LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PENGUJIAN KADAR AIR TANAH

PROYEK : Tugas Akhir
Asal sampel : Mertoyudan, Magelang, Jawa Tengah.

DIKERJAKAN : : Okky + Anto
TANGGAL : : 11 Juli 2005

1	No Pengujian (kode sampel)			1	2
2	Berat Conteiner	W1 (gr)		21.92	22.35
3	Berat Conteiner + tanah basah	W2 (gr)		36.90	51.85
4	Berat Conteiner + tanah kering	W3 (gr)		33.05	43.77
5	Berat air	Wa (gr)	= (W2-W3)	3.85	8.08
6	Berat tanah Kering	Wo (gr)	= (W3-W1)	11.13	21.42
7	Kadar Air	w (%)	$= \frac{(W2-W3)}{(W3-W1)} \times 100\ \%$	34.59	37.72
8	Kadar Air rata - rata	wrt (%)		36.16 %	

PENGUJIAN BERAT VOLUME TANAH

PROYEK : Tugas Akhir
Asal sampel : Mertoyudan, Magelang, Jawa Tengah.

DIKERJAKAN : : Okky + Anto
TANGGAL : : 14 Juli 2005

1	No Pengujian (kode sampel)			1	2	3
2	Diameter ring	(d) cm		6.40	6.40	6.40
3	Tinggi ring	(t) cm		2.58	2.58	2.58
4	Volume ring	(V) cm^3		82.96	82.96	82.96
5	Berat ring	W1 (gr)		83.05	83.05	83.05
6	Berat ring + tanah	W2 (gr)		237.47	232.51	224.48
7	Berat tanah	Wo (gr)	= (W2-W1)	154.42	149.46	141.43
7	Berat volume tanah	γ (gram/cm^3)	$= \frac{(W2-W1)}{V}$	1.86	1.80	1.70
8	Berat volume rata - rata	γrt (gram/cm^3)		1.789		

LAMPIRAN NO. 1 a

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PENGUJIAN BATAS SUSUT TANAH

PROYEK : Tugas Akhir
Asal sampel : Mertoyudan, Magelang, Jawa Tengah.

DIKERJAKAN : : Okky + Anto
TANGGAL : : 14 Juli 2005

1	No Pengujian (kode sampel)				1	2
2	Berat jenis tanah				2.538	
3	Berat Cawan Susut	W1 (gr)			38.13	38.05
4	Berat cawan susut + tanah basah	W2 (gr)			66.73	66.60
5	Berat cawan susut + tanah kering	W3 (gr)			62.14	61.67
6	Berat air	Wa (gr)	= (W2-W3)		4.59	4.93
7	Berat tanah Kering	Wo (gr)	=(W3-W1)		24.01	23.62
8	Berat air raksa yang terdesak tanah kering					
	+ gelas ukur	Wr (gr)			204.91	202.39
9	Berat gelas ukur	W4 (gr)			33.97	33.97
10	Volume tanah kering	Vo (Cm^3)	=(Wr-W4)/13,6		12.57	12.38
11	Batas Susut Tanah	SL (%)	=((Vo/Wo)-(1/Gs)) x 100%		12.95	13.03
12	Batas susut tanah rata-rata	SL (%)			12.99	

LAMPIRAN NO.2

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL FTSP
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang Km 14,4 Telp. (0274) 895042, 895707, Fax (0274) 895330. Jogjakarta.

PENGUJIAN BATAS CAIR

PROYEK : Tugas Akhir
LOKASI : Mertoyudan, Magelang, Jawa Tengah.

Tanggal : 13 Juli 2005
Dikerjakan : Okky dan Anto

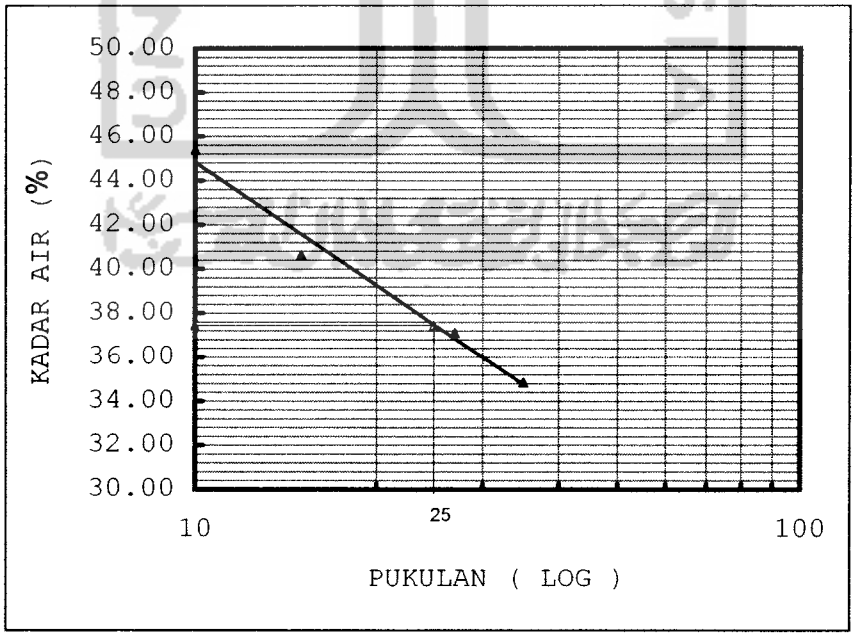
NO	NO. PENGUJIAN	I		II		III		IV	
1	NO CAWAN	1	2	3	4	5	6	7	8
2	Berat cawan kosong	21.75	22.30	22.10	15.00	21.72	21.79	21.88	22.13
3	Berat cawan + tanah basah (gr)	53.70	50.67	40.90	36.51	43.20	55.80	44.66	43.92
4	Berat cawan + tanah kering (gr)	43.76	41.78	35.49	30.27	37.38	46.60	38.76	38.30
5	Berat air (3) - (4)	9.94	8.89	5.41	6.24	5.82	9.20	5.90	5.62
6	Berat tanah kering (4) - (2)	22.01	19.48	13.39	15.27	15.66	24.81	16.88	16.17
7	KADAR AIR = (5)/(6) x 100 % =	45.16	45.64	40.40	40.86	37.16	37.08	34.95	34.76
8	KADAR AIR RATA-RATA =		45.40		40.63		37.12		34.85
9	PUKULAN		10		15		27		35

PENGUJIAN BATAS PLASTIS

NO		
1	NO CAWAN	1
2	BERAT CAWAN KOSONG	21.90
3	BERAT CAWAN + TANAH BASAH	23.49
4	BERAT CAWAN + TANAH KERING	23.18
5	BERAT AIR (3)-(4)	0.31
6	BERAT TANAH KERING (4)-(2)	1.28
7	KADAR AIR = (5)/(6) ----x 100 % =	24.22
8	KADAR AIR RATA-RATA =	24.22

KESIMPULAN

FLOW INDEX	:	**7.193**
BATAS CAIR	:	**37.47**
BATAS PLASTIS	:	**24.22**
INDEX PLASTISITAS	:	**13.25**



LAMPIRAN N0. 3

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PEMADATAN TANAH
Proctor test

PROYEK : Tugas Akhir
Asal Sampel : Mertoyudan, Magelang, Jawa Tengah
NO Sampel :
Komposisi :

DIKERJAKAN : Okky + Anto
TANGGAL : 12-Jul-05

DATA SILINDER			
1	Diameter (ø) cm	:	10.1
2	Tinggi (H) cm	:	11.6
3	Volume (V) cm³	:	929.37
4	Berat gram	:	1859

DATA PENUMBUK	
Berat (kg)	2.505
Jumlah lapis	3
Jumlah tumbukan /lapis	25
Tinggi jatuh	30.48

Berat jenis Gs	:	2.538

PENAMBAHAN AIR

1	Berat tanah absah	gram	2000	2000	2000	2000	2000
2	Kadar air mula-mula	%	8.60	8.60	8.60	8.60	8.60
3	Penambahan air	%	0	5	10	15	20
4	Penambahan air	ml	0	100	200	300	400

PENGUJIAN PEMADATAN SILINDER

			1	2	3	4	5
1	Nomor pengujian						
2	Berat silinder + tanah padat	gram	3367.5	3538	3654	3658	3550
3	Berat tanah padat	gram	1508.5	1679	1795	1799	1691
4	Berat volume tanah	gr/cm³	1.623	1.807	1.931	1.936	1.820

PENGUJIAN KADAR AIR

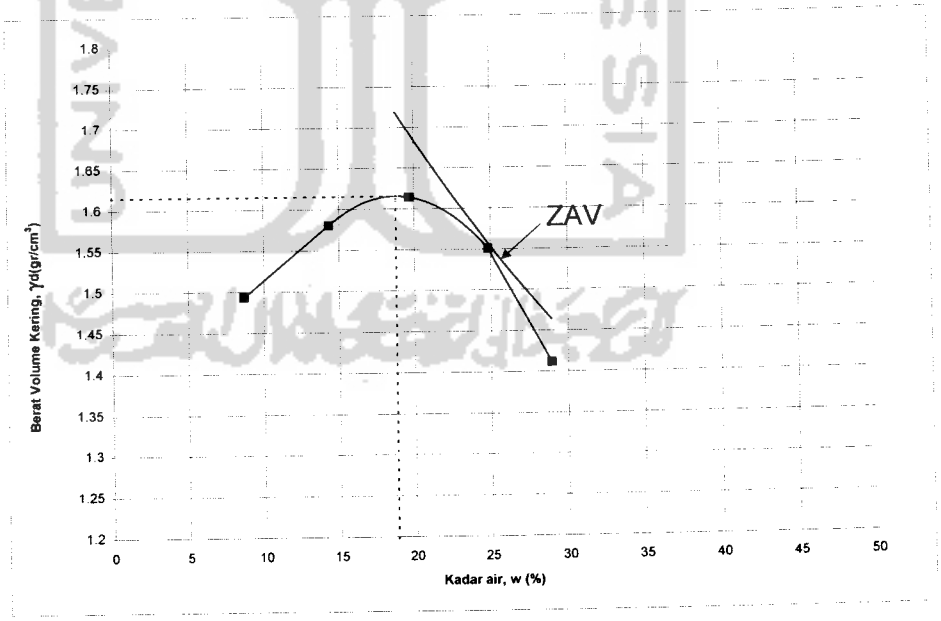
			1		2		3		4		5	
1	NOMOR PERCOBAAN		a	b	a	b	a	b	a	b	a	b
2	Nomor cawan											
3	Berat cawan kosong	gram	21.45	21.37	22.02	21.81	22.34	21.68	21.92	21.65	21.92	21.79
4	Berat cawan + tanah basah	gram	46.91	45.31	36.45	71.79	38.41	40.24	42.35	85.53	46.39	64.97
5	Berat cawan + tanah kering	gram	44.98	43.30	34.65	65.50	35.76	37.20	38.30	72.78	40.92	55.25
8	Kadar air = w	%	8.20	9.17	14.25	14.40	19.75	19.59	24.73	24.94	28.79	29.05
9	Kadar air rata-rata			8.68		14.32		19.67		24.83		28.92
10	Berat volume tanah kering	gr/cm³		1.493		1.580		1.614		1.551		1.411

BERAT VOLUME KERING MAKSIMUM (gr/cm³)

1.61537

KADAR AIR OPTIMUM (%)

18.78



Diperiksa :

LAMPIRAN NO.4

GRAIN SIZE ANALYSIS

Project : TA
Test no : 1
Depth 0-2.00 meter

Location : Mertoyudan, Magelang, Jawa Tengah.
Date : 20 Agustus 2005
Tested by : Okky + Anto

Soil sample (disturbed/undisturbed)
Mass of soil = 60 gr
Specific Gravity , G = 2.538
K2 = a/W x 100 = 1.71246657

Hydromoter type = 152 H
Hydr. Correction, a = 1.027
Meniscus corretion, m = 1

Sive Analisis

Save No	Opening (mm)	Mass retained (gr)		Mass retained (gr)		% finer by mass e/W x 100%	Remarks
4	4.750	d1 =	0.00	e1 =	60.00	100.00	e7 = W - Sd
10	2.000	d2 =	1.90	e2 =	58.10	96.83	e6 = d7 + e7
20	0.850	d3 =	0.82	e3 =	57.28	95.47	e5 = d6 + e6
40	0.425	d4 =	0.93	e4 =	56.35	93.92	e4 = d5 + e5
60	0.250	d5 =	1.15	e5 =	55.20	92.00	e3 = d4 +e4
140	0.106	d6 =	10.35	e6 =	44.85	74.75	e2 = d3 + e3
200	0.075	d7 =	1.10	e7 =	43.75	72.92	e1 = d2 + e2
		Sd =	16.25				

Hirometer Analisis

Time	elapsed time min. T	R1	R2	t	R' R1 + m	L	K	D (mm)	Rc= R1-R2+Cr	P K2 x R (%)
9.29										
9.31	2	30	-2.0	27	31	11.219	0.0129	0.03053605	33.3	57.03
9.34	5	25	-2.0	27	26	12.038	0.0129	0.0200049	28.3	48.46
9.59	30	17	-2.0	27	18	13.348	0.0129	0.00859982	20.3	34.76
10.29	60	14	-2.0	26	15	13.839	0.0131	0.00629467	17.3	29.63
13.39	250	12	-2.0	26	13	14.166	0.0131	0.00312002	15.3	26.20
9.29	1440	10	-2.0	25	11	14.494	0.0131	0.00131495	13.3	22.78
									0	0

Remarks :

Rc = R1 - R2 + Cr (Cr =Temperatur correction factors)

R' = R1 + m (m correctoin for meniscus)

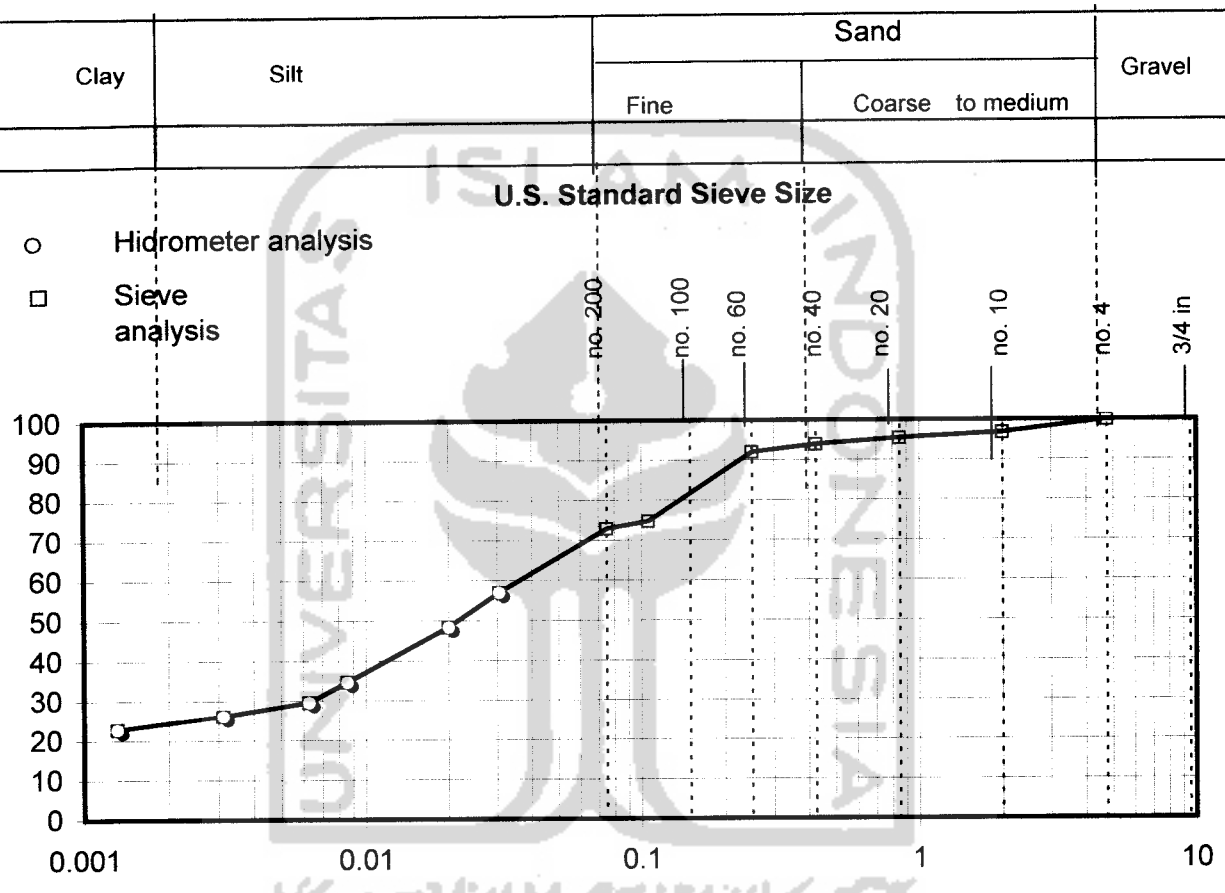
SOIL MECHANICS LABORATORY
CIVIL ENGINEERING DEPARTEMENT
ISLAMIC UNIVERSITY OF INDONESIA

LAMPIRAN NO.5

GRAIN SIZE ANALYSIS

Project	: TA	Tested	: Okky + Anto
Smple no.	: 1	Date	: 20 Agustus 2005
Depth	: 0-2.00 meter	Location	: Mertoyudan, Magelang, Jawa Tengah.

Soil sample (disturbed/undisturbed)
Specifig Gravity : 2.538
Discription of soil : Silt Clay



Finer # 200 :	72.918 %		D10 (mm)		
			D30 (mm)		0.0065
Gravel :	0.00 %		D60 (mm)		0.0350
Sand :	27.08 %		Cu = D60/D10		
Silt :	35.24 %		Cc = $D30^2$ / (D10xD60)		
Clay :	12.46 %				

SOIL MECHANICS LABORATORY
CIVIL ENGINEERING DEPARTEMENT
ISLAMIC UNIVERSITY OF INDONESIA

LAMPIRAN NO.6

GRAIN SIZE ANALYSIS

Project	: TA	Location	: Mertoyudan, Magelang, Jawa Tengah.
Test no	: 2	Date	: 20 Agustus 2005
Depth	:0-2.00 meter	Tested by	: Okky + Anto

Soil sample (disturbed/undisturbed)

Mass of soil =	60 gr	Hydromoter type =	152 H
Specific Gravity , G =	2.538	Hydr. Correction, a =	1.027
K2 = a/W x 100 =	1.71246657	Meniscus corretion, m =	1

Sive Analisis

Save No	Opening (mm)	Mass retained (gr)		Mass retained (gr)		% finer by mass e/W x 100%	Remarks
4	4.750	d1 =	0.00	e1 =	60.00	100.00	e7 = W - Sd
10	2.000	d2 =	2.10	e2 =	57.90	96.50	e6 = d7 + e7
20	0.850	d3 =	0.86	e3 =	57.04	95.07	e5 = d6 + e6
40	0.425	d4 =	1.10	e4 =	55.94	93.23	e4 = d5 + e5
60	0.250	d5 =	1.40	e5 =	54.54	90.90	e3 = d4 +e4
140	0.106	d6 =	10.10	e6 =	44.44	74.07	e2 = d3 + e3
200	0.075	d7 =	2.42	e7 =	42.02	70.03	e1 = d2 + e2
		Sd =	17.98				

Hirometer Analisis

Time	elapsed time min. T	R1	R2	t	R' R1 + m	L	K	D (mm)	Rc= R1-R2+Cr	P K2 x R (%)
9.29										
9.31	2	32	-2.0	27	33	10.892	0.0129	0.03008711	35.3	60.45
9.34	5	25	-2.0	27	26	12.038	0.0129	0.0200049	28.3	48.46
9.59	30	15	-2.0	27	16	13.675	0.0129	0.00870468	18.3	31.34
10.29	60	12	-2.0	26	13	14.166	0.0131	0.00636871	15.3	26.20
13.39	250	10	-2.0	26	11	14.494	0.0131	0.00315587	13.3	22.78
9.29	1440	8	-2.0	25	9	14.821	0.0131	0.00132972	11.3	19.35

Remarks :

Rc = R1 - R2 + Cr (Cr =Temperatur correction factors)

R' = R1 + m (m correctoin for meniscus)

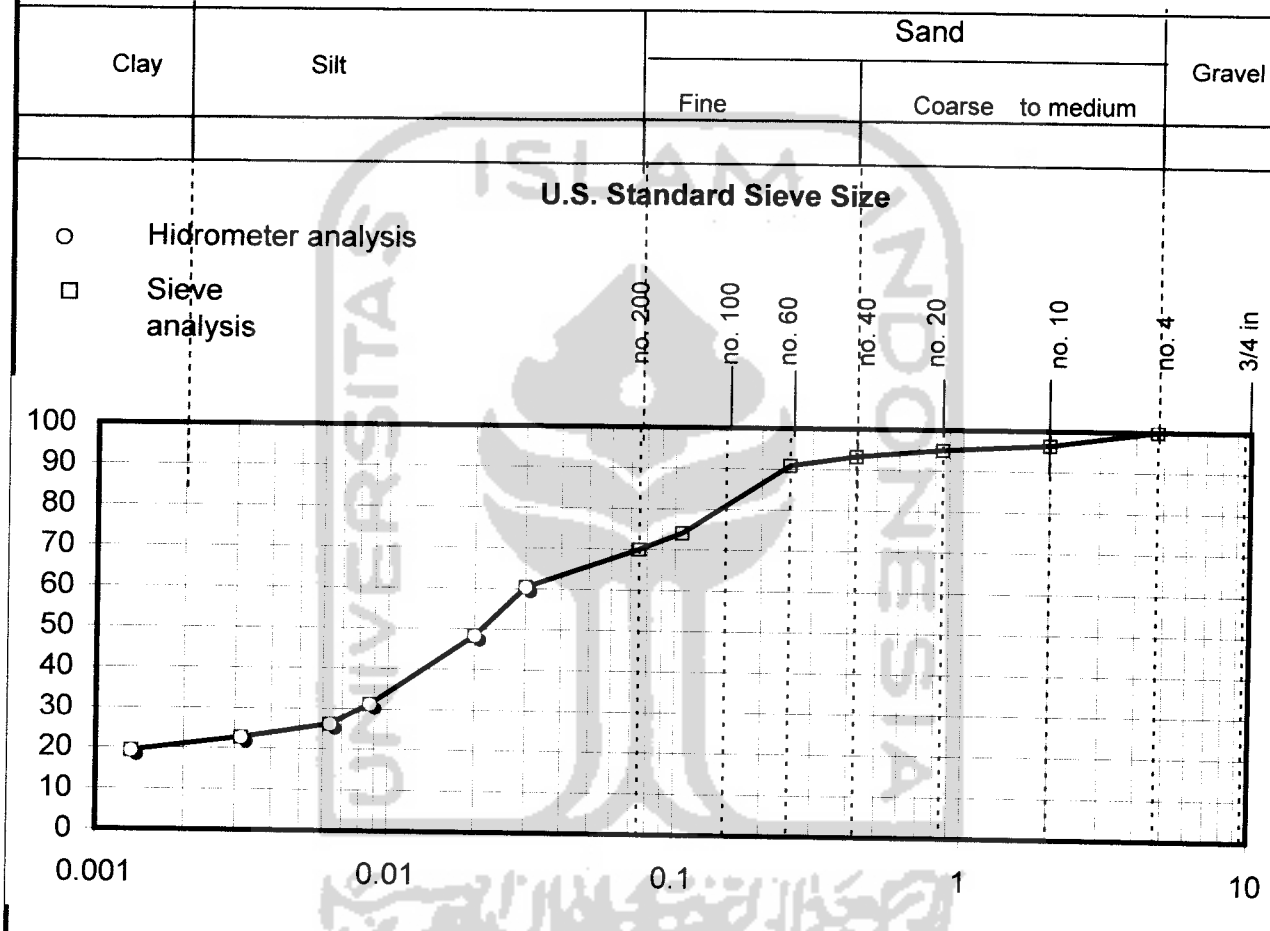
SOIL MECHANICS LABORATORY
CIVIL ENGINEERING DEPARTEMENT
ISLAMIC UNIVERSITY OF INDONESIA

LAMPIRAN NO.7

GRAIN SIZE ANALYSIS

Project	: TA	Tested	: Okky + Anto
Smple no.	: 2	Date	: 20 Agustus 2005
Depth	: 0-2,00 meter	Location	: Mertoyudan, Magelang, Jawa Tengah.

