

LAMPIRAN 1

1. Analisa Data Atterberg Limit

**FAKULTAS TEKNIK UNIVERSITAS INDONESIA
LABORATORIUM MEKANIKATANAH**

Kampus UI - Depok 16424 Telp. (021)7270029, 78849102 Fax. (021)7270028

ATTERBERG LIMITS DETERMINATION

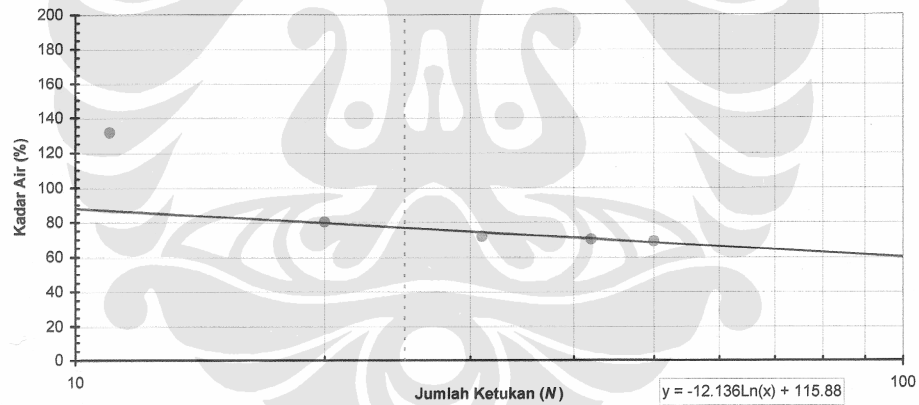
Proyek = Kaoline filler super 325 mesh
Lokasi proyek = Lab. Mektan FT-UI
Deskripsi tanah = kaoline, warna putih
Diuji oleh = Tim skripsi kaoline

No. Pekerjaan = ---
No. Boring = --- No. Sampel = 1
Kedalaman = ---
Tanggal Pengujian = 21 Juli 2008

Liquid Limit Determination

No. Can	Unit	1	2	3	4	5
Berat can	(gr)	6.34	8.13	7.87	7.94	8.15
Berat tanah basah + can	(gr)	26.13	27.74	27.22	25.11	36.57
Berat tanah kering + can	(gr)	14.87	18.99	19.11	18.00	24.94
Berat air	(gr)	11.26	8.75	8.11	7.11	11.63
Berat tanah kering	(gr)	8.53	10.86	11.24	10.06	16.79
Kadar air (w)	(%)	132.00	80.57	72.15	70.68	69.27
Jumlah ketukan (N)		11	20	31	42	50

Catatan : data no.1 pada LL diabaikan dalam grafik, karena menyimpang terlalu jauh.



Flow Index (FI) =	-27.90 (%)
Liquid Limit (LL) =	76.80 (%)
Plastic Limit (PL) =	- (%)
Plasticity Index (PI) =	- (%)

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ATTERBERG LIMITS DETERMINATION

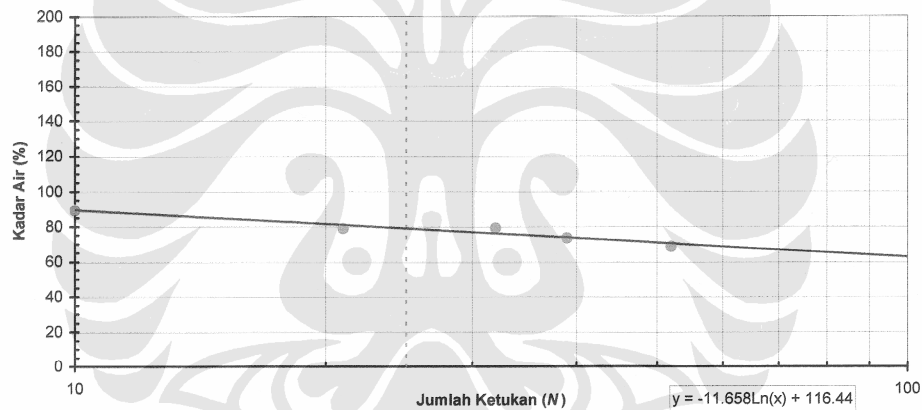
Proyek = Kaoline filler super 325 mesh
Lokasi proyek = Lab. Mektan FT-UI
Deskripsi tanah = kaoline, warna putih
Diuji oleh = Tim skripsi kaoline

No. Pekerjaan = ---
No. Boring = --- No. Sampel = 2
Kedalaman = ---
Tanggal Pengujian = 21 Juli 2008

Liquid Limit Determination

No. Can	Unit	1	2	3	4	5
Berat can	(gr)	8.80	8.63	9.33	8.73	9.11
Berat tanah basah + can	(gr)	19.93	16.53	20.13	22.02	20.81
Berat tanah kering + can	(gr)	14.67	13.04	15.35	16.38	16.04
Berat air	(gr)	5.26	3.49	4.78	5.64	4.77
Berat tanah kering	(gr)	5.87	4.41	6.02	7.65	6.93
Kadar air (w)	(%)	89.61	79.14	79.40	73.73	68.83
Jumlah ketukan (N)		10	21	32	39	52

Catatan :



Flow Index (FI) =	-26.80 (%)
Liquid Limit (LL) =	78.90 (%)
Plastic Limit (PL) =	38.40 (%)
Plasticity Index (PI) =	40.50 (%)

Plastic Limit Determination

No. Can	Unit	1	2
Berat can	(gr)	21.49	12.82
Berat tanah basah + can	(gr)	39.65	29.76
Berat tanah kering + can	(gr)	34.60	25.07
Berat air	(gr)	5.05	4.69
Berat tanah kering	(gr)	13.11	12.25
Kadar air (w)	(%)	38.52	38.29

Catatan :

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ATTERBERG LIMITS DETERMINATION

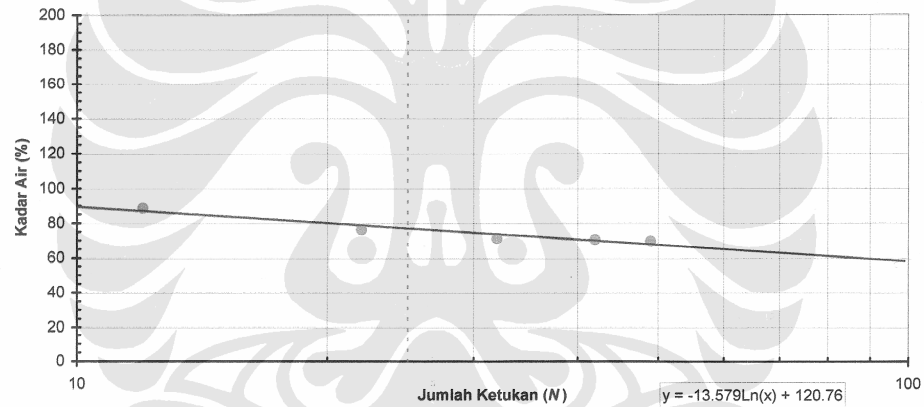
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Deskripsi tanah = kaoline, warna putih
Diuji oleh = Tim skripsi kaoline

No. Pekerjaan = ---
No. Boring = --- No. Sampel = 3
Kedalaman = ---
Tanggal Pengujian = 21 Juli 2008

Liquid Limit Determination

No. Can	Unit	1	2	3	4	5
Berat can	(gr)	9.14	8.00	8.00	8.47	8.04
Berat tanah basah + can	(gr)	26.43	18.39	19.73	23.53	26.55
Berat tanah kering + can	(gr)	18.29	13.89	14.84	17.29	18.94
Berat air	(gr)	8.14	4.50	4.89	6.24	7.61
Berat tanah kering	(gr)	9.15	5.89	6.84	8.82	10.90
Kadar air (w)	(%)	88.96	76.40	71.49	70.75	69.82
Jumlah ketukan (N)		12	22	32	42	49

Catatan :



Flow Index (FI) =	-31.30 (%)
Liquid Limit (LL) =	77.10 (%)
Plastic Limit (PL) =	- (%)
Plasticity Index (PI) =	- (%)

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ATTERBERG LIMITS DETERMINATION

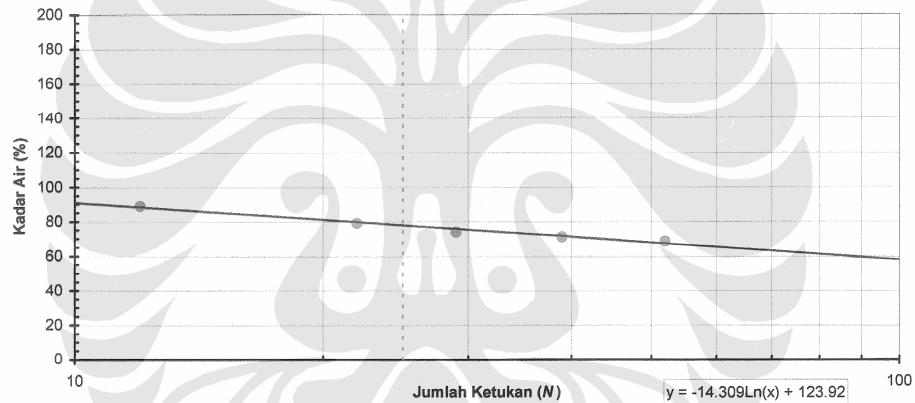
Proyek = Kaoline filler super 325 mesh
Lokasi proyek = Lab. Mektan FT-UI
Deskripsi tanah = kaoline, warna putih
Diuji oleh = Tim skripsi kaoline

No. Pekerjaan = ---
No. Boring = --- No. Sampel = 4
Kedalaman = ---
Tanggal Pengujian = 22 Juli 2008

