

### Lampiran 1 Pemeriksaan Ring Density

Tabel Pemeriksaan Kadar Air dan Berat Isi Kering berdasarkan Ring Density

Lapisan Tanah	Kadar Air (%)	Berat Isi Kering
Lapisan 1	28.23	1.331
Lapisan 2	28.17	1.334
Lapisan 3	28.67	1.331
Lapisan 4	28.17	1.334
<b>Rata - rata</b>	<b>28.31</b>	<b>1.332</b>

#### PEMERIKSAAN DENSITY RING TANAH ASLI

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.30	36.20	36.20	36.20	36.30	36.30	36.40	36.30	36.20	36.20	36.30	36.30
3. Mass of Wet Soil	gr	19.60	19.50	19.50	19.50	19.60	19.60	19.70	19.60	19.50	19.50	19.60	19.60
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	31.90	32.00	31.90	32.00	31.90	32.00	31.90	31.90	32.00	32.00	32.00	31.90
7. Mass of Dry Soil	gr	15.20	15.30	15.20	15.30	15.20	15.30	15.20	15.20	15.30	15.30	15.30	15.20
8. Mass of Water	gr	4.40	4.20	4.30	4.20	4.40	4.30	4.50	4.40	4.20	4.20	4.30	4.40
9. Water Content	%	28.95	27.45	28.29	27.45	28.95	28.10	29.61	28.95	27.45	27.45	28.10	28.95
10. Average of Water Content	%	28.23			28.17			28.67			28.17		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.328	1.337	1.328	1.337	1.328	1.337	1.328	1.328	1.337	1.337	1.337	1.328
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.331			1.334			1.331			1.334		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.332</b>											

**PEMERIKSAAN DENSITY RING SAMPEL 1**

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.20	36.10	36.10	36.20	36.20	36.10	36.30	36.20	36.20	36.10	36.10	36.20
3. Mass of Wet Soil	gr	19.50	19.40	19.40	19.50	19.50	19.40	19.60	19.50	19.50	19.40	19.40	19.50
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	31.90	31.80	31.90	31.90	32.00	31.80	31.90	32.00	32.00	31.90	31.80	31.90
7. Mass of Dry Soil	gr	15.20	15.10	15.20	15.20	15.30	15.10	15.20	15.30	15.30	15.20	15.10	15.20
8. Mass of Water	gr	4.30	4.30	4.20	4.30	4.20	4.30	4.40	4.20	4.20	4.20	4.30	4.30
9. Water Content	%	28.29	28.48	27.63	28.29	27.45	28.48	28.95	27.45	27.45	27.63	28.48	28.29
10. Average of Water Content	%	28.13			28.07			27.95			28.13		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.328	1.319	1.328	1.328	1.337	1.319	1.328	1.337	1.337	1.328	1.319	1.328
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.325			1.328			1.334			1.325		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.328</b>											

**PEMERIKSAAN DENSITY RING SAMPEL 2**

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.10	36.30	36.10	36.20	36.20	36.10	36.20	36.20	36.10	36.20	36.10	36.10
3. Mass of Wet Soil	gr	19.40	19.60	19.40	19.50	19.50	19.40	19.50	19.50	19.40	19.50	19.40	19.40
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	31.80	32.00	31.90	31.80	31.90	31.90	31.80	31.90	31.80	31.80	31.90	31.80
7. Mass of Dry Soil	gr	15.10	15.30	15.20	15.10	15.20	15.20	15.10	15.20	15.10	15.10	15.20	15.10
8. Mass of Water	gr	4.30	4.30	4.20	4.40	4.30	4.20	4.40	4.30	4.30	4.40	4.20	4.30
9. Water Content	%	28.48	28.10	27.63	29.14	28.29	27.63	29.14	28.29	28.48	29.14	27.63	28.48
10. Average of Water Content	%	28.07			28.35			28.64			28.42		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.319	1.337	1.328	1.319	1.328	1.328	1.319	1.328	1.319	1.319	1.328	1.319
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.328			1.325			1.322			1.322		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.324</b>											

### PEMERIKSAAN DENSITY RING SAMPEL 3

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.30	36.20	36.10	36.10	36.00	36.00	36.10	36.10	36.20	36.10	36.10	36.00
3. Mass of Wet Soil	gr	19.60	19.50	19.40	19.40	19.30	19.30	19.40	19.40	19.50	19.40	19.40	19.30
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	31.90	31.90	31.80	31.80	31.70	31.80	31.70	31.90	31.90	31.80	31.80	31.70
7. Mass of Dry Soil	gr	15.20	15.20	15.10	15.10	15.00	15.10	15.00	15.20	15.20	15.10	15.10	15.00
8. Mass of Water	gr	4.40	4.30	4.30	4.30	4.30	4.20	4.40	4.20	4.30	4.30	4.30	4.30
9. Water Content	%	28.95	28.29	28.48	28.48	28.67	27.81	29.33	27.63	28.29	28.48	28.48	28.67
10. Average of Water Content	%	28.57			28.32			28.42			28.54		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.328	1.328	1.319	1.319	1.311	1.319	1.311	1.328	1.328	1.319	1.319	1.311
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.325			1.316			1.322			1.316		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.320</b>											

#### PEMERIKSAAN DENSITY RING SAMPEL 4

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.00	36.00	36.10	36.20	36.10	36.20	36.00	36.10	36.10	36.20	36.10	36.10
3. Mass of Wet Soil	gr	19.30	19.30	19.40	19.50	19.40	19.50	19.30	19.40	19.40	19.50	19.40	19.40
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	31.70	31.60	31.80	31.90	31.80	32.00	32.00	31.90	31.80	31.90	31.90	31.80
7. Mass of Dry Soil	gr	15.00	14.90	15.10	15.20	15.10	15.30	15.30	15.20	15.10	15.20	15.20	15.10
8. Mass of Water	gr	4.30	4.40	4.30	4.30	4.30	4.20	4.00	4.20	4.30	4.30	4.20	4.30
9. Water Content	%	28.67	29.53	28.48	28.29	28.48	27.45	26.14	27.63	28.48	28.29	27.63	28.48
10. Average of Water Content	%	28.89			28.07			27.42			28.13		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.311	1.302	1.319	1.328	1.319	1.337	1.337	1.328	1.319	1.328	1.328	1.319
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.311			1.328			1.328			1.325		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.323</b>											

### PEMERIKSAAN DENSITY RING SAMPEL 5

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.20	36.10	36.20	36.30	36.20	36.20	36.20	36.30	36.30	36.20	36.10	36.20
3. Mass of Wet Soil	gr	19.50	19.40	19.50	19.60	19.50	19.50	19.50	19.60	19.60	19.50	19.40	19.50
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	31.90	31.80	32.00	32.00	31.90	31.90	31.90	31.80	32.00	32.00	31.90	31.90
7. Mass of Dry Soil	gr	15.20	15.10	15.30	15.30	15.20	15.20	15.20	15.10	15.30	15.30	15.20	15.20
8. Mass of Water	gr	4.30	4.30	4.20	4.30	4.30	4.30	4.30	4.50	4.30	4.20	4.20	4.30
9. Water Content	%	28.29	28.48	27.45	28.10	28.29	28.29	28.29	29.80	28.10	27.45	27.63	28.29
10. Average of Water Content	%	28.07			28.23			28.73			27.79		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.328	1.319	1.337	1.337	1.328	1.328	1.328	1.319	1.337	1.337	1.328	1.328
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.328			1.331			1.328			1.331		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.330</b>											

**PEMERIKSAAN DENSITY RING SAMPEL 6**

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.30	36.20	36.30	36.10	36.10	36.30	36.20	36.20	36.20	36.20	36.30	36.20
3. Mass of Wet Soil	gr	19.60	19.50	19.60	19.40	19.40	19.60	19.50	19.50	19.50	19.50	19.60	19.50
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	32.00	32.10	31.90	32.00	31.80	31.80	31.90	32.00	31.80	31.90	32.00	32.00
7. Mass of Dry Soil	gr	15.30	15.40	15.20	15.30	15.10	15.10	15.20	15.30	15.10	15.20	15.30	15.30
8. Mass of Water	gr	4.30	4.10	4.40	4.10	4.30	4.50	4.30	4.20	4.40	4.30	4.30	4.20
9. Water Content	%	28.10	26.62	28.95	26.80	28.48	29.80	28.29	27.45	29.14	28.29	28.10	27.45
10. Average of Water Content	%	27.89			28.36			28.29			27.95		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.337	1.346	1.328	1.337	1.319	1.319	1.328	1.337	1.319	1.328	1.337	1.337
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.337			1.325			1.328			1.334		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.331</b>											

### PEMERIKSAAN DENSITY RING SAMPEL 7

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.20	36.10	36.20	36.30	36.10	36.10	36.20	36.10	36.00	36.00	36.10	36.10
3. Mass of Wet Soil	gr	19.50	19.40	19.50	19.60	19.40	19.40	19.50	19.40	19.30	19.30	19.40	19.40
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	31.90	31.80	31.80	31.90	31.90	31.90	32.00	31.90	31.90	31.80	31.80	31.90
7. Mass of Dry Soil	gr	15.20	15.10	15.10	15.20	15.20	15.20	15.30	15.20	15.20	15.10	15.10	15.20
8. Mass of Water	gr	4.30	4.30	4.40	4.40	4.20	4.20	4.20	4.20	4.10	4.20	4.30	4.20
9. Water Content	%	28.29	28.48	29.14	28.95	27.63	27.63	27.45	27.63	26.97	27.81	28.48	27.63
10. Average of Water Content	%	28.64			28.07			27.35			27.97		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.328	1.319	1.319	1.328	1.328	1.328	1.337	1.328	1.328	1.319	1.319	1.328
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.322			1.328			1.331			1.322		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.326</b>											



### PEMERIKSAAN DENSITY RING SAMPEL 8

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.10	36.00	36.10	36.00	36.00	36.10	36.20	36.10	36.20	36.10	36.20	36.00
3. Mass of Wet Soil	gr	19.40	19.30	19.40	19.30	19.30	19.40	19.50	19.40	19.50	19.40	19.50	19.30
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	31.70	31.80	31.70	31.80	31.80	31.70	31.90	31.90	31.80	31.80	31.90	31.80
7. Mass of Dry Soil	gr	15.00	15.10	15.00	15.10	15.10	15.00	15.20	15.20	15.10	15.10	15.20	15.10
8. Mass of Water	gr	4.40	4.20	4.40	4.20	4.20	4.40	4.30	4.20	4.40	4.30	4.30	4.20
9. Water Content	%	29.33	27.81	29.33	27.81	27.81	29.33	28.29	27.63	29.14	28.48	28.29	27.81
10. Average of Water Content	%	28.83			28.32			28.35			28.19		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.311	1.319	1.311	1.319	1.319	1.311	1.328	1.328	1.319	1.319	1.328	1.319
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.313			1.316			1.325			1.322		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.319</b>											