Soil sample (disturbed/undisturbed)
Specifig Gravity : 2.538
Discription of soil : Silt Clay



Finer # 200 :	70.033 %	D10 (mm)	
		D30 (mm)	0.0086
Gravel :	0.00 %	D60 (mm)	0.0300
Sand :	29.97 %	Cu = D60/D10	
Silt :	35.79 %	Cc = D30² / (D10xD60)	
Clay :	16.44 %		

SOIL MECHANICS LABORATORY
CIVIL ENGINEERING DEPARTEMENT
ISLAMIC UNIVERSITY OF INDONESIA

LAMPIRAN NO.8

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Beban P (Kg)			0.50	1.00	2.00	4.00	8.00	16.00	4.00	0.50
Waktu Pembacaan			Pembacaan dial ... (mm) untuk beban ... (kg/cm^2)							
Jam	t	$\sqrt{t}$	0.25	0.50	1.00	2.00	4.00	8.00	2,00 (*)	0,25 (*)
	0	0	10.000	9.630	9.437	9.025	8.715	8.220	7.690	7.735
	5,40"	0.3	9.850	9.600	9.340	8.930	8.530	8.000		
	15,00"	0.5	9.840	9.580	9.320	8.910	8.490	7.960		
	29,40"	0.7	9.815	9.570	9.309	8.900	8.470	7.940		
	1,00"	1.0	9.800	9.565	9.290	8.890	8.445	7.910		
	2,25"	1.5	9.780	9.550	9.275	8.870	8.415	7.870		
	4,00"	2.0	9.770	9.545	9.262	8.850	8.385	7.845		
	6,25"	2.5	9.760	9.540	9.250	8.840	8.375	7.820		
	9,00"	3.0	9.750	9.530	9.243	8.831	8.360	7.803		
	12,25"	3.5	9.740	9.525	9.235	8.824	8.352	7.790		
	16,00"	4.0	9.730	9.520	9.230	8.814	8.340	7.778		
	25,00"	5.0	9.716	9.510	9.218	8.800	8.327	7.760		
	36,00"	5.8	9.705	9.500	9.208	8.792	8.315	7.750		
	49,00"	7.0	9.700	9.491	9.200	8.781	8.307	7.740		
1,04'	64,00"	8.0	9.695	9.480	9.195	8.765	8.299	7.730		
1,21'	81,00"	9.6	9.688	9.475	9.190	8.748	8.290	7.725		
1,40'	100,00"	10.0	9.683	9.472	9.185	8.742	8.283	7.720		
2,01'	121,00"	11.0	9.680	9.470	9.180	8.735	8.280	7.713		
2,24'	144,00"	12.0	9.680	9.470	9.178	8.725	8.272	7.710		
3,45'	225,00"	15.0								
6,40'	400,00"	20.0								
24,0'	1440,00"	38.0	9.630	9.437	9.025	8.715	8.220	7.690	7.735	8.150

LAMPIRAN NO.9

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

HITUNGAN UJI KONSOLIDASI

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

Tanggal : 12 Juli 2005 0
dikerjakan : Okky + Anto 0

Berat Jenis Tanah	2.538	Luas ring (cm2)	19.635
Berat ring (gr)	36.3	Tinggi (Ho) (cm)	2.06
Diameter (cm)	5	Volume Vo (cm3)	40.448

Beban	Pembacaan akhir dial	Perubahan tebal ΔH	Perubahan angka pori $\frac{\Delta H}{H_t}$	Angka pori $e = e_1 - \Delta e$	$Cc = \frac{\Delta e}{\log \frac{P_2}{P_1}}$	tebal akhir H=H1-ΔH	1/2 tebal rata-rata d=(H1+H2)/2	$\sqrt{t_{90}}$	t_{90} (detik)	Cv = $\frac{0.848 \times (d/2)^2}{t_{90}}$ (cm^2/det)
(kg/cm^2)	(mm)	(cm)								
0.00	10.000			0.923			1.02075			
		0.037	0.035			2.023		6	2160	0.000409
0.25	9.630			0.888			1.006675			
		0.019	0.018		0.060	2.004		6.6	2613.6	0.000329
0.50	9.437			0.870			0.99155			
		0.041	0.038		0.128	1.963		6	2160	0.000386
1.00	9.025			0.832			0.9735			
		0.031	0.029		0.096	1.932		8.8	4646.4	0.000173
2.00	8.715			0.803			0.953375			
		0.049	0.046		0.153	1.882		6.45	2496.15	0.000309
4.00	8.220			0.757			0.92775			
		0.053	0.049		0.164	1.829		6.35	2419.35	0.000302
8.00	7.690			0.707						
		-0.045	-0.042		0.070					
2.00	7.735			0.749						
		-0.042	-0.039		0.043					
0.25	8.150			0.788						
0.00										

LAMPIRAN NO.10

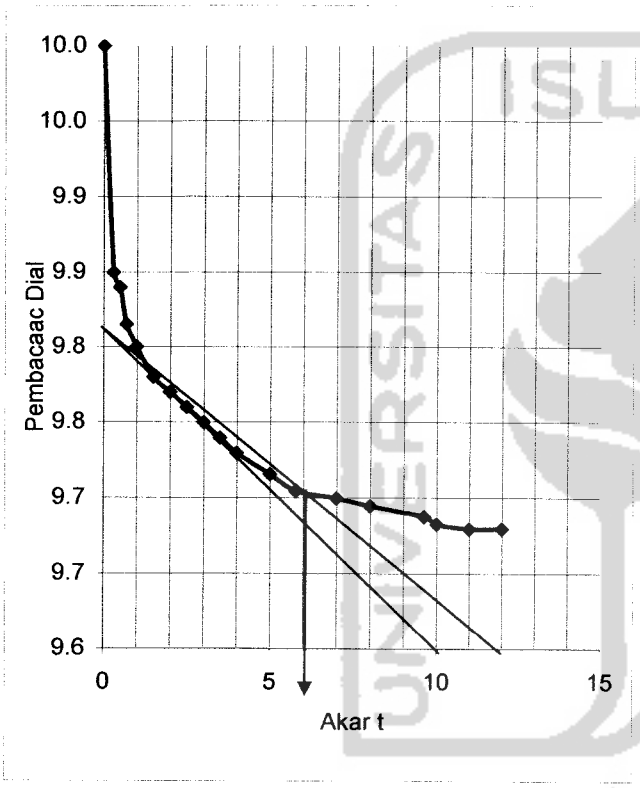
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

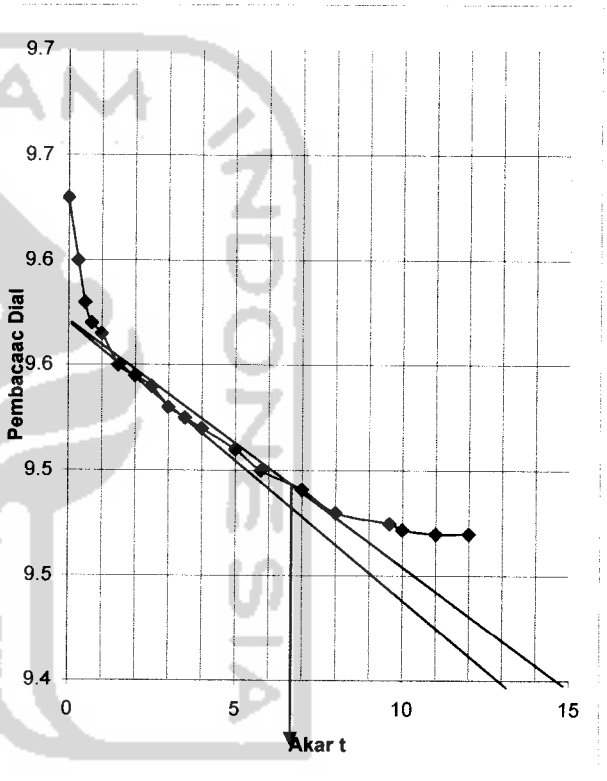
Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Beban 0.25 kg/cm^2



$\sqrt{t}$: 6

Beban 0.5 kg/cm^2



$\sqrt{t}$: 6.6

LAMPIRAN NO.11

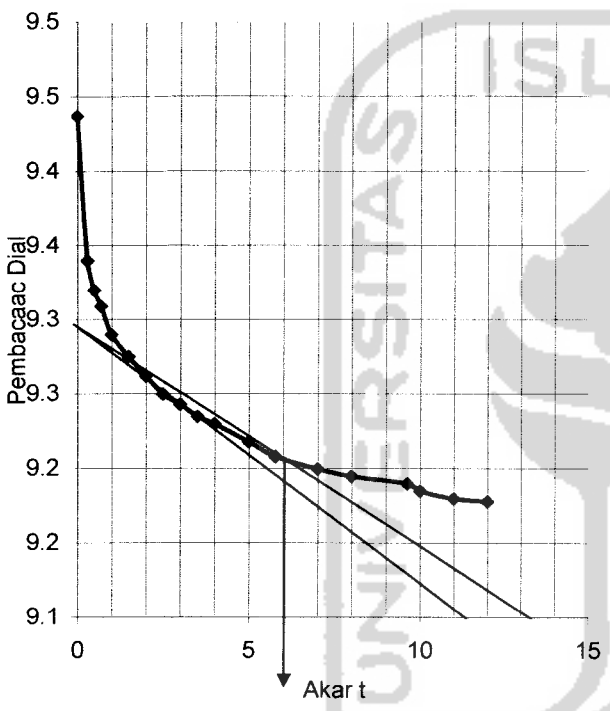
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

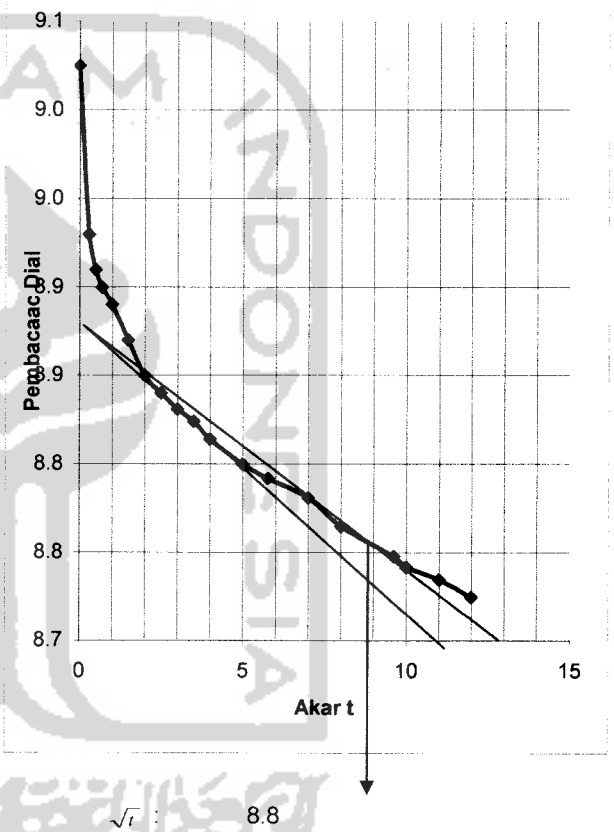
Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Beban 1.00 kg/cm^2



$\sqrt{t}$: 6

Beban 2.00 kg/cm^2



$\sqrt{t}$: 8.8

LAMPIRAN NO.12

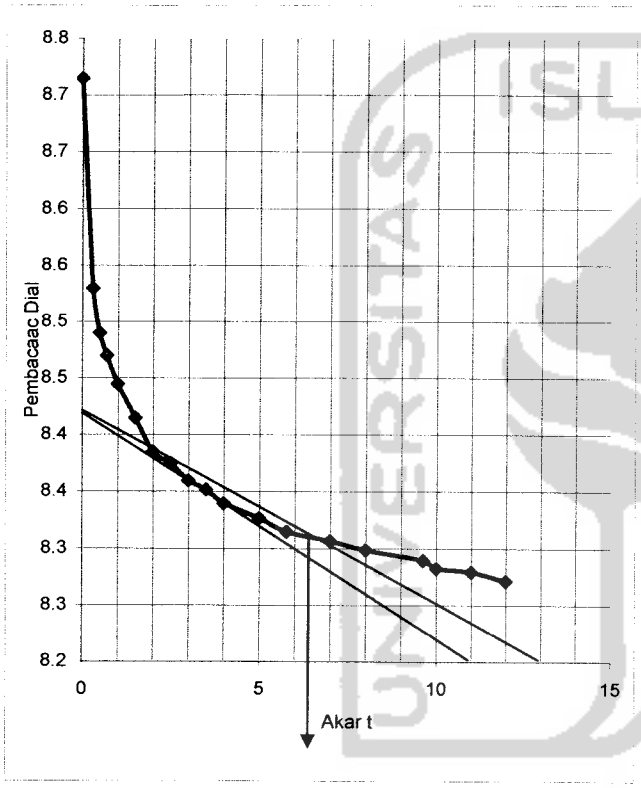
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

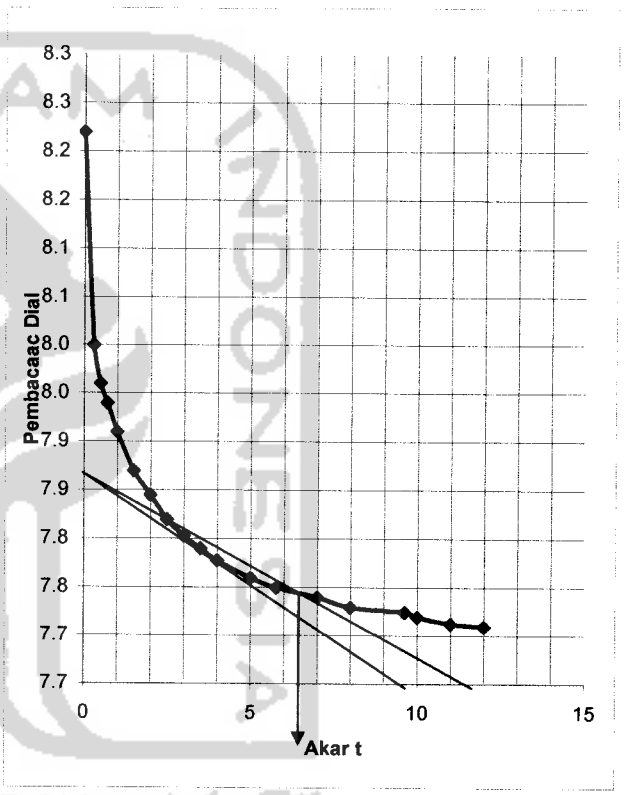
Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Beban 4.00 kg/cm^2



$\sqrt{t}$: 6.45

Beban 8.00 kg/cm^2



$\sqrt{t}$: 6.35

LAMPIRAN NO.13

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

KESIMPULAN UJI KONSOLIDASI

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Data Parameter tanah dan ring

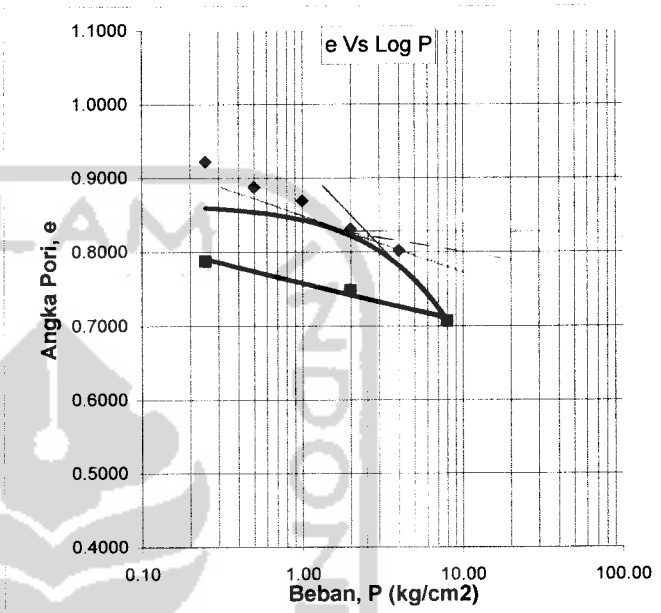
Berat Jenis Tanah	2.538
Berat ring (gr)	36.3
Diameter (cm)	5
Luas ring (cm2)	19.63495
Tinggi (Ho) (cm)	2.06
Volume Vo (cm3)	40.44801

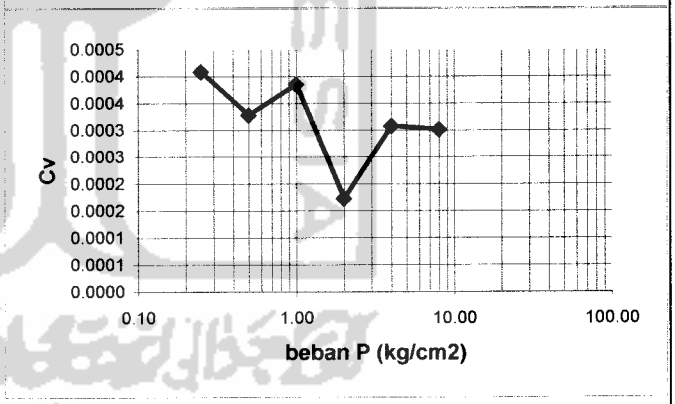
Kadar air		
Berat Container (cup), gr	21.92	22.05
Berat Cup + tanah basah, gr	36.90	39.50
Berat Cup + tanah kering, gr	33.05	34.55
Kadar air %	34.59	39.60
Kadar air rata-rata %	37.10	

Berat ring + tanah basah, gr	109.50
Berat volume tanah basah	1.810
Berat volume tanah kering	1.320
Tinggi bagian padat (Ht)	1.07
Angka pori (e)	0.922654
Derajad kejenuhan (Sr)	146.8724

Setelah pengujian	
Berat ring + tanah basah, gr	108.72
Berat ring + tanah kering, gr	91.17
Kadar air, %	31.98469
Angka pori (e)	0.787788
Derajad Kejanuhan (Sr)	178.6774

Cc	0.143241
Cs	-0.04289





LAMPIRAN NO.14

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik
kedalaman : 2.00 meter

Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Beban P (Kg)			0.50	1.00	2.00	4.00	8.00	16.00	4.00	0.50
Waktu Pembacaan			Pembacaan dial ... (mm) untuk beban ... (kg/cm^2)							
Jam	t	$\sqrt{t}$	0.25	0.50	1.00	2.00	4.00	8.00	2,00 (*)	0,25 (*)
	0	0	10.000	9.510	9.285	8.910	8.465	7.910	7.289	7.340
	5,40"	0.3	9.780	9.450	9.180	8.750	8.250	7.650		
	15,00"	0.5	9.730	9.440	9.140	8.720	8.210	7.635		
	29,40"	0.7	9.710	9.435	9.120	8.700	8.190	7.605		
	1,00"	1.0	9.690	9.420	9.105	8.675	8.165	7.575		
	2,25"	1.5	9.660	9.405	9.080	8.640	8.110	7.540		
	4,00"	2.0	9.648	9.395	9.062	8.627	8.105	7.505		
	6,25"	2.5	9.630	9.388	9.053	8.605	8.085	7.460		
	9,00"	3.0	9.620	9.380	9.043	8.600	8.070	7.442		
	12,25"	3.5	9.610	9.374	9.035	8.587	8.055	7.420		
	16,00"	4.0	9.600	9.368	9.025	8.578	8.045	7.410		
	25,00"	5.0	9.590	9.354	9.015	8.565	8.022	7.390		
	36,00"	5.8	9.580	9.345	9.005	8.553	8.010	7.380		
	49,00"	7.0	9.570	9.330	9.000	8.548	8.000	7.370		
1,04'	64,00"	8.0	9.566	9.322	8.990	8.544	7.980	7.353		
1,21'	81,00"	9.6	9.563	9.319	8.988	8.530	7.975	7.350		
1,40'	100,00"	10.0	9.558	9.317	8.983	8.525	7.970	7.343		
2,01'	121,00"	11.0	9.553	9.313	8.980	8.520	7.968	7.335		
2,24'	144,00"	12.0	9.550	9.310	8.975	8.515	7.960	7.320		
3,45'	225,00"	15.0								
6,40'	400,00"	20.0								
24,0'	1440,00"	38.0	9.510	9.285	8.910	8.465	7.910	7.289	7.340	7.820

LAMPIRAN NO.15

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

HITUNGAN UJI KONSOLIDASI

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

Tanggal : 12 Juli 2005 0
dikerjakan : Okky + Anto 0

Berat Jenis Tanah	2.538	Luas ring (cm2)	19.9504
Berat ring (gr)	41.1	Tinggi (Ho) (cm)	2.09
Diameter (cm)	5.04	Volume Vo (cm3)	41.6963

Beban	Pembacaan akhir dial	Perubahan tebal ΔH	Perubahan angka pori $\Delta e = \frac{\Delta H}{H_t}$	Angka pori $e = e_1 - \Delta e$	$Cc = \frac{\Delta e}{\log \frac{P_2}{P_1}}$	tebal akhir H=H1-ΔH	1/2 tebal rata-rata d=(H1+H2)/2	$\sqrt{t_{90}}$	t_{90} (detik)	$Cv = \frac{0.848 \times (d/2)^2}{t_{90}}$ (cm^2/det)
(kg/cm^2)	(mm)	(cm)								
0.00	10.000			0.933			1.03275			
		0.049	0.045			2.041		4.2	1058.4	0.000855
0.25	9.510			0.888			1.014875			
		0.023	0.021		0.069	2.019		8.4	4233.6	0.000206
0.50	9.285			0.867			0.999875			
		0.038	0.035		0.115	1.981		6	2160	0.000392
1.00	8.910			0.832			0.979375			
		0.045	0.041		0.137	1.937		5.85	2053.35	0.000396
2.00	8.465			0.791			0.954375			
		0.056	0.051		0.171	1.881		6.15	2269.35	0.00034
4.00	7.910			0.740			0.924975			
		0.062	0.057		0.191	1.819		6	2160	0.000336
8.00	7.289			0.682						
		-0.051	-0.047		0.078					
2.00	7.340			0.729						
		-0.048	-0.044		0.049					
0.25	7.820			0.774						
0.00										