Liquid Limit Determination

No. Can	Unit	1	2	3	4	5
Berat can	(gr)	9.11	8.72	8.48	8.76	9.31
Berat tanah basah + can	(gr)	17.97	19.56	23.79	23.53	23.73
Berat tanah kering + can	(gr)	13.79	14.77	17.27	17.38	17.86
Berat air	(gr)	4.18	4.79	6.52	6.15	5.87
Berat tanah kering	(gr)	4.68	6.05	8.79	8.62	8.55
Kadar air (w)	(%)	89.32	79.17	74.18	71.35	68.65
Jumlah ketukan (N)		12	22	29	39	52

Catatan :



Flow Index (FI) =	-32.90 (%)
Liquid Limit (LL) =	77.90 (%)
Plastic Limit (PL) =	40.17 (%)
Plasticity Index (PI) =	37.73 (%)

Plastic Limit Determination

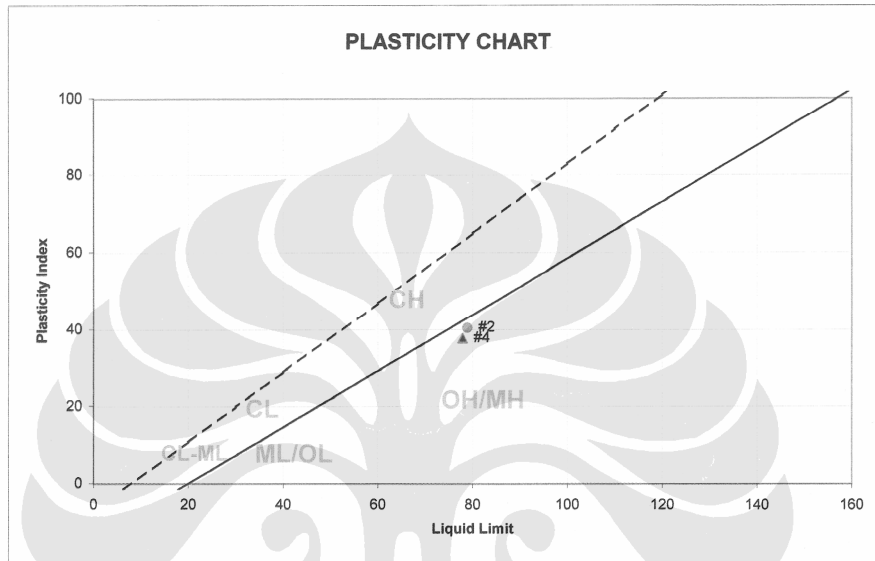
No. Can	Unit	1	2
Berat can	(gr)	20.95	13.06
Berat tanah basah + can	(gr)	38.65	30.12
Berat tanah kering + can	(gr)	33.62	25.19
Berat air	(gr)	5.03	4.93
Berat tanah kering	(gr)	12.67	12.13
Kadar air (w)	(%)	39.70	40.64

Catatan :



ATTERBERG LIMIT

PROYEK Skripsi Kaoline	TANGGAL 21-22 Juli 2008
LOKASI Lab. Mektan FT-UI	DIUJI OLEH Tim Kaoline



No. Bor	Kedalaman (m)	Simbol	LL (%)	PL (%)	PI (%)	Unified Classification
		#1	76.80			-
		#2	78.90	38.40	40.50	OH/MH
		#3	77.10			-
		#4	77.90	40.17	37.73	OH/MH

2. Analisa Data Specivic Gravity

FAKULTAS TEKNIK UNIVERSITAS INDONESIA LABORATORIUM MEKANIKATANAH

Kampus UI - Depok 16424 Telp. (021)7270029, 78849102 Fax. (021)7270028

SPECIFIC GRAVITY DARI TANAH SOLID (Gs)

Proyek = Kaoline filler super 325 mesh

No. Pekerjaan = ---

Lokasi proyek = Lab. Mektan FT-UI

No. Boring = --- No. Sampel = ---

Deskripsi tanah = kaoline, warna putih

Kedalaman = ---

Diuji oleh = Tim skripsi kaoline

Tanggal Pengujian = 23 Juli 2008

NO. TES	Unit	1	2	3	4
Vol. piknometer pada 20°C	(mL)	500	500	500	500
Metode <i>air removal</i> ¹		dididihkan	dididihkan	dididihkan	dididihkan
Berat piknometer + air + tanah = W_{bws}	(gr)	718.29	718.15	727.44	726.16
Temperatur pada saat pengujian, °C		29	29	29	29
Berat piknometer + air ² = W_{bw}	(gr)	656.65	656.43	665.75	664.40
No. <i>evaporate dish</i>		1	2	7	8
Berat <i>evaporate dish</i> + tanah kering	(gr)	402.29	407.95	418.23	394.76
Berat <i>evaporate dish</i>	(gr)	302.27	307.92	318.08	294.71
Berat tanah kering = W_s	(gr)	100.02	100.03	100.15	100.05
$W_w = W_s + W_{bw} - W_{bws}$	(gr)	38.38	38.31	38.46	38.29
Nilai α pada temperatur pengujian		0.99598	0.99598	0.99598	0.99598
$G_s = \alpha W_s / W_w$		2.596	2.601	2.594	2.602
Gs Rata-rata		2.598			

Keterangan :

¹ mengindikasikan pengeluaran udara dengan divakum atau dengan aspirator.

² W_{bw} adalah berat piknometer yang diisi air yang kuantitasnya sama dengan cairan pendispersi yang telah ditambahkan pada campuran air-tanah dan pada temperatur yang sama.

Catatan :

Gs rata-rata dari tanah solid = 2.598

3. Analisa Data Hydrometer

**FAKULTAS TEKNIK UNIVERSITAS INDONESIA
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GRAIN SIZE ANALYSIS - HIDROMETER METHOD

Proyek = Kaoline filler super 325 mesh
Lokasi proyek = Lab. Mektan FT-UI
Deskripsi tanah = kaoline, warna putih
Diuji oleh = Tim skripsi kaoline

Tanggal Pengujian = 24 - 25 Juli 2008
No. Pekerjaan = ---
No. Boring = --- No. Sampel = ---
Kedalaman = ---

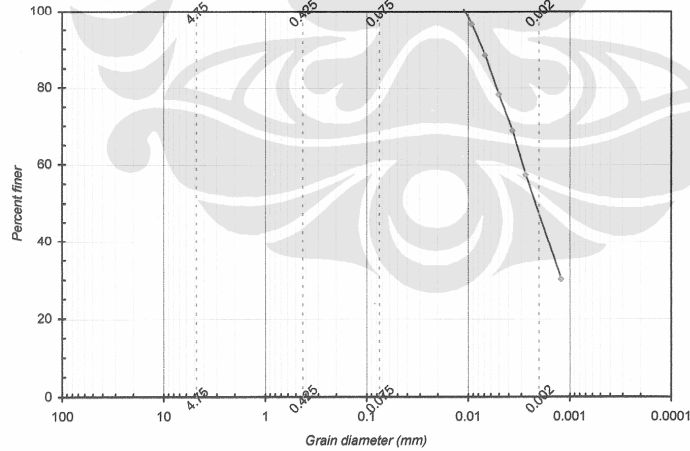
Hidrometer analysis

No. hidrometer = 1 G_s tanah = 2.598 Koreksi nol = 4
Agen pendispersi = Water glass a = 1.012 Koreksi meniskus = 1
Berat pendispersi = 40 gr Berat tanah (W_s) = 50 gr

Waktu pembacaan		Waktu berjalan (menit)	Temp. °C	C _T	Actual Hyd. reading R _a	Corr. Hyd. reading R _c	% Finer	Hyd. corr. only for meniskus R	L	L/t	K	D (mm)
Tanggal	Jam											
24-Jul-08	10:05	1	28.5	2.76	53	51.76	104.8	54	7.4	7.400	0.0126	0.034
	10:06	2	28.5	2.76	53	51.76	104.8	54	7.4	3.700	0.0126	0.024
	10:07	3	28.5	2.76	52.7	51.46	104.2	53.7	7.5	2.500	0.0126	0.020
	10:08	4	28.5	2.76	52.2	50.96	103.2	53.2	7.6	1.900	0.0126	0.017
	10:12	8	28.5	2.76	52	50.76	102.8	53	7.6	0.950	0.0126	0.012
	10:19	15	28.5	2.76	49	47.76	96.7	50	8.1	0.540	0.0126	0.009
	10:34	30	28.5	2.76	45	43.76	88.6	46	8.8	0.293	0.0126	0.007
	11:04	60	28.5	2.76	40	38.76	78.5	41	9.6	0.160	0.0126	0.005
	12:04	120	29	3.08	35	34.08	69.0	36	10.4	0.087	0.0125	0.004
	14:04	240	29.5	3.42	29	28.42	57.5	30	11.4	0.048	0.0125	0.003
18:04	480											
2:04	960											
25-Jul-08	10:04	1440	28	2.48	16.5	14.98	30.3	17.5	13.4	0.009	0.0126	0.001

Catatan : $R_c = R_a - (\text{koreksi nol}) + C_T$ % finer = $R_c \cdot (a) / W_s$ $D = K \cdot \sqrt{(L/t)}$

<< GRAVEL	SAND		SILT	CLAY >>
	Coarse to medium	Fine		



Komposisi	
Sand	0%
Silt	53%
Clay	47%

Deskripsi visual tanah :
Putih

Klasifikasi tanah :
Clayey Silt

Sistem klasifikasi :
Unified

GRAIN SIZE ANALYSIS - HIDROMETER METHOD

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 Diuji oleh = Tim skripsi kaoline

