

LAMPIRAN

Lampiran 1 Instrumen Penelitian

- **Arloji Sampel 1**

Hasil arloji tersebut untuk di gunakan proses perhitungan rumus

Tabel 4.1 Hasil Pengujian sampel 1 kedalaman 15.50-`16.00m

Dial Deformasi	Hasil Pengujian
0	0
20	4.50
40	7.00
60	10.00
80	12.00
100	13.00
120	15.00
140	15.50

- **Arloji Sampel 2**

Tabel 4.2 Hasil Pengujian sampel 2 kedalaman 15.50-16.00m

Dial Deformasi	Hasil Pengujian
0	0
20	9.00
40	11.00
60	14.00
80	18.00
100	22.00
120	24.00
140	27.00

- **Arloji Sampel 3**

Tabel 4.3 Hasil Pengujian sampel 3 kedalaman 15.50-16.00m

Dial Deformasi	Hasil Pengujian
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0	0
20	38.00
40	40.00
60	42.00
80	44.00
100	46.00
120	48.00
140	50.00

4.3.2 Arloji Kedalaman 19.50-20.00m

- **Arloji Sampel 1**

Tabel 4.4 Hasil Pengujian sampel 1 kedalaman 19.50-20.00m

Dial Deformasi	Hasil Pengujian
0	0
20	4.50
40	6.00
60	8.00
80	10.00
100	11.00
120	12.00
140	-

- **Arloji Sampel 2**

Tabel 4.5 Hasil Pengujian sampel 2 kedalaman 19.50-20.00m

Dial Deformasi	Hasil Pengujian
0	0
20	8
40	12.00
60	16.00

80	20.00
100	22.00
120	24.00
140	-

- **Arloji Sampel 3**

Tabel 4.6 Hasil Pengujian sampel 3 kedalaman 19.50-20.00m

Dial Deformasi	Hasil Pengujian
0	0
20	8
40	12.00
60	16.00
80	20.00
100	22.00
120	24.00
140	-

1.3.3 Arloji Kedalaman 23.50-24.00m

- **Arloji Sampel 1**

Tabel 4.7 Hasil Pengujian sampel 1 kedalaman 23.50-24.00m

Dial Deformasi	Hasil Pengujian
0	0
20	10.00
40	13.00
60	17.00
80	18.00
100	21.00
120	24.00
140	-

- **Arloji Sampel 2**

Tabel 4.8 Hasil Pengujian sampel 2 kedalaman 23.50-24.00m

Dial Deformasi	Hasil Pengujian
0	0
20	20.00
40	26.00
60	34.00
80	36.00
100	42.00
120	38.00
140	-

- **Arloji Sampel 3**

Tabel 4.9 Hasil Pengujian sampel 3 kedalaman 23.50-24.00m

Dial Deformasi	Hasil Pengujian
0	0
20	31.00
40	34.00
60	37.00
80	40.00
100	43.00
120	46.00
140	-

Lampiran 2 hasil penelitian kerja

Perhitungan Kedalaman 15.50-16.00m

Sampel 1

Kedalaman 15.00 – 15.50m

Sampel 1

Tegangan Indistrib

0.679

D : 38

H : 70

A : 1134.115

Volume : 79388.05

Tabel 4.10 perhitungan sampel 1 kedalaman 15.50-16.00m

Profing						
ΔH	Ring	σ	ξ (%)	Ac	$\sigma_1-\sigma_3$	$1/2 \sigma_1-\sigma_3$
0	0.00	0.679	0.00%	11.34115	0	0
0.2	4.50	0.679	0.29%	11.34112	0.452336	0.226168
0.4	7.00	0.679	0.57%	11.34109	0.703636	0.351818
0.6	10.00	0.679	0.86%	11.34106	1.005197	0.502598
0.8	12.00	0.679	1.14%	11.34104	1.206239	0.641714
1	13.00	0.679	1.43%	11.34101	1.306762	0.653381
1.2	15.00	0.679	1.71%	11.34098	1.507806	0.753903
1.4	15.50	0.679	2.00%	11.34095	1.558071	0.779035

Sampel 2

Kedalaman 15.00 – 15.50 m

Sampel 2

Tegangan Indistrib

1.357

D : 38

H : 70

A : 1134.115

Volume : 79388.05

Tabel 4.11 perhitungan sampel 2 kedalaman 15.50-16.00m

Profing						
ΔH	Ring	σ	ξ (%)	Ac	$\sigma_1-\sigma_3$	$1/2 \sigma_1-\sigma_3$
0	0.00	1.357	0.00%	11.34115	0	0
0.2	9.00	1.357	0.29%	11.34112	0.904672	0.452336
0.4	11.00	1.357	0.57%	11.34109	1.105714	0.552857
0.6	14.00	1.357	0.86%	11.34106	1.407275	0.703638
0.8	18.00	1.357	1.14%	11.34104	1.809359	0.904679
1	22.00	1.357	1.43%	11.34101	2.211444	1.105722
1.2	24.00	1.357	1.71%	11.34098	2.41249	1.206245