LAMPIRAN NO.16

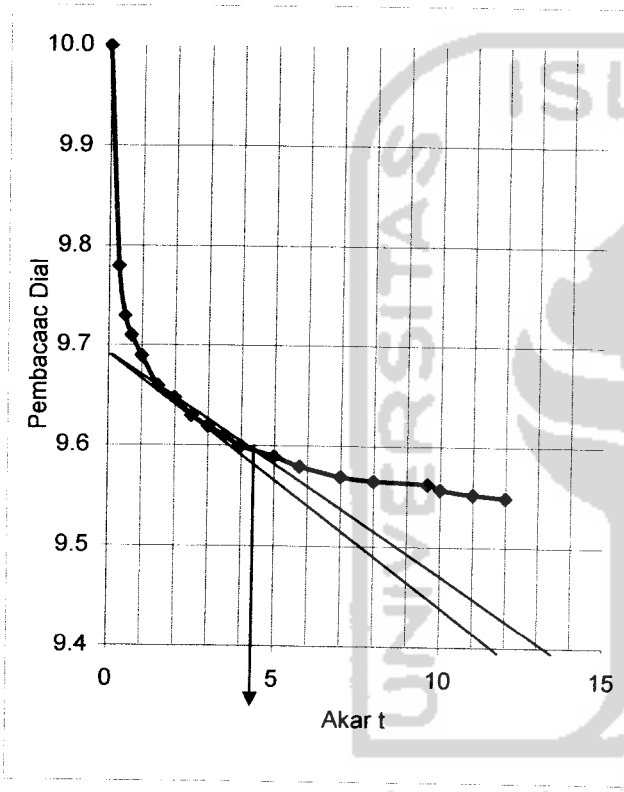
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

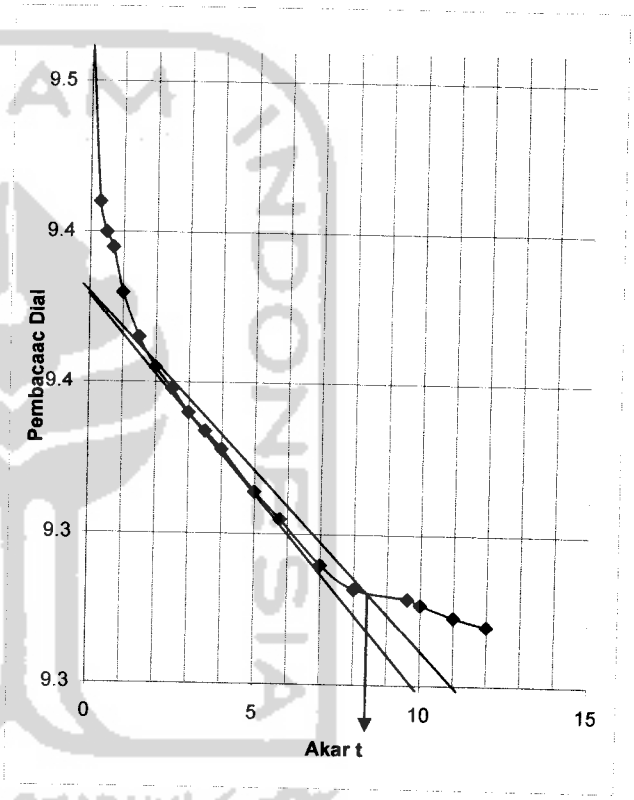
Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Beban 0.25 kg/cm^2



$\sqrt{t}$: 4.2

Beban 0.5 kg/cm^2



$\sqrt{t}$: 8.4

LAMPIRAN NO.17

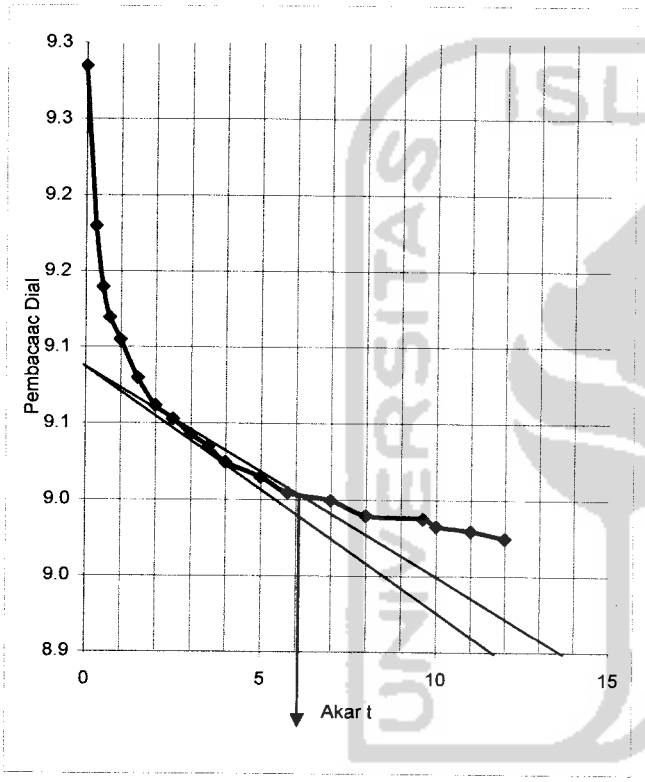
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

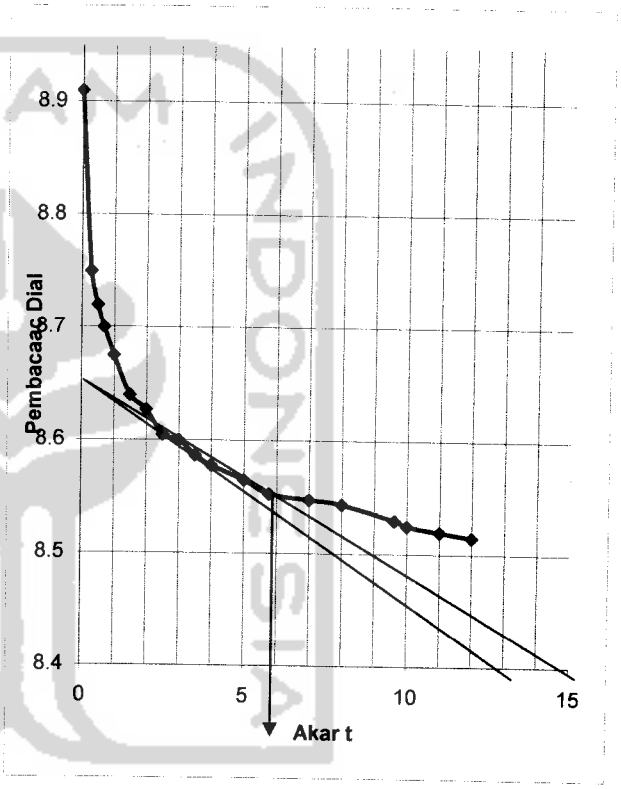
Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Beban 1.00 kg/cm^2



$\sqrt{t}$: 6

Beban 2.00 kg/cm^2



$\sqrt{t}$: 5.85

LAMPIRAN NO.18

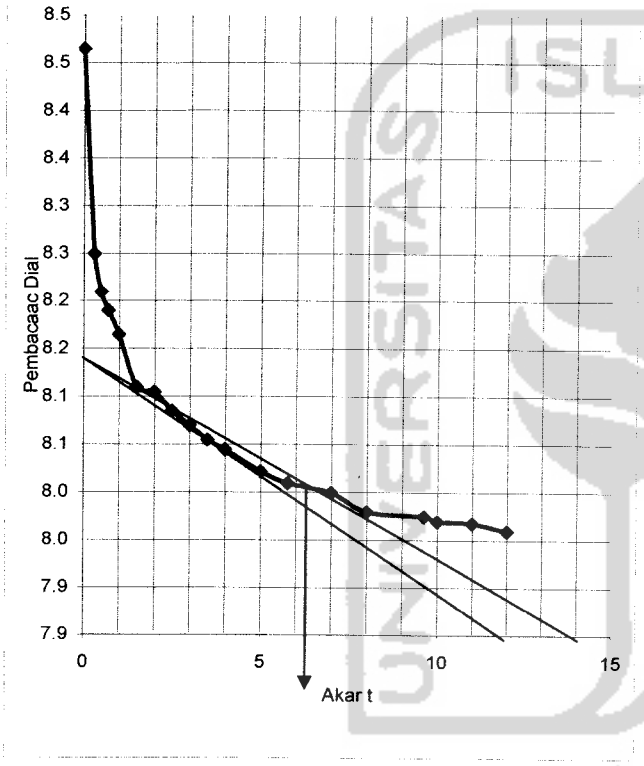
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalaman : 2.00 meter

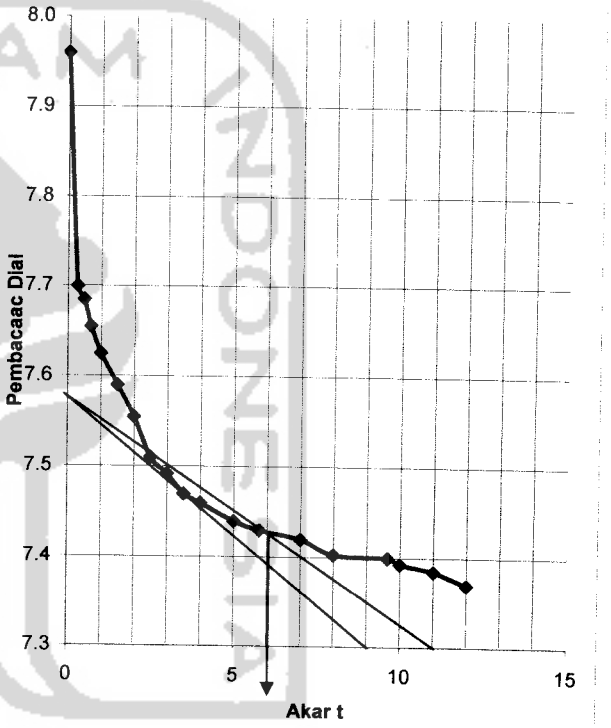
Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Beban 4.00 kg/cm^2



$\sqrt{t}$: 6.15

Beban 8.00 kg/cm^2



$\sqrt{t}$: 6

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

KESIMPULAN UJI KONSOLIDASI

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah
No. Titik :
kedalam : 2.00 meter

Tanggal : 12 Juli 2005
dikerjakan : Okky + Anto

Data Parameter tanah dan ring

Berat Jenis Tana	2.538
Berat ring (gr)	41.1
Diameter (cm)	5.04
Luas ring (cm2)	19.95037
Tinggi (Ho) (cm)	2.09
Volume Vo (cm3)	41.69627

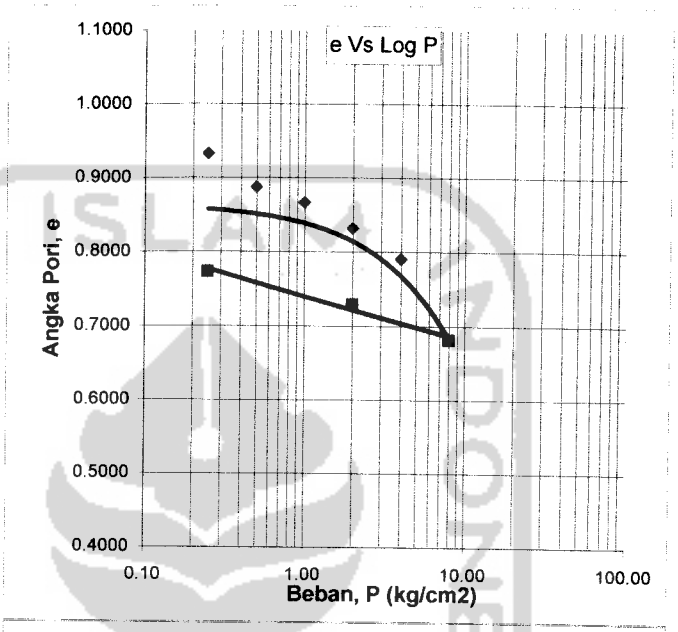
Kadar air		
Berat Container (	21.70	22.35
Berat Cup + tana	54.70	51.85
Berat Cup + tana	46.38	43.77
Kadar air %	33.71	37.72
Kadar air rata-ra	35.72	

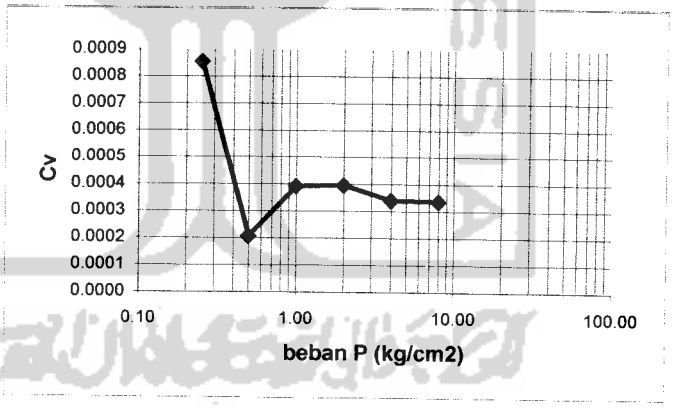
Berat ring + tanah	115.40
Berat volume tan	1.782
Berat volume tan	1.313
Tinggi bagian pad	1.08
Angka pori (e)	0.933006
Derajad kejenuha	148.9235

Setelah pengujian	
Berat ring + tanah	114.10
Berat ring + tanah	95.45
Kadar air, %	34.31463
Angka pori (e)	0.773833
Derajad Kejanuha	181.4303

Cc 0.166585

Cs -0.04916





LAMPIRAN NO.20

PENGUJIAN BERAT JENIS AGREGAT

Proyek : Tugas Akhir
Lokasi : Mertoyudan, Magelang, Jawa Tengah.
Dikerjakan : anto + okky
Kedalaman : 2,00 meter

AGREGAT KASAR (tertahan # 10)

A	Berat benda uji kering oven		
B	Berat benda uji kering permukaan jenuh		
C	Berat benda uji dalam air		
*	Berat jenis kering oven (SG)		
*	Berat jenis kering permukaan jenuh (SSD)		
*	Berat jenis semu (Apperen)		
*	Penyerapan (Absorsi)		

AGREGAT HALUS (lolos #10)

1	No pengujian	1	2
2	Berat Picknometer (W1)	35.45	16.80
3	Berat Picknometer +tanah kering (W2)	48.93	23.96
4	Berat Picknometer + tanah + air (W3)	92.33	46.46
5	Berat Picknometer + air (W4)	84.17	42.12
6	Temperatur (t^o)	27.00	27.00
7	Bj pata temperatu (t^0)	0.996550	0.996550
8	Bj pata temperatu (27,5 ^{0}C)	0.996410	0.996410
7	Berat tanah kering (Wt)	13.48	7.16
8	A = Wt + W4	97.65	49.28
9	I = A - W3	5.32	2.82
10	Berat Jenis tanah, Gs = Wt / I	2.53	2.54
11	Bret Jenis = Gs. (Bj t^0 / Bj t 27,5 ^{0}C)	2.5342	2.5412
12	Berat jenis rata-rata	2.538	

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL FTSP
UNIVERSITAS ISLAM INDONESIA

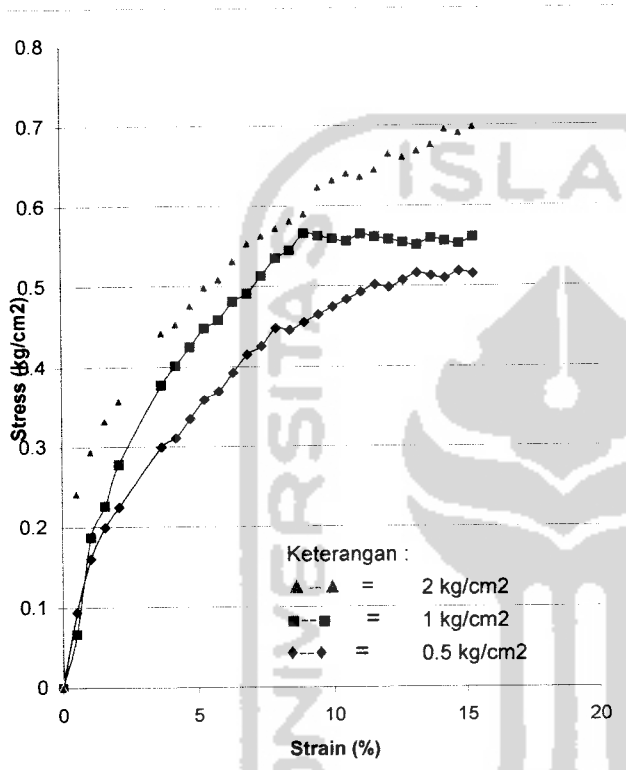
LAMPIRAN NO. 1 b

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

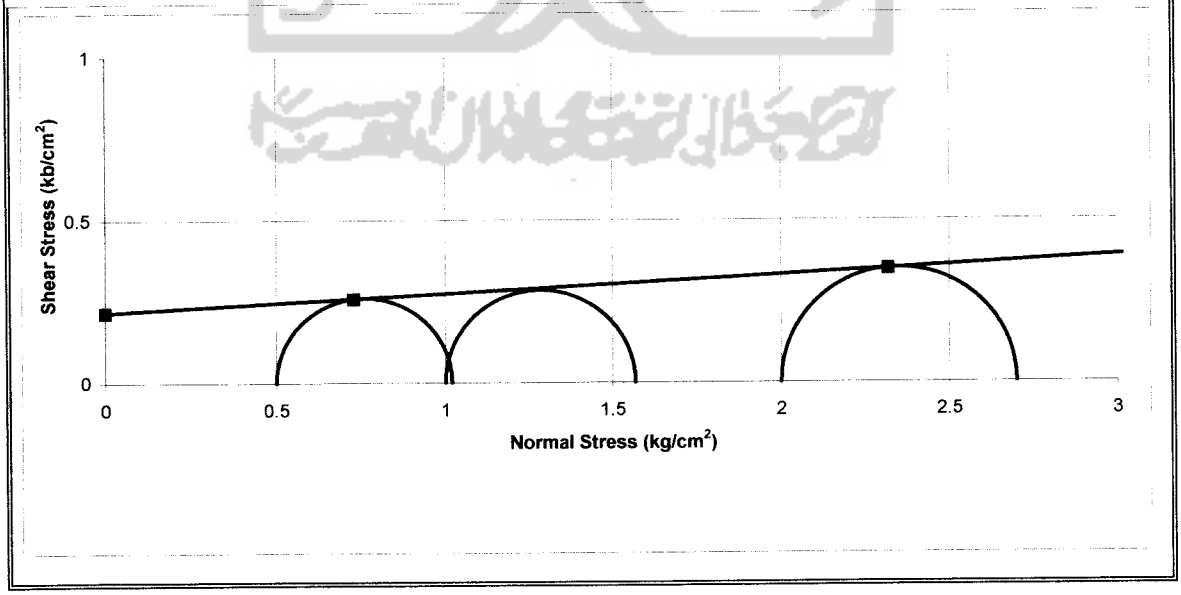
Sample No. : Undisturbed
Date : 04 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	165.42	165.42	165.42
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	

γd gram/cm³	1.7899318	1.7899318	1.7899318
γd gram/cm³	1.3146138	1.3146138	1.3146138

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.5190121	0.5666819	0.6991933
$\sigma_1 = \Delta\sigma + \sigma_3$	1.0190121	1.5666819	2.6991933
$(\sigma_1+\sigma_2)/2$	0.759506	1.2833409	2.3495967
$(\sigma_1-\sigma_2)/2$	0.259506	0.2833409	0.3495967
Angle of shearing resistence (o)			3.2620979
Apperen cohesion (kg/cm²)			0.2160855



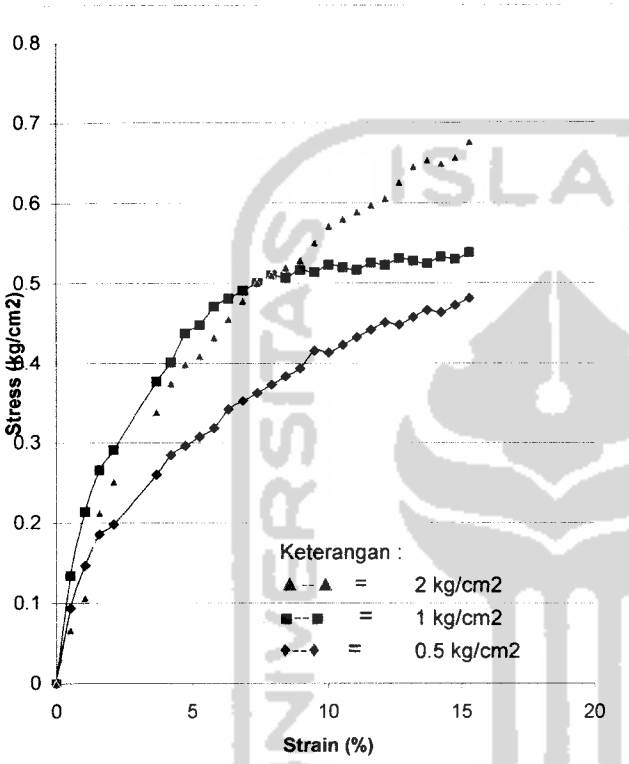
LAMPIRAN NO.21

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

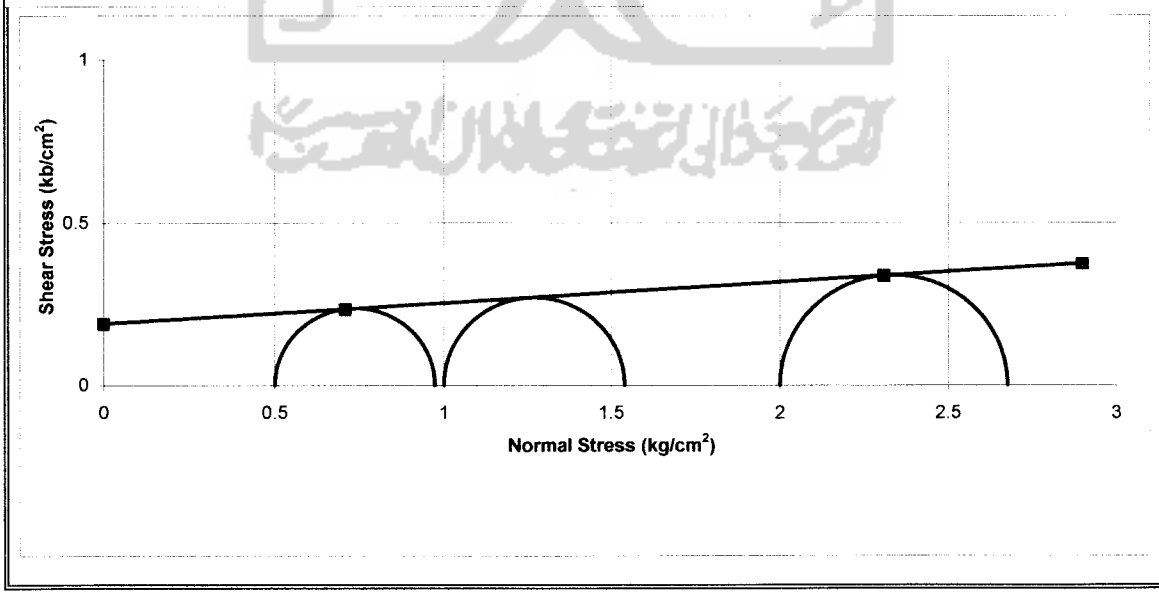
Sample No. : Undisturbed
Date : 04 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	165.42	165.42	165.42
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	