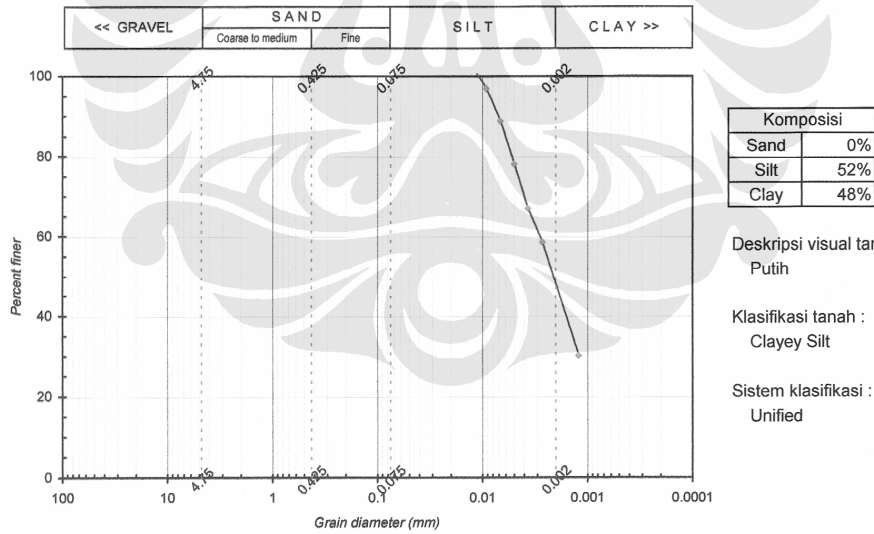
Tanggal Pengujian = 24 - 25 Juli 2008
 No. Pekerjaan = ---
 No. Boring = --- No. Sampel = ---
 Kedalaman = ---

Hidrometer analysis

No. hidrometer = 1 Gs tanah = 2.598 Koreksi nol = 4
 Agen pendispersi = Water glass a = 1.012 Koreksi meniskus = 1
 Berat pendispersi = 40 gr Berat tanah (W_s) = 50 gr

Waktu pembacaan		Waktu berjalan (menit)	Temp. °C	C_T	Actual Hyd. reading R_a	Corr. Hyd. reading R_c	% Finer	Hyd. corr. only for meniskus R	L	L/t	K	D (mm)
Tanggal	Jam											
24-Jul-08	10:20	1	28.5	2.76	54	52.76	106.8	55	7.3	7.300	0.0126	0.034
	10:21	2	28.5	2.76	53.3	52.06	105.4	54.3	7.4	3.700	0.0126	0.024
	10:22	3	28.5	2.76	52.9	51.66	104.6	53.9	7.5	2.500	0.0126	0.020
	10:23	4	28.5	2.76	52.5	51.26	103.8	53.5	7.5	1.875	0.0126	0.017
	10:27	8	28.5	2.76	51.7	50.46	102.2	52.7	7.7	0.963	0.0126	0.012
	10:34	15	28.8	2.95	49	47.95	97.1	50	8.1	0.540	0.0125	0.009
	10:49	30	28.8	2.95	45	43.95	89.0	46	8.8	0.293	0.0125	0.007
	11:19	60	28.8	2.95	39.7	38.65	78.2	40.7	9.6	0.160	0.0125	0.005
	12:19	120	29	3.08	34.1	33.18	67.2	35.1	10.5	0.088	0.0125	0.004
	14:19	240	30	3.80	29.2	29.00	58.7	30.2	11.3	0.047	0.0124	0.003
18:19	480											
2:19	960											
25-Jul-08	10:19	1440	28	2.48	16.5	14.98	30.3	17.5	13.4	0.009	0.0126	0.001

Catatan : $R_c = R_a - (\text{koreksi nol}) + C_T$ % finer = $R_c \cdot (a) / W_s$ $D = K \cdot \sqrt{(L/t)}$



GRAIN SIZE ANALYSIS - HIDROMETER METHOD

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 Deskripsi tanah = kaoline, warna putih
 Diuji oleh = Tim skripsi kaoline

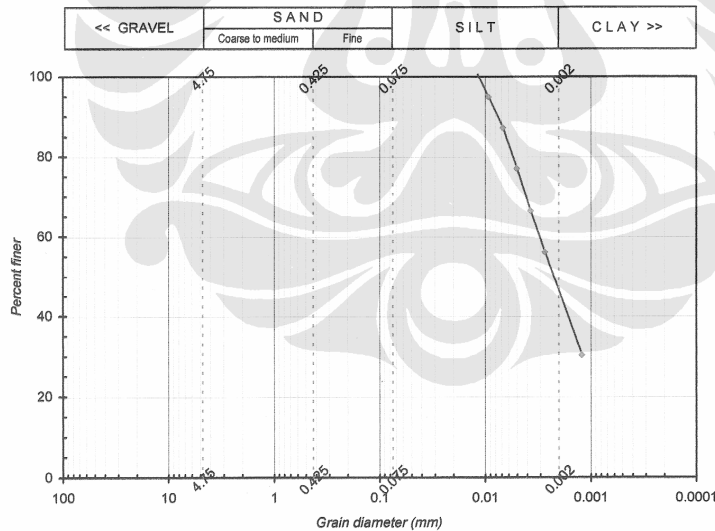
Tanggal Pengujian = 24 - 25 Juli 2008
 No. Pekerjaan = ---
 No. Boring = --- No. Sampel = ---
 Kedalaman = ---

Hidrometer analysis

No. hidrometer = 1 Gs tanah = 2.598 Koreksi nol = 4
 Agen pendispersi = Water glass a = 1.012 Koreksi meniskus = 1
 Berat pendispersi = 40 gr Berat tanah (W_s) = 50 gr

Waktu pembacaan		Waktu berjalan (menit)	Temp. °C	C_T	Actual Hyd. reading R_a	Corr. Hyd. reading R_c	% Finer	Hyd. corr. only for meniskus R	L	L/t	K	D (mm)
Tanggal	Jam											
24-Jul-08	10:45	1	28.8	2.95	54	52.95	107.2	55	7.3	7.300	0.0125	0.034
	10:46	2	28.8	2.95	53	51.95	105.2	54	7.4	3.700	0.0125	0.024
	10:47	3	28.8	2.95	52.8	51.75	104.8	53.8	7.5	2.500	0.0125	0.020
	10:48	4	28.8	2.95	52	50.95	103.2	53	7.6	1.900	0.0125	0.017
	10:52	8	28.8	2.95	51.2	50.15	101.5	52.2	7.7	0.963	0.0125	0.012
	10:59	15	28.8	2.95	48	46.95	95.1	49	8.3	0.553	0.0125	0.009
	11:14	30	28.8	2.95	44.2	43.15	87.4	45.2	8.9	0.297	0.0125	0.007
	11:44	60	28.8	2.95	39.2	38.15	77.2	40.2	9.7	0.162	0.0125	0.005
	12:44	120	29	3.08	33.8	32.88	66.6	34.8	10.6	0.088	0.0125	0.004
	14:44	240	30	3.80	28	27.80	56.3	29	11.5	0.048	0.0124	0.003
	18:44	480										
	2:44	960										
25-Jul-08	10:44	1440	28.1	2.53	16.5	15.03	30.4	17.5	13.4	0.009	0.0126	0.001

Catatan : $R_c = R_a - (\text{koreksi nol}) + C_T$ % finer = $R_c \cdot (a) / W_s$ D = $K \cdot \sqrt{L/t}$



4. Analisa Data Pembuatan Benda Uji

MONITORING PEMBUATAN BENDA UJI

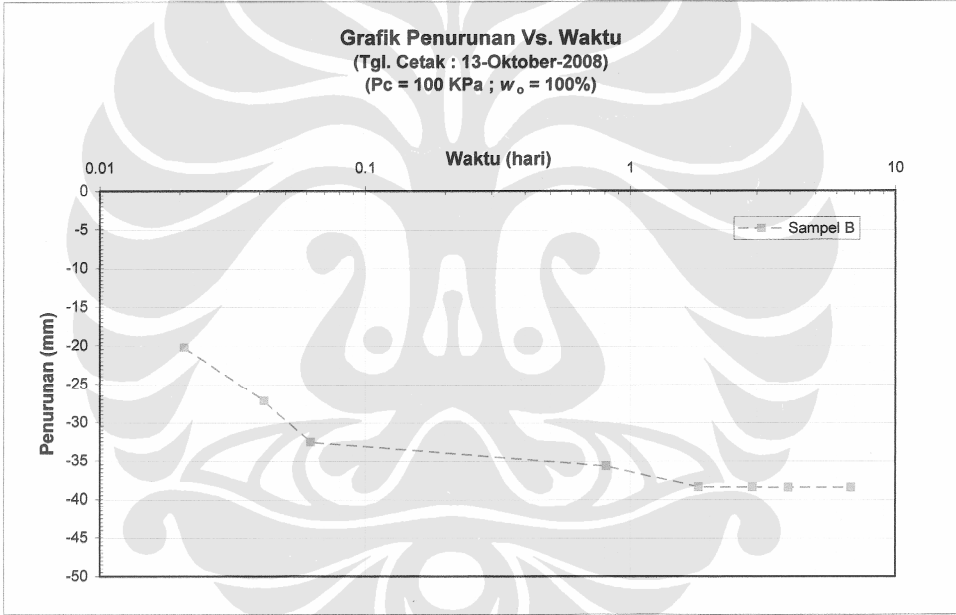
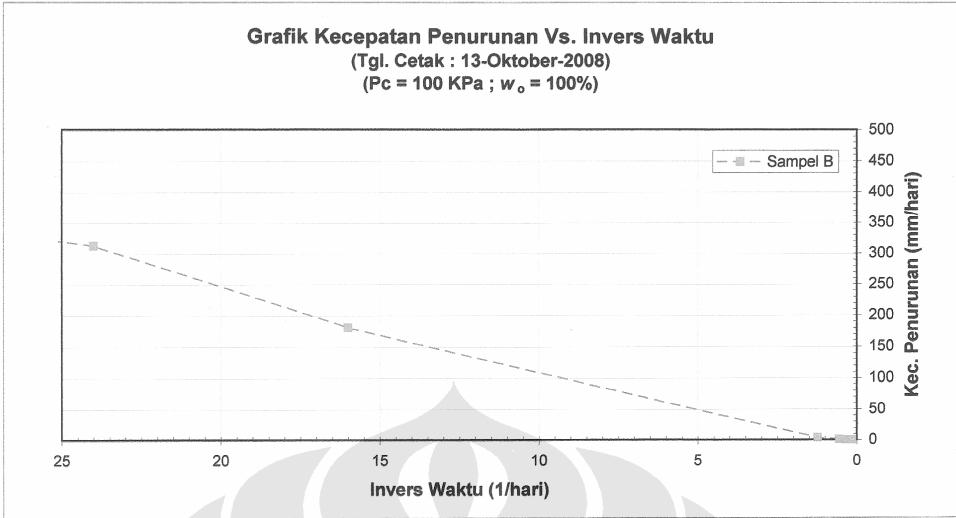
Hari / Tanggal =	13-Oct-08
Jenis tanah =	Kaoline murni
Tegangan preloading (Pc) =	100 kPa
Alat untuk preloading =	Rowe Cell
Kode sampel =	# 1 - B
Kadar air renc. Sblm. preloading (w_o) =	100 %
Ukuran cetakan :	$\phi = 15.2$ cm
	H = 17.8 cm
Kondisi sebelum preloading :	
(a) Volume cetakan (can) =	79.10 cm ³
(b) Berat cetakan =	9.45 gr
(c) Berat cetakan + wet soil =	119.67 gr
(d) Berat cetakan + dry soil =	65.24 gr