1.4 27.00 1.357 2.00% 11.34095 2.714058 1.357029

Sampel 3

Kedalaman 15.00 - 15,50m

Sampel 3

Tegangan Indistrib 2,67

D : 38

H : 70

A : 1134.115

Volume : 79388.05

Tabel 4.12 perhitungan sampel 3 kedalaman 15.50-16.00m

Profing						
ΔH	Ring	σ	$\xi(\%)$	Ac	$\sigma_1-\sigma_3$	$1/2 \sigma_1-\sigma_3$
0	0.00	2.67	0.00%	11.34115	0	0
0.2	38.00	2.67	0.29%	11.34112	3.819728	1.909864
0.4	40.00	2.67	0.57%	11.34109	4.020777	2.010388
0.6	42.00	2.67	0.86%	11.34106	4.221826	2.110913
0.8	44.00	2.67	1.14%	11.34104	4.422877	2.211438
1	46.00	2.67	1.43%	11.34101	4.623928	2.311964
1.2	48.00	2.67	1.71%	11.34098	4.824981	2.41249
1.4	50.00	2.67	2.00%	11.34095	5.026034	2.513017

Perhitungan Kedalaman 19.50-20.00m

Sampel 1

Kedalaman 19.50-20.00m

Sampel 1

Tegangan Indistrib 0.879

D : 38

H : 70

A : 1134.115

Volume : 79388.05

Tabel 4.13 Perhitungan sampel 1 kedalaman 19.50-20.00m

Profing						
ΔH	Ring	σ	$\xi(\%)$	Ac	$\sigma_1-\sigma_3$	$1/2 \sigma_1-\sigma_3$
0	0.00	0.879	0.00%	11.34115	0	0
0.2	4.50	0.879	0.29%	11.34112	0.452336	0.226168
0.4	6.00	0.879	0.57%	11.34109	0.603117	0.301558
0.6	8.00	0.879	0.86%	11.34106	0.804157	0.402079
0.8	10.00	0.879	1.14%	11.34104	1.005199	0.996877
1	11.00	0.879	1.43%	11.34101	1.105722	0.552861
1.2	12.00	0.879	1.71%	11.34098	1.206245	0.603123

Sampel 2

Kedalaman 19.50-20.00m

Sampel 2

Tegangan Indistrib

1.757

D : 38

H : 70

A : 1134.115

Volume : 79388.05

Tabel 4.14 perhitungan sampel 2 kedalaman 19.50-20.00m

Profing						
ΔH	Ring	σ	$\xi(\%)$	Ac	$\sigma_1-\sigma_3$	$1/2 \sigma_1-\sigma_3$
0	0.00	1.757	0.00%	11.34115	0	0
0.2	8.00	1.757	0.29%	11.34112	0.804153	0.402077
0.4	12.00	1.757	0.57%	11.34109	1.206233	0.603117
0.6	16.00	1.757	0.86%	11.34106	1.608315	0.804157
0.8	20.00	1.757	1.14%	11.34104	2.010398	1.005199
1	22.00	1.757	1.43%	11.34101	2.211444	1.105722
1.2	24.00	1.757	1.71%	11.34098	2.41249	1.206245

Sampel 3

Kedalaman 19.50-20.00m

Sampel 3

Tegangan Indistrib 3.514

D : 38

H : 70

A : 1134.115

Volume : 79388.05

Tabel 4.15 perhitungan sampel 3 kedalaman 19.50-20.00m

Profing						
ΔH	Ring	σ	$\xi(\%)$	Ac	$\sigma_1-\sigma_3$	$1/2 \sigma_1-\sigma_3$
0	0.00	3.514	0.00%	11.34115	0	0
0.2	8.00	3.514	0.29%	11.34112	0.804153	0.402077
0.4	12.00	3.514	0.57%	11.34109	1.206233	0.603117
0.6	16.00	3.514	0.86%	11.34106	1.608315	0.804157
0.8	20.00	3.514	1.14%	11.34104	2.010398	1.005199
1	22.00	3.514	1.43%	11.34101	2.211444	1.105722
1.2	24.00	3.514	1.71%	11.34098	2.41249	1.206245

Perhitungan Kedalaman 23.50-24.00m

Sampel 1

Kedalaman 23.50-24.00m

Sampel 1

Tegangan Indistrib 1.057

D : 38

H : 70

A : 1134.115

Volume : 79388.05

Tabel 4.16 Perhitungan sampel 1 kedalaman 23.50-24.00m

Profing						
ΔH	Ring	σ	$\xi(\%)$	Ac	$\sigma_1-\sigma_3$	$1/2 \sigma_1-\sigma_3$
0	0.00	1.057	0.00%	11.34115	0	0
0.2	10.00	1.057	0.29%	11.34112	1.005192	0.502596
0.4	13.00	1.057	0.57%	11.34109	1.306752	0.653376
0.6	17.00	1.057	0.86%	11.34106	1.708834	0.854417
0.8	18.00	1.057	1.14%	11.34104	1.809359	0.665971
1	21.00	1.057	1.43%	11.34101	2.110924	1.055462
1.2	24.00	1.057	1.71%	11.34098	2.41249	1.206245