γd gram/cm³	1.7899318	1.7899318	1.7899318
γd gram/cm³	1.3146138	1.3146138	1.3146138

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.4728777	0.5387227	0.676269
$\sigma_1 = \Delta\sigma + \sigma_3$	0.9728777	1.5387227	2.676269
$(\sigma_1+\sigma_2)/2$	0.7364388	1.2693614	2.3381345
$(\sigma_1-\sigma_2)/2$	0.2364388	0.2693614	0.3381345
Angle of shearing resistence (o)			3.6514134
Apperen cohesion (kg/cm²)			0.189519



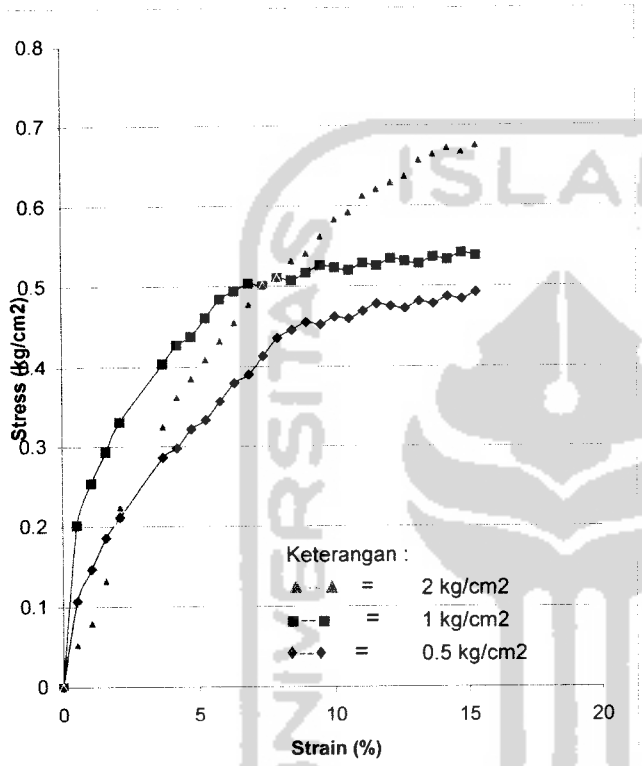
LAMPIRAN NO.22

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

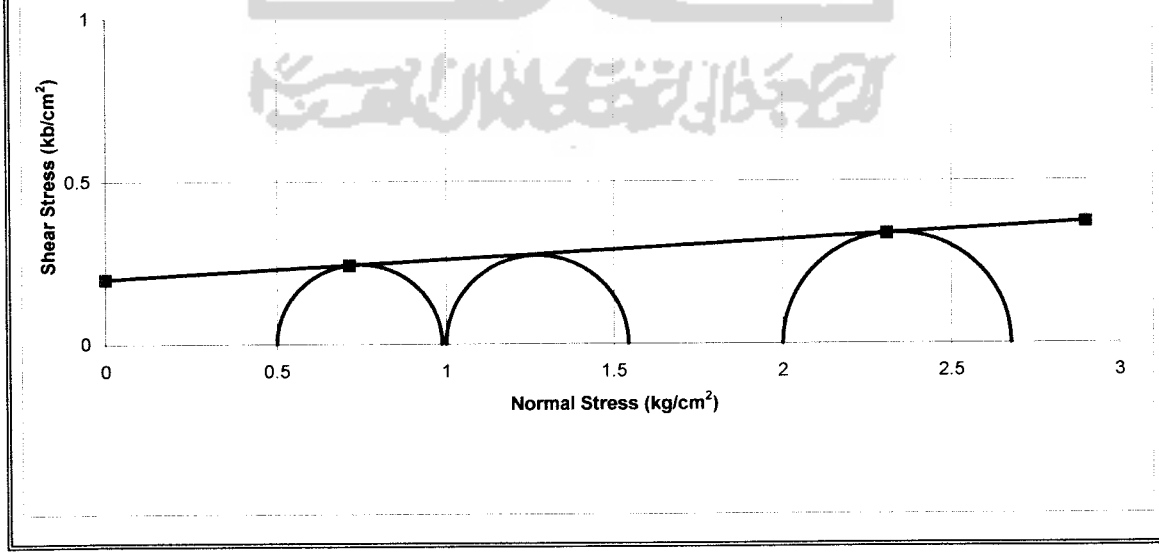
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 04 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	165.42	165.42	165.42
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
γd gram/cm³	1.7899318	1.7899318	1.7899318
γd gram/cm³	1.3146138	1.3146138	1.3146138

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.4874107	0.5420793	0.676269
$\sigma_1 = \Delta\sigma + \sigma_3$	0.9874107	1.5420793	2.676269
$(\sigma_1+\sigma_2)/2$	0.7437054	1.2710396	2.3381345
$(\sigma_1-\sigma_2)/2$	0.2437054	0.2710396	0.3381345
Angle of shearing resistence (o)			3.4078325
Apperen cohesion (kg/cm²)			0.1993711



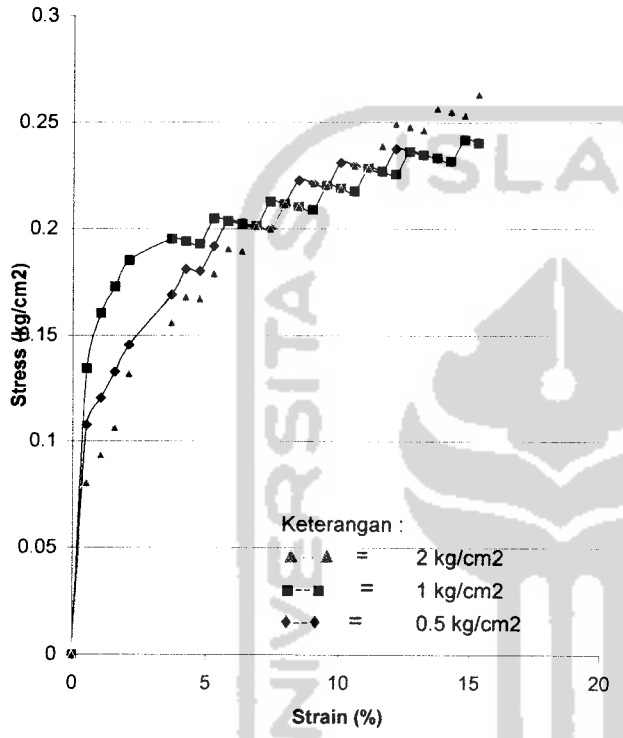
LAMPIRAN NO.23

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

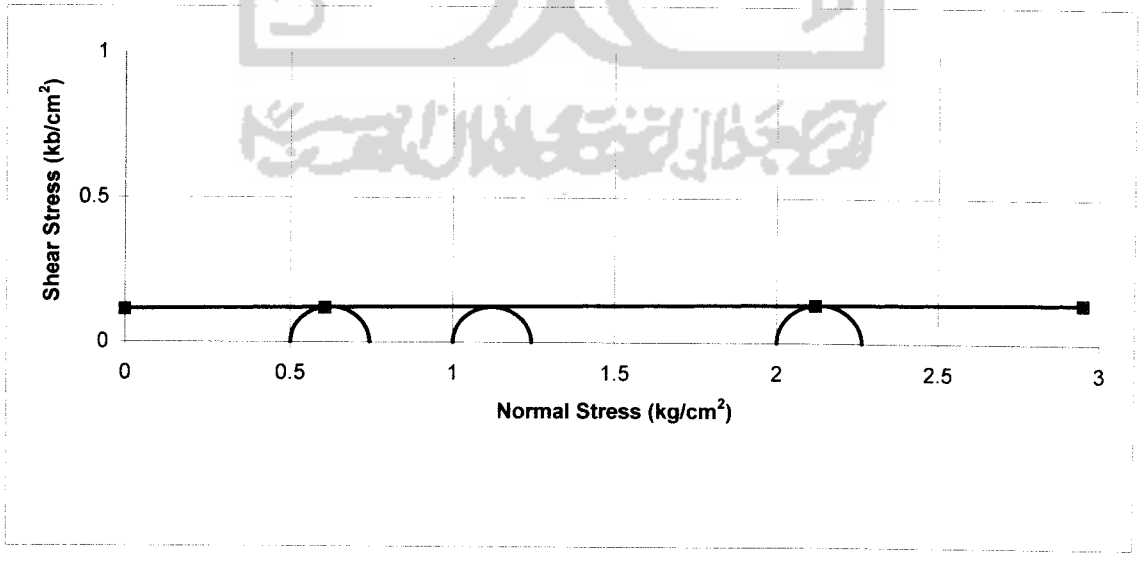
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 08 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	153.80	160.50	161.20
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
5% > water content %		37.96	
γd gram/cm³	1.6641973	1.7366948	1.7442692
γd gram/cm³	1.2062521	1.2588002	1.2642902

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.2422056	0.2422056	0.2636303
$\sigma_1 = \Delta\sigma + \sigma_3$	0.7422056	1.2422056	2.2636303
$(\sigma_1+\sigma_2)/2$	0.6211028	1.1211028	2.1318151
$(\sigma_1-\sigma_2)/2$	0.1211028	0.1211028	0.1318151
Angle of shearing resistence (o)			0.4205729
Apperen cohesion (kg/cm²)			0.1157493



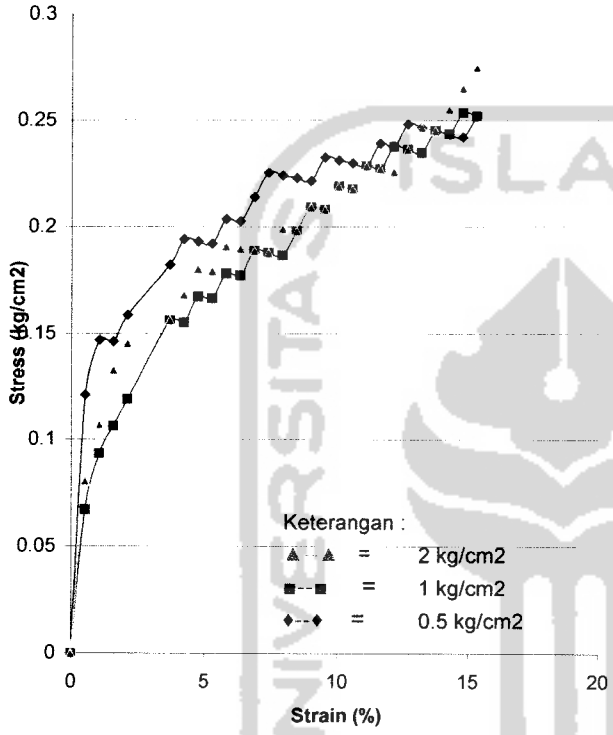
LAMPIRAN NO.24

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

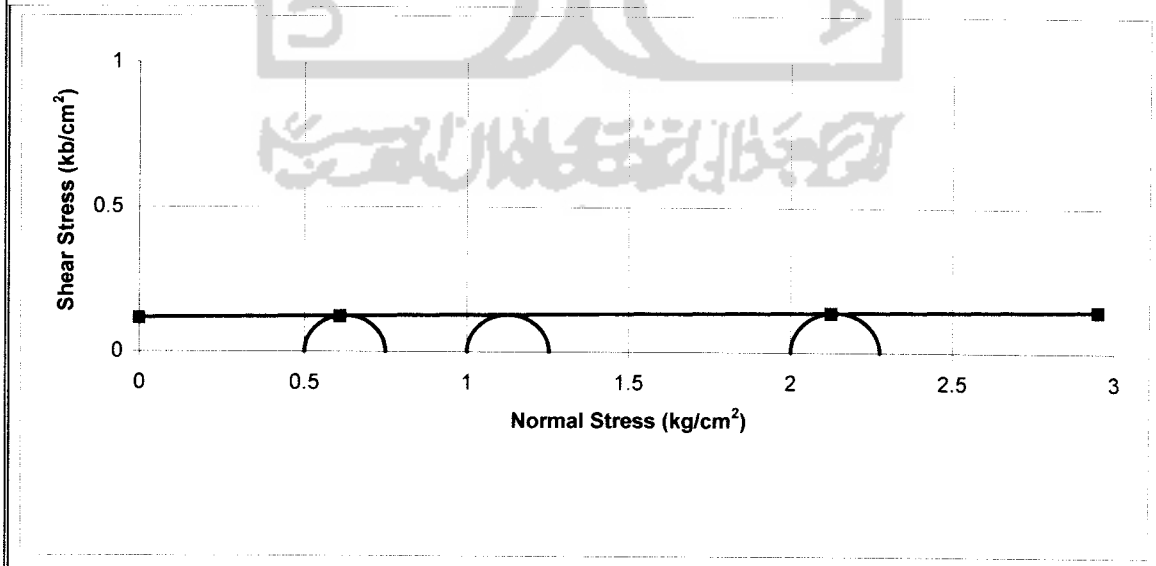
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 08 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	157.50	159.10	158.00
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
5% > water content %		37.96	
γd gram/cm³	1.7042332	1.7215461	1.7096435
γd gram/cm³	1.2352712	1.24782	1.2391927

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.2482045	0.2537392	0.2750925
$\sigma_1 = \Delta\sigma + \sigma_3$	0.7482045	1.2537392	2.2750925
$(\sigma_1+\sigma_2)/2$	0.6241023	1.1268696	2.1375462
$(\sigma_1-\sigma_2)/2$	0.1241023	0.1268696	0.1375462
Angle of shearing resistence (o)			0.5230665
Apperen cohesion (kg/cm²)			0.1176176



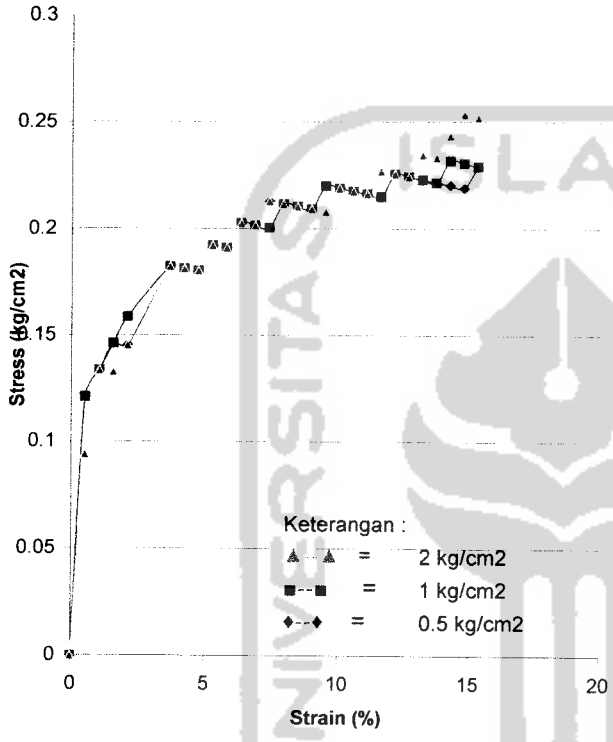
LAMPIRAN NO.25

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

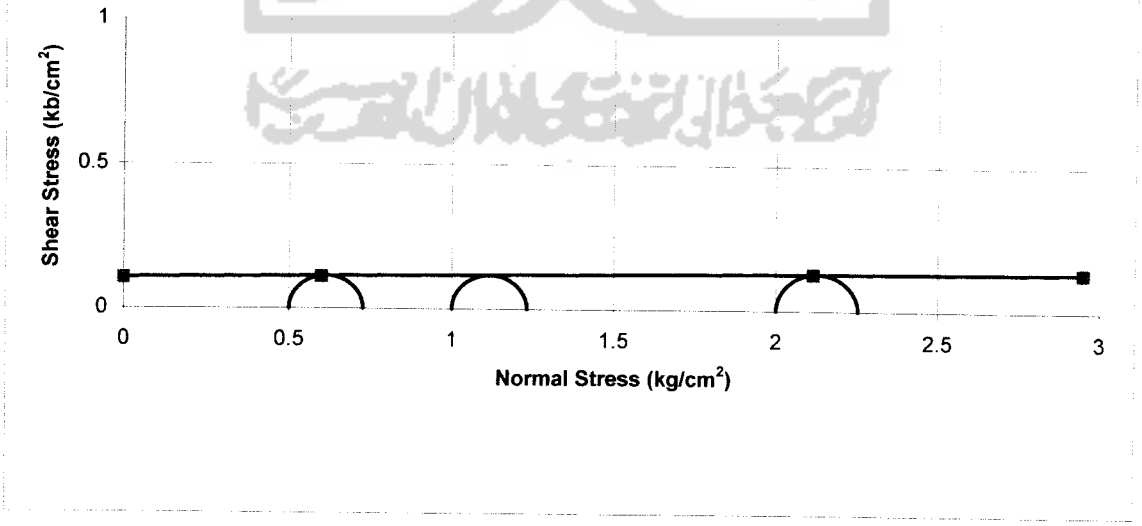
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 08 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	156.80	160.00	157.80
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
5% > water content %		37.96	
γd gram/cm³	1.6966589	1.7312845	1.7074794
γd gram/cm³	1.2297811	1.2548787	1.2376241

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.2259229	0.2321003	0.2537392
$\sigma_1 = \Delta\sigma + \sigma_3$	0.7259229	1.2321003	2.2537392
$(\sigma_1+\sigma_2)/2$	0.6129614	1.1160502	2.1268696
$(\sigma_1-\sigma_2)/2$	0.1129614	0.1160502	0.1268696
Angle of shearing resistence (o)			0.5389869
Apperen cohesion (kg/cm²)			0.1064826

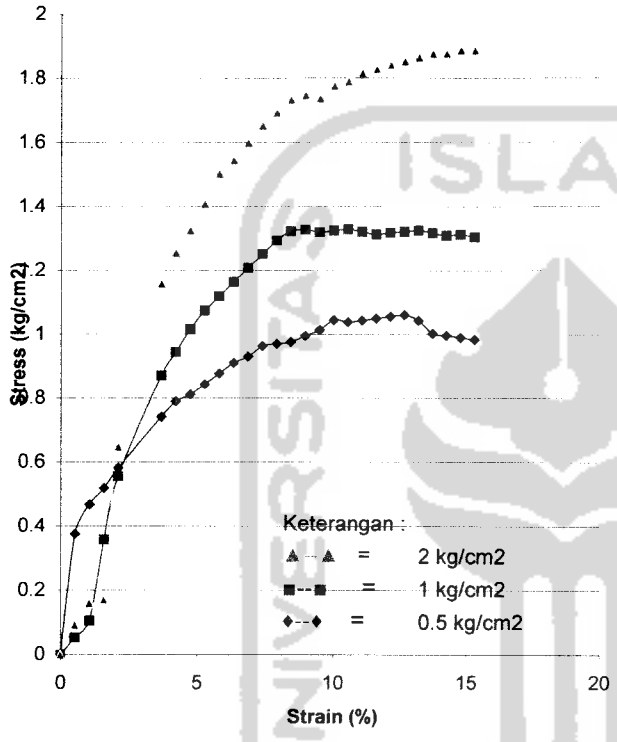


LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

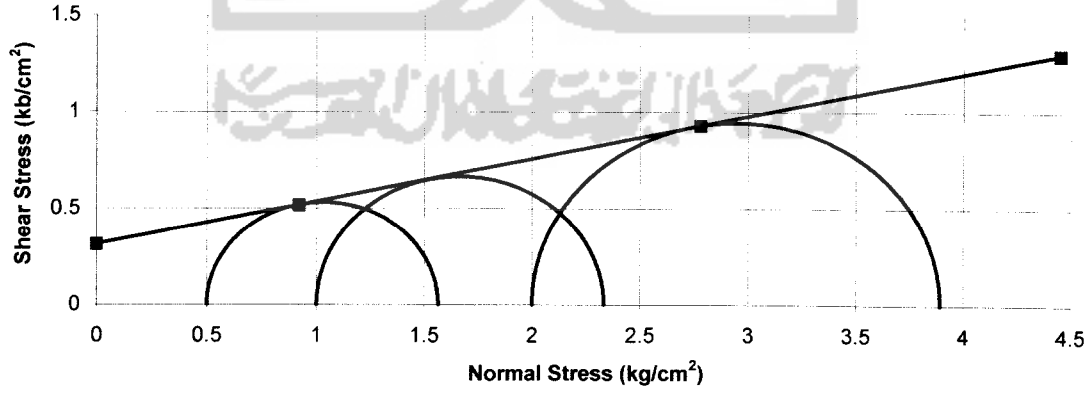
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 06 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	168.70	166.60	167.50
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
5% < water content %		34.35	
γd gram/cm³	1.8254231	1.8027	1.8124385
γd gram/cm³	1.3587209	1.3418073	1.349056

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	1.0637337	1.3315418	1.8915106
$\sigma_1 = \Delta\sigma + \sigma_3$	1.5637337	2.3315418	3.8915106
$(\sigma_1+\sigma_2)/2$	1.0318668	1.6657709	2.9457553
$(\sigma_1-\sigma_2)/2$	0.5318668	0.6657709	0.9457553
Angle of shearing resistence (o)			12.462927
Apperen cohesion (kg/cm²)			0.3166255



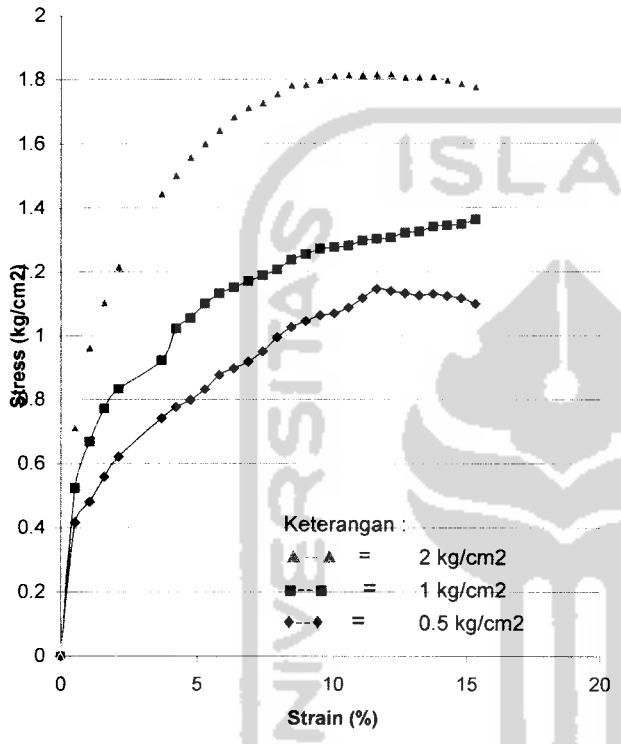
LAMPIRAN NO.27

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

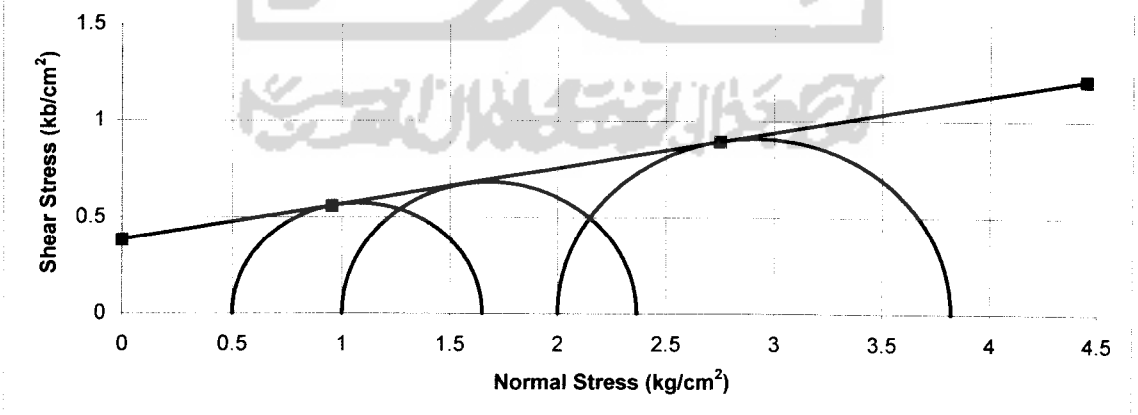
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 06 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	169.80	168.60	167.50
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
5% < water content %		34.35	
γd gram/cm³	1.8373257	1.8243411	1.8124385
γd gram/cm³	1.3675803	1.3579154	1.349056