Kadar air aktual $w_{act} \rightarrow (c-d)/(d-b) =$	97.56 %
$\gamma_{wet} \rightarrow (c-b)/a =$	1.393 gr/cm ³
$\gamma_{dry} \rightarrow \gamma_{wet}/(1+w_{act}) =$	0.705 gr/cm ³
Specific Gravity (GS) =	2.598
$VW \rightarrow (\gamma_{wet} \cdot \gamma_{dry})/\gamma_w =$	0.688 cm ³ /cm ³ sampel
$Vs \rightarrow \gamma_{dry}/(GS \times \gamma_w) =$	0.271 cm ³ /cm ³ sampel
$Vv \rightarrow 1-Vs =$	0.729 cm ³ /cm ³ sampel
Derajat kejenuhan (DS) $\rightarrow Vw/Vv =$	0.945
Angka pori (e) $\rightarrow Vv/Vs =$	2.683
Porositas (n) $\rightarrow Vv/V =$	0.729

Waktu (hari)	Waktu Berjalan (jam)	Elevasi Sampel		Penurunan (ΔH) (mm)	Kecepatan Penurunan			Kec. Penurunan (v) (mm/hari)	Catatan					
		Elev.(H) (mm)	Bacaan Dial (div)		Penurunan (Δh) (mm)	Durasi (Δt) (detik)								
13-Oct-08	14:30	0:00:00	0.000	~	79.00	27	0.27	0	-	-	-	-	-	-
	15:00	0:30:00	0.021	48	58.87	2040	20.40	-20.13	10	0.10	18.28	0.0002	472.648	
	15:30	1:00:00	0.042	24	51.87	2740	27.40	-27.13	10	0.10	27.60	0.0003	313.043	
	16:00	1:30:00	0.063	16	46.47	3280	32.80	-32.53	5	0.05	23.85	0.0003	181.132	
14-Oct-08	10:00	19:30:00	0.813	1.231	43.37	3590	35.90	-35.63	-	3.10	-	0.7500	4.133	
15-Oct-08	10:00	43:30:00	1.813	0.552	40.67	3860	38.60	-38.33	-	2.70	-	1.8125	1.490	
16-Oct-08	12:00	69:30:00	2.896	0.345	40.63	3864	38.64	-38.37	-	0.04	-	2.8958	0.014	
17-Oct-08	13:30	95:00:00	3.958	0.253	40.60	3867	38.67	-38.40	-	0.03	-	3.9583	0.008	
20-Oct-08	10:00	163:30:00	6.813	0.147	40.59	3868	38.68	-38.41	-	0.01	-	6.8125	0.001	

Kondisi setelah preloading :	
(a) Volume cetakan =	79.10 cm ³
(b) Berat cetakan =	8.11 gr
(c) Berat cetakan + wet soil =	153.12 gr
(d) Berat cetakan + dry soil =	99.42 gr

Kadar air $w_c \rightarrow (c-d)/(d-b) =$	58.81 %
$\gamma_{wet} \rightarrow (c-b)/a =$	1.833 gr/cm ³
$\gamma_{dry} \rightarrow \gamma_{wet}/(1+w_c) =$	1.154 gr/cm ³
Specific Gravity (GS) =	2.598
$VW \rightarrow (\gamma_{wet} \cdot \gamma_{dry})/\gamma_w =$	0.679 cm ³ /cm ³ sampel
$Vs \rightarrow \gamma_{dry}/(GS \times \gamma_w) =$	0.444 cm ³ /cm ³ sampel
$Vv \rightarrow 1-Vs =$	0.556 cm ³ /cm ³ sampel
Derajat kejenuhan (DS) $\rightarrow Vw/Vv =$	1.222
Angka pori (e) $\rightarrow Vv/Vs =$	1.251
Porositas (n) $\rightarrow Vv/V =$	0.556



MONITORING PEMBUATAN BENDA UJI

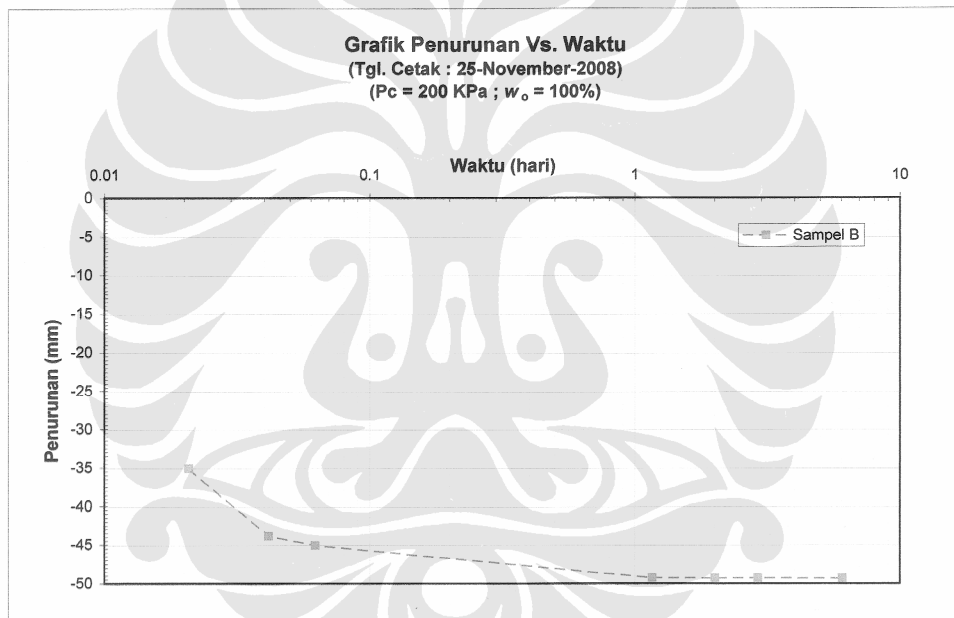
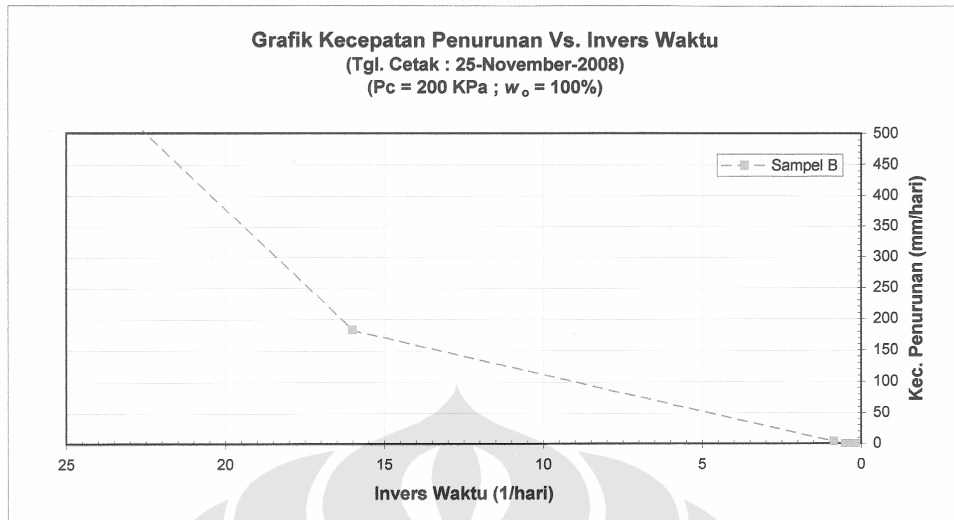
Hari / Tanggal =	25-Nov-08	
Jenis tanah =	Kaoline murni	
Tegangan preloading (Pc) =	200 kPa	
Alat untuk preloading =	Rowe Cell	
Kode sampel =	# 1 - B	
Kadar air renc. Sblm. preloading (w_o) =	100 %	
Ukuran cetakan :	ϕ =	15.2 cm
	H =	17.8 cm
Kondisi sebelum preloading :		
(a) Volume cetakan (can) =	79.10 cm ³	
(b) Berat cetakan =	7.99 gr	
(c) Berat cetakan + wet soil =	92.03 gr	
(d) Berat cetakan + dry soil =	50.27 gr	