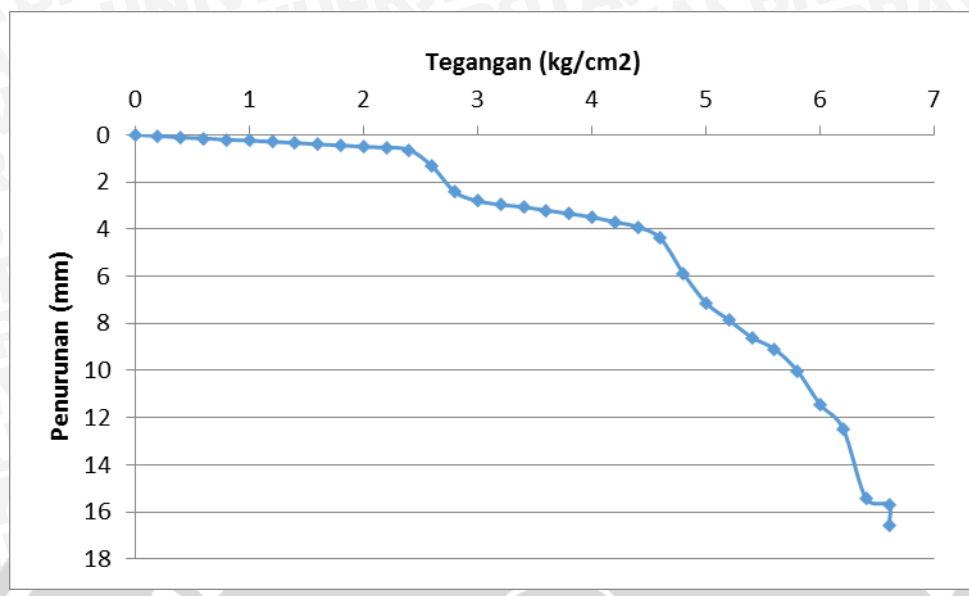
### PEMERIKSAAN DENSITY RING SAMPEL 9

Lapisan Tanah Dasar		1			2			3			4		
Ring No.		1	2	3	1	2	3	1	2	3	1	2	3
Height of Ring	cm	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Diameter of Ring	cm	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
1. Mass of Ring	gr	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
2. Mass of Wet Soil + Ring	gr	36.20	36.30	36.30	36.30	36.20	36.10	36.30	36.20	36.30	36.20	36.30	36.30
3. Mass of Wet Soil	gr	19.50	19.60	19.60	19.60	19.50	19.40	19.60	19.50	19.60	19.50	19.60	19.60
4. Volume of Soil	cm <sup>3</sup>	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
6. Mass of Dry Soil + Ring	gr	31.90	31.80	32.00	31.90	32.00	32.00	31.90	31.90	32.00	32.00	32.00	31.90
7. Mass of Dry Soil	gr	15.20	15.10	15.30	15.20	15.30	15.30	15.20	15.20	15.30	15.30	15.30	15.20
8. Mass of Water	gr	4.30	4.50	4.30	4.40	4.20	4.10	4.40	4.30	4.30	4.20	4.30	4.40
9. Water Content	%	28.29	29.80	28.10	28.95	27.45	26.80	28.95	28.29	28.10	27.45	28.10	28.95
10. Average of Water Content	%	28.73			27.73			28.45			28.17		
11. Dry Density of Soil ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.328	1.319	1.337	1.328	1.337	1.337	1.328	1.328	1.337	1.337	1.337	1.328
12. Average of $\gamma_d$ per layer	gr/cm <sup>3</sup>	1.328			1.334			1.331			1.334		
<b>Average of <math>\gamma_d</math> Total</b>	gr/cm <sup>3</sup>	<b>1.332</b>											

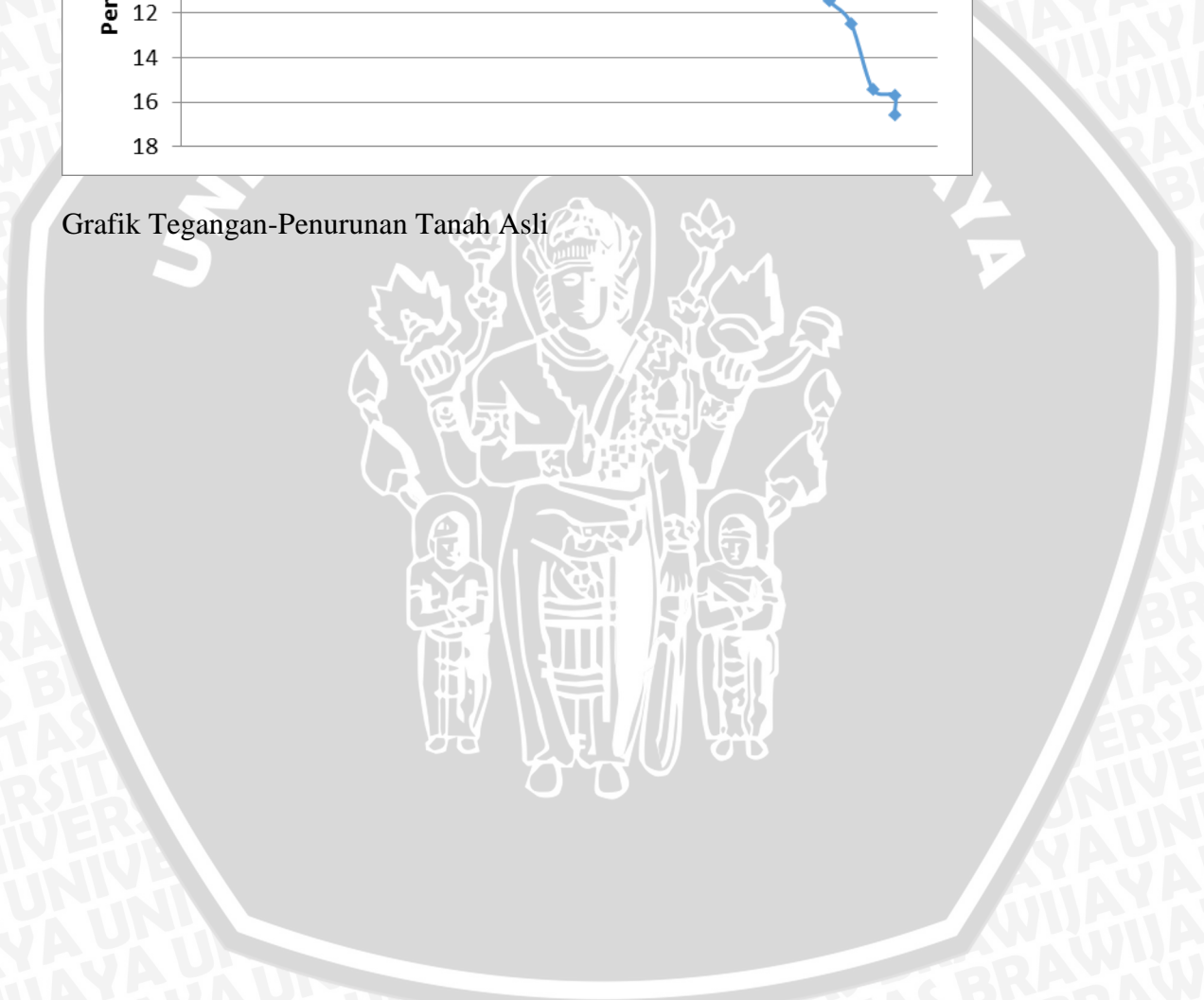
**Lampiran 2 Hasil Uji Pembebanan**

Tabel Uji Pembebanan Tanah Asli

Pembacaan n LVDT	Interval ( $\Delta$ )	Penurunan (s)	Beban (P)	Luas Pelat (A)	Daya Dukung (q)
		mm	kg	cm <sup>2</sup>	kg/cm <sup>2</sup>
A	$\Delta = A \pm 50$	$s = \Delta \times 0,005$	P	$A = 5 \times 5$	$q = P/A$
52.44	0	0	0	25	0
52.35	9	0.045	5	25	0.2
52.22	22	0.11	10	25	0.4
52.14	30	0.15	15	25	0.6
52.03	41	0.205	20	25	0.8
51.95	49	0.245	25	25	1
51.86	58	0.29	30	25	1.2
51.76	68	0.34	35	25	1.4
51.64	80	0.4	40	25	1.6
51.55	89	0.445	45	25	1.8
51.43	101	0.505	50	25	2
51.35	109	0.545	55	25	2.2
51.17	127	0.635	60	25	2.4
49.79	265	1.325	65	25	2.6
47.6	484	2.42	70	25	2.8
46.83	561	2.805	75	25	3
46.52	592	2.96	80	25	3.2
46.32	612	3.06	85	25	3.4
46.03	641	3.205	90	25	3.6
45.76	668	3.34	95	25	3.8
45.46	698	3.49	100	25	4
45.05	739	3.695	105	25	4.2
44.63	781	3.905	110	25	4.4
43.66	878	4.39	115	25	4.6
40.7	1174	5.87	120	25	4.8
38.18	1426	7.13	125	25	5
36.72	1572	7.86	130	25	5.2
35.26	1718	8.59	135	25	5.4
34.26	1818	9.09	140	25	5.6
32.4	2004	10.02	145	25	5.8
29.55	2289	11.445	150	25	6
27.5	2494	12.47	155	25	6.2
21.6	3084	15.42	160	25	6.4
21.1	3134	15.67	165	25	6.6
19.3	3314	16.57	165	25	6.6