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	1.148361	1.3640001	1.8192738
$\sigma_1 = \Delta\sigma + \sigma_3$	1.648361	2.3640001	3.8192738
$(\sigma_1+\sigma_2)/2$	1.0741805	1.6820001	2.9096369
$(\sigma_1-\sigma_2)/2$	0.5741805	0.6820001	0.9096369
Angle of shearing resistence (o)			10.535523
Apperen cohesion (kg/cm²)			0.3840589



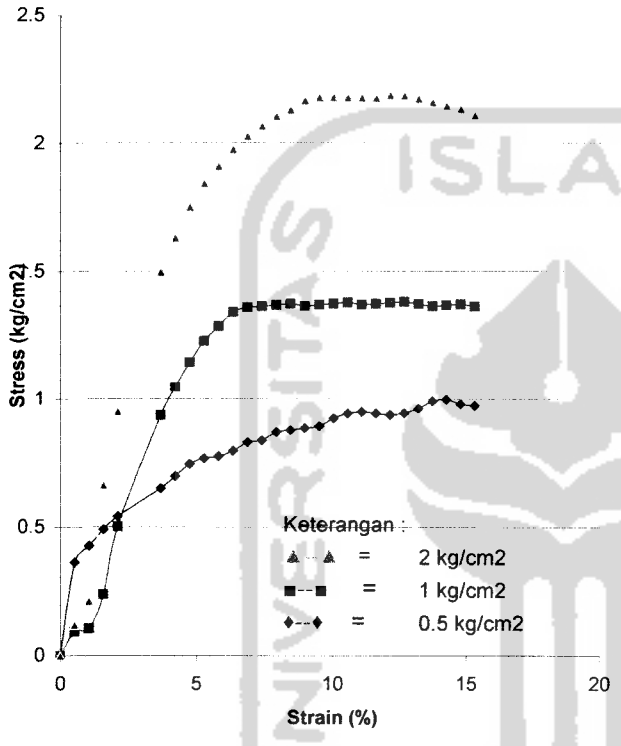
LAMPIRAN NO.28

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

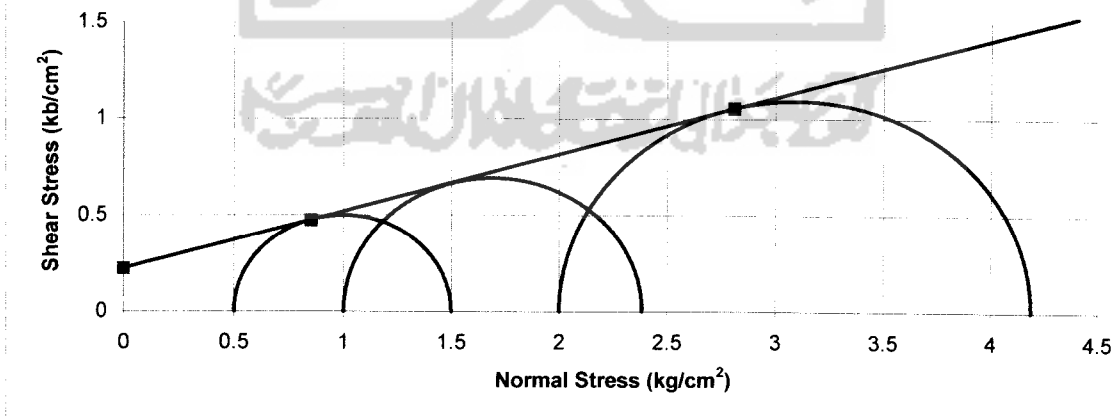
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 06 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	171.20	169.30	167.90
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
5% < water content %		34.35	
γd gram/cm³	1.8524745	1.8319155	1.8167667
γd gram/cm³	1.378856	1.3635533	1.3522776

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.9980314	1.3828538	2.1878849
$\sigma_1 = \Delta\sigma + \sigma_3$	1.4980314	2.3828538	4.1878849
$(\sigma_1+\sigma_2)/2$	0.9990157	1.6914269	3.0939424
$(\sigma_1-\sigma_2)/2$	0.4990157	0.6914269	1.0939424
Angle of shearing resistence (o)			16.4882
Apperen cohesion (kg/cm²)			0.2246973



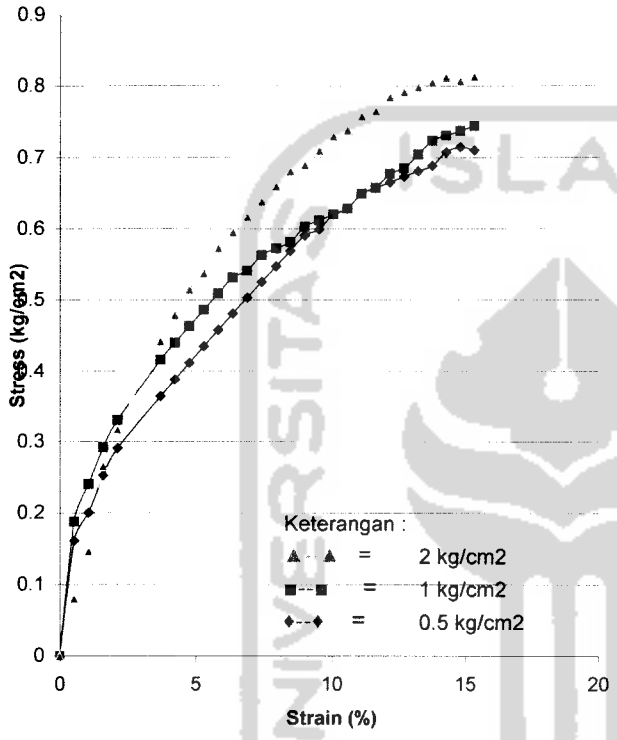
LAMPIRAN NO.29

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

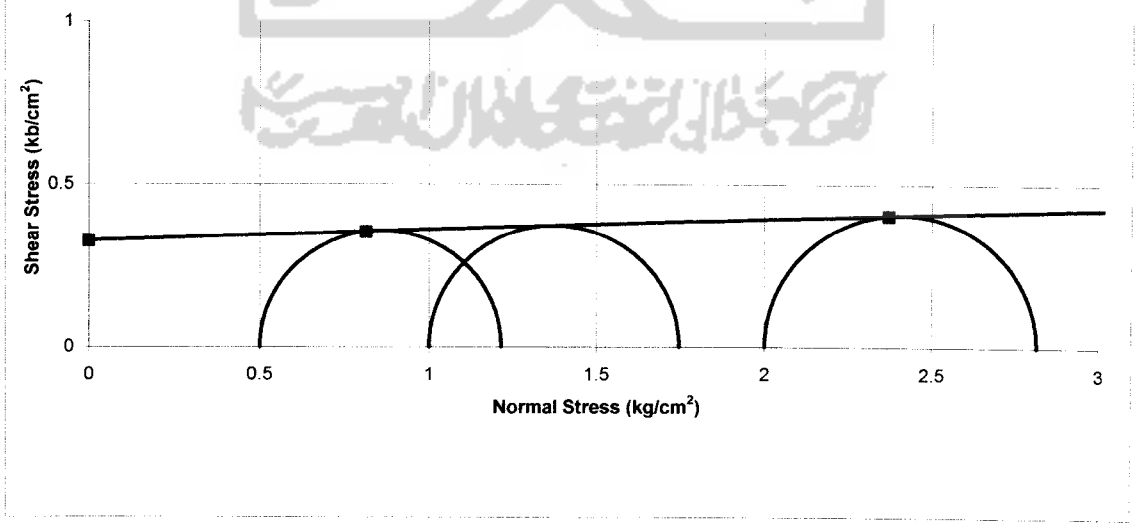
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 11 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	173.69	173.69	173.69
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
γd gram/cm³	1.8794176	1.8794176	1.8794176
γd gram/cm³	1.3803365	1.3803365	1.3803365

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.7150833	0.7450421	0.8138152
$\sigma_1 = \Delta\sigma + \sigma_3$	1.2150833	1.7450421	2.8138152
$(\sigma_1+\sigma_2)/2$	0.8575416	1.372521	2.4069076
$(\sigma_1-\sigma_2)/2$	0.3575416	0.372521	0.4069076
Angle of shearing resistence (o)			1.8564845
Apperen cohesion (kg/cm²)			0.3284933

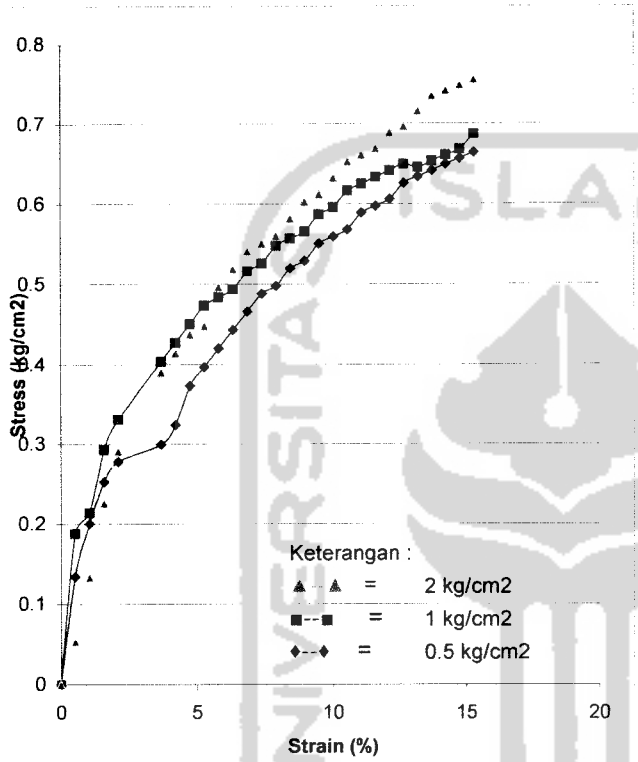


LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

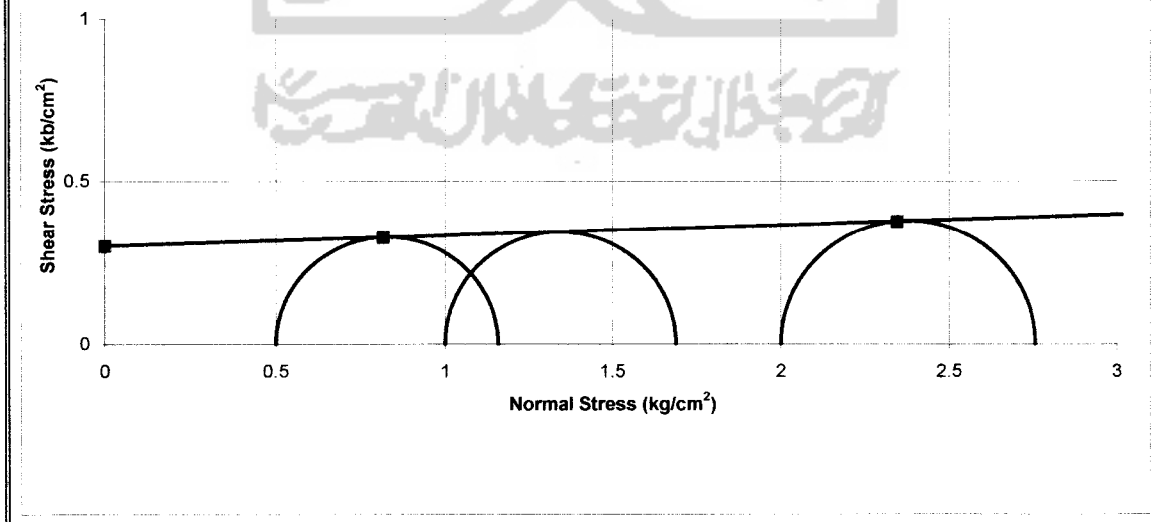
Sample No. : Undisturbed
Date : 11 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	173.69	173.69	173.69
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	

γd gram/cm³	1.8794176	1.8794176	1.8794176
γd gram/cm³	1.3803365	1.3803365	1.3803365

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.6574153	0.6877311	0.7565043
$\sigma_1 = \Delta\sigma + \sigma_3$	1.1574153	1.6877311	2.7565043
$(\sigma_1+\sigma_2)/2$	0.8287076	1.3438656	2.3782521
$(\sigma_1-\sigma_2)/2$	0.3287076	0.3438656	0.3782521
Angle of shearing resistence (o)			1.8106564
Apperen cohesion (kg/cm²)			0.3026726



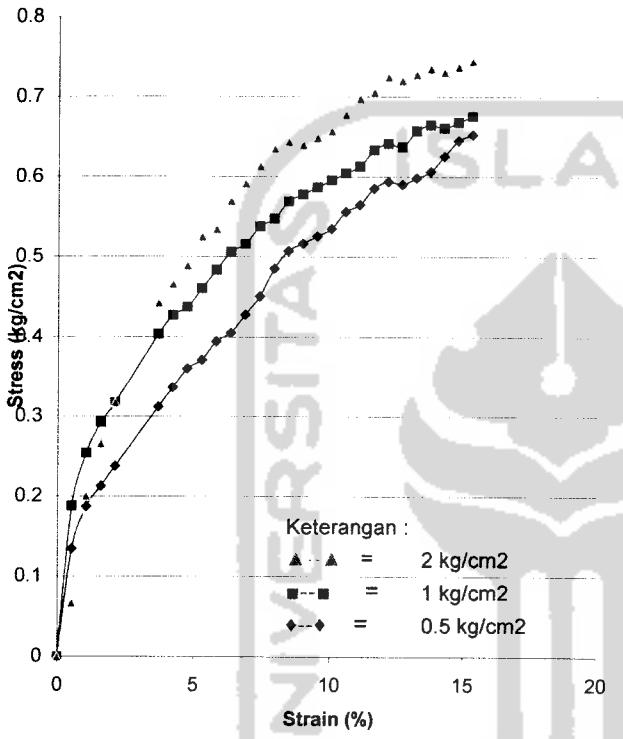
LAMPIRAN NO.31

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

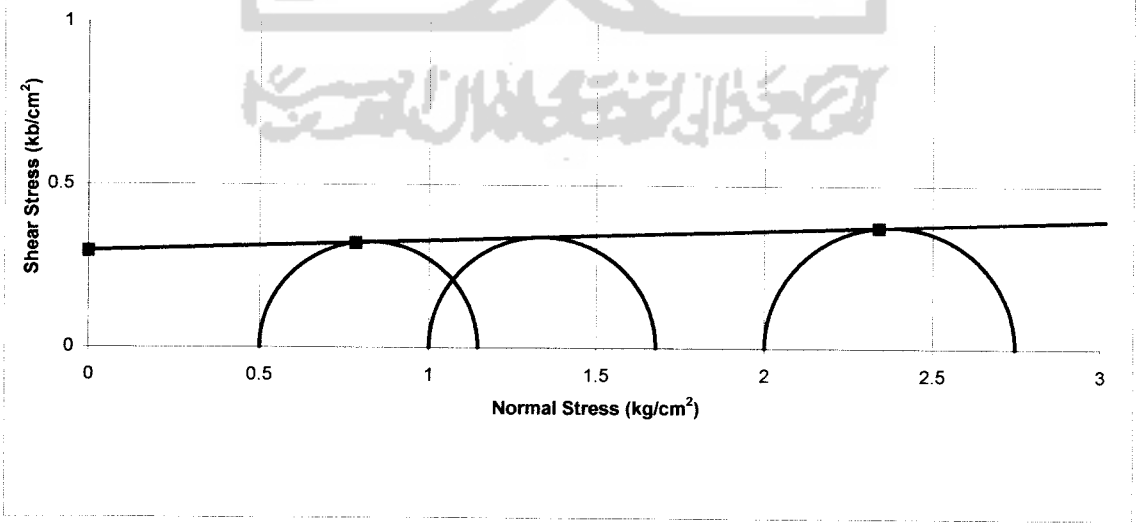
Sample No. : Undisturbed
Date : 11 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	173.69	173.69	173.69
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	

γd gram/cm³	1.8794176	1.8794176	1.8794176
γd gram/cm³	1.3803365	1.3803365	1.3803365

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.6458817	0.676269	0.7450421
$\sigma_1 = \Delta\sigma + \sigma_3$	1.1458817	1.676269	2.7450421
$(\sigma_1+\sigma_2)/2$	0.8229408	1.3381345	2.372521
$(\sigma_1-\sigma_2)/2$	0.3229408	0.3381345	0.372521
Angle of shearing resistence (o)			1.8608892
Apperen cohesion (kg/cm²)			0.295075



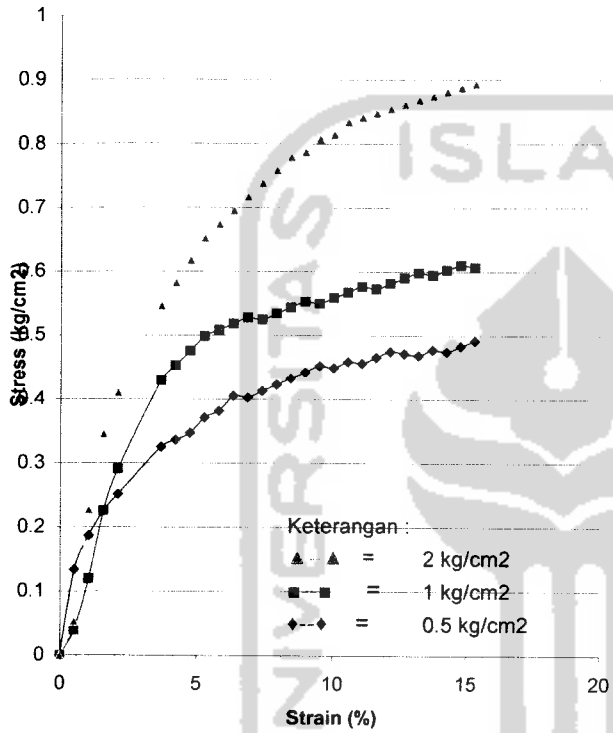
LAMPIRAN NO.32

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil :Silt Clay

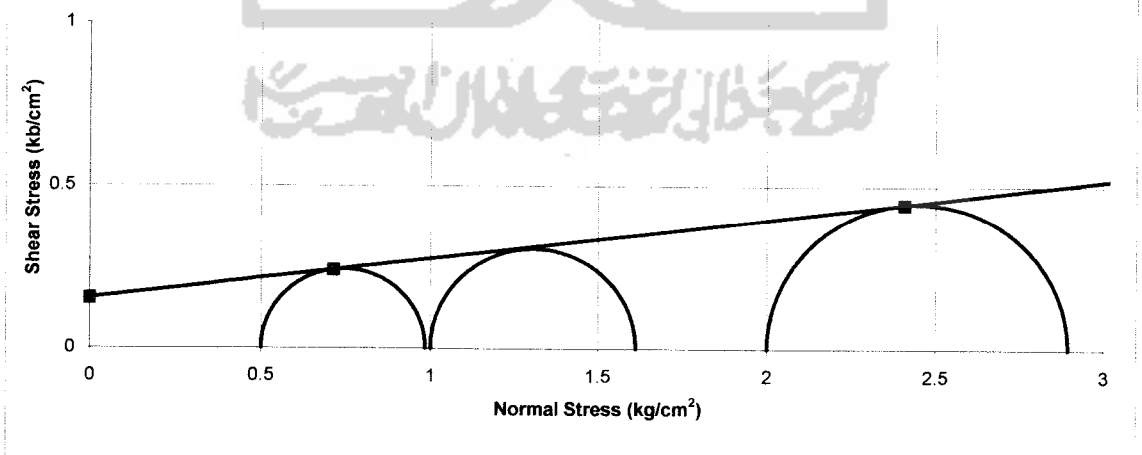
Sample No. : Undisturbed
Date : 09 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	157.15	157.15	157.15
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	

γd gram/cm³	1.700446	1.700446	1.700446
γd gram/cm³	1.2488911	1.2488911	1.2488911

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.4844113	0.6112809	0.8940505
$\sigma_1 = \Delta\sigma + \sigma_3$	0.9844113	1.6112809	2.8940505
$(\sigma_1+\sigma_2)/2$	0.7422056	1.3056404	2.4470252
$(\sigma_1-\sigma_2)/2$	0.2422056	0.3056404	0.4470252
Angle of shearing resistence (o)			6.8920343
Apperen cohesion (kg/cm²)			0.154256