Kadar air aktual w_{act} --> (c-d)/(d-b) =	98.77 %
γ_{wet} --> (c-b)/a =	1.062 gr/cm ³
γ_{dry} --> $\gamma_{wet}/(1+w_{act})$ =	0.535 gr/cm ³
Specific Gravity (GS) =	2.598
VW --> $(\gamma_{wet}-\gamma_{dry})/\gamma_w$ =	0.528 cm ³ /cm ³ sampel
Vs --> $\gamma_{dry}/(GS \times \gamma_w)$ =	0.206 cm ³ /cm ³ sampel
Vv --> 1-Vs =	0.794 cm ³ /cm ³ sampel
Derajat kejenuhan (DS) --> Vw/Vv =	0.665
Angka pori (e) --> Vv/Vs =	3.860
Porositas (n) --> Vv/V =	0.794

Waktu	Waktu Berjalan				Elevasi Sampel			Penurunan (ΔH)	Kecepatan Penurunan				Kec. Penurunan (v)	Catatan
					Elev.(H)	Bacaan Dial			Penurunan (Δh)	Durasi (Δt)				
(hari)	(jam)	(jam)	(hari)	(1/hari)	(mm)	(div)	(mm)	(mm)	(div)	(mm)	(detik)	(hari)	(mm/hari)	
25-Nov-08	12:00	0:00:00	0.000	~	83.00	0	0.00	0	-	-	-	-	-	
	12:30	0:30:00	0.021	48	48.00	3500	35.00	-35.00	10	0.10	6.46	0.0001	1337.461	
	13:00	1:00:00	0.042	24	39.20	4380	43.80	-43.80	10	0.10	15.01	0.0002	575.616	
	13:30	1:30:00	0.063	16	38.00	4500	45.00	-45.00	10	0.10	47.09	0.0005	183.478	
26-Nov-08	16:00	28:00:00	1.167	0.857	33.80	4920	49.20	-49.20	-	4.20	-	1.1042	3.804	
27-Nov-08	12:10	48:10:00	2.007	0.498	33.75	4925	49.25	-49.25	-	0.05	-	2.0069	0.025	
28-Nov-08	10:00	70:00:00	2.917	0.343	33.73	4927	49.27	-49.27	-	0.02	-	2.9167	0.007	
1-Dec-08	13:30	145:30:00	6.063	0.165	33.72	4928	49.28	-49.28	-	0.01	-	6.0625	0.002	

Kondisi setelah preloading :		
(a) Volume cetakan =	79.10 cm ³	
(b) Berat cetakan =	7.87 gr	
(c) Berat cetakan + wet soil =	140.05 gr	
(d) Berat cetakan + dry soil =	91.78 gr	

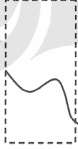
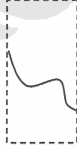

Kadar air w_o --> (c-d)/(d-b) =	57.53 %
γ_{wet} --> (c-b)/a =	1.671 gr/cm ³
γ_{dry} --> $\gamma_{wet}/(1+w_o)$ =	1.061 gr/cm ³
Specific Gravity (GS) =	2.598
VW --> $(\gamma_{wet}-\gamma_{dry})/\gamma_w$ =	0.610 cm ³ /cm ³ sampel
Vs --> $\gamma_{dry}/(GS \times \gamma_w)$ =	0.408 cm ³ /cm ³ sampel
Vv --> 1-Vs =	0.592 cm ³ /cm ³ sampel
Derajat kejenuhan (DS) --> Vw/Vv =	1.031
Angka pori (e) --> Vv/Vs =	1.449
Porositas (n) --> Vv/V =	0.592



5. Analisa Data Triaksial UU

TRIAXIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline Tanggal : 3-Nov-08
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline $P_c=100$ kPa, $w_o=100\%$ Jenis pengujiar : UU - test
 No. pengeboran
 No. sampel : Diuji oleh : Taufik Hidayat
 Kedalaman

		Unit	Data sampel			Catatan
No. Sampel			1	2	3	
Kode Sampel			-	-		
(a)	Berat can	(gr)	0.00	0.00	0.00	
(b)	Berat can + tanah basah	(gr)	141.63	138.05	140.00	
(c)	Berat can + tanah kering	(gr)	89.43	87.08	88.38	
(b-c)	Berat air	(gr)	52.20	50.97	51.62	
(c-a)	Berat tanah kering	(gr)	89.43	87.08	88.38	
(b-c)/(c-a)	Kadar air (w)	(%)	58.37	58.53	58.41	
Kadar air rata-rata (w)		(%)	58.44			
(d)	Tinggi sampel (H_o)	(cm)	7.56	7.59	7.56	
(e)	Diameter sampel (D_o)	(cm)	3.81	3.78	3.82	
(f)	Luas (A_o)	(cm ²)	11.40	11.22	11.46	
(g)	Volume (V_o)	(cm ³)	86.19	85.18	86.64	
(b-a)/(g)	Berat jenis tanah basah (γ_{wet})	(gr/cm ³)	1.643	1.621	1.616	
(c-a)/(g)	Berat jenis tanah kering (γ_{dry})	(gr/cm ³)	1.038	1.022	1.020	
Rata-rata (γ_{wet})		(gr/cm ³)	1.627			
Rata-rata (γ_{dry})		(gr/cm ³)	1.027			
Tegangan lateral / sel pada sampel (σ_3)		(kg/cm ²)	0.50	1.00	1.50	
Tipe keruntuhan						
						

TRIAxIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline Pc=100 kPa, wo=100%
 No. pengeboran :
 No. sampel : 1
 Kedalaman :

Tanggal : 3-Nov-08
 Jenis pengujian triaksial : UU - test
 Diuji oleh : Taufik Hidayat

Data sampel :

Kode sampel : -
 Diameter (ϕ) : 3.81 cm
 Tinggi awal (H_0) : 7.56 cm
 Luas penampang (A_0) : 11.40 cm²
 Volume (V) : 129.98 cm³

Data alat :

Load ring constant (LRC) : 0.364 kg/div
 Strain rate : 1.00 mm/menit

Waktu Berjalan (menit)	Deformasi (ΔH)		Beban (P)		Tegangan Sel (σ_3) (kg/cm ²)	Regangan (ϵ) ($\Delta H/H_0$) (%)	Faktor Koreksi Luas ($1-\epsilon$)	Luas Pen. Terkoreksi ($A_0/[1-\epsilon]$) (cm ²)	Tegangan Deviator ($\sigma_1-\sigma_3$) (kg/cm ²)
	Dial Reading		Dial Reading						
	1 div = (div)	0.001 cm (cm)	1 div = (div)	0.364 kg (kg)					
0	0.000	0	0.000	0.500	0.000	1.000	11.401	0.000	
25	0.025	2.1	0.764	0.500	0.331	0.997	11.439	0.067	
50	0.050	3	1.092	0.500	0.661	0.993	11.477	0.095	
75	0.075	3.5	1.274	0.500	0.992	0.990	11.515	0.111	
100	0.100	4	1.456	0.500	1.323	0.987	11.554	0.126	
125	0.125	4.7	1.711	0.500	1.653	0.983	11.593	0.148	
150	0.150	5	1.820	0.500	1.984	0.980	11.632	0.156	
175	0.175	5.5	2.002	0.500	2.315	0.977	11.671	0.172	
200	0.200	5.8	2.111	0.500	2.646	0.974	11.711	0.180	
225	0.225	6	2.184	0.500	2.976	0.970	11.751	0.186	
250	0.250	6.2	2.257	0.500	3.307	0.967	11.791	0.191	
275	0.275	6.5	2.366	0.500	3.638	0.964	11.831	0.200	
300	0.300	6.8	2.475	0.500	3.968	0.960	11.872	0.208	
325	0.325	6.9	2.512	0.500	4.299	0.957	11.913	0.211	
350	0.350	7.1	2.584	0.500	4.630	0.954	11.954	0.216	
375	0.375	7.4	2.694	0.500	4.960	0.950	11.996	0.225	
400	0.400	7.7	2.803	0.500	5.291	0.947	12.038	0.233	
425	0.425	7.95	2.894	0.500	5.622	0.944	12.080	0.240	
450	0.450	8.1	2.948	0.500	5.952	0.940	12.122	0.243	
475	0.475	8.25	3.003	0.500	6.283	0.937	12.165	0.247	
500	0.500	8.4	3.058	0.500	6.614	0.934	12.208	0.250	
525	0.525	8.75	3.185	0.500	6.944	0.931	12.252	0.260	
550	0.550	8.9	3.240	0.500	7.275	0.927	12.295	0.263	
575	0.575	9.1	3.312	0.500	7.606	0.924	12.339	0.268	
600	0.600	9.3	3.385	0.500	7.937	0.921	12.384	0.273	
625	0.625	9.45	3.440	0.500	8.267	0.917	12.428	0.277	
650	0.650	9.6	3.494	0.500	8.598	0.914	12.473	0.280	
675	0.675	9.75	3.549	0.500	8.929	0.911	12.519	0.283	
700	0.700	9.9	3.604	0.500	9.259	0.907	12.564	0.287	
725	0.725	10.15	3.695	0.500	9.590	0.904	12.610	0.293	
750	0.750	10.25	3.731	0.500	9.921	0.901	12.657	0.295	
775	0.775	10.4	3.786	0.500	10.251	0.897	12.703	0.298	
800	0.800	10.6	3.858	0.500	10.582	0.894	12.750	0.303	
825	0.825	10.75	3.913	0.500	10.913	0.891	12.797	0.306	
850	0.850	10.9	3.968	0.500	11.243	0.888	12.845	0.309	
875	0.875	11.2	4.077	0.500	11.574	0.884	12.893	0.316	
900	0.900	11.4	4.150	0.500	11.905	0.881	12.942	0.321	
925	0.925	11.65	4.241	0.500	12.235	0.878	12.990	0.326	
950	0.950	11.85	4.313	0.500	12.566	0.874	13.039	0.331	
975	0.975	12	4.368	0.500	12.897	0.871	13.089	0.334	
1000	1.000	12.2	4.441	0.500	13.228	0.868	13.139	0.338	
1025	1.025	12.4	4.514	0.500	13.558	0.864	13.189	0.342	
1050	1.050	12.65	4.605	0.500	13.889	0.861	13.240	0.348	
1075	1.075	12.8	4.659	0.500	14.220	0.858	13.291	0.351	
1100	1.100	13	4.732	0.500	14.550	0.854	13.342	0.355	
1125	1.125	13.15	4.787	0.500	14.881	0.851	13.394	0.357	
1150	1.150	13.25	4.823	0.500	15.212	0.848	13.446	0.359	
1175	1.175	13.35	4.859	0.500	15.542	0.845	13.499	0.360	
1200	1.200	13.4	4.878	0.500	15.873	0.841	13.552	0.360	
1225	1.225	13.5	4.914	0.500	16.204	0.838	13.606	0.361	
1250	1.250	13.5	4.914	0.500	16.534	0.835	13.659	0.360	
1275	1.275	13.5	4.914	0.500	16.865	0.831	13.714	0.358	