Grafik Tegangan-Penurunan Tanah Asli



### Hasil Uji Beban (*Load Test*) Tanah Stabilisasi DSM

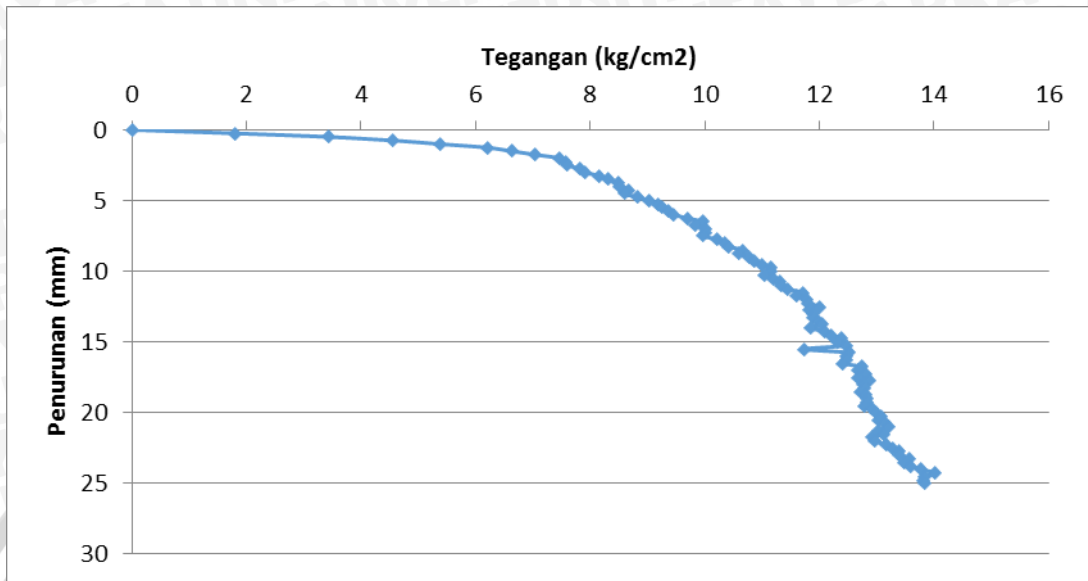
Variasi 1: L = 4cm ; Df = 5 cm

Faktor Kalibrasi alat: 0,005

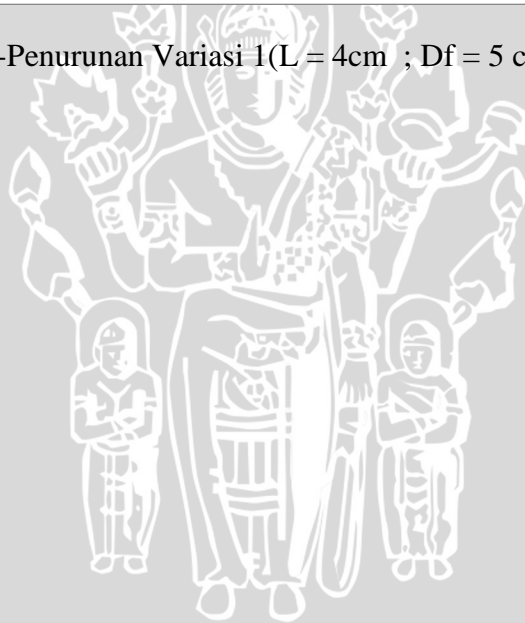
Pembacaan <i>LVDT</i>	Interval ( $\Delta$ )	Penurunan ( <i>s</i> )	Beban ( <i>P</i> )	Luas Pelat ( <i>A</i> )	Daya Dukung ( <i>q</i> )
		mm	kg	cm <sup>2</sup>	kg/cm <sup>2</sup>
A	$\Delta = A \pm 50$	$s = \Delta \times 0,005$	<i>P</i>	$A = 5 \times 5$	$q = P/A$
51.29	0	0	0	25	0
50.79	0.5	0.25	45	25	1.8
50.29	1	0.5	86	25	3.44
49.79	1.5	0.75	114	25	4.56
49.29	2	1	134.5	25	5.38
48.79	2.5	1.25	155	25	6.2
48.29	3	1.5	165.5	25	6.62
47.79	3.5	1.75	176	25	7.04
47.29	4	2	186.5	25	7.46
46.79	4.5	2.25	189.5	25	7.58
46.29	5	2.5	190	25	7.6
45.79	5.5	2.75	195.5	25	7.82
45.29	6	3	197.5	25	7.9
44.79	6.5	3.25	204	25	8.16
44.29	7	3.5	207.5	25	8.3
43.79	7.5	3.75	212	25	8.48
43.29	8	4	212.5	25	8.5
42.79	8.5	4.25	216.5	25	8.66
42.29	9	4.5	215	25	8.6
41.79	9.5	4.75	220.5	25	8.82
41.29	10	5	225.5	25	9.02
40.79	10.5	5.25	229.5	25	9.18
40.29	11	5.5	231	25	9.24
39.79	11.5	5.75	234	25	9.36
39.29	12	6	236.5	25	9.46
38.79	12.5	6.25	242.5	25	9.7
38.29	13	6.5	249	25	9.96
37.79	13.5	6.75	245.5	25	9.82
37.29	14	7	250.5	25	10.02
36.79	14.5	7.25	250.5	25	10.02
36.29	15	7.5	249	25	9.96

35.79	15.5	7.75	255.5	25	10.22
35.29	16	8	258.5	25	10.34
34.79	16.5	8.25	260.5	25	10.42
34.29	17	8.5	266.5	25	10.66
33.79	17.5	8.75	265	25	10.6
33.29	18	9	269.5	25	10.78
32.79	18.5	9.25	271.5	25	10.86
32.29	19	9.5	275	25	11
31.79	19.5	9.75	279	25	11.16
31.29	20	10	279	25	11.16
30.79	20.5	10.25	276	25	11.04
30.29	21	10.5	280	25	11.2
29.79	21.5	10.75	282.5	25	11.3
29.29	22	11	283	25	11.32
28.79	22.5	11.25	286	25	11.44
28.29	23	11.5	292.5	25	11.7
27.79	23.5	11.75	290	25	11.6
27.29	24	12	294.5	25	11.78
26.79	24.5	12.25	295	25	11.8
26.29	25	12.5	300	25	12
25.79	25.5	12.75	295.5	25	11.82
25.29	26	13	297.5	25	11.9
24.79	26.5	13.25	297.5	25	11.9
24.29	27	13.5	299.5	25	11.98
23.79	27.5	13.75	301	25	12.04
23.29	28	14	296	25	11.84
22.79	28.5	14.25	302.5	25	12.1
22.29	29	14.5	305.3	25	12.212
21.79	29.5	14.75	309.5	25	12.38
21.29	30	15	308	25	12.32
20.79	30.5	15.25	312	25	12.48
20.29	31	15.5	293.5	25	11.74
19.79	31.5	15.75	313	25	12.52
19.29	32	16	312	25	12.48
18.79	32.5	16.25	312	25	12.48
18.29	33	16.5	310	25	12.4
17.79	33.5	16.75	318.5	25	12.74
17.29	34	17	317	25	12.68
16.79	34.5	17.25	320	25	12.8
16.29	35	17.5	317	25	12.68
15.79	35.5	17.75	322	25	12.88

15.29	36	18	319	25	12.76
14.79	36.5	18.25	319.5	25	12.78
14.29	37	18.5	318	25	12.72
13.79	37.5	18.75	320	25	12.8
13.29	38	19	320.5	25	12.82
12.79	38.5	19.25	321	25	12.84
12.29	39	19.5	319.5	25	12.78
11.79	39.5	19.75	323	25	12.92
11.29	40	20	324.5	25	12.98
10.79	40.5	20.25	327	25	13.08
10.29	41	20.5	326	25	13.04
9.79	41.5	20.75	328.5	25	13.14
9.29	42	21	330.5	25	13.22
8.79	42.5	21.25	326	25	13.04
8.29	43	21.5	328	25	13.12
7.79	43.5	21.75	323	25	12.92
7.29	44	22	324	25	12.96
6.79	44.5	22.25	329	25	13.16
6.29	45	22.5	332	25	13.28
5.79	45.5	22.75	335	25	13.4
5.29	46	23	335	25	13.4
4.79	46.5	23.25	339	25	13.56
4.29	47	23.5	337	25	13.48
3.79	47.5	23.75	340	25	13.6
3.29	48	24	344	25	13.76
2.79	48.5	24.25	350.5	25	14.02
2.29	49	24.5	346	25	13.84
1.79	49.5	24.75	345.5	25	13.82
1.29	50	25	346	25	13.84



Grafik Tegangan-Penurunan Variasi 1 (L = 4cm ; Df = 5 cm)





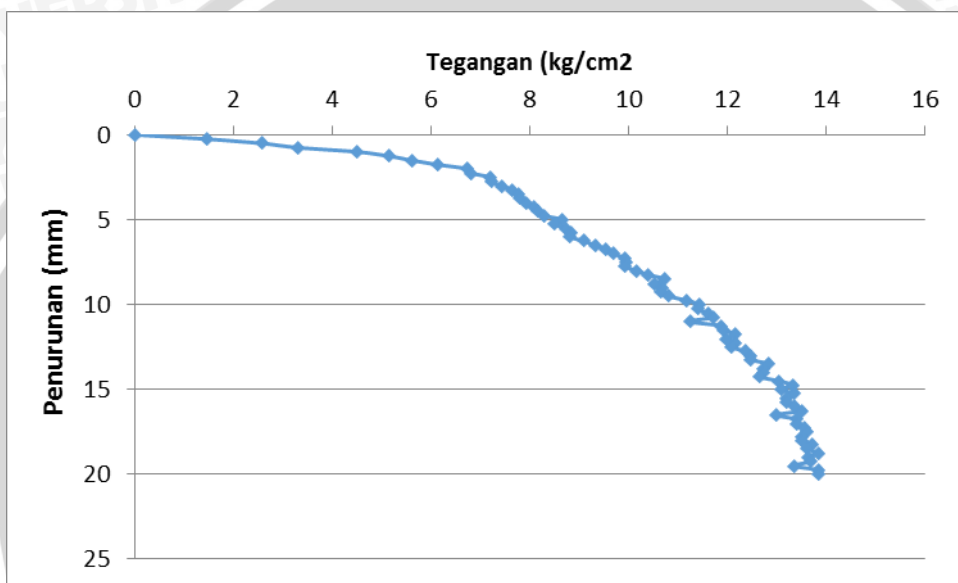
Variasi 2:  $L = 5\text{ cm}$  ;  $D_f = 5\text{ cm}$

Faktor Kalibrasi alat: 0,005

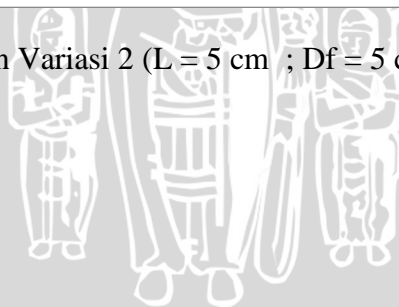
Pembacaan <i>LVDT</i>	Interval ( $\Delta$ )	Penurunan ( $s$ )	Beban ( $P$ )	Luas Pelat ( $A$ )	Daya Dukung ( $q$ )
		mm	kg	$\text{cm}^2$	$\text{kg/cm}^2$
A	$\Delta = A$ $\pm 50$	$s = \Delta \times$ 0,005	$P$	$A = 5 \times 5$	$q = P/A$
51.75	0	0	0	25	0
51.25	0.5	0.25	36.5	25	1.46
50.75	1	0.5	64	25	2.56
50.25	1.5	0.75	82.5	25	3.3
49.75	2	1	112.5	25	4.5
49.25	2.5	1.25	128.5	25	5.14
48.75	3	1.5	140	25	5.6
48.25	3.5	1.75	153	25	6.12
47.75	4	2	168	25	6.72
47.25	4.5	2.25	170	25	6.8
46.75	5	2.5	180	25	7.2
46.25	5.5	2.75	180.5	25	7.22
45.75	6	3	185.5	25	7.42
45.25	6.5	3.25	191	25	7.64
44.75	7	3.5	194	25	7.76
44.25	7.5	3.75	195	25	7.8
43.75	8	4	198	25	7.92
43.25	8.5	4.25	202	25	8.08
42.75	9	4.5	204	25	8.16
42.25	9.5	4.75	207	25	8.28
41.75	10	5	216	25	8.64
41.25	10.5	5.25	212	25	8.48
40.75	11	5.5	218	25	8.72
40.25	11.5	5.75	221	25	8.84
39.75	12	6	220	25	8.8
39.25	12.5	6.25	227	25	9.08
38.75	13	6.5	233	25	9.32
38.25	13.5	6.75	238	25	9.52
37.75	14	7	242	25	9.68
37.25	14.5	7.25	248	25	9.92
36.75	15	7.5	249	25	9.96
36.25	15.5	7.75	248	25	9.92
35.75	16	8	254	25	10.16
35.25	16.5	8.25	260	25	10.4