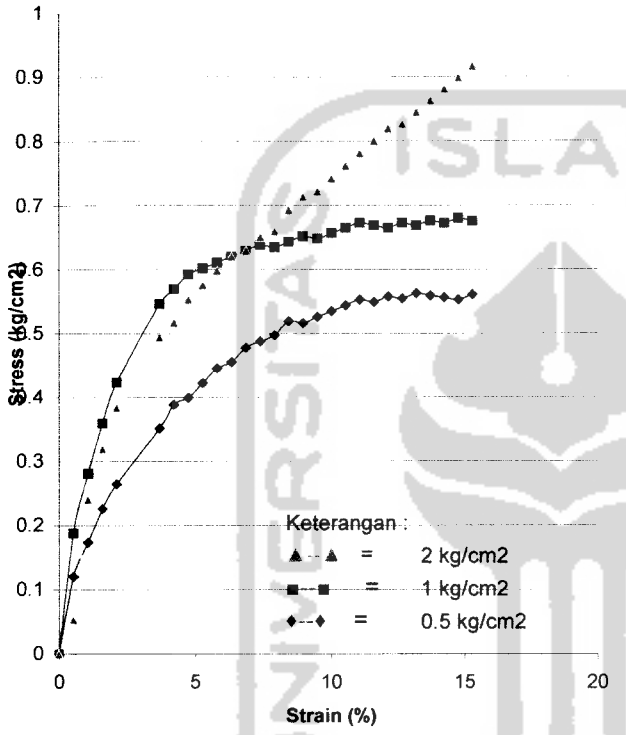
LAMPIRAN NO.33

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

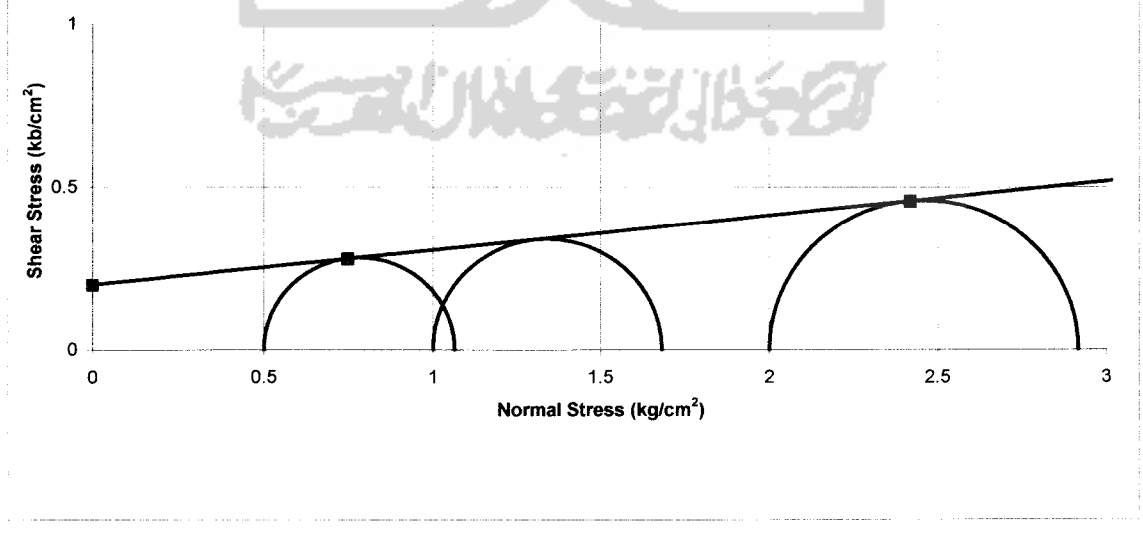
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 09 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	157.15	157.15	157.15
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
γd gram/cm³	1.700446	1.700446	1.700446
γd gram/cm³	1.2488911	1.2488911	1.2488911

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.5638967	0.6804825	0.9169749
$\sigma_1 = \Delta\sigma + \sigma_3$	1.0638967	1.6804825	2.9169749
$(\sigma_1+\sigma_2)/2$	0.7819483	1.3402412	2.4584874
$(\sigma_1-\sigma_2)/2$	0.2819483	0.3402412	0.4584874
Angle of shearing resistence (o)			6.0431742
Apperen cohesion (kg/cm²)			0.2007025



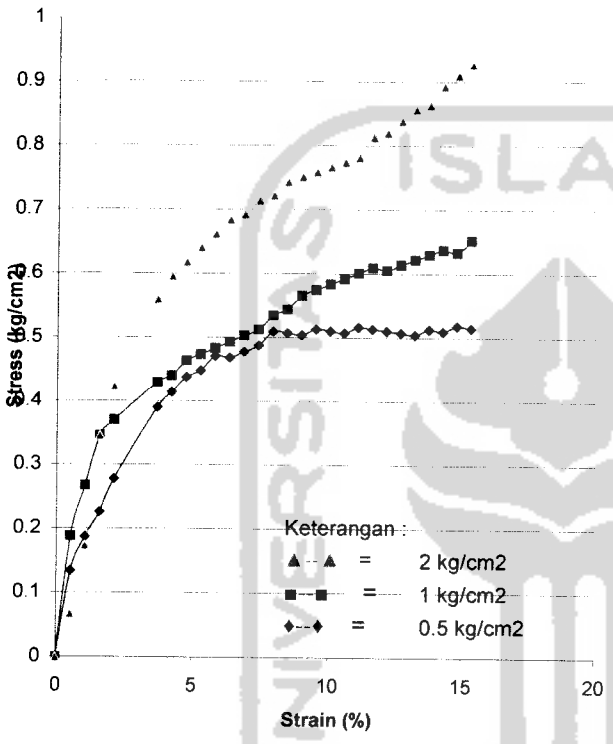
LAMPIRAN NO.34

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

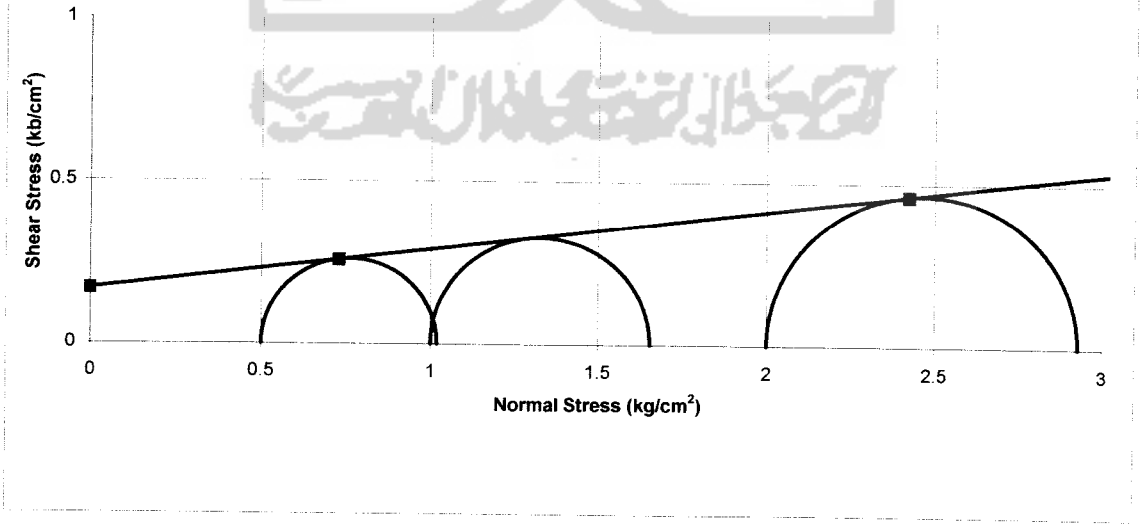
Project : Tugas Akhir
Location : Mertoyudan, Magelang, Jawa Tengah
Description of soil : Silt Clay

Sample No. : Undisturbed
Date : 09 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	157.15	157.15	157.15
Water Content			
Wt Container (cup), gr		21.92	22.35
Wt of Cup + Wet soil, gr		36.90	51.85
Wt of Cup + Dry soil, gr		33.05	43.77
Water Content %		34.59	37.72
Averege water content %		36.16	
γd gram/cm³	1.700446	1.700446	1.700446
γd gram/cm³	1.2488911	1.2488911	1.2488911

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	0.5190121	0.6533446	0.928437
$\sigma_1 = \Delta\sigma + \sigma_3$	1.0190121	1.6533446	2.928437
$(\sigma_1+\sigma_2)/2$	0.759506	1.3266723	2.4642185
$(\sigma_1-\sigma_2)/2$	0.259506	0.3266723	0.4642185
Angle of shearing resistence (o)			6.888559
Apperen cohesion (kg/cm²)			0.169636



LAMPIRAN NO.35

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PENGUJIAN KADAR AIR TANAH

PROYEK : Tugas Akhir
Asal sampel : Kampus UII FTSP

DIKERJAKAN : : Okky + Anto
TANGGAL : : 19 Juli 2005

1	No Pengujian (kode sampel)			1	2
2	Berat Conteiner	W1 (gr)		21.80	22.12
3	Berat Conteiner + tanah basah	W2 (gr)		42.15	38.88
4	Berat Conteiner + tanah kering	W3 (gr)		40.48	37.62
5	Berat air	Wa (gr)	= (W2-W3)	1.67	1.26
6	Berat tanah Kering	Wo (gr)	= (W3-W1)	18.68	15.50
7	Kadar Air	w (%)	$= \frac{(W2-W3)}{(W3-W1)} \times 100\ \%$	8.94	8.13
8	Kadar Air rata - rata	wrt (%)		8.53 %	

PENGUJIAN BERAT VOLUME TANAH

PROYEK : Tugas Akhir
Asal sampel : Kampus UII FTSP

DIKERJAKAN : : Okky + Anto
TANGGAL : : 19 Juli 2005

1	No Pengujian (kode sampel)			1	2	3
2	Diameter ring	(d) cm		6.40	6.40	6.40
3	Tinggi ring	(t) cm		2.58	2.58	2.58
4	Volume ring	(V) cm^3		82.96	82.96	82.96
5	Berat ring	W1 (gr)		83.05	83.05	83.05
6	Berat ring + tanah	W2 (gr)		236.83	234.58	235.69
7	Berat tanah	Wo (gr)	= (W2-W1)	153.78	151.53	152.64
7	Berat volume tanah	γ (gram/cm^3)	$= \frac{(W2-W1)}{V}$	1.85	1.83	1.84
8	Berat volume rata - rata	γrt (gram/cm^3)		1.840		

LAMPIRAN NO. 36 a

PENGUJIAN BERAT JENIS AGREGAT

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
Dikerjakan : Anto + Okky
kedalaman : 2,00 meter

AGREGAT KASAR (tertahan # 10)

A	Berat benda uji kering oven	
B	Berat benda uji kering permukaan jenuh	
C	Berat benda uji dalam air	
*	Berat jenis kering oven (SG)	
*	Berat jenis kering permukaan jenuh (SSD)	
*	Berat jenis semu (Apperen)	
*	Penyerapan (Absorsi)	

AGREGAT HALUS (lolos #10)

1	No pengujian	1	2
2	Berat Picknometer (W1)	17.07	16.71
3	Berat Picknometer +tanah kering (W2)	32.27	30.71
4	Berat Picknometer + tanah + air (W3)	52.16	50.46
5	Berat Picknometer + air (W4)	42.4	41.49
6	Temperatur (t^o)	25.00	25.00
7	Bj pata temperatu (t^0)	0.997090	0.997090
8	Bj pata temperatu (27,5 ^{0}C)	0.996410	0.996410
7	Berat tanah kering (Wt)	15.20	14.00
8	A = Wt + W4	57.60	55.49
9	I = A - W3	5.44	5.03
10	Berat Jenis tanah, Gs = Wt / I	2.79	2.78
11	Bret Jenis = Gs. (Bj t^0 / Bj t 27,5 ^{0}C)	2.7960	2.7852
12	Berat jenis rata-rata	2.791	

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL FTSP
UNIVERSITAS ISLAM INDONESIA

LAMPIRAN NO. 36 b

GRAIN SIZE ANALYSIS

Project	: TA	Location	: Kampus UII Fak. Teknik Sipil / Perencanaan
Test no	: 1	Date	: 20 Agustus 2005
Depth	0-2.00 meter	Tested by	: Okky + Anto

Soil sample (disturbed/undisturbed)

Mass of soil =	60 gr	Hydromoter type =	152 H
Specific Gravity , G =	2.791	Hydr. Correction, a =	0.970
K2 = a/W x 100 =	1.61715285	Meniscus corretion, m =	1

Sive Analisis

Save No	Opening (mm)	Mass retained (gr)		Mass retained (gr)		% finer by mass e/W x 100%	Remarks
4	4.750	d1 =	0.00	e1 =	60.00	100.00	e7 = W - Sd
10	2.000	d2 =	8.60	e2 =	51.40	85.67	e6 = d7 + e7
20	0.850	d3 =	12.00	e3 =	39.40	65.67	e5 = d6 + e6
40	0.425	d4 =	13.00	e4 =	26.40	44.00	e4 = d5 + e5
60	0.250	d5 =	2.20	e5 =	24.20	40.33	e3 = d4 +e4
140	0.106	d6 =	1.00	e6 =	23.20	38.67	e2 = d3 + e3
200	0.075	d7 =	0.48	e7 =	22.72	37.87	e1 = d2 + e2
		Sd =	37.28				

Hirometer Analisis

Time	elapsed time min. T	R1	R2	t	R' R1 + m	L	K	D (mm)	Rc= R1-R2+Cr	P K2 x R (%)
9.29										
9.31	2	14	-2.0	27	15	13.839	0.0119	0.03143248	17.3	27.98
9.34	5	11	-2.0	27	12	14.330	0.0119	0.02022937	14.3	23.13
9.59	30	10	-2.0	27	11	14.494	0.0119	0.00830565	13.3	21.51
10.29	60	8	-2.0	26	9	14.821	0.0121	0.0060375	11.3	18.27
13.39	250	6	-2.0	26	7	15.149	0.0121	0.00299026	9.3	15.04
9.29	1440	5	-2.0	25	6	15.313	0.0121	0.00125266	8.3	13.42

Remarks :

Rc = R1 - R2 + Cr (Cr =Temperatur correction factors)

R' = R1 + m (m correctoin for meniscus)

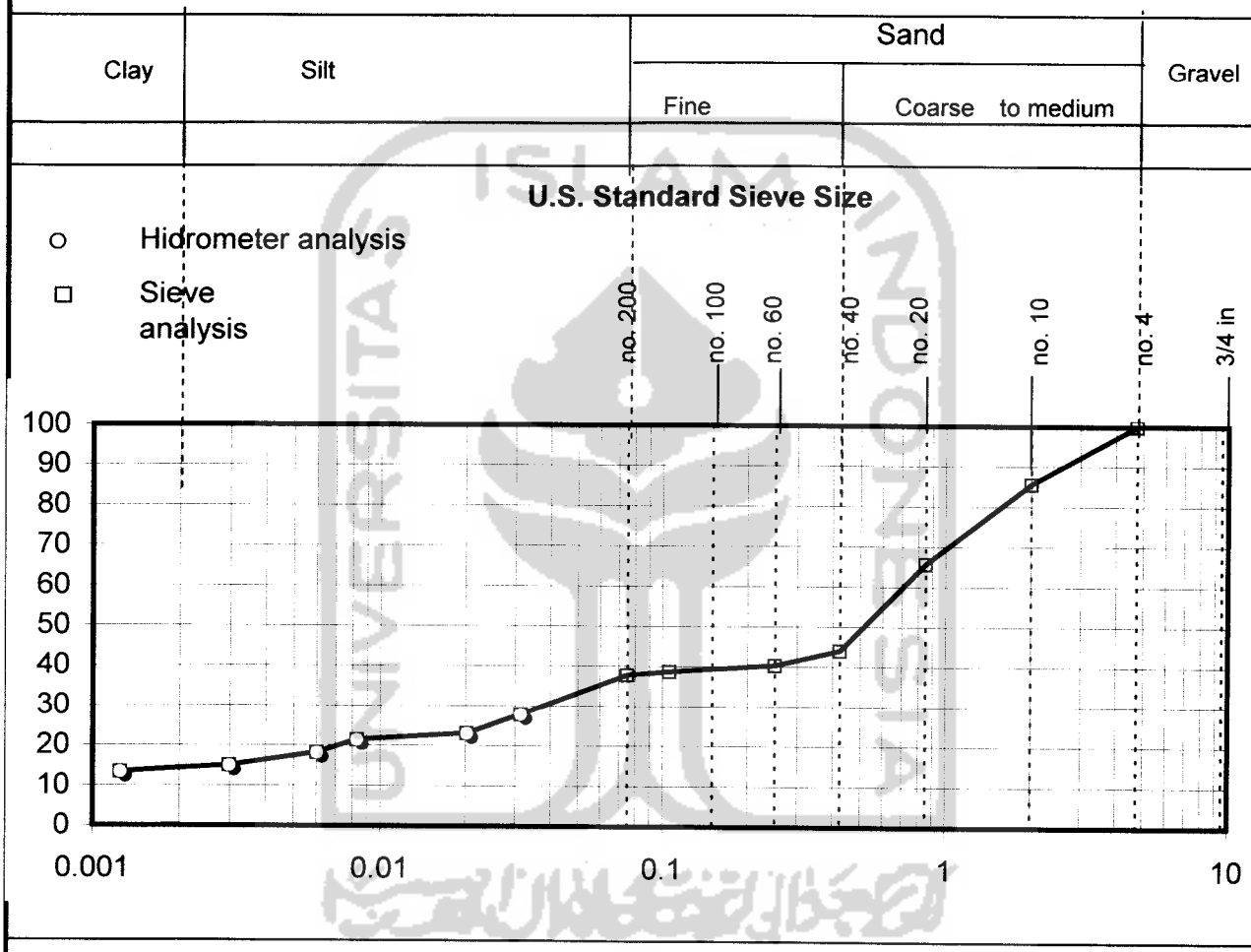
SOIL MECHANICS LABORATORY
CIVIL ENGINEERING DEPARTEMENT
ISLAMIC UNIVERSITY OF INDONESIA

LAMPIRAN NO.37

GRAIN SIZE ANALYSIS

Project	: TA	Tested	: Okky + Anto
Smple no.	: 1	Date	: 20 Agustus 2005
Depth	: 0-2,00 meter	Location	: Kampus UII Fak. Teknik Sipil / Perencanaa

Soil sample (disturbed/undisturbed)
Specifig Gravity : 2.791
Discription of soil : Clay Sand



Finer # 200 :	37.867 %	D10 (mm)	
		D30 (mm)	0.0036
Gravel :	0.00 %	D60 (mm)	0.0700
Sand :	62.13 %	Cu = D60/D10	
Silt :	15.64 %	Cc = D30² / (D10xD60)	
Clay :	2.21 %		

SOIL MECHANICS LABORATORY
CIVIL ENGINEERING DEPARTEMENT
ISLAMIC UNIVERSITY OF INDONESIA

LAMPIRAN NO.38

GRAIN SIZE ANALYSIS

Project	: TA	Location	: Kampus UII Fak. Teknik Sipil / Perencanaan
Test no	: 2	Date	: 20 Agustus 2005
Depth	0-2.00 meter	Tested by	: Okky + Anto

Soil sample (disturbed/undisturbed)

Mass of soil =	60 gr	Hydromoter type =	152 H
Specific Gravity , G =	2.791	Hydr. Correction, a =	0.970
K2 = a/W x 100 =	1.61715285	Meniscus corretion, m =	1

Sive Analisis

Save No	Opening (mm)	Mass retained (gr)		Mass retained (gr)		% finer by mass e/W x 100%	Remarks
4	4.750	d1 =	0.00	e1 =	60.00	100.00	e7 = W - Sd
10	2.000	d2 =	8.43	e2 =	51.57	85.95	e6 = d7 + e7
20	0.850	d3 =	11.80	e3 =	39.77	66.28	e5 = d6 + e6
40	0.425	d4 =	12.98	e4 =	26.79	44.65	e4 = d5 + e5
60	0.250	d5 =	1.90	e5 =	24.89	41.48	e3 = d4 +e4
140	0.106	d6 =	1.20	e6 =	23.69	39.48	e2 = d3 + e3
200	0.075	d7 =	0.23	e7 =	23.46	39.10	e1 = d2 + e2
		Sd =	36.54				

Hirometer Analisis

Time	elapsed time min. T	R1	R2	t	R' R1 + m	L	K	D (mm)	Rc= R1-R2+Cr	P K2 x R (%)
9.29										
9.31	2	13	-2.0	27	14	14.003	0.0119	0.03161788	16.3	26.36
9.34	5	12	-2.0	27	13	14.166	0.0119	0.02011347	15.3	24.74
9.59	30	10	-2.0	27	11	14.494	0.0119	0.00830565	13.3	21.51
10.29	60	9	-2.0	26	10	14.658	0.0121	0.00600406	12.3	19.89
13.39	250	6	-2.0	26	7	15.149	0.0121	0.00299026	9.3	15.04
9.29	1440	4	-2.0	25	5	15.476	0.0121	0.00125933	7.3	11.81
									0	0

Remarks :

Rc = R1 - R2 + Cr (Cr =Temperatur correction factors)

R' = R1 + m (m correctoin for meniscus)

SOIL MECHANICS LABORATORY
CIVIL ENGINEERING DEPARTEMENT
ISLAMIC UNIVERSITY OF INDONESIA

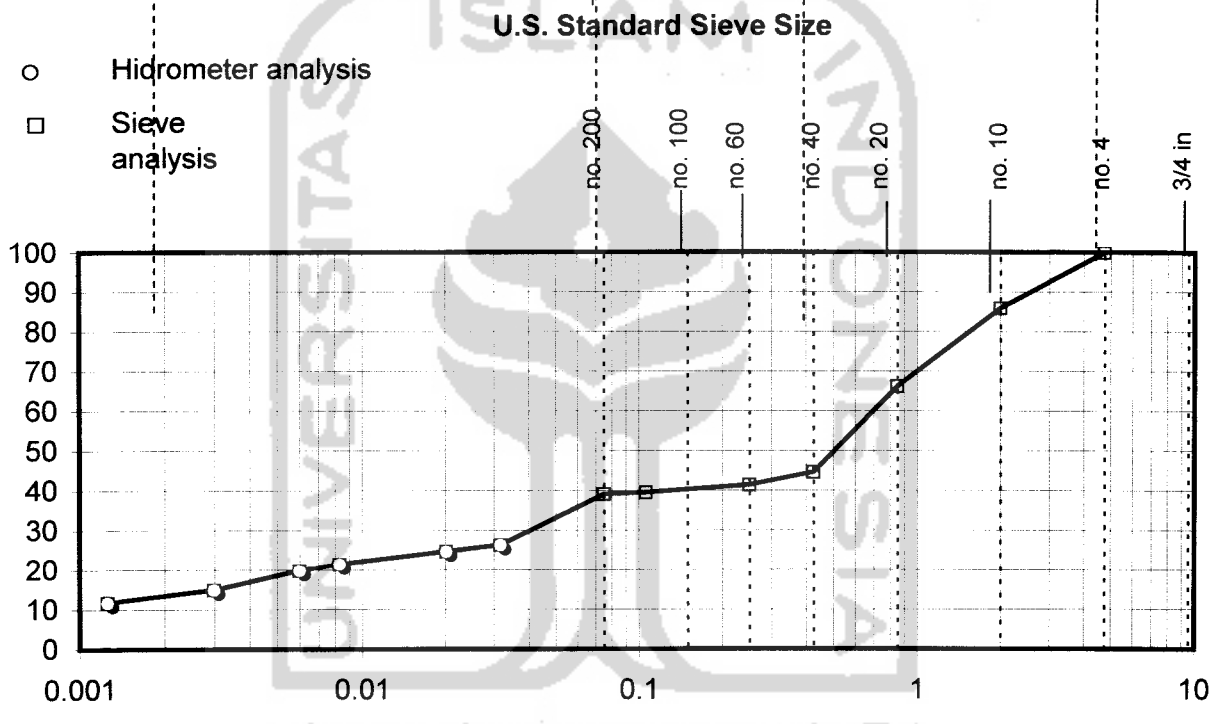
LAMPIRAN NO.39

GRAIN SIZE ANALYSIS

Project	: TA	Tested	: Okky + Anto
Smple no.	: 2	Date	: 20 Agustus 2005
Depth	: 0-2.00 meter	Location	: Kampus UII Fak. Teknik Sipil / Perencanaa

Soil sample (disturbed/undisturbed)
Specifig Gravity : 2.791
Discription of soil : Clay Sand

Clay	Silt	Sand		Gravel
		Fine	Coarse to medium	



Finer # 200 :	39.1 %	D10 (mm)		
		D30 (mm)		0.0039
Gravel :	0.00 %	D60 (mm)		0.0690
Sand :	60.90 %	Cu = D60/D10		
Silt :	15.30 %	Cc = D30² / (D10xD60)		
Clay :	3.49 %			