Perhitungan data :

Tegangan lateral (σ_3) =	0.500 kg/cm ²
Tegangan deviator maksimum ($\Delta\sigma = \sigma_1-\sigma_3$) =	0.361 kg/cm ²
Tegangan vertikal maksimum ($\sigma_1 = \Delta\sigma+\sigma_3$) =	0.861 kg/cm ²
Regangan saat tegangan vertikal maximum =	16.204 %

TRIAxIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline Pc=100 kPa, w_o=100%
 No. pengeboran :
 No. sampel : 2
 Kedalaman :

Tanggal : 3-Nov-08
 Jenis pengujian triaksial : UU - test
 Diuji oleh : Taufik Hidayat

Data sampel :

Kode sampel : -
 Diameter (φ) : 3.78 cm
 Tinggi awal (H_o) : 7.59 cm
 Luas penampang (A_o) : 11.22 cm²
 Volume (V) : 125.94 cm³

Data alat :

Load ring constant (LRC) 0.364 kg/div
 Strain rate 1.00 mm/menit

Waktu Berjalan (menit)	Deformasi (ΔH) Dial Reading		Beban (P) Dial Reading		Tegangan Sel (σ ₃) (kg/cm ²)	Regangan (ε) (ΔH/H _o) (%)	Faktor Koreksi Luas (1-ε)	Luas Pen. Terkoreksi (A _o [1-ε]) (cm ²)	Tegangan Deviator (σ ₁ -σ ₃) (kg/cm ²)
	1 div = (div)	0.001 cm (cm)	1 div = (div)	0.364 kg (kg)					
0	0	0.000	0	0.000	1.000	0.000	1.000	11.222	0.000
25	0.025	0.025	1.5	0.546	1.000	0.329	0.997	11.259	0.048
50	0.050	0.050	2.5	0.910	1.000	0.659	0.993	11.297	0.081
75	0.075	0.075	5	1.820	1.000	0.988	0.990	11.334	0.161
100	0.100	0.100	7	2.548	1.000	1.318	0.987	11.372	0.224
125	0.125	0.125	8.5	3.094	1.000	1.647	0.984	11.410	0.271
150	0.150	0.150	9.7	3.531	1.000	1.976	0.980	11.448	0.308
175	0.175	0.175	10.5	3.822	1.000	2.306	0.977	11.487	0.333
200	0.200	0.200	11.2	4.077	1.000	2.635	0.974	11.526	0.354
225	0.225	0.225	12	4.368	1.000	2.964	0.970	11.565	0.378
250	0.250	0.250	12.55	4.568	1.000	3.294	0.967	11.604	0.394
275	0.275	0.275	13	4.732	1.000	3.623	0.964	11.644	0.406
300	0.300	0.300	13.7	4.987	1.000	3.953	0.960	11.684	0.427
325	0.325	0.325	14	5.096	1.000	4.282	0.957	11.724	0.435
350	0.350	0.350	14.3	5.205	1.000	4.611	0.954	11.765	0.442
375	0.375	0.375	14.9	5.424	1.000	4.941	0.951	11.805	0.459
400	0.400	0.400	15.2	5.533	1.000	5.270	0.947	11.846	0.467
425	0.425	0.425	15.6	5.678	1.000	5.599	0.944	11.888	0.478
450	0.450	0.450	16	5.824	1.000	5.929	0.941	11.929	0.488
475	0.475	0.475	16.1	5.860	1.000	6.258	0.937	11.971	0.490
500	0.500	0.500	16.4	5.970	1.000	6.588	0.934	12.013	0.497
525	0.525	0.525	16.8	6.115	1.000	6.917	0.931	12.056	0.507
550	0.550	0.550	17.1	6.224	1.000	7.246	0.928	12.099	0.514
575	0.575	0.575	17.3	6.297	1.000	7.576	0.924	12.142	0.519
600	0.600	0.600	17.5	6.370	1.000	7.905	0.921	12.185	0.523
625	0.625	0.625	17.9	6.516	1.000	8.235	0.918	12.229	0.533
650	0.650	0.650	18	6.552	1.000	8.564	0.914	12.273	0.534
675	0.675	0.675	18.2	6.625	1.000	8.893	0.911	12.318	0.538
700	0.700	0.700	18.4	6.698	1.000	9.223	0.908	12.362	0.542
725	0.725	0.725	18.8	6.843	1.000	9.552	0.904	12.407	0.552
750	0.750	0.750	19	6.916	1.000	9.881	0.901	12.453	0.555
775	0.775	0.775	19.15	6.971	1.000	10.211	0.898	12.498	0.558
800	0.800	0.800	19.25	7.007	1.000	10.540	0.895	12.544	0.559
825	0.825	0.825	19.5	7.098	1.000	10.870	0.891	12.591	0.564
850	0.850	0.850	19.8	7.207	1.000	11.199	0.888	12.637	0.570
875	0.875	0.875	20	7.280	1.000	11.528	0.885	12.684	0.574
900	0.900	0.900	20.1	7.316	1.000	11.858	0.881	12.732	0.575
925	0.925	0.925	20.2	7.353	1.000	12.187	0.878	12.780	0.575
950	0.950	0.950	20.4	7.426	1.000	12.516	0.875	12.828	0.579
975	0.975	0.975	20.6	7.498	1.000	12.846	0.872	12.876	0.582
1000	1.000	1.000	20.9	7.608	1.000	13.175	0.868	12.925	0.589
1025	1.025	1.025	21	7.644	1.000	13.505	0.865	12.974	0.589
1050	1.050	1.050	21.2	7.717	1.000	13.834	0.862	13.024	0.593
1075	1.075	1.075	21.4	7.790	1.000	14.163	0.858	13.074	0.596
1100	1.100	1.100	21.7	7.899	1.000	14.493	0.855	13.124	0.602
1125	1.125	1.125	21.85	7.953	1.000	14.822	0.852	13.175	0.604
1150	1.150	1.150	21.9	7.972	1.000	15.152	0.848	13.226	0.603
1175	1.175	1.175	21.95	7.990	1.000	15.481	0.845	13.278	0.602
1200	1.200	1.200	22	8.008	1.000	15.810	0.842	13.330	0.601
1225	1.225	1.225	22	8.008	1.000	16.140	0.839	13.382	0.598
1250	1.250	1.250	22	8.008	1.000	16.469	0.835	13.435	0.596

Perhitungan data :

Tegangan lateral (σ ₃) =	1.000 kg/cm ²
Tegangan deviator maksimum (Δσ = σ ₁ -σ ₃) =	0.604 kg/cm ²
Tegangan vertikal maksimum (σ ₁ = Δσ+σ ₃) =	1.604 kg/cm ²
Regangan saat tegangan vertikal maximum =	14.822 %

TRIAXIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline Pc=100 kPa, w_o=100%
 No. pengeboran :
 No. sampel : 3
 Kedalaman :

Tanggal : 3-Nov-08
 Jenis pengujian triaksial : UU - test
 Diuji oleh : Taufik Hidayat

Data alat:

Load ring constant (LRC) 0.364 kg/div
 Strain rate 1.00 mm/menit

Data sampel:

Kode sampel :
 Diameter (φ) : 3.82 cm
 Tinggi awal (H_o) : 7.56 cm
 Luas penampang (A_o) : 11.46 cm²
 Volume (V) : 131.35 cm³