34.75	17	8.5	268	25	10.72
34.25	17.5	8.75	263	25	10.52
33.75	18	9	267	25	10.68
33.25	18.5	9.25	266	25	10.64
32.75	19	9.5	270	25	10.8
32.25	19.5	9.75	279	25	11.16
31.75	20	10	286	25	11.44
31.25	20.5	10.25	285	25	11.4
30.75	21	10.5	290	25	11.6
30.25	21.5	10.75	293	25	11.72
29.75	22	11	281	25	11.24
29.25	22.5	11.25	297	25	11.88
28.75	23	11.5	298	25	11.92
28.25	23.5	11.75	304	25	12.16
27.75	24	12	299.5	25	11.98
27.25	24.5	12.25	304	25	12.16
26.75	25	12.5	302	25	12.08
26.25	25.5	12.75	309	25	12.36
25.75	26	13	312	25	12.48
25.25	26.5	13.25	312	25	12.48
24.75	27	13.5	321	25	12.84
24.25	27.5	13.75	318	25	12.72
23.75	28	14	318	25	12.72
23.25	28.5	14.25	316	25	12.64
22.75	29	14.5	326	25	13.04
22.25	29.5	14.75	333	25	13.32
21.75	30	15	327	25	13.08
21.25	30.5	15.25	334	25	13.36
20.75	31	15.5	330	25	13.2
20.25	31.5	15.75	330	25	13.2
19.75	32	16	334	25	13.36
19.25	32.5	16.25	338	25	13.52
18.75	33	16.5	325	25	13
18.25	33.5	16.75	335	25	13.4
17.75	34	17	335	25	13.4
17.25	34.5	17.25	339	25	13.56
16.75	35	17.5	340	25	13.6
16.25	35.5	17.75	338	25	13.52
15.75	36	18	338	25	13.52
15.25	36.5	18.25	343	25	13.72
14.75	37	18.5	340.5	25	13.62

14.25	37.5	18.75	346	25	13.84
13.75	38	19	341	25	13.64
13.25	38.5	19.25	342	25	13.68
12.75	39	19.5	334	25	13.36
12.25	39.5	19.75	346	25	13.84
11.75	40	20	346	25	13.84



Grafik Tegangan-Penurunan Variasi 2 (L = 5 cm ; Df = 5 cm)



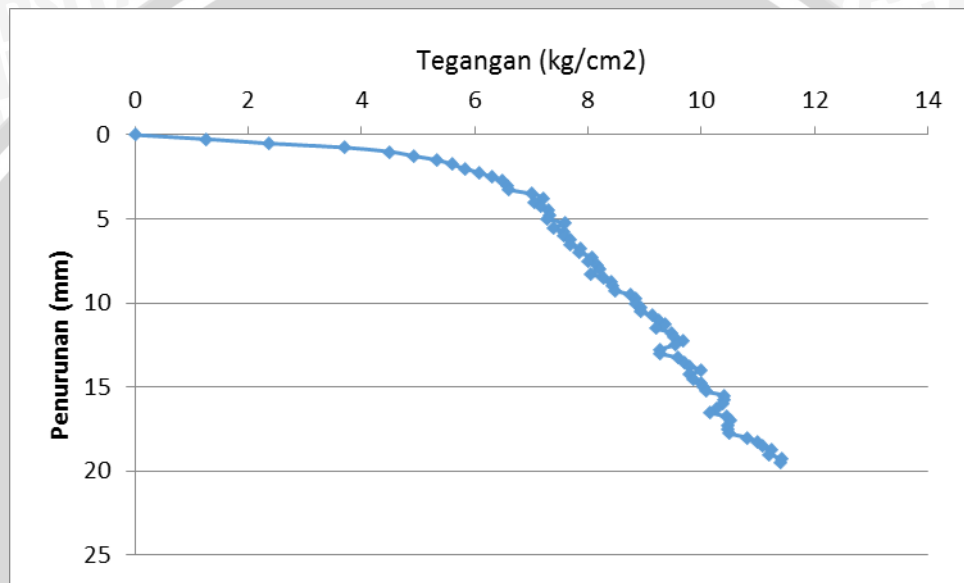
Variasi 3:  $L = 6 \text{ cm}$  ;  $D_f = 5 \text{ cm}$

Faktor Kalibrasi alat: 0,005

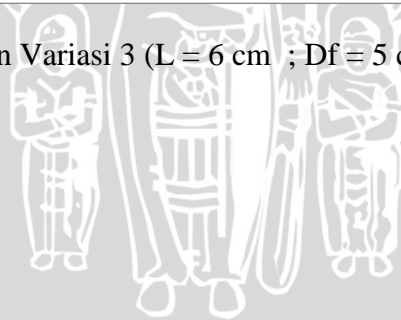
Pembacaan <i>LVDT</i>	Interval ( $\Delta$ )	Penurunan ( $s$ )	Beban ( $P$ )	Luas Pelat ( $A$ )	Daya Dukung ( $q$ )
		mm	kg	cm <sup>2</sup>	kg/cm <sup>2</sup>
A	$\Delta = A$ $\pm 50$	$s = \Delta \times$ 0,005	$P$	$A = 5 \times 5$	$q = P/A$
53.02	0	0	0	25	0
52.52	0.5	0.25	31.5	25	1.26
52.02	1	0.5	59	25	2.36
51.52	1.5	0.75	92.5	25	3.7
51.02	2	1	112.5	25	4.5
50.52	2.5	1.25	123	25	4.92
50.02	3	1.5	133.5	25	5.34
49.52	3.5	1.75	140	25	5.6
49.02	4	2	145.5	25	5.82
48.52	4.5	2.25	152	25	6.08
48.02	5	2.5	157.5	25	6.3
47.52	5.5	2.75	162	25	6.48
47.02	6	3	164.5	25	6.58
46.52	6.5	3.25	165	25	6.6
46.02	7	3.5	175	25	7
45.52	7.5	3.75	180	25	7.2
45.02	8	4	176.5	25	7.06
44.52	8.5	4.25	179	25	7.16
44.02	9	4.5	182.5	25	7.3
43.52	9.5	4.75	183	25	7.32
43.02	10	5	182	25	7.28
42.52	10.5	5.25	190	25	7.6
42.02	11	5.5	185	25	7.4
41.52	11.5	5.75	189	25	7.56
41.02	12	6	189	25	7.56
40.52	12.5	6.25	192	25	7.68
40.02	13	6.5	192	25	7.68
39.52	13.5	6.75	196.5	25	7.86
39.02	14	7	196	25	7.84
38.52	14.5	7.25	202	25	8.08
38.02	15	7.5	200	25	8
37.52	15.5	7.75	204	25	8.16
37.02	16	8	205	25	8.2

36.52	16.5	8.25	201	25	8.04
36.02	17	8.5	207	25	8.28
35.52	17.5	8.75	210	25	8.4
35.02	18	9	211	25	8.44
34.52	18.5	9.25	212	25	8.48
34.02	19	9.5	218.5	25	8.74
33.52	19.5	9.75	221	25	8.84
33.02	20	10	221	25	8.84
32.52	20.5	10.25	223	25	8.92
32.02	21	10.5	223	25	8.92
31.52	21.5	10.75	228.5	25	9.14
31.02	22	11	231	25	9.24
30.52	22.5	11.25	234	25	9.36
30.02	23	11.5	230	25	9.2
29.52	23.5	11.75	237	25	9.48
29.02	24	12	238	25	9.52
28.52	24.5	12.25	242	25	9.68
28.02	25	12.5	238.5	25	9.54
27.52	25.5	12.75	232	25	9.28
27.02	26	13	232	25	9.28
26.52	26.5	13.25	239.5	25	9.58
26.02	27	13.5	242.5	25	9.7
25.52	27.5	13.75	244.5	25	9.78
25.02	28	14	250	25	10
24.52	28.5	14.25	245	25	9.8
24.02	29	14.5	246.5	25	9.86
23.52	29.5	14.75	250	25	10
23.02	30	15	251	25	10.04
22.52	30.5	15.25	252	25	10.08
22.02	31	15.5	260	25	10.4
21.52	31.5	15.75	260	25	10.4
21.02	32	16	259.5	25	10.38
20.52	32.5	16.25	256.5	25	10.26
20.02	33	16.5	254	25	10.16
19.52	33.5	16.75	261	25	10.44
19.02	34	17	263	25	10.52
18.52	34.5	17.25	261.5	25	10.46
18.02	35	17.5	262	25	10.48
17.52	35.5	17.75	262.5	25	10.5
17.02	36	18	270	25	10.8
16.52	36.5	18.25	274.5	25	10.98

16.02	37	18.5	277	25	11.08
15.52	37.5	18.75	281	25	11.24
15.02	38	19	280	25	11.2
14.52	38.5	19.25	285.5	25	11.42
14.02	39	19.5	285	25	11.4



Grafik Tegangan-Penurunan Variasi 3 (L = 6 cm ; Df = 5 cm)



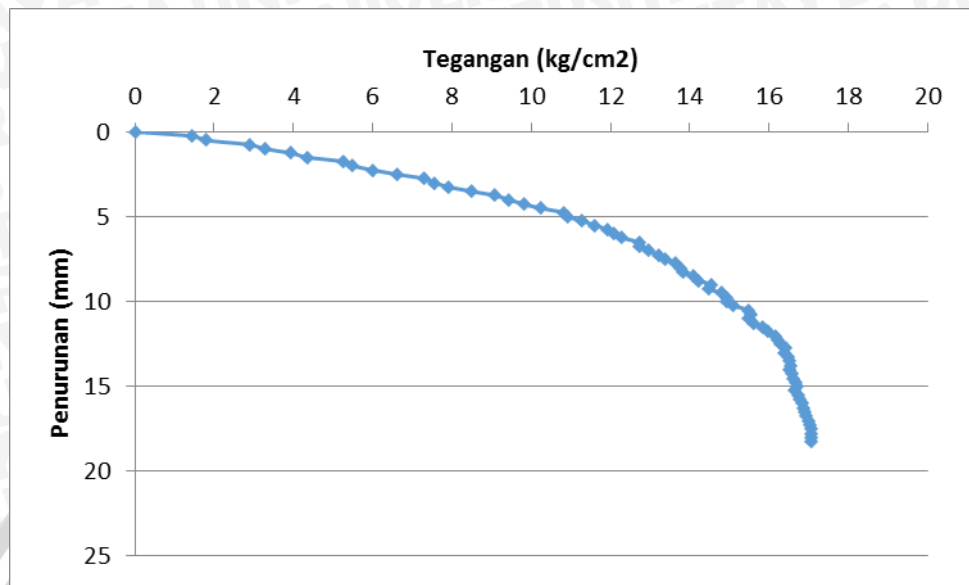
Variasi 4:  $L = 4 \text{ cm}$  ;  $D_f = 10 \text{ cm}$