SOIL MECHANICS LABORATORY
CIVIL ENGINEERING DEPARTEMENT
ISLAMIC UNIVERSITY OF INDONESIA

LAMPIRAN NO.40

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Beban P (Kg)			0.50	1.00	2.00	4.00	8.00	16.00	4.00	0.50
Waktu Pembacaan			Pembacaan dial ... (mm) untuk beban ... (kg/cm^2)							
Jam	t	$\sqrt{t}$	0.25	0.50	1.00	2.00	4.00	8.00	2,00 (*)	0,25 (*)
	0	0	11.000	10.800	10.660	10.390	10.000	9.325	8.635	8.685
	5,40"	0.3	10.950	10.755	10.500	10.245	9.910	9.120		
	15,00"	0.5	10.900	10.740	10.490	10.210	9.720	9.075		
	29,40"	0.7	10.875	10.735	10.480	10.180	9.690	9.030		
	1,00"	1.0	10.860	10.730	10.470	10.160	9.610	8.985		
	2,25"	1.5	10.850	10.720	10.465	10.130	9.550	8.915		
	4,00"	2.0	10.840	10.710	10.455	10.110	9.515	8.870		
	6,25"	2.5	10.830	10.705	10.450	10.085	9.488	8.835		
	9,00"	3.0	10.825	10.695	10.440	10.070	9.460	8.805		
	12,25"	3.5	10.820	10.690	10.430	10.055	9.435	8.775		
	16,00"	4.0	10.815	10.680	10.420	10.035	9.410	8.750		
	25,00"	5.0	10.810	10.670	10.410	10.020	9.380	8.695		
	36,00"	5.8	10.805	10.665	10.400	10.010	9.350	8.660		
	49,00"	7.0	10.800	10.660	10.390	10.000	9.325	8.635		
1,04'	64,00"	8.0								
1,21'	81,00"	9.6								
1,40'	100,00"	10.0								
2,01'	121,00"	11.0								
2,24'	144,00"	12.0								
3,45'	225,00"	15.0								
6,40'	400,00"	20.0								
24,0'	1440,00"	38.0	10.800	10.660	10.390	10.000	9.325	8.635	8.685	8.890

LAMPIRAN NO.41

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

HITUNGAN UJI KONSOLIDASI

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

Tanggal : 19 Juli 2005 0
dikerjakan : Okky + Anto 0

Berat Jenis Tanah	2.791	Luas ring (cm2)	19.635
Berat ring (gr)	35.6	Tinggi (Ho) (cm)	2.02
Diameter (cm)	5	Volume Vo (cm3)	39.6626

Beban	Pembacaan akhir dial	Perubahan tebal ΔH	Perubahan angka pori $\Delta e = \frac{\Delta H}{H_t}$	Angka pori $e = e_1 - \Delta e$	$Cc = \frac{\Delta e}{\log \frac{P_2}{P_1}}$	tebal akhir H=H1-ΔH	1/2 tebal rata-rata d=(H1+H2)/2	$\sqrt{t_{90}}$	t_{90} (detik)	Cv = $\frac{0.848 \times (d/2)^2}{t_{90}}$ (cm^2/det)
(kg/cm^2)	(mm)	(cm)								
0.00	11.000			0.654			1.005			
		0.020	0.016			2.000		3.9	912.6	0.000939
0.25	10.800			0.638			0.9965			
		0.014	0.011		0.038	1.986		5.8	2018.4	0.000417
0.50	10.660			0.626			0.98625			
		0.027	0.022		0.073	1.959		6.3	2381.4	0.000346
1.00	10.390			0.604			0.96975			
		0.039	0.032		0.106	1.920		5	1500	0.000532
2.00	10.000			0.572			0.943125			
		0.068	0.055		0.184	1.853		6.15	2269.35	0.000332
4.00	9.325			0.517			0.909			
		0.069	0.057		0.188	1.784		6.5	2535	0.000276
8.00	8.635			0.460						
		-0.050	-0.041		0.068					
2.00	8.685			0.501						
		-0.021	-0.017		0.019					
0.25	8.890			0.518						
0.00										

LAMPIRAN NO.42

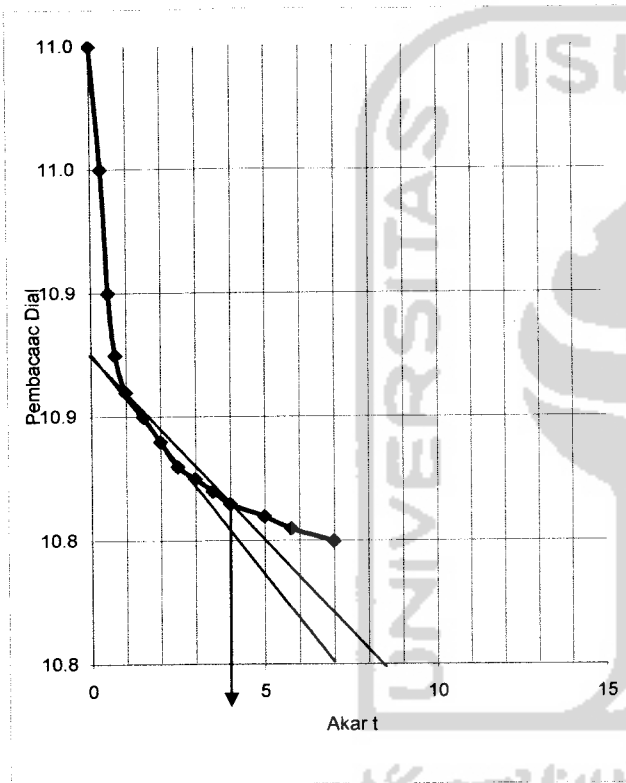
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

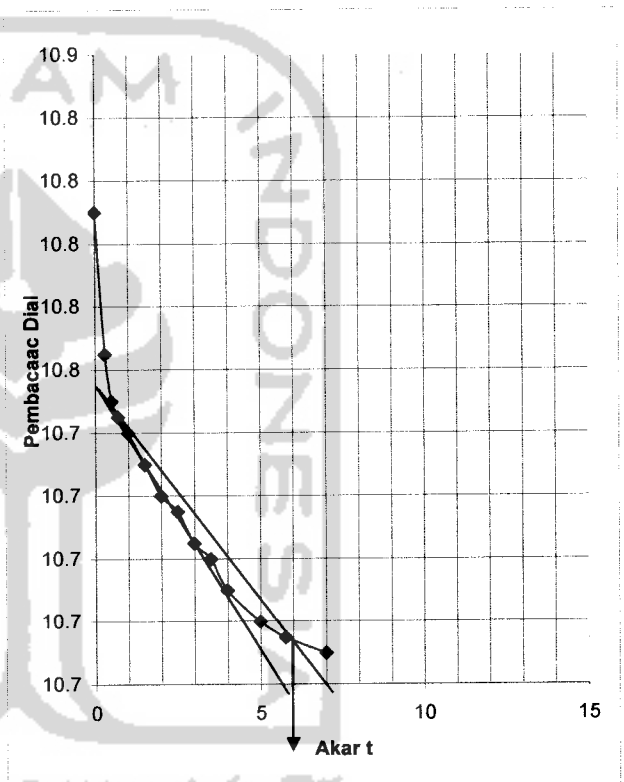
Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Beban 0.25 kg/cm^2



$\sqrt{t}$: 3.9

Beban 0.5 kg/cm^2



$\sqrt{t}$: 5.8

LAMPIRAN NO.43

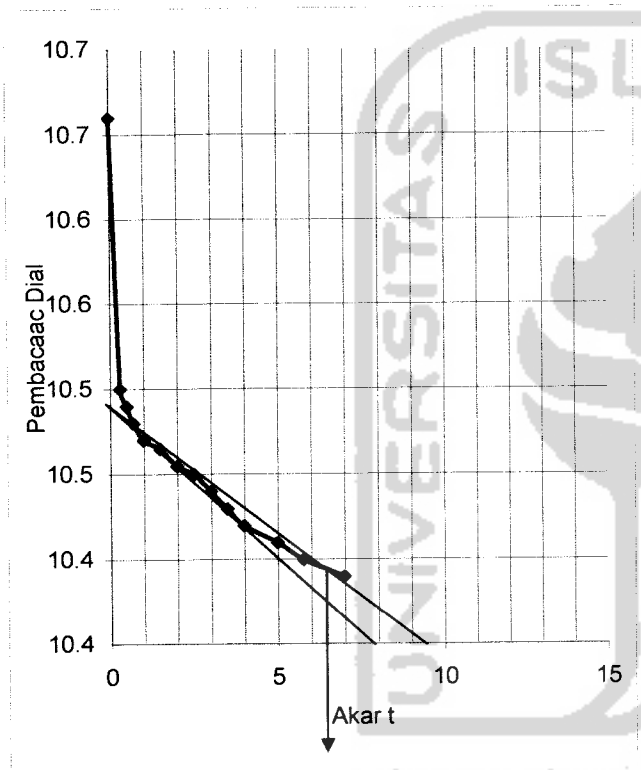
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

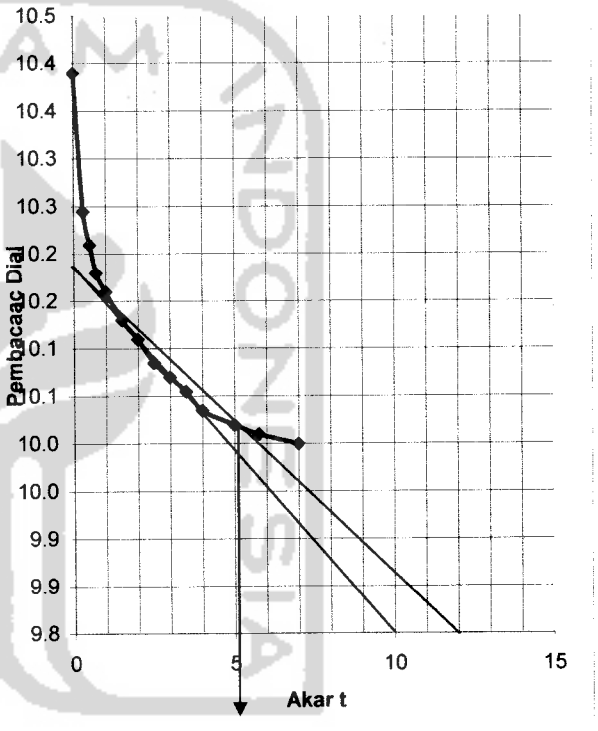
Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Beban 1.00 kg/cm^2



$\sqrt{t}$: 6.3

Beban 2.00 kg/cm^2



$\sqrt{t}$: 5

LAMPIRAN NO.44

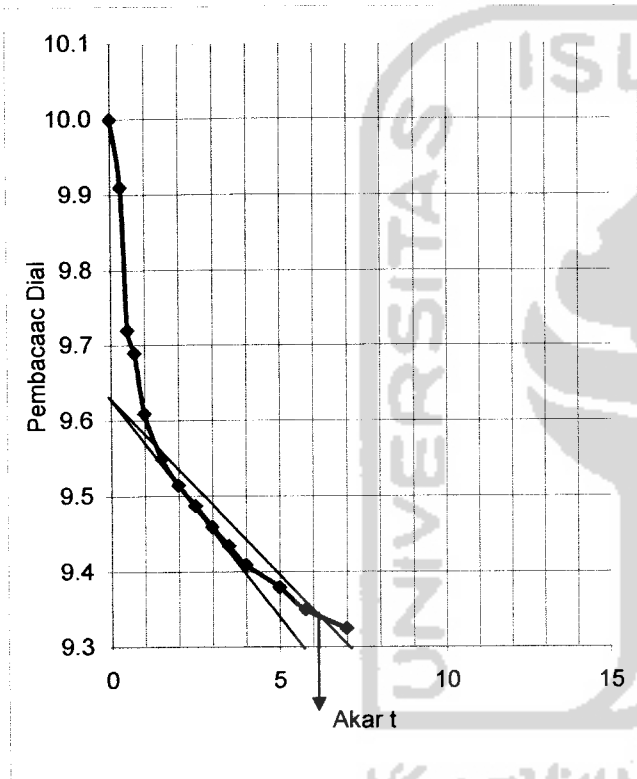
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

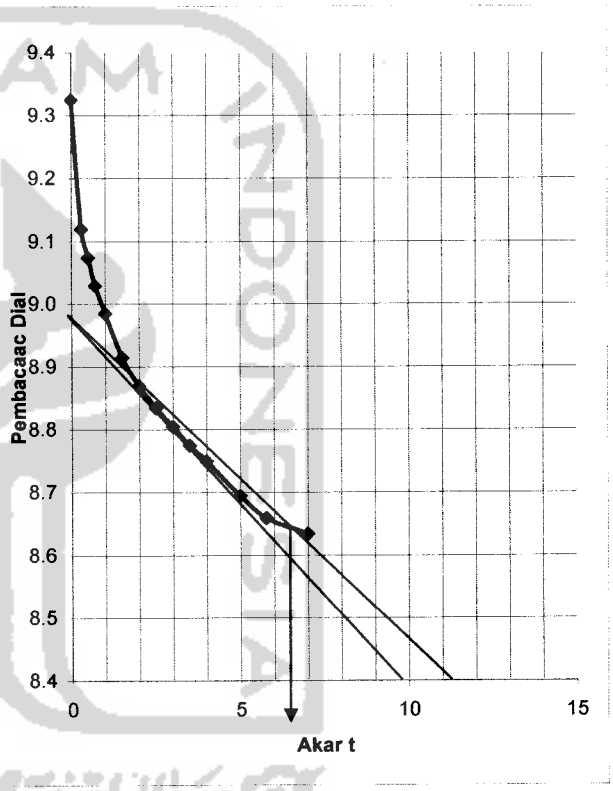
Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Beban 4.00 kg/cm^2



$\sqrt{t}$: 6.15

Beban 8.00 kg/cm^2



$\sqrt{t}$: 6.5

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

KESIMPULAN UJI KONSOLIDASI

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Data Parameter tanah dan ring

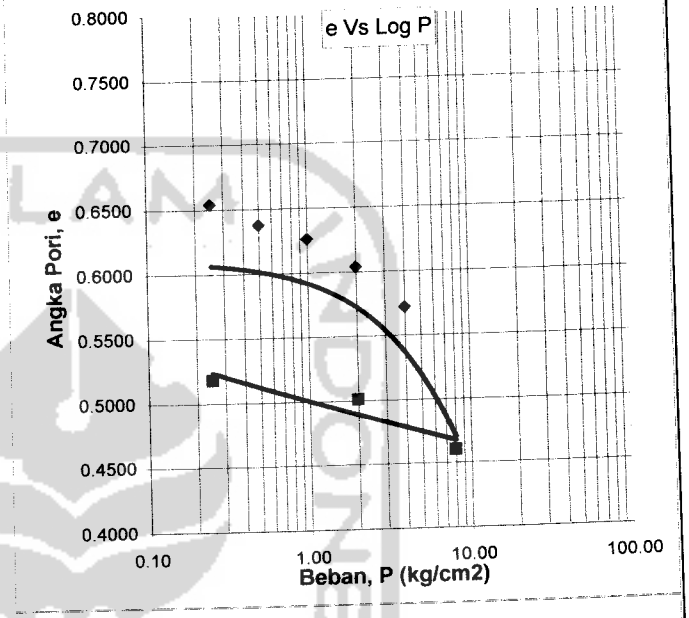
Berat Jenis Tanah	2.791
Berat ring (gr)	35.6
Diameter (cm)	5
Luas ring (cm2)	19.63495
Tinggi (Ho) (cm)	2.02
Volume Vo (cm3)	39.66261

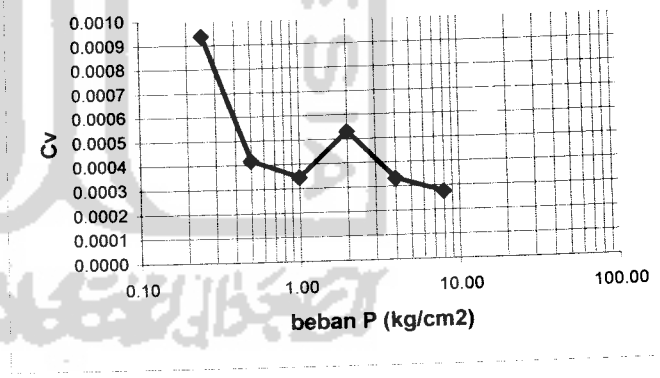
Kadar air		
Berat Container (cup), gr	21.92	22.27
Berat Cup + tanah basah, gr	42.27	39.03
Berat Cup + tanah kering, gr	40.62	37.75
Kadar air %	8.82	8.27
Kadar air rata-rata %	8.55	

Berat ring + tanah basah, gr	108.24
Berat volume tanah basah	1.831
Berat volume tanah kering	1.687
Tinggi bagian padat (Ht)	1.22
Angka pori (e)	0.654168
Derajad kejenuhan (Sr)	285.517

Setelah pengujian	
Berat ring + tanah basah, gr	107.05
Berat ring + tanah kering, gr	97.14
Kadar air, %	16.10335
Angka pori (e)	0.518231
Derajad Kejanuhan (Sr)	336.9513

Cc	0.128671
Cs	-0.01859





LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Beban P (Kg)			0.50	1.00	2.00	4.00	8.00	16.00	4.00	0.50
Waktu Pembacaan			Pembacaan dial ... (mm) untuk beban ... (kg/cm^2)							
Jam	t	$\sqrt{t}$	0.25	0.50	1.00	2.00	4.00	8.00	2,00 (*)	0,25 (*)
	0	0	11.000	10.830	10.670	10.400	10.015	9.370	8.660	8.715
	5,40"	0.3	10.900	10.800	10.550	10.250	9.930	9.100		
	15,00"	0.5	10.895	10.765	10.530	10.220	9.680	9.060		
	29,40"	0.7	10.885	10.755	10.520	10.190	9.650	9.030		
	1,00"	1.0	10.880	10.745	10.500	10.180	9.630	9.000		
	2,25"	1.5	10.870	10.730	10.480	10.140	9.570	8.960		
	4,00"	2.0	10.860	10.720	10.470	10.120	9.550	8.920		
	6,25"	2.5	10.855	10.713	10.460	10.100	9.520	8.890		
	9,00"	3.0	10.850	10.705	10.450	10.080	9.490	8.860		
	12,25"	3.5	10.845	10.700	10.440	10.065	9.470	8.825		
	16,00"	4.0	10.840	10.695	10.432	10.050	9.450	8.800		
	25,00"	5.0	10.833	10.685	10.420	10.030	9.420	8.750		
	36,00"	5.8	10.830	10.680	10.410	10.020	9.390	8.700		
	49,00"	7.0	10.830	10.670	10.400	10.015	9.370	8.660		
1,04'	64,00"	8.0								
1,21'	81,00"	9.6								
1,40'	100,00"	10.0								
2,01'	121,00"	11.0								
2,24'	144,00"	12.0								
3,45'	225,00"	15.0								
6,40'	400,00"	20.0								
24,0'	1440,00"	38.0	10.830	10.670	10.400	10.015	9.370	8.660	8.715	9.210

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

HITUNGAN UJI KONSOLIDASI

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

Tanggal : 19 Juli 2005 0
dikerjakan : Okky + Anto 0

Berat Jenis Tanah	2.791	Luas ring (cm2)	20.4683
Berat ring (gr)	34	Tinggi (Ho) (cm)	1.98
Diameter (cm)	5.105	Volume Vo (cm3)	40.5272

Beban	Pembacaan akhir dial	Perubahan tebal ΔH	Perubahan angka pori $\Delta e = \frac{\Delta H}{H_t}$	Angka pori $e = e_1 - \Delta e$	$Cc = \frac{\Delta e}{\log \frac{P_2}{P_1}}$	tebal akhir H=H1-ΔH	1/2 tebal rata-rata d=(H1+H2)/2	$\sqrt{t_{90}}$	t_{90} (detik)	Cv = $\frac{0.848 \times (d/2)^2}{t_{90}}$ (cm^2/det)
(kg/cm^2)	(mm)	(cm)								
0.00	11.000			0.683			0.98575			
		0.017	0.014			1.963		6	2160	0.000381
0.25	10.830			0.669			0.9775			
		0.016	0.014		0.045	1.947		5.25	1653.75	0.00049
0.50	10.670			0.655			0.96675			
		0.027	0.023		0.076	1.920		5.75	1983.75	0.0004
1.00	10.400			0.632			0.950375			
		0.039	0.033		0.109	1.882		5.6	1881.6	0.000407
2.00	10.015			0.599			0.924625			
		0.065	0.055		0.182	1.817		6.3	2381.4	0.000304
4.00	9.370			0.544			0.89075			
		0.071	0.060		0.200	1.746		5.7	1949.4	0.000345
8.00	8.660			0.484						
		-0.055	-0.047		0.078					
2.00	8.715			0.531						
		-0.050	-0.042		0.047					
0.25	9.210			0.573						
0.00										

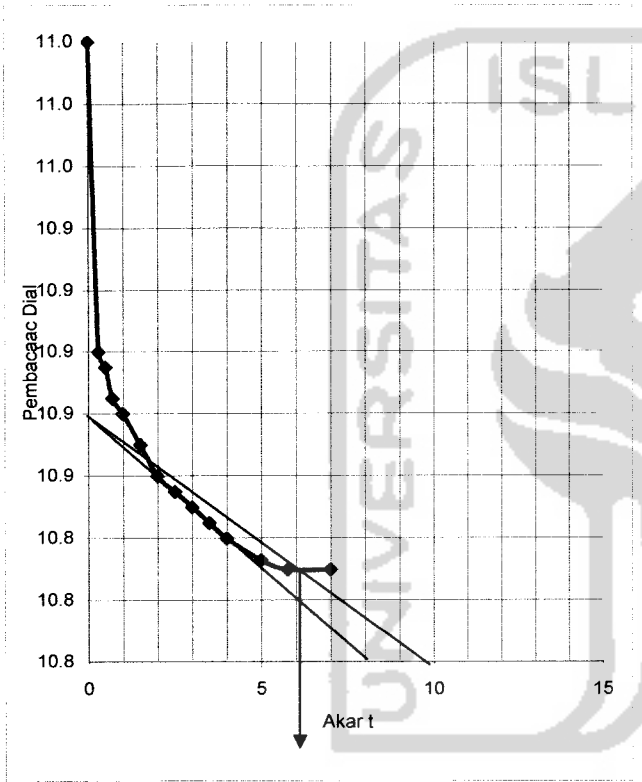
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

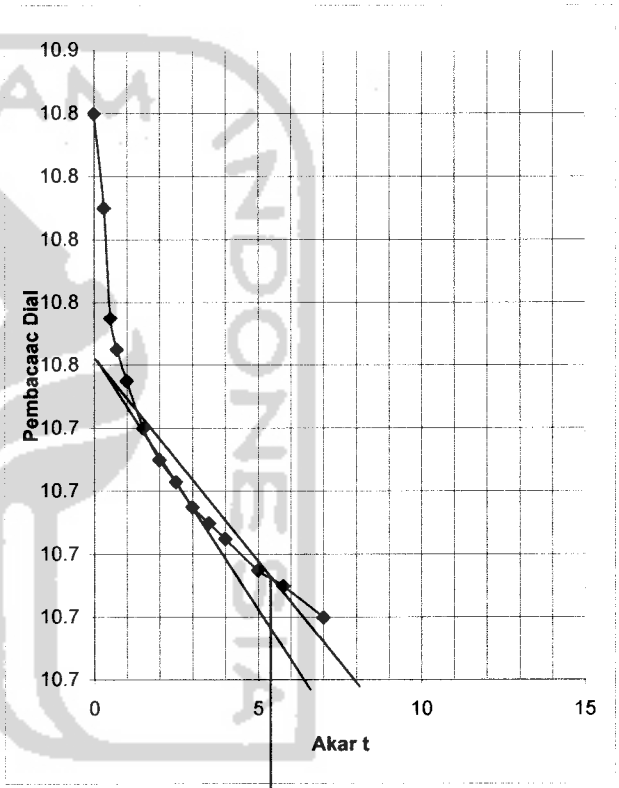
Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Beban 0.25 kg/cm^2



