Scale Laboratory (SSL) - Aerial View

- Blast Chamber (BB120)
- AXPRO Conference Room (BB120)
- Vacuum Chamber (BB106)
- Machine Shop Preparation Lab (BB105)
- AXPRO Staff Offices (BB 129)
Blasting Chamber (BB 120)

The blasting chamber at the SSL is capable of tests up to 20-grams of total explosive weight. The chamber is fully equipped for all types of explosives and initiation systems. Data collection capabilities include: VOD measurement; high speed imagery; strain measurement, aquarium testing, flash x-ray, and PDV measurement.
Vacuum Chamber (BB 106)

The vacuum chamber at the SSL is used for low pressure testing of charges of up to 8-grams. The chamber is equipped with an electric initiation system and can reach a pressure of 20-torr in approximately 40-minutes. Data collection capabilities include: VOD measurement; high speed imagery; and strain measurement.
Machine Shop/Fragmentation Lab (BB105)

AN Prill quality control test lab:
- Friability
- Size Distribution
- Porosity
- Windex Test
- Centrifuge test
- Vacuum test

Machine Shop Capabilities
- MIG welder
- Tools for wood and metal fabrication
- Lathe
- Polishing equipment
- Crushing equipment
- Size Distribution testing equipment
- Grinding equipment