Faktor Kalibrasi alat: 0,005

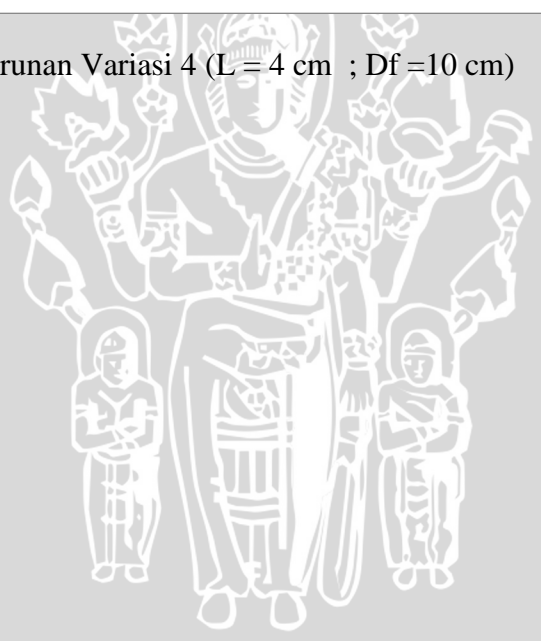
Pembacaan <i>LVDT</i>	Interval ( $\Delta$ )	Penurunan ( $s$ )	Beban ( $P$ )	Luas Pelat ( $A$ )	Daya Dukung ( $q$ )
		mm	kg	cm <sup>2</sup>	kg/cm <sup>2</sup>
A	$\Delta = A$ $\pm 50$	$s = \Delta \times$ 0,005	$P$	$A = 5 \times 5$	$q = P/A$
54.98	0	0	0	25	0
54.48	0.5	0.25	36	25	1.44
53.98	1	0.5	45	25	1.8
53.48	1.5	0.75	72	25	2.88
52.98	2	1	82	25	3.28
52.48	2.5	1.25	98.5	25	3.94
51.98	3	1.5	108.5	25	4.34
51.48	3.5	1.75	131.5	25	5.26
50.98	4	2	137	25	5.48
50.48	4.5	2.25	150	25	6
49.98	5	2.5	165	25	6.6
49.48	5.5	2.75	182	25	7.28
48.98	6	3	189	25	7.56
48.48	6.5	3.25	198	25	7.92
47.98	7	3.5	212	25	8.48
47.48	7.5	3.75	227	25	9.08
46.98	8	4	236	25	9.44
46.48	8.5	4.25	245	25	9.8
45.98	9	4.5	256	25	10.24
45.48	9.5	4.75	270	25	10.8
44.98	10	5	273	25	10.92
44.48	10.5	5.25	282	25	11.28
43.98	11	5.5	290	25	11.6
43.48	11.5	5.75	297.5	25	11.9
42.98	12	6	302	25	12.08
42.48	12.5	6.25	307	25	12.28
41.98	13	6.5	318	25	12.72
41.48	13.5	6.75	318	25	12.72
40.98	14	7	324	25	12.96
40.48	14.5	7.25	330.5	25	13.22
39.98	15	7.5	334	25	13.36
39.48	15.5	7.75	340.5	25	13.62
38.98	16	8	344	25	13.76
38.48	16.5	8.25	345.5	25	13.82

37.98	17	8.5	352	25	14.08
37.48	17.5	8.75	355.5	25	14.22
36.98	18	9	363	25	14.52
36.48	18.5	9.25	362	25	14.48
35.98	19	9.5	370	25	14.8
35.48	19.5	9.75	373.5	25	14.94
34.98	20	10	373.5	25	14.94
34.48	20.5	10.25	377.5	25	15.1
33.98	21	10.5	387	25	15.48
33.48	21.5	10.75	388.5	25	15.54
32.98	22	11	387	25	15.48
32.48	22.5	11.25	390	25	15.6
31.98	23	11.5	395.5	25	15.82
31.48	23.5	11.75	399	25	15.96
30.98	24	12	404	25	16.16
30.48	24.5	12.25	405.5	25	16.22
29.98	25	12.5	407	25	16.28
29.48	25.5	12.75	410	25	16.4
28.98	26	13	409.5	25	16.38
28.48	26.5	13.25	412	25	16.48
27.98	27	13.5	413	25	16.52
27.48	27.5	13.75	413.5	25	16.54
26.98	28	14	412.5	25	16.5
26.48	28.5	14.25	414	25	16.56
25.98	29	14.5	415	25	16.6
25.48	29.5	14.75	417	25	16.68
24.98	30	15	417.5	25	16.7
24.48	30.5	15.25	416	25	16.64
23.98	31	15.5	418.5	25	16.74
23.48	31.5	15.75	419.5	25	16.78
22.98	32	16	420.5	25	16.82
22.48	32.5	16.25	422	25	16.88
21.98	33	16.5	422.5	25	16.9
21.48	33.5	16.75	423.5	25	16.94
20.98	34	17	424.5	25	16.98
20.48	34.5	17.25	426	25	17.04
19.98	35	17.5	426.5	25	17.06
19.48	35.5	17.75	426.5	25	17.06
18.98	36	18	426.5	25	17.06
18.48	36.5	18.25	426.5	25	17.06





Grafik Tegangan-Penurunan Variasi 4 (L = 4 cm ; Df = 10 cm)

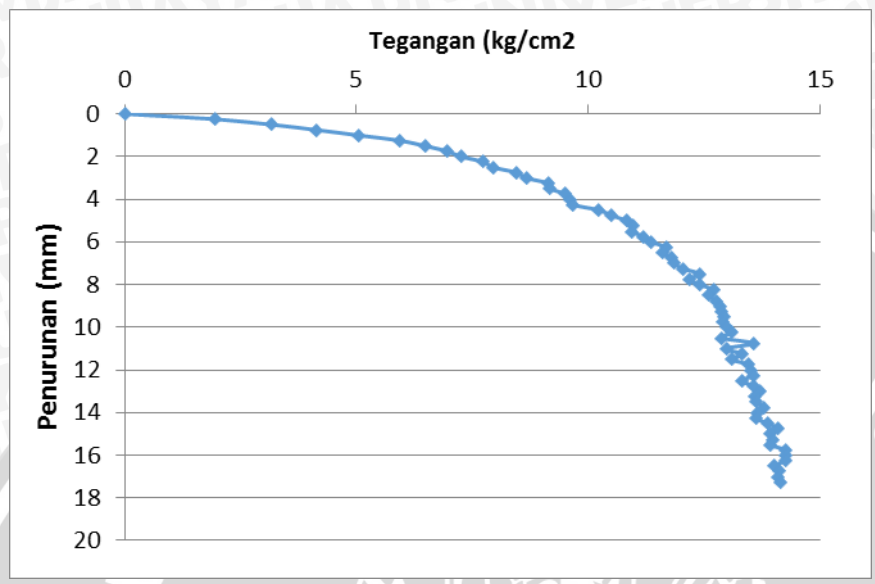


Variasi 5:  $L = 5 \text{ cm}$  ;  $D_f = 10 \text{ cm}$

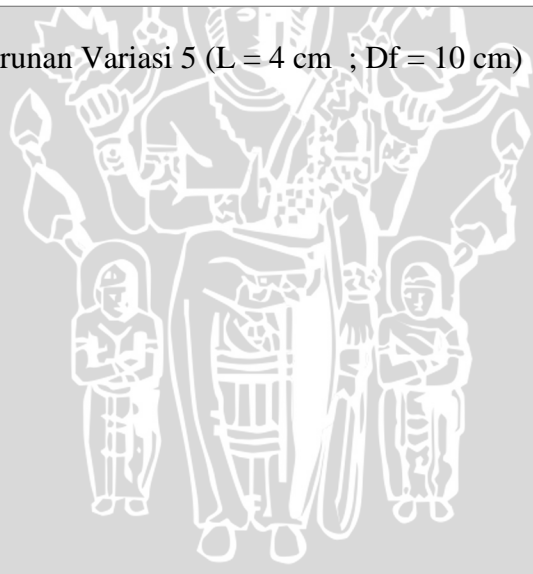
Faktor Kalibrasi alat: 0,005

Pembacaan <i>LVDT</i>	Interval ( $\Delta$ )	Penurunan ( $s$ )	Beban ( $P$ )	Luas Pelat ( $A$ )	Daya Dukung ( $q$ )
		Mm	kg	cm <sup>2</sup>	kg/cm <sup>2</sup>
A	$\Delta = A$ $\pm 50$	$s = \Delta \times$ 0,005	$P$	$A = 5 \times 5$	$q = P/A$
49.78	0	0	0	25	0
49.28	0.5	0.25	49	25	1.96
48.78	1	0.5	79	25	3.16
48.28	1.5	0.75	103.5	25	4.14
47.78	2	1	126	25	5.04
47.28	2.5	1.25	148.5	25	5.94
46.78	3	1.5	162	25	6.48
46.28	3.5	1.75	174	25	6.96
45.78	4	2	181.5	25	7.26
45.28	4.5	2.25	193.5	25	7.74
44.78	5	2.5	198.5	25	7.94
44.28	5.5	2.75	211.5	25	8.46
43.78	6	3	216.5	25	8.66
43.28	6.5	3.25	228.5	25	9.14
42.78	7	3.5	229.5	25	9.18
42.28	7.5	3.75	237.5	25	9.5
41.78	8	4	240.5	25	9.62
41.28	8.5	4.25	241.5	25	9.66
40.78	9	4.5	255.5	25	10.22
40.28	9.5	4.75	262.5	25	10.5
39.78	10	5	270.5	25	10.82
39.28	10.5	5.25	274.5	25	10.98
38.78	11	5.5	273.5	25	10.94
38.28	11.5	5.75	280	25	11.2
37.78	12	6	284	25	11.36
37.28	12.5	6.25	292	25	11.68
36.78	13	6.5	290	25	11.6
36.28	13.5	6.75	295	25	11.8
35.78	14	7	296.5	25	11.86
35.28	14.5	7.25	301	25	12.04
34.78	15	7.5	310	25	12.4
34.28	15.5	7.75	304.5	25	12.18
33.78	16	8	310	25	12.4

