

Biax Experiment

For current calibrations – [gpfs/group/cjm38/default/Calibrations/](#)

Revised: 30 Nov. 2021

Exp. Name: p5756s04Gniess50

Operator(s): Affinito, Marone

Temperature (°C): 24.6

Relative Humidity (%): 100

Date/Time: 25/07/2022

Hydraulics start: 5421.2

Hydraulics end: 5424.4

Data Logger/Control File: 8-chan FORGE

Purpose/Description: FORGE Project Run with the Gniess Sample, 50, 25, 75 and 100 Mpa. Vstep and SHS Sequence at e stress.

Sample Block Used and Thickness with **no** Sample: Steel 5x5 cm

Using plain side blocks – no ptz – and 10x10 cm 3 component pzt loading platens (10.1A and 10.1B)

Material: Gniess
Particle Size, Distribution: \bar{d} 125 < 125 μm
Benchtop Sample Thickness (mm): 81.2
Pre-Compaction Sample Thickness (mm): 80.55
Post-Compaction Sample Thickness (mm): 77.48

	Block 1	Block 2
Empty Block Weight (g)	0	0
Weight of Material Used (g)	0	0
Sample Block Weight (g)	0	0
Weight of Gouge (g)	0	0

Load Cells:

Contact Area: 0.0025 m²

Load cell name	Calibrations (mV/kN)	Target stress (MPa)	Init. Voltage	Volt. @ load
44mm Solid Horiz	12.894 (V/MPa): 0.0322	50, 25, 75, 100	-0.388	1.22375, 0.41787, 2.02963, 2.8355
44mm Solid Vert	13.074 (V/MPa): 0.0327	0	0	0.

Displacement Transducers

Name	Gain (mm/V)
Horiz. Load-point	0.756
Vert. Load-point	0.568

Horizontal Servo Settings	
P:	D _{atten} :
I:	Feedback:
D:	E-gain:
Vertical Servo Settings	
P:	D _{atten} :
I:	Feedback:
D:	E-gain:

Chilled water at HPS	Chiller Unit	Proc. water @ Chiller
1. Temp In (°F):	6. Panel Temp (°F):	10. Temp In (°F):
2. Pres. In (psi):	7. Panel Pres. (psi):	11. Pres. In (psi):
3. Temp Out (°F):	8. Near Pres. In (psi):	12. Temp Out (°F):
4. Pres. Out (psi):	9. Near Pres. Out (psi):	13. Pres. Out (psi):
5. Flow (lpm):		
Hyd. Power Supply (HPS)		
14. Tank Temp (°C):	15. Temp. Out (°C):	16. Pres. Out (psi):

Experiment Notes

- # Sample was left in humidity bag for 4 hours, surfaces were dusted with water and water was poured on gouge before/after compacting.
- # 450 NS Inc. 50 MPa
- # Post-Compaction Panel Reading: 3.549mm
- # Pre-Shear Compaction Panel Reading: 3.679mm
- # 1600 Shearing @ 10um/s for 6mm
- # 9000 VStep Sequence and Run 1(P-Wave)
- # AC Run 2 (S-Wave) For the Final two VSteps
- # SHS Sequence (Run 3, P-Wave)
- # 1967000 Unload to 25MPa and Shear 2mm
- # 1970150 VStep Sequence 2 (Run 4: P-Wave)
- # SHS Sequence 2 (Run 5: P-Wave) Note: Stopped Run after first 4 holds.
- # We will not do any more acoustics to keep the mech file smaller.
- # 3865000 NS Inc 75MPa and Shearing Begins @ 10um/s
- # 3868800 VStep and SHS Sequence
- # End of Test, Took stress down and sample out.

**decided to quit at 75 MPa to check forcing blocks.
They were fine. No damage to grooves
We'll go to 100 MPa next time.**