$\sqrt{t}$: 6

Beban 0.5 kg/cm^2



$\sqrt{t}$: 5.25

LAMPIRAN NO.49

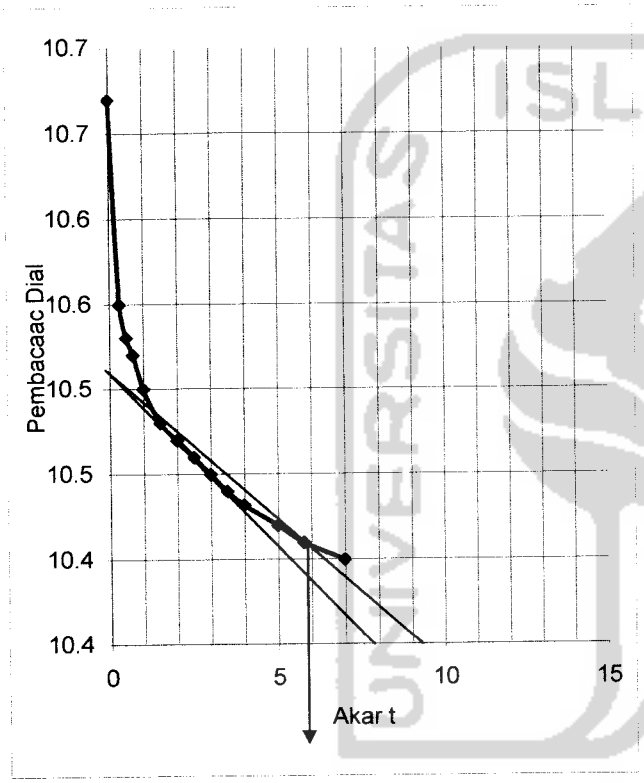
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

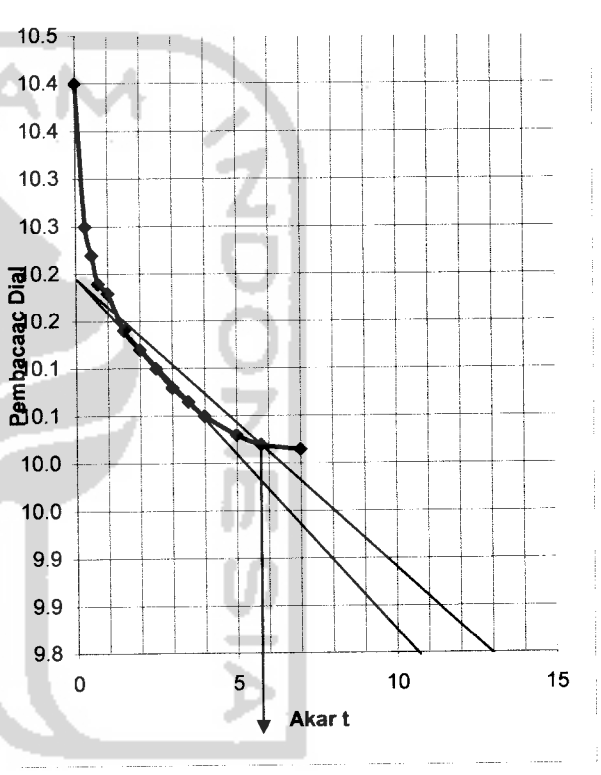
Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Beban 1.00 kg/cm^2



$\sqrt{t}$: 5.75

Beban 2.00 kg/cm^2



$\sqrt{t}$: 5.6

LAMPIRAN NO.50

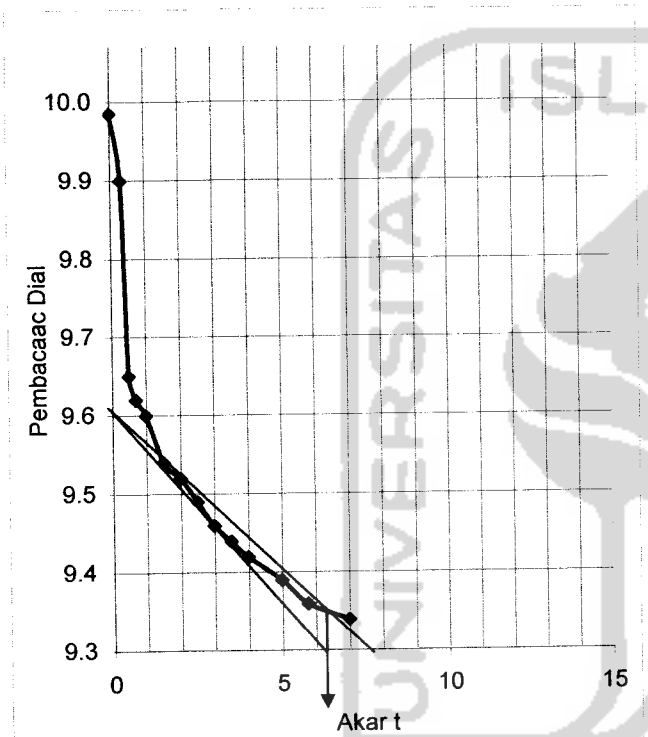
LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

GRAFIK PENURUNAN

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

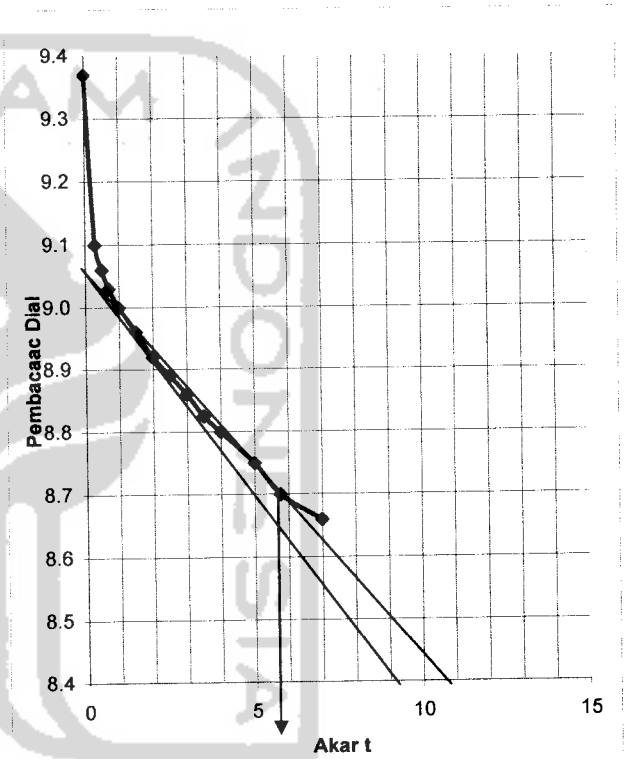
Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Beban 4.00 kg/cm^2



$\sqrt{t}$: 6.3

Beban 8.00 kg/cm^2



$\sqrt{t}$: 5.7

LAMPIRAN NO.51

LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

KESIMPULAN UJI KONSOLIDASI

Proyek : Tugas Akhir
Lokasi : Kampus UII FTSP
No. Titik :
kedalaman : 2.00 meter

Tanggal : 19 Juli 2005
dikerjakan : Okky + Anto

Data Parameter tanah dan ring

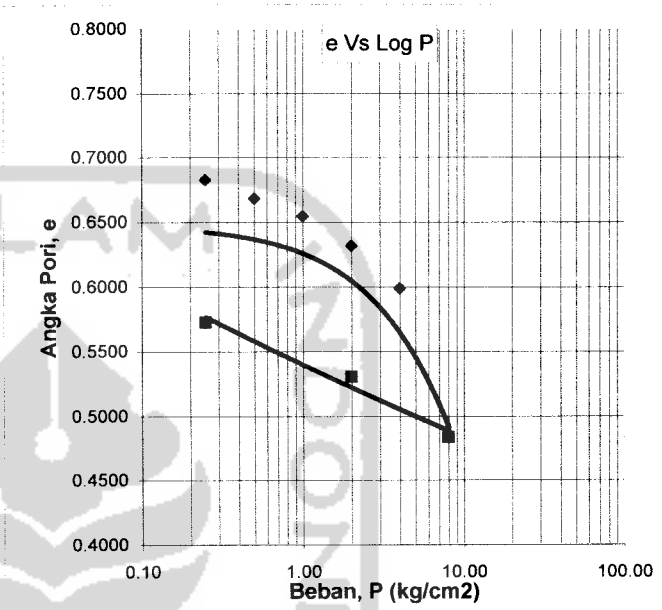
Berat Jenis Tanah	2.791
Berat ring (gr)	34
Diameter (cm)	5.105
Luas ring (cm2)	20.46828
Tinggi (Ho) (cm)	1.98
Volume Vo (cm3)	40.5272

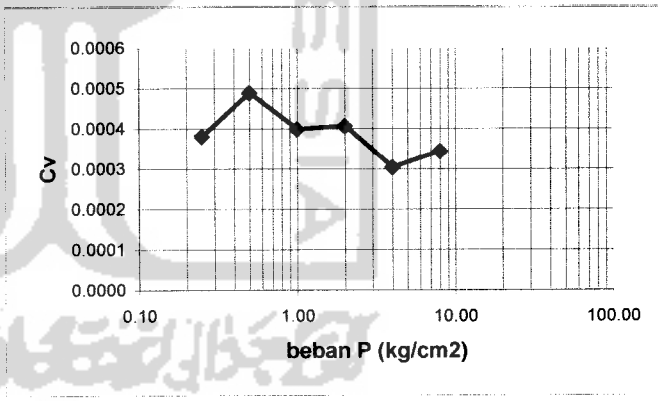
Kadar air		
Berat Container (cup), gr	21.67	21.92
Berat Cup + tanah basah, gr	37.78	42.41
Berat Cup + tanah kering, gr	36.49	40.82
Kadar air %	8.70	8.41
Kadar air rata-rata %	8.56	

Berat ring + tanah basah, gr	106.96
Berat volume tanah basah	1.800
Berat volume tanah kering	1.658
Tinggi bagian padat (Ht)	1.18
Angka pori (e)	0.683006
Derajad kejenuhan (Sr)	274.635

Setelah pengujian	
Berat ring + tanah basah, gr	105.82
Berat ring + tanah kering, gr	96.46
Kadar air, %	14.98559
Angka pori (e)	0.572931
Derajad Kejanuhan (Sr)	309.1001

Cc	0.132147
Cs	-0.04659





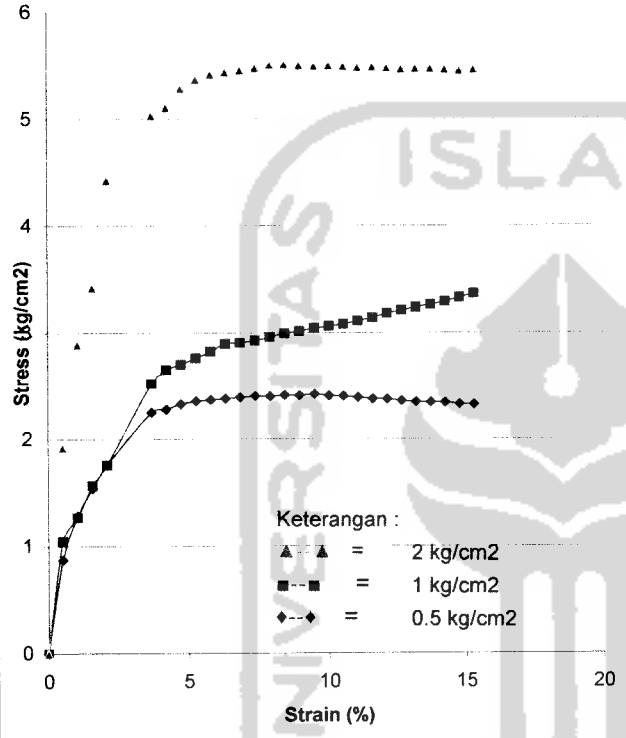
LAMPIRAN NO.52

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
Location : Kampus UII FTSP
Description of soil : Clay Sand

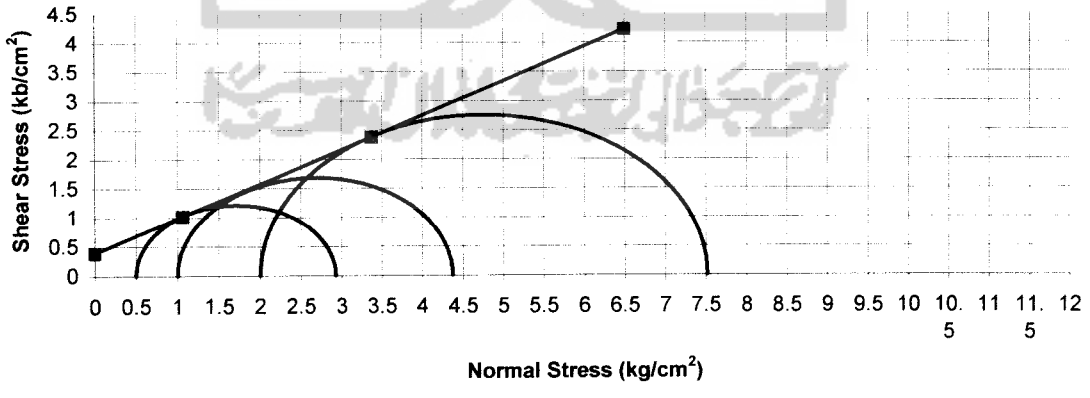
Sample No. : Disturbed
Date : 13 Agustus 2005
Tested by : Anto + Okky



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	170.05	170.05	170.05
Water Content			
Wt Container (cup), gr		21.80	22.12
Wt of Cup + Wet soil, gr		42.15	38.88
Wt of Cup + Dry soil, gr		40.48	37.62
Water Content %		8.94	8.13
Averege water content %		8.53	

γd gram/cm³	1.8400309	1.8400309	1.8400309
γd gram/cm³	1.6953413	1.6953413	1.6953413

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	2.4250557	3.3698826	5.5138112
$\sigma_1 = \Delta\sigma + \sigma_3$	2.9250557	4.3698826	7.5138112
$(\sigma_1+\sigma_2)/2$	1.7125279	2.6849413	4.7569056
$(\sigma_1-\sigma_2)/2$	1.2125279	1.6849413	2.7569056
Angle of shearing resistence (o)			30.490371
Apperen cohesion (kg/cm²)			0.3982542



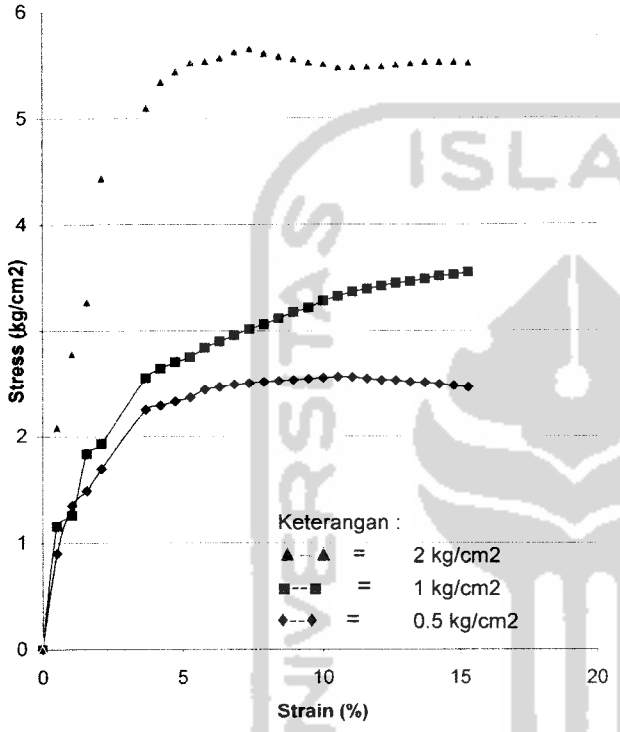
LAMPIRAN NO.53

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
Location : Kampus UII FTSP
Description of soil : Clay Sand

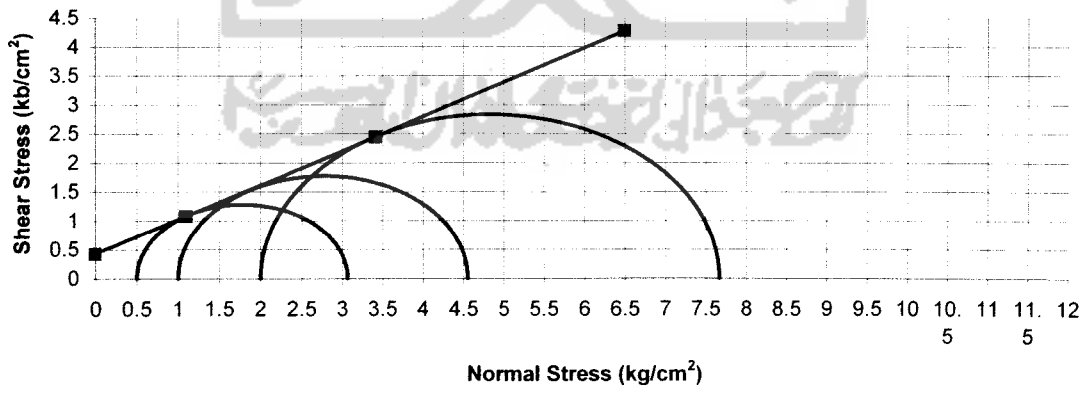
Sample No. : Disturbed
Date : 13 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	170.05	170.05	170.05
Water Content			
Wt Container (cup), gr		21.80	22.12
Wt of Cup + Wet soil, gr		42.15	38.88
Wt of Cup + Dry soil, gr		40.48	37.62
Water Content %		8.94	8.13
Averege water content %		8.53	

γd gram/cm³	1.8400309	1.8400309	1.8400309
γd gram/cm³	1.6953413	1.6953413	1.6953413

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	2.5662441	3.5532776	5.665105
$\sigma_1 = \Delta\sigma + \sigma_3$	3.0662441	4.5532776	7.665105
$(\sigma_1+\sigma_2)/2$	1.7831221	2.7766388	4.8325525
$(\sigma_1-\sigma_2)/2$	1.2831221	1.7766388	2.8325525
Angle of shearing resistence (o)			30.543932
Apperen cohesion (kg/cm²)			0.437192



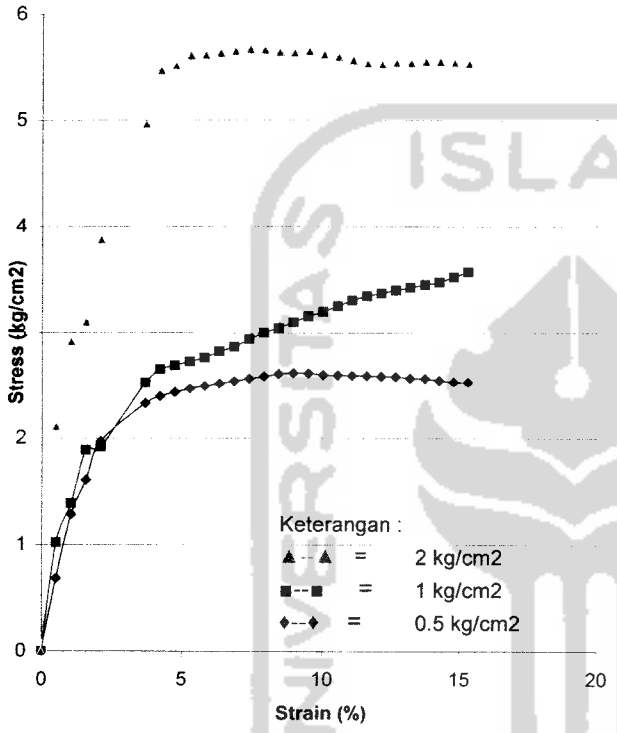
LAMPIRAN N0. 54

LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
Location : Kampus UII FTSP
Description of soil : Clay Sand

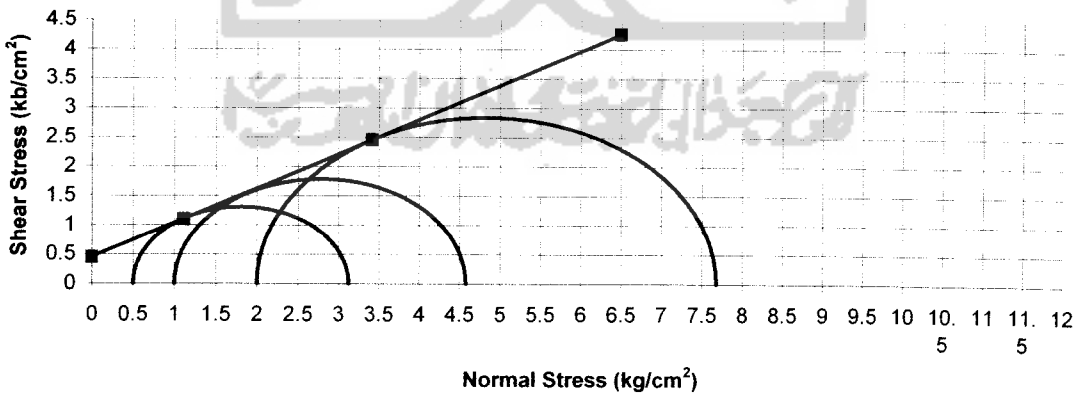
Sample No. : Disturbed
Date : 13 Agustus 2005
Tested by : Okky + Anto



Piece No :	1	2	3
H cm	7.58	7.58	7.58
D cm	3.94	3.94	3.94
A cm²	12.19	12.19	12.19
V cm³	92.42	92.42	92.42
Wt gram	170.05	170.05	170.05
Water Content			
Wt Container (cup), gr		21.80	22.12
Wt of Cup + Wet soil, gr		42.15	38.88
Wt of Cup + Dry soil, gr		40.48	37.62
Water Content %		8.94	8.13
Averege water content %		8.53	

γd gram/cm³	1.8400309	1.8400309	1.8400309
γd gram/cm³	1.6953413	1.6953413	1.6953413

σ_3	0.5	1	2
$\Delta\sigma$ = P/A	2.6239835	3.5762019	5.6776384
$\sigma_1 = \Delta\sigma + \sigma_3$	3.1239835	4.5762019	7.6776384
$(\sigma_1+\sigma_2)/2$	1.8119918	2.788101	4.8388192
$(\sigma_1-\sigma_2)/2$	1.3119918	1.788101	2.8388192
Angle of shearing resistence (o)			30.305326
Apperen cohesion (kg/cm²)			0.4599215



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