33.28	16.5	8.25	318	25	12.72
32.78	17	8.5	315	25	12.6
32.28	17.5	8.75	319	25	12.76
31.78	18	9	321	25	12.84
31.28	18.5	9.25	322	25	12.88
30.78	19	9.5	323.5	25	12.94
30.28	19.5	9.75	322.5	25	12.9
29.78	20	10	324.5	25	12.98
29.28	20.5	10.25	327.5	25	13.1
28.78	21	10.5	322	25	12.88
28.28	21.5	10.75	339	25	13.56
27.78	22	11	324.5	25	12.98
27.28	22.5	11.25	333	25	13.32
26.78	23	11.5	327.5	25	13.1
26.28	23.5	11.75	336.5	25	13.46
25.78	24	12	337.5	25	13.5
25.28	24.5	12.25	339.5	25	13.58
24.78	25	12.5	333	25	13.32
24.28	25.5	12.75	339	25	13.56
23.78	26	13	342.5	25	13.7
23.28	26.5	13.25	340	25	13.6
22.78	27	13.5	340.5	25	13.62
22.28	27.5	13.75	344.5	25	13.78
21.78	28	14	341.5	25	13.66
21.28	28.5	14.25	340.5	25	13.62
20.78	29	14.5	346.5	25	13.86
20.28	29.5	14.75	352.5	25	14.1
19.78	30	15	348.5	25	13.94
19.28	30.5	15.25	349.5	25	13.98
18.78	31	15.5	348	25	13.92
18.28	31.5	15.75	356.5	25	14.26
17.78	32	16	356.5	25	14.26
17.28	32.5	16.25	356.5	25	14.26
16.78	33	16.5	350	25	14
16.28	33.5	16.75	353	25	14.12
15.78	34	17	352.5	25	14.1
15.28	34.5	17.25	354	25	14.16



Grafik Tegangan-Penurunan Variasi 5 (L = 4 cm ; Df = 10 cm)



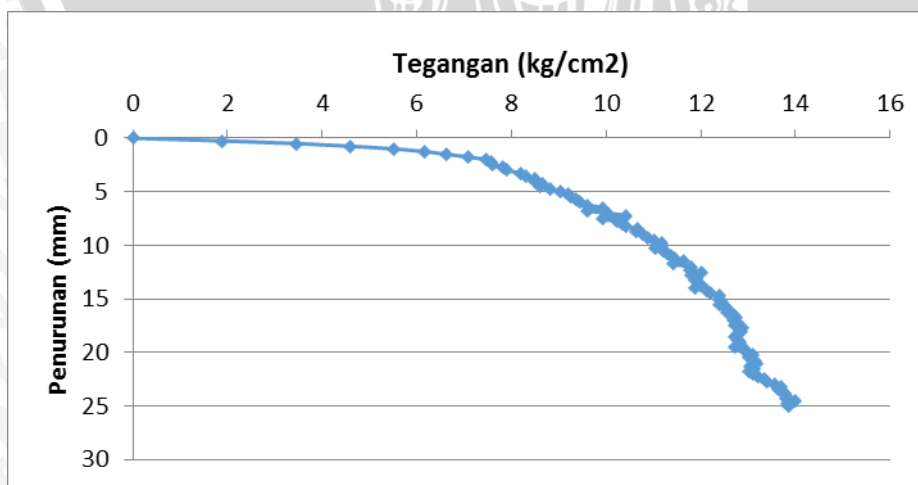
Variasi 6 :  $L = 6\text{cm}$  ;  $D_f = 10\text{ cm}$

Faktor Kalibrasi alat: 0,005

Pembacaan <i>LVDT</i>	Interval ( $\Delta$ )	Penurunan ( $s$ )	Beban ( $P$ )	Luas Pelat ( $A$ )	Daya Dukung ( $q$ )
		mm	kg	cm <sup>2</sup>	kg/cm <sup>2</sup>
A	$\Delta = A \pm 50$	$s = \Delta \times 0,005$	$P$	$A = 5 \times 5$	$q = P/A$
57.41	0	0	0	25	0
56.91	0.5	0.25	47	25	1.88
56.41	1	0.5	86	25	3.44
55.91	1.5	0.75	114.5	25	4.58
55.41	2	1	138	25	5.52
54.91	2.5	1.25	154	25	6.16
54.41	3	1.5	165.5	25	6.62
53.91	3.5	1.75	177	25	7.08
53.41	4	2	186.5	25	7.46
52.91	4.5	2.25	189	25	7.56
52.41	5	2.5	190	25	7.6
51.91	5.5	2.75	195.5	25	7.82
51.41	6	3	197.5	25	7.9
50.91	6.5	3.25	204.5	25	8.18
50.41	7	3.5	207.5	25	8.3
49.91	7.5	3.75	212	25	8.48
49.41	8	4	212.5	25	8.5
48.91	8.5	4.25	216.5	25	8.66
48.41	9	4.5	215	25	8.6
47.91	9.5	4.75	220.5	25	8.82
47.41	10	5	225.5	25	9.02
46.91	10.5	5.25	229.5	25	9.18
46.41	11	5.5	231	25	9.24
45.91	11.5	5.75	234	25	9.36
45.41	12	6	236	25	9.44
44.91	12.5	6.25	240	25	9.6
44.41	13	6.5	248	25	9.92
43.91	13.5	6.75	240	25	9.6
43.41	14	7	250.5	25	10.02
42.91	14.5	7.25	260	25	10.4
42.41	15	7.5	248	25	9.92
41.91	15.5	7.75	255.5	25	10.22
41.41	16	8	258.5	25	10.34

40.91	16.5	8.25	260.5	25	10.42
40.41	17	8.5	266.5	25	10.66
39.91	17.5	8.75	265.5	25	10.62
39.41	18	9	269	25	10.76
38.91	18.5	9.25	271.5	25	10.86
38.41	19	9.5	275	25	11
37.91	19.5	9.75	279.5	25	11.18
37.41	20	10	279	25	11.16
36.91	20.5	10.25	276	25	11.04
36.41	21	10.5	280	25	11.2
35.91	21.5	10.75	282	25	11.28
35.41	22	11	284	25	11.36
34.91	22.5	11.25	286	25	11.44
34.41	23	11.5	291	25	11.64
33.91	23.5	11.75	285.5	25	11.42
33.41	24	12	294.5	25	11.78
32.91	24.5	12.25	294	25	11.76
32.41	25	12.5	300	25	12
31.91	25.5	12.75	295	25	11.8
31.41	26	13	297.5	25	11.9
30.91	26.5	13.25	297	25	11.88
30.41	27	13.5	299	25	11.96
29.91	27.5	13.75	300	25	12
29.41	28	14	297	25	11.88
28.91	28.5	14.25	303	25	12.12
28.41	29	14.5	305	25	12.2
27.91	29.5	14.75	309.5	25	12.38
27.41	30	15	309.5	25	12.38
26.91	30.5	15.25	311	25	12.44
26.41	31	15.5	309.5	25	12.38
25.91	31.5	15.75	313	25	12.52
25.41	32	16	314.5	25	12.58
24.91	32.5	16.25	314	25	12.56
24.41	33	16.5	317	25	12.68
23.91	33.5	16.75	318.5	25	12.74
23.41	34	17	317	25	12.68
22.91	34.5	17.25	319	25	12.76
22.41	35	17.5	318	25	12.72
21.91	35.5	17.75	322	25	12.88
21.41	36	18	321	25	12.84
20.91	36.5	18.25	319	25	12.76

20.41	37	18.5	318	25	12.72
19.91	37.5	18.75	319	25	12.76
19.41	38	19	320.5	25	12.82
18.91	38.5	19.25	320	25	12.8
18.41	39	19.5	318	25	12.72
17.91	39.5	19.75	323	25	12.92
17.41	40	20	324	25	12.96
16.91	40.5	20.25	327	25	13.08
16.41	41	20.5	325	25	13
15.91	41.5	20.75	328.5	25	13.14
15.41	42	21	329.5	25	13.18
14.91	42.5	21.25	326	25	13.04
14.41	43	21.5	328	25	13.12
13.91	43.5	21.75	325	25	13
13.41	44	22	327	25	13.08
12.91	44.5	22.25	330	25	13.2
12.41	45	22.5	333.5	25	13.34
11.91	45.5	22.75	335	25	13.4
11.41	46	23	339	25	13.56
10.91	46.5	23.25	342	25	13.68
10.41	47	23.5	341	25	13.64
9.91	47.5	23.75	344	25	13.76
9.41	48	24	345	25	13.8
8.91	48.5	24.25	345	25	13.8
8.41	49	24.5	349.5	25	13.98
7.91	49.5	24.75	345.5	25	13.82
7.41	50	25	346	25	13.84



Grafik Tegangan-Penurunan Variasi 6 (L = 6 cm ; Df = 10 cm)

Variasi 7:  $L = 4 \text{ cm}$  ;  $D_f = 15 \text{ cm}$

Faktor Kalibrasi alat: 0,005

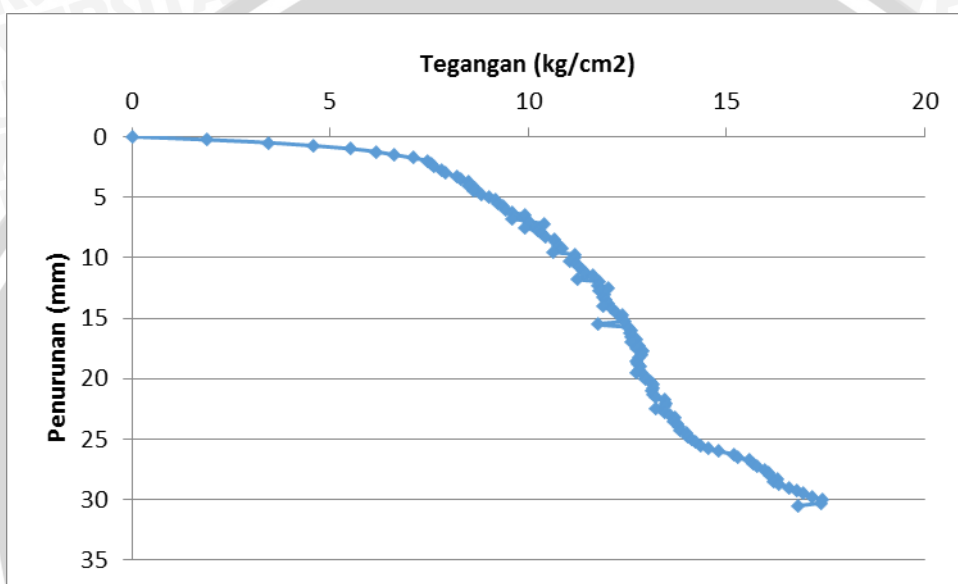
Pembacaan <i>LVDT</i>	Interval ( $\Delta$ )	Penurunan ( $s$ )	Beban ( $P$ )	Luas Pelat ( $A$ )	Daya Dukung ( $q$ )
		Mm	kg	cm <sup>2</sup>	kg/cm <sup>2</sup>
A	$\Delta = A \pm 50$	$s = \Delta \times 0,005$	$P$	$A = 5 \times 5$	$q = P/A$
61.07	0	0	0	25	0
60.57	0.5	0.25	47	25	1.88
60.07	1	0.5	86	25	3.44
59.57	1.5	0.75	114.5	25	4.58
59.07	2	1	138	25	5.52
58.57	2.5	1.25	154	25	6.16
58.07	3	1.5	165.5	25	6.62
57.57	3.5	1.75	177	25	7.08
57.07	4	2	186.5	25	7.46
56.57	4.5	2.25	189	25	7.56
56.07	5	2.5	190	25	7.6
55.57	5.5	2.75	195.5	25	7.82
55.07	6	3	197.5	25	7.9
54.57	6.5	3.25	204.5	25	8.18
54.07	7	3.5	207.5	25	8.3
53.57	7.5	3.75	212	25	8.48
53.07	8	4	212.5	25	8.5
52.57	8.5	4.25	216.5	25	8.66
52.07	9	4.5	215	25	8.6
51.57	9.5	4.75	220.5	25	8.82
51.07	10	5	225.5	25	9.02
50.57	10.5	5.25	229.5	25	9.18
50.07	11	5.5	231	25	9.24
49.57	11.5	5.75	234	25	9.36
49.07	12	6	236	25	9.44
48.57	12.5	6.25	240	25	9.6
48.07	13	6.5	248	25	9.92
47.57	13.5	6.75	240	25	9.6
47.07	14	7	250.5	25	10.02
46.57	14.5	7.25	260	25	10.4
46.07	15	7.5	248	25	9.92
45.57	15.5	7.75	255.5	25	10.22
45.07	16	8	258.5	25	10.34
44.57	16.5	8.25	260.5	25	10.42



