



Faculty of Civil Engineering and Geosciences

Department of Geoscience & Engineering

Geoscience & Engineering Laboratory



Geoscience and Engineering Laboratory

Large laboratory housing a large range of experimental equipment for engineering and geoscience:

E.g. :

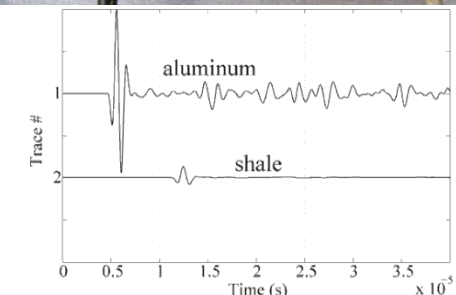
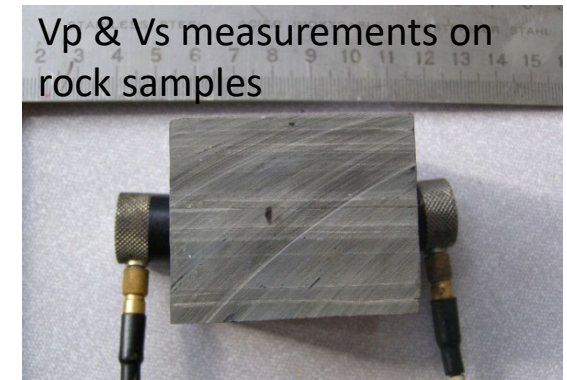
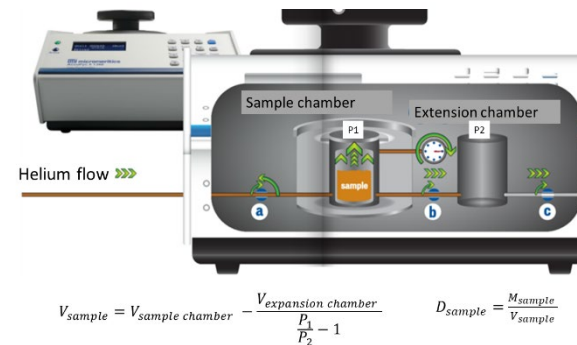
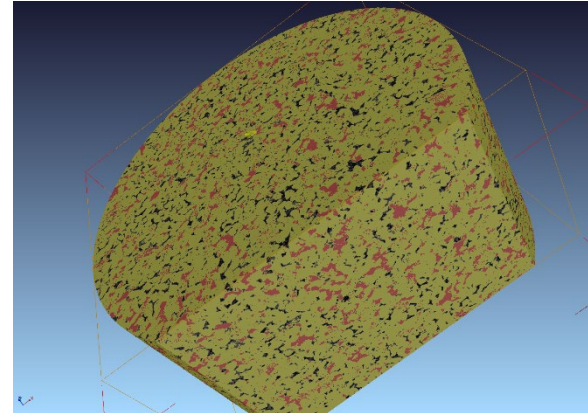
- Flow cells
- Fluid tanks
- Soil Mechanics
- Compaction
- Geophysics
- Rock Mechanics

EPOS NL UU/TUD

- *MINT Infrastructure*
- *Delft Petrophysics Lab*

Petrophysical Properties

- Density
- Porosity
- Permeability
- Mineralogy
- Seismic Velocities
- Elastic parameters
- Seismic wave properties
- ...



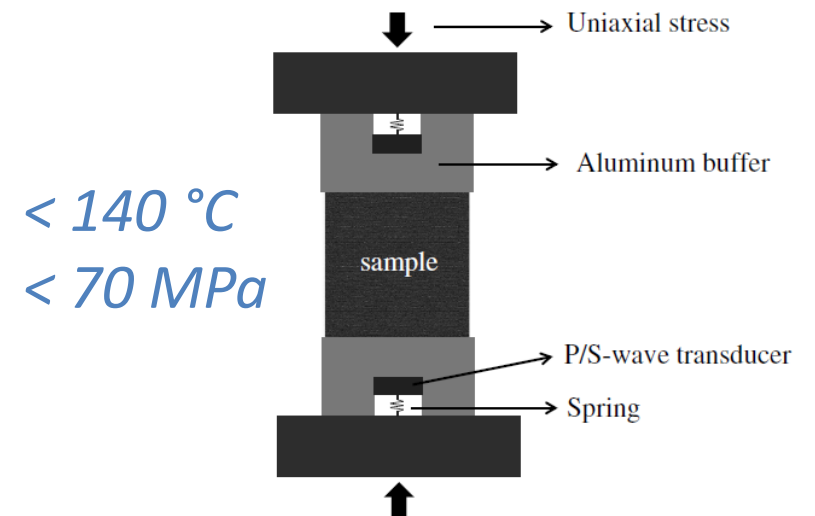
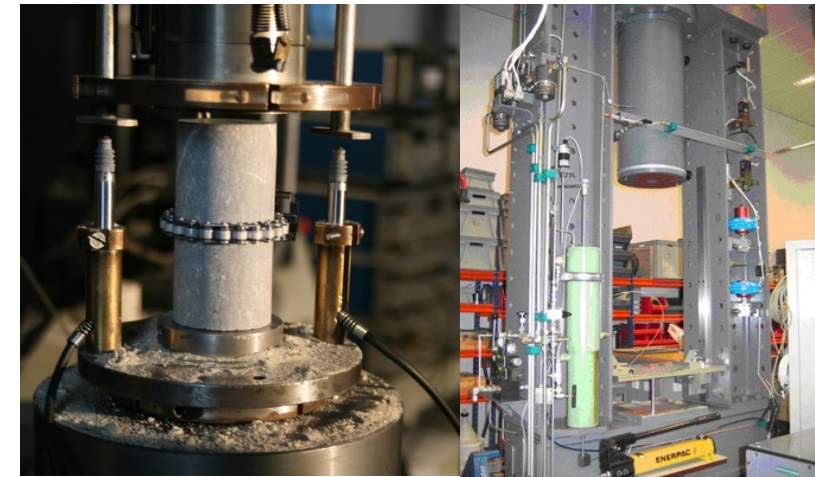
Often at in-situ conditions (P, T, fluid pressure, fluid composition)

Typically on cm-sized rock samples

The laboratory houses various rock mechanical equipment

Cm-sized cylindrical rock samples

- Unconfined Compressive Strength – UCS – tests
- Confined Compressive Strength – CCS – tests
- Equipped with pore-pressure lines, transient pore pressure for permeability evolution
- Equipped with heating capabilities (sample, fluid)
- Equipped with active acoustics (V_p , V_s evolution)
- Equipped with acoustic emission (microseismicity monitoring)



The laboratory houses various rock mechanical equipment

Dm-sized large rock samples

- Borehole Simulator (40 cm diameter rock samples)
- True triaxial machine (30 cm cubed rock samples)
- Equipped with active acoustics
- Equipped with acoustic emission

< 140 °C
< 70 MPa