Sampel 2

Kedalaman 23.50-24.00m

Sampel 1

Tegangan Indistrib 1.057

D : 38

H : 70

A : 1134.115

Volume : 79388.05

Tabel 4.17 perhitungan sampel 2 kedalaman 23.50-24.00m

Profing						
ΔH	Ring	σ	$\xi(\%)$	Ac	$\sigma_1-\sigma_3$	$1/2 \sigma_1-\sigma_3$
0	0.00	1.057	0.00%	11.34115	0	0
0.2	10.00	1.057	0.29%	11.34112	1.005192	0.502596
0.4	13.00	1.057	0.57%	11.34109	1.306752	0.653376
0.6	17.00	1.057	0.86%	11.34106	1.708834	0.854417
0.8	18.00	1.057	1.14%	11.34104	1.809359	0.665971
1	21.00	1.057	1.43%	11.34101	2.110924	1.055462
1.2	24.00	1.057	1.71%	11.34098	2.41249	1.206245

Sampel 3

Kedalaman 23.50-24.00m

Sampel 3

Tegangan Indistrib 2.714

D : 38

H : 70

A : 1134.115

Volume : 79388.05

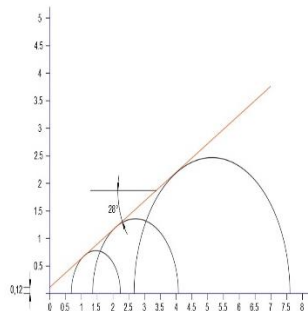
Tabel 4.18 perhitungan sampel 3 kedalaman 23.50-24.00m

Profing						
ΔH	Ring	Σ	$\xi(\%)$	Ac	$\sigma_1 - \sigma_3$	$1/2 \sigma_1 - \sigma_3$
0	0.00	2.714	0.00%	11.34115	0	0
0.2	31.00	2.714	0.29%	11.34112	3.116094	1.558047
0.4	34.00	2.714	0.57%	11.34109	3.41766	1.70883
0.6	37.00	2.714	0.86%	11.34106	3.719228	1.859614
0.8	40.00	2.714	1.14%	11.34104	4.020797	2.010398
1	43.00	2.714	1.43%	11.34101	4.322368	2.161184
1.2	46.00	2.714	1.71%	11.34098	4.62394	2.31197

Perhitungan Rumus Triaxial

Mendapatkan kohesi, sudut geser, mohr coloumb dengan menggunakan aplikasi Autocad.

Hasil Kedalaman 15.50-16.00m

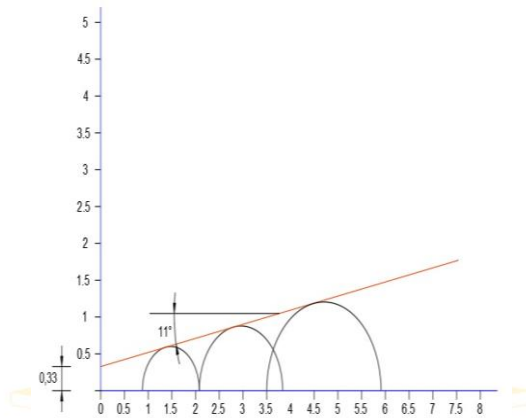


Grafik 4.1 Mohr Coloumb kedalaman 15.50-16.00m

C : 0.12

ϕ : 28°

Hasil Kedalaman 19.50-20.00m

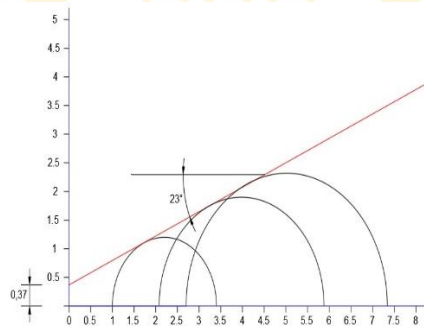


Grafik 4.2 Mohr Coloumb kedalaman 19.50-20.00m

C : 0.33

ϕ : 11°

Hasil Kedalaman 23.50 – 24.00m


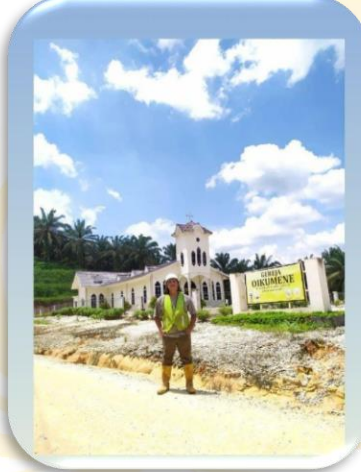


Grafik 4.3 Mohr Coloumb kedalaman 23.50-24.00m

C : 0.37

ϕ : 23°

Lampiran 3 Dokumentasi

No	Foto/Picture	Keterangan
1.		Sedang menguji alat di laboratorium
2.		Posisi di lokasi lubang gaung, dumai