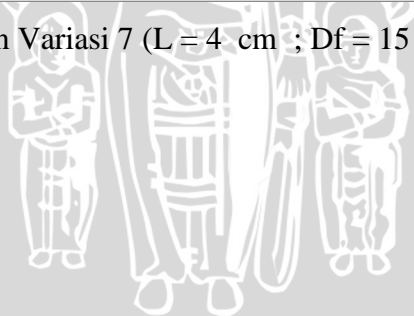
44.07	17	8.5	266.5	25	10.66
43.57	17.5	8.75	267.5	25	10.7
43.07	18	9	269	25	10.76
42.57	18.5	9.25	271.5	25	10.86
42.07	19	9.5	265.5	25	10.62
41.57	19.5	9.75	279.5	25	11.18
41.07	20	10	279	25	11.16
40.57	20.5	10.25	276	25	11.04
40.07	21	10.5	280	25	11.2
39.57	21.5	10.75	282	25	11.28
39.07	22	11	284	25	11.36
38.57	22.5	11.25	286	25	11.44
38.07	23	11.5	291	25	11.64
37.57	23.5	11.75	280.5	25	11.22
37.07	24	12	294.5	25	11.78
36.57	24.5	12.25	294	25	11.76
36.07	25	12.5	300	25	12
35.57	25.5	12.75	295	25	11.8
35.07	26	13	297.5	25	11.9
34.57	26.5	13.25	297	25	11.88
34.07	27	13.5	299	25	11.96
33.57	27.5	13.75	300	25	12
33.07	28	14	297	25	11.88
32.57	28.5	14.25	303	25	12.12
32.07	29	14.5	305	25	12.2
31.57	29.5	14.75	309.5	25	12.38
31.07	30	15	309.5	25	12.38
30.57	30.5	15.25	311	25	12.44
30.07	31	15.5	293.5	25	11.74
29.57	31.5	15.75	313	25	12.52
29.07	32	16	314.5	25	12.58
28.57	32.5	16.25	314	25	12.56
28.07	33	16.5	315	25	12.6
27.57	33.5	16.75	318.5	25	12.74
27.07	34	17	315	25	12.6
26.57	34.5	17.25	319.5	25	12.78
26.07	35	17.5	318	25	12.72
25.57	35.5	17.75	322	25	12.88
25.07	36	18	321	25	12.84
24.57	36.5	18.25	319.5	25	12.78
24.07	37	18.5	318	25	12.72

23.57	37.5	18.75	319	25	12.76
23.07	38	19	320.5	25	12.82
22.57	38.5	19.25	320	25	12.8
22.07	39	19.5	318	25	12.72
21.57	39.5	19.75	323	25	12.92
21.07	40	20	324	25	12.96
20.57	40.5	20.25	327	25	13.08
20.07	41	20.5	329	25	13.16
19.57	41.5	20.75	328.5	25	13.14
19.07	42	21	327.5	25	13.1
18.57	42.5	21.25	329	25	13.16
18.07	43	21.5	330	25	13.2
17.57	43.5	21.75	336	25	13.44
17.07	44	22	337	25	13.48
16.57	44.5	22.25	335.5	25	13.42
16.07	45	22.5	330.5	25	13.22
15.57	45.5	22.75	335.5	25	13.42
15.07	46	23	339	25	13.56
14.57	46.5	23.25	342	25	13.68
14.07	47	23.5	341.5	25	13.66
13.57	47.5	23.75	344	25	13.76
13.07	48	24	345	25	13.8
12.57	48.5	24.25	346	25	13.84
12.07	49	24.5	349.5	25	13.98
11.57	49.5	24.75	350.5	25	14.02
11.07	50	25	352.5	25	14.1
10.57	50.5	25.25	355	25	14.2
10.07	51	25.5	358.5	25	14.34
9.57	51.5	25.75	363	25	14.52
9.07	52	26	370	25	14.8
8.57	52.5	26.25	379.5	25	15.18
8.07	53	26.5	382	25	15.28
7.57	53.5	26.75	389.5	25	15.58
7.07	54	27	392	25	15.68
6.57	54.5	27.25	394	25	15.76
6.07	55	27.5	399	25	15.96
5.57	55.5	27.75	401.5	25	16.06
5.07	56	28	402.5	25	16.1
4.57	56.5	28.25	407	25	16.28
4.07	57	28.5	405	25	16.2
3.57	57.5	28.75	408	25	16.32

3.07	58	29	414.5	25	16.58
2.57	58.5	29.25	419	25	16.76
2.07	59	29.5	423.5	25	16.94
1.57	59.5	29.75	429	25	17.16
1.07	60	30	435	25	17.4
0.57	60.5	30.25	434.5	25	17.38
0.07	61	30.5	420	25	16.8



Grafik Tegangan-Penurunan Variasi 7 (L = 4 cm ; Df = 15 cm)

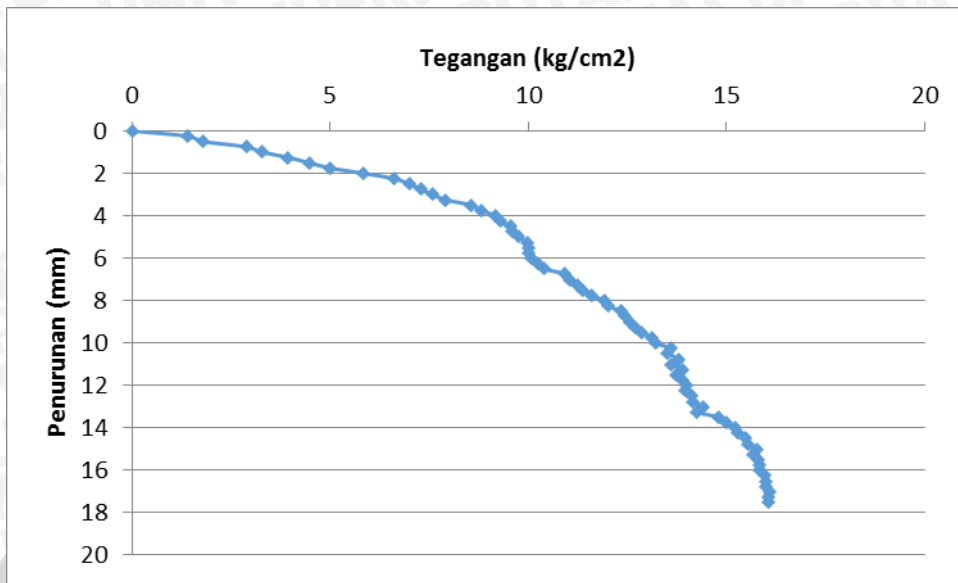


Variasi 8:  $L = 5 \text{ cm}$  ;  $D_f = 15 \text{ cm}$

Faktor Kalibrasi alat: 0,005

Pembacaan <i>LVDT</i>	Interval ( $\Delta$ )	Penurunan ( $s$ )	Beban ( $P$ )	Luas Pelat ( $A$ )	Daya Dukung ( $q$ )
		Mm	kg	cm <sup>2</sup>	kg/cm <sup>2</sup>
A	$\Delta = A \pm 50$	$s = \Delta \times 0,005$	$P$	$A = 5 \times 5$	$q = P/A$
54.98	0	0	0	25	0
54.48	0.5	0.25	35	25	1.4
53.98	1	0.5	45	25	1.8
53.48	1.5	0.75	72	25	2.88
52.98	2	1	82	25	3.28
52.48	2.5	1.25	98.5	25	3.94
51.98	3	1.5	111.5	25	4.46
51.48	3.5	1.75	125	25	5
50.98	4	2	146	25	5.84
50.48	4.5	2.25	165	25	6.6
49.98	5	2.5	175	25	7
49.48	5.5	2.75	182	25	7.28
48.98	6	3	189.5	25	7.58
48.48	6.5	3.25	198	25	7.92
47.98	7	3.5	214	25	8.56
47.48	7.5	3.75	220	25	8.8
46.98	8	4	229.5	25	9.18
46.48	8.5	4.25	232	25	9.28
45.98	9	4.5	238.5	25	9.54
45.48	9.5	4.75	240	25	9.6
44.98	10	5	243.5	25	9.74
44.48	10.5	5.25	249	25	9.96
43.98	11	5.5	250.5	25	10.02
43.48	11.5	5.75	250.5	25	10.02
42.98	12	6	252	25	10.08
42.48	12.5	6.25	255.5	25	10.22
41.98	13	6.5	260	25	10.4
41.48	13.5	6.75	273	25	10.92
40.98	14	7	276	25	11.04
40.48	14.5	7.25	280.5	25	11.22
39.98	15	7.5	284.5	25	11.38
39.48	15.5	7.75	290	25	11.6
38.98	16	8	297.5	25	11.9
38.48	16.5	8.25	300.5	25	12.02

37.98	17	8.5	308	25	12.32
37.48	17.5	8.75	310.5	25	12.42
36.98	18	9	314	25	12.56
36.48	18.5	9.25	317.5	25	12.7
35.98	19	9.5	321	25	12.84
35.48	19.5	9.75	327.5	25	13.1
34.98	20	10	330	25	13.2
34.48	20.5	10.25	340	25	13.6
33.98	21	10.5	337.5	25	13.5
33.48	21.5	10.75	345	25	13.8
32.98	22	11	340	25	13.6
32.48	22.5	11.25	347	25	13.88
31.98	23	11.5	343	25	13.72
31.48	23.5	11.75	347.5	25	13.9
30.98	24	12	349.5	25	13.98
30.48	24.5	12.25	349	25	13.96
29.98	25	12.5	353	25	14.12
29.48	25.5	12.75	353.5	25	14.14
28.98	26	13	360	25	14.4
28.48	26.5	13.25	356.5	25	14.26
27.98	27	13.5	370	25	14.8
27.48	27.5	13.75	374.5	25	14.98
26.98	28	14	380.5	25	15.22
26.48	28.5	14.25	382	25	15.28
25.98	29	14.5	387	25	15.48
25.48	29.5	14.75	388.5	25	15.54
24.98	30	15	394	25	15.76
24.48	30.5	15.25	391.5	25	15.66
23.98	31	15.5	395	25	15.8
23.48	31.5	15.75	395.5	25	15.82
22.98	32	16	396	25	15.84
22.48	32.5	16.25	399	25	15.96
21.98	33	16.5	399.5	25	15.98
21.48	33.5	16.75	400	25	16
20.98	34	17	402.5	25	16.1
20.48	34.5	17.25	401	25	16.04
19.98	35	17.5	401.5	25	16.06



Grafik Tegangan-Penurunan Variasi 8 (L = 5 cm ; Df = 15 cm)



Variasi 9: L = 6 cm ; Df = 15 cm

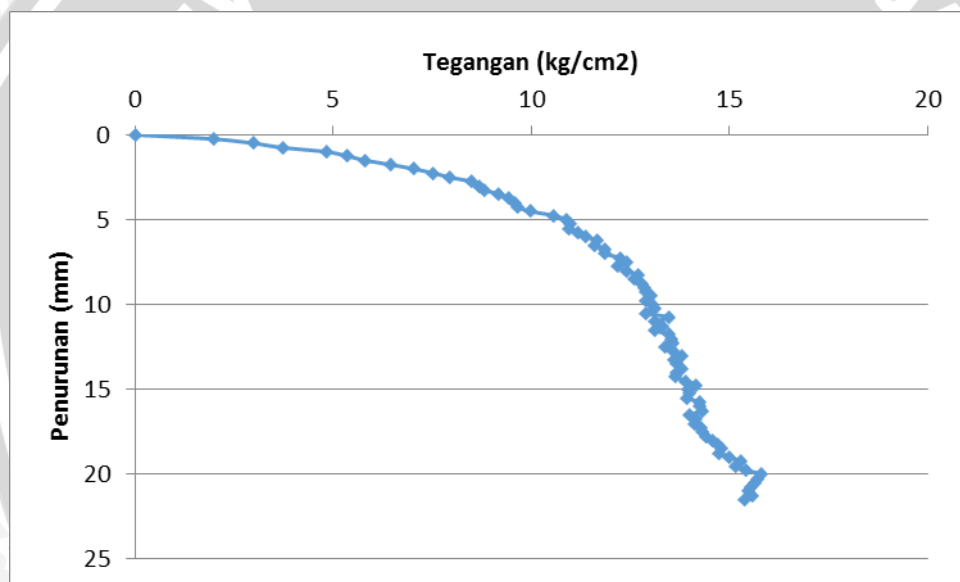
Faktor Kalibrasi alat: 0,005

Pembacaan <i>LVDT</i>	Interval ( $\Delta$ )	Penurunan ( <i>s</i> )	Beban ( <i>P</i> )	Luas Pelat ( <i>A</i> )	Daya Dukung ( <i>q</i> )
		mm	kg	cm <sup>2</sup>	kg/cm <sup>2</sup>
A	$\Delta = A \pm 50$	$s = \Delta \times 0,005$	<i>P</i>	$A = 5 \times 5$	$q = P/A$
55.87	0	0	0	25	0
55.37	0.5	0.25	50	25	2
54.87	1	0.5	75	25	3
54.37	1.5	0.75	93	25	3.72
53.87	2	1	121	25	4.84
53.37	2.5	1.25	134	25	5.36
52.87	3	1.5	145	25	5.8
52.37	3.5	1.75	161	25	6.44
51.87	4	2	175.5	25	7.02
51.37	4.5	2.25	188	25	7.52
50.87	5	2.5	198.5	25	7.94
50.37	5.5	2.75	212	25	8.48
49.87	6	3	217	25	8.68
49.37	6.5	3.25	220.5	25	8.82
48.87	7	3.5	229.5	25	9.18
48.37	7.5	3.75	235.5	25	9.42
47.87	8	4	240	25	9.6
47.37	8.5	4.25	241.5	25	9.66
46.87	9	4.5	249	25	9.96
46.37	9.5	4.75	264	25	10.56
45.87	10	5	272	25	10.88
45.37	10.5	5.25	274.5	25	10.98
44.87	11	5.5	273.5	25	10.94
44.37	11.5	5.75	279	25	11.16
43.87	12	6	284	25	11.36
43.37	12.5	6.25	291.5	25	11.66
42.87	13	6.5	290	25	11.6
42.37	13.5	6.75	296	25	11.84
41.87	14	7	296.5	25	11.86
41.37	14.5	7.25	306	25	12.24
40.87	15	7.5	310	25	12.4
40.37	15.5	7.75	304.5	25	12.18
39.87	16	8	310	25	12.4
39.37	16.5	8.25	317	25	12.68

38.87	17	8.5	315	25	12.6
38.37	17.5	8.75	319.5	25	12.78
37.87	18	9	321.5	25	12.86
37.37	18.5	9.25	322.5	25	12.9
36.87	19	9.5	325	25	13
36.37	19.5	9.75	322.5	25	12.9
35.87	20	10	326.5	25	13.06
35.37	20.5	10.25	327.5	25	13.1
34.87	21	10.5	322	25	12.88
34.37	21.5	10.75	337	25	13.48
33.87	22	11	327.5	25	13.1
33.37	22.5	11.25	333	25	13.32
32.87	23	11.5	327.5	25	13.1
32.37	23.5	11.75	336.5	25	13.46
31.87	24	12	338.5	25	13.54
31.37	24.5	12.25	339.5	25	13.58
30.87	25	12.5	334	25	13.36
30.37	25.5	12.75	339	25	13.56
29.87	26	13	344.5	25	13.78
29.37	26.5	13.25	340	25	13.6
28.87	27	13.5	341.5	25	13.66
28.37	27.5	13.75	344.5	25	13.78
27.87	28	14	341.5	25	13.66
27.37	28.5	14.25	340.5	25	13.62
26.87	29	14.5	347.5	25	13.9
26.37	29.5	14.75	354	25	14.16
25.87	30	15	348.5	25	13.94
25.37	30.5	15.25	349.5	25	13.98
24.87	31	15.5	348	25	13.92
24.37	31.5	15.75	356.5	25	14.26
23.87	32	16	356.5	25	14.26
23.37	32.5	16.25	357.5	25	14.3
22.87	33	16.5	350	25	14
22.37	33.5	16.75	354	25	14.16
21.87	34	17	352.5	25	14.1
21.37	34.5	17.25	357	25	14.28
20.87	35	17.5	357.5	25	14.3
20.37	35.5	17.75	360	25	14.4
19.87	36	18	364	25	14.56
19.37	36.5	18.25	367.5	25	14.7
18.87	37	18.5	370	25	14.8



18.37	37.5	18.75	368	25	14.72
17.87	38	19	375	25	15
17.37	38.5	19.25	382	25	15.28
16.87	39	19.5	379	25	15.16
16.37	39.5	19.75	385	25	15.4
15.87	40	20	395	25	15.8
15.37	40.5	20.25	392.5	25	15.7
14.87	41	20.5	390.5	25	15.62
14.37	41.5	20.75	388.5	25	15.54
13.87	42	21	387	25	15.48
13.37	42.5	21.25	389	25	15.56
12.87	43	21.5	384.5	25	15.38



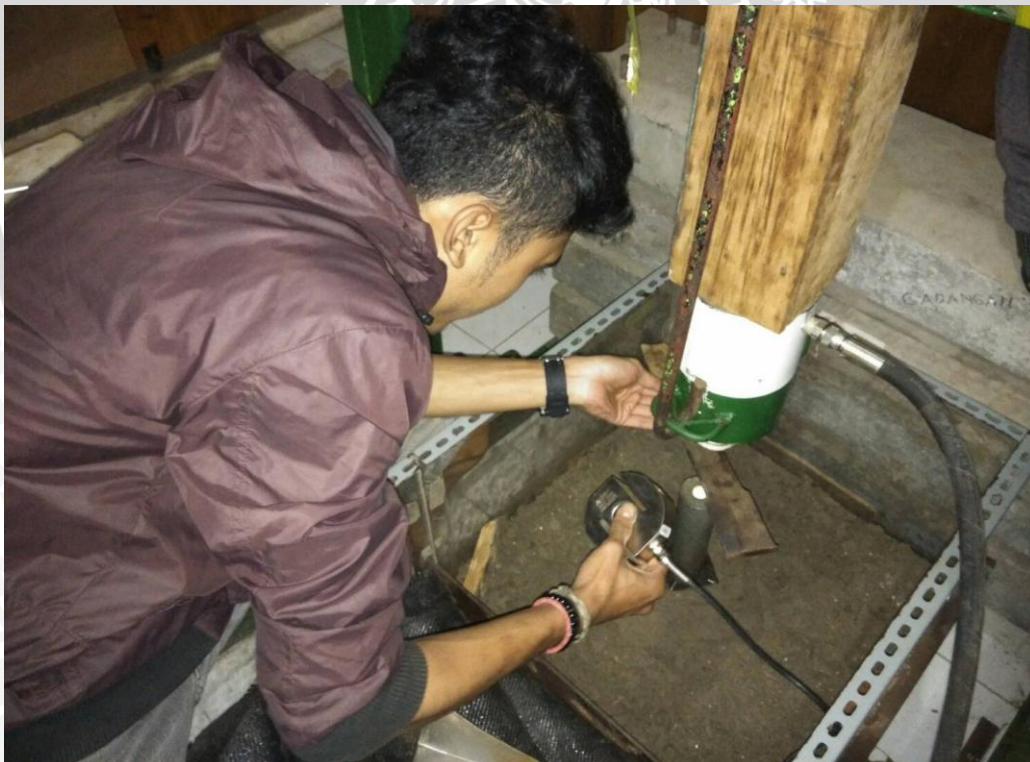
Grafik Tegangan-Penurunan Variasi 9 (L = 6 cm ; Df = 15 cm)



Lampiran 3 Gambar Pelaksanaan



Gambar *Instalasi* Kolom DSM



Gambar *Setting* Pembebanan



Gambar Uji Pembebanan



Gambar Setelah Pembebanan