Waktu Berjalan (menit)	Deformasi (ΔH)		Beban (P)		Tegangan Sel (σ ₃) (kg/cm ²)	Regangan (ε) (ΔH/H _o) (%)	Faktor Koreksi Luas (1-ε)	Luas Pen. Terkoreksi (A _o [1-ε]) (cm ²)	Tegangan Deviator (σ ₁ -σ ₃) (kg/cm ²)
	Dial Reading		Dial Reading						
	1 div = 0.001 cm (div)	(cm)	1 div = 0.364 kg (div)	(kg)					
0	0.000	0	0.000	1.500	0.000	1.000	11.461	0.000	
25	0.025	2	0.728	1.500	0.331	0.997	11.499	0.063	
50	0.050	6	2.184	1.500	0.661	0.993	11.537	0.189	
75	0.075	7.8	2.839	1.500	0.992	0.990	11.576	0.245	
100	0.100	9	3.276	1.500	1.323	0.987	11.614	0.282	
125	0.125	10	3.640	1.500	1.653	0.983	11.654	0.312	
150	0.150	10.9	3.968	1.500	1.984	0.980	11.693	0.339	
175	0.175	11.7	4.259	1.500	2.315	0.977	11.732	0.363	
200	0.200	12.2	4.441	1.500	2.646	0.974	11.772	0.377	
225	0.225	13	4.732	1.500	2.976	0.970	11.812	0.401	
250	0.250	13.5	4.914	1.500	3.307	0.967	11.853	0.415	
275	0.275	14	5.096	1.500	3.638	0.964	11.893	0.428	
300	0.300	14.5	5.278	1.500	3.968	0.960	11.934	0.442	
325	0.325	15	5.460	1.500	4.299	0.957	11.976	0.456	
350	0.350	15.6	5.678	1.500	4.630	0.954	12.017	0.473	
375	0.375	16	5.824	1.500	4.960	0.950	12.059	0.483	
400	0.400	16.3	5.933	1.500	5.291	0.947	12.101	0.490	
425	0.425	16.8	6.115	1.500	5.622	0.944	12.144	0.504	
450	0.450	17	6.188	1.500	5.952	0.940	12.186	0.508	
475	0.475	17.2	6.261	1.500	6.283	0.937	12.229	0.512	
500	0.500	17.6	6.406	1.500	6.614	0.934	12.273	0.522	
525	0.525	18	6.552	1.500	6.944	0.931	12.316	0.532	
550	0.550	18.2	6.625	1.500	7.275	0.927	12.360	0.536	
575	0.575	18.55	6.752	1.500	7.606	0.924	12.404	0.544	
600	0.600	18.8	6.843	1.500	7.937	0.921	12.449	0.550	
625	0.625	19	6.916	1.500	8.267	0.917	12.494	0.554	
650	0.650	19.15	6.971	1.500	8.598	0.914	12.539	0.556	
675	0.675	19.4	7.062	1.500	8.929	0.911	12.584	0.561	
700	0.700	19.8	7.207	1.500	9.259	0.907	12.630	0.571	
725	0.725	20	7.280	1.500	9.590	0.904	12.677	0.574	
750	0.750	20.1	7.316	1.500	9.921	0.901	12.723	0.575	
775	0.775	20.15	7.335	1.500	10.251	0.897	12.770	0.574	
800	0.800	20.25	7.371	1.500	10.582	0.894	12.817	0.575	
825	0.825	20.6	7.498	1.500	10.913	0.891	12.865	0.583	
850	0.850	20.8	7.571	1.500	11.243	0.888	12.913	0.586	
875	0.875	21	7.644	1.500	11.574	0.884	12.961	0.590	
900	0.900	21.1	7.680	1.500	11.905	0.881	13.010	0.590	
925	0.925	21.25	7.735	1.500	12.235	0.878	13.059	0.592	
950	0.950	21.4	7.790	1.500	12.566	0.874	13.108	0.594	
975	0.975	21.8	7.935	1.500	12.897	0.871	13.158	0.603	
1000	1.000	21.9	7.972	1.500	13.228	0.868	13.208	0.604	
1025	1.025	22	8.008	1.500	13.558	0.864	13.258	0.604	
1050	1.050	21.15	7.699	1.500	13.889	0.861	13.309	0.578	
1075	1.075	22.2	8.081	1.500	14.220	0.858	13.361	0.605	
1100	1.100	22.3	8.117	1.500	14.550	0.854	13.412	0.605	
1125	1.125	22.4	8.154	1.500	14.881	0.851	13.464	0.606	
1150	1.150	22.8	8.299	1.500	15.212	0.848	13.517	0.614	
1175	1.175	22.85	8.317	1.500	15.542	0.845	13.570	0.613	
1200	1.200	22.95	8.354	1.500	15.873	0.841	13.623	0.613	
1225	1.225	23	8.372	1.500	16.204	0.838	13.677	0.612	
1250	1.250	23.1	8.408	1.500	16.534	0.835	13.731	0.612	
1275	1.275	23.2	8.445	1.500	16.865	0.831	13.786	0.613	
1300	1.300	23.3	8.481	1.500	17.196	0.828	13.841	0.613	
1325	1.325	23.4	8.518	1.500	17.526	0.825	13.896	0.613	
1350	1.350	23.6	8.554	1.500	17.857	0.821	13.952	0.613	
1375	1.375	23.6	8.590	1.500	18.188	0.818	14.009	0.613	
1400	1.400	23.8	8.663	1.500	18.519	0.815	14.066	0.616	
1425	1.425	23.9	8.700	1.500	18.849	0.812	14.123	0.616	
1450	1.450	24	8.736	1.500	19.180	0.808	14.181	0.616	
1475	1.475	24	8.736	1.500	19.511	0.805	14.239	0.614	
1500	1.500	24	8.736	1.500	19.841	0.802	14.298	0.611	

Perhitungan data :

Tegangan lateral (σ ₃) =	1.500 kg/cm ²
Tegangan deviator maksimum (Δσ = σ ₁ -σ ₃) =	0.616 kg/cm ²
Tegangan vertikal maksimum (σ ₁ = Δσ+σ ₃) =	2.116 kg/cm ²
Regangan saat tegangan vertikal maximum =	19.180 %

TRIAxIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline Tanggal: 3-Nov-08
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline Pc=100 kPa, w_o=100% Jenis pengujian
 No. pengeboran : --- Triaksial: UU - test
 No. sampel : ---
 Kedalaman : --- Diuji oleh: Taufik Hidayat

No. sampel		1	2	3	Catatan
Kode sampel		-	-	0	
Teg. normal saat runtuh ($\Delta\sigma$)	(kg/cm ²)	0.36	0.60	0.62	
Tegangan lateral (σ_3)	(kg/cm ²)	0.50	1.00	1.50	
Tegangan normal total (σ_1)	(kg/cm ²)	0.86	1.60	2.12	
Regangan saat runtuh	(%)	16.20	14.82	19.18	

Berat jenis tanah basah (γ_{wet})
 = 1.627 gr/cm³

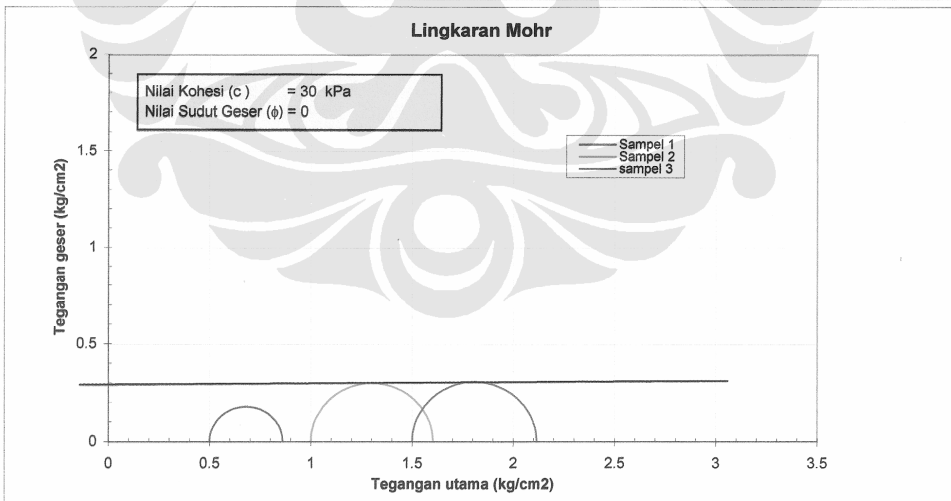
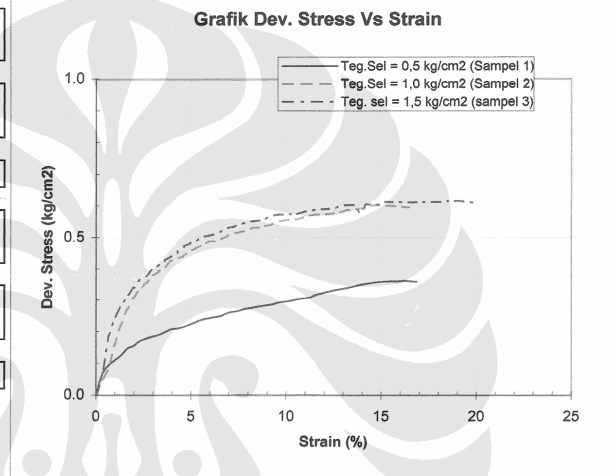
Berat jenis tanah kering (γ_{dry})
 = 1.027 gr/cm³

Kadar air (w) = 58.44 %

Nilai tahanan kohesi (c)
 = 0.3 kg/cm²


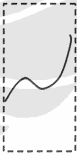
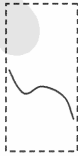
Nilai tahanan sudut geser (ϕ)
 = 0

Strain rate = 1 mm/min



TRIAxIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline Tanggal : 3-Dec-08
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline $P_c=200$ kPa, $w_o=100\%$ Jenis pengujiar : UU - test
 No. pengeboran
 No. sampel Diuji oleh : Taufik Hidayat
 Kedalaman

		Unit	Data sampel			Catatan
No. Sampel			1	2	3	
Kode Sampel			-	-		
(a)	Berat can	(gr)	0.00	0.00	0.00	
(b)	Berat can + tanah basah	(gr)	118.43	142.17	120.17	
(c)	Berat can + tanah kering	(gr)	76.21	77.40	90.80	
(b-c)	Berat air	(gr)	42.22	64.77	29.37	
(c-a)	Berat tanah kering	(gr)	76.21	77.40	90.80	
(b-c)/(c-a)	Kadar air (w)	(%)	55.40	83.68	32.35	
Kadar air rata-rata (w)		(%)	57.14			
(d)	Tinggi sampel (H_o)	(cm)	7.10	7.60	7.20	
(e)	Diameter sampel (D_o)	(cm)	3.60	3.80	3.60	
(f)	Luas (A_o)	(cm ²)	10.18	11.34	10.18	
(g)	Volume (V_o)	(cm ³)	72.27	86.19	73.29	
(b-a)/(g)	Berat jenis tanah basah (γ_{wet})	(gr/cm ³)	1.639	1.649	1.640	
(c-a)/(g)	Berat jenis tanah kering (γ_{dry})	(gr/cm ³)	1.055	0.898	1.239	
Rata-rata (γ_{wet})		(gr/cm ³)	1.643			
Rata-rata (γ_{dry})		(gr/cm ³)	1.064			
Tegangan lateral / sel pada sampel (σ_3)		(kg/cm ²)	0.50	1.00	1.50	
Tipe keruntuhan						
						

TRIAXIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline Pc=200 kPa, w_o=100%
 No. pengeboran :
 No. sampel : 1
 Kedalaman :

Tanggal : 3-Dec-08
 Jenis pengujian triaksial : UU - test
 Diuji oleh : Taufik Hidayat

Data sampel :

Kode sampel : -
 Diameter (φ) : 3.60 cm
 Tinggi awal (H_o) : 7.10 cm
 Luas penampang (A_o) : 10.18 cm²
 Volume (V) : 103.61 cm³

Data alat :
 Load ring constant (LRC) 0.196 kg/div
 Strain rate 1.00 mm/menit

Waktu Berjalan (menit)	Deformasi (ΔH)		Beban (P)		Tegangan Sel (σ ₃) (kg/cm ²)	Regangan (ε) (ΔH/H _o) (%)	Faktor Koreksi Luas (1-ε)	Luas Pen. Terkoreksi (A _o [1-ε]) (cm ²)	Tegangan Deviator (σ ₁ -σ ₃) (kg/cm ²)
	Dial Reading		Dial Reading						
	1 div = (div)	0.001 cm (cm)	1 div = (div)	0.196 kg (kg)					
0	0.000	0	0.000	0.500	0.000	1.000	10.179	0.000	
25	0.025	9	1.764	0.500	0.352	0.996	10.215	0.173	
50	0.050	12	2.352	0.500	0.704	0.993	10.251	0.229	
75	0.075	15	2.940	0.500	1.056	0.989	10.287	0.286	
100	0.100	17.5	3.430	0.500	1.408	0.986	10.324	0.332	
125	0.125	19	3.724	0.500	1.761	0.982	10.361	0.359	
150	0.150	21.5	4.214	0.500	2.113	0.979	10.398	0.405	
175	0.175	23.8	4.666	0.500	2.466	0.975	10.436	0.447	
200	0.200	26	5.096	0.500	2.817	0.972	10.474	0.487	
225	0.225	27.8	5.449	0.500	3.169	0.968	10.512	0.518	
250	0.250	28.8	5.645	0.500	3.521	0.965	10.550	0.535	
275	0.275	31	6.076	0.500	3.873	0.961	10.586	0.574	
300	0.300	32.8	6.429	0.500	4.225	0.958	10.628	0.605	
325	0.325	34.8	6.821	0.500	4.577	0.954	10.667	0.639	
350	0.350	36	7.056	0.500	4.930	0.951	10.707	0.659	
375	0.375	37.5	7.350	0.500	5.282	0.947	10.746	0.684	
400	0.400	38.4	7.526	0.500	5.634	0.944	10.786	0.698	
425	0.425	39	7.644	0.500	5.986	0.940	10.827	0.706	
450	0.450	41	8.036	0.500	6.338	0.937	10.868	0.739	
475	0.475	42	8.232	0.500	6.690	0.933	10.909	0.755	
500	0.500	43.5	8.526	0.500	7.042	0.930	10.950	0.779	
525	0.525	44.5	8.722	0.500	7.394	0.926	10.992	0.794	
550	0.550	45.4	8.898	0.500	7.746	0.923	11.033	0.806	
575	0.575	46.3	9.075	0.500	8.099	0.919	11.076	0.819	
600	0.600	47	9.212	0.500	8.451	0.915	11.118	0.829	
625	0.625	47.5	9.310	0.500	8.803	0.912	11.161	0.834	
650	0.650	48.2	9.447	0.500	9.155	0.908	11.205	0.843	
675	0.675	49	9.604	0.500	9.507	0.905	11.248	0.854	
700	0.700	49.5	9.702	0.500	9.859	0.901	11.292	0.859	
725	0.725	50	9.800	0.500	10.211	0.898	11.336	0.864	
750	0.750	50.8	9.957	0.500	10.563	0.894	11.381	0.875	
775	0.775	51	9.996	0.500	10.915	0.891	11.426	0.875	
800	0.800	51.7	10.133	0.500	11.268	0.887	11.471	0.883	
825	0.825	52	10.192	0.500	11.620	0.884	11.517	0.885	
850	0.850	52.5	10.290	0.500	11.972	0.880	11.563	0.890	
875	0.875	52.8	10.349	0.500	12.324	0.877	11.610	0.891	
900	0.900	53.3	10.447	0.500	12.676	0.873	11.656	0.896	
925	0.925	53.5	10.486	0.500	13.028	0.870	11.704	0.896	
950	0.950	53.8	10.545	0.500	13.380	0.866	11.751	0.897	
975	0.975	54.4	10.662	0.500	13.732	0.863	11.799	0.904	
1000	1.000	54.5	10.682	0.500	14.085	0.859	11.847	0.902	
1025	1.025	54.6	10.702	0.500	14.437	0.856	11.896	0.900	
1050	1.050	54.9	10.760	0.500	14.789	0.852	11.945	0.901	
1075	1.075	55	10.780	0.500	15.141	0.849	11.995	0.899	
1100	1.100	55.2	10.819	0.500	15.493	0.845	12.045	0.898	
1125	1.125	55.4	10.858	0.500	15.845	0.842	12.095	0.898	
1150	1.150	55.5	10.878	0.500	16.197	0.838	12.146	0.896	
1175	1.175	55.5	10.878	0.500	16.549	0.835	12.197	0.892	
1200	1.200	55.6	10.898	0.500	16.901	0.831	12.249	0.890	
1225	1.225	55.8	10.937	0.500	17.254	0.827	12.301	0.889	
1250	1.250	55.9	10.956	0.500	17.606	0.824	12.354	0.887	
1275	1.275	56	10.976	0.500	17.958	0.820	12.407	0.885	
1300	1.300	56.5	11.074	0.500	18.310	0.817	12.460	0.889	
1325	1.325	56.7	11.113	0.500	18.662	0.813	12.514	0.888	
1350	1.350	56.8	11.133	0.500	19.014	0.810	12.569	0.886	
1375	1.375	57	11.172	0.500	19.366	0.806	12.623	0.885	
1400	1.400	57	11.172	0.500	19.718	0.803	12.679	0.881	
1425	1.425	57	11.172	0.500	20.070	0.799	12.735	0.877	

Perhitungan data :

Tegangan lateral (σ ₃) =	0.500 kg/cm ²
Tegangan deviator maksimum (Δσ = σ ₁ -σ ₃) =	0.904 kg/cm ²
Tegangan vertikal maksimum (σ ₁ = Δσ+σ ₃) =	1.404 kg/cm ²
Regangan saat tegangan vertikal maximum =	13.732 %

TRIAXIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline Pc=200 kPa, wo=100%
 No. pengeboran :
 No. sampel : 2
 Kedalaman :

Tanggal : 3-Dec-08
 Jenis pengujian triaksial : UU - test
 Diuji oleh : Taufik Hidayat

Data sampel :
 Kode sampel :
 Diameter (φ) : 3.80 cm
 Tinggi awal (Ho) : 7.60 cm
 Luas penampang (Ao) : 11.34 cm²
 Volume (V) : 128.62 cm³

Data alat :
 Load ring constant (LRC) : 0.196 kg/div
 Strain rate : 1.00 mm/menit

Waktu Berjalan (menit)	Deformasi (ΔH)		Beban (P)		Tegangan Sel (σ ₃) (kg/cm ²)	Regangan (ε) (ΔH/Ho) (%)	Faktor Koreksi Luas (1-ε)	Luas Pen. Terkoreksi (Ao/[1-ε]) (cm ²)	Tegangan Deviator (σ ₁ -σ ₃) (kg/cm ²)
	Dial Reading		Dial Reading						
	1 div = (div)	0.001 cm (cm)	1 div = (div)	0.196 kg (kg)					
0	0	0.000	0	0.000	1.000	0.000	1.000	11.341	0.000
25	0.025	10	1.960	1.000	0.329	0.997	11.379	0.172	
50	0.050	12	2.352	1.000	0.658	0.993	11.416	0.206	
75	0.075	15	2.940	1.000	0.987	0.990	11.454	0.257	
100	0.100	18	3.528	1.000	1.316	0.987	11.492	0.307	
125	0.125	20.5	4.018	1.000	1.645	0.984	11.531	0.348	
150	0.150	22.5	4.410	1.000	1.974	0.980	11.569	0.381	
175	0.175	24	4.704	1.000	2.303	0.977	11.608	0.405	
200	0.200	26.5	5.194	1.000	2.632	0.974	11.648	0.446	
225	0.225	29	5.684	1.000	2.961	0.970	11.687	0.486	
250	0.250	31	6.076	1.000	3.289	0.967	11.727	0.518	
275	0.275	32	6.272	1.000	3.618	0.964	11.767	0.533	
300	0.300	33.5	6.566	1.000	3.947	0.961	11.807	0.556	
325	0.325	36	7.056	1.000	4.276	0.957	11.848	0.596	
350	0.350	38	7.448	1.000	4.605	0.954	11.889	0.626	
375	0.375	39.5	7.742	1.000	4.934	0.951	11.930	0.649	
400	0.400	40.5	7.938	1.000	5.263	0.947	11.971	0.663	
425	0.425	41.5	8.134	1.000	5.592	0.944	12.013	0.677	
450	0.450	42	8.232	1.000	5.921	0.941	12.055	0.683	
475	0.475	43	8.428	1.000	6.250	0.938	12.097	0.697	
500	0.500	44	8.624	1.000	6.579	0.934	12.140	0.710	
525	0.525	45	8.820	1.000	6.908	0.931	12.183	0.724	
550	0.550	46	9.016	1.000	7.237	0.928	12.226	0.737	
575	0.575	47.1	9.232	1.000	7.566	0.924	12.269	0.752	
600	0.600	48.2	9.447	1.000	7.895	0.921	12.313	0.767	
625	0.625	49	9.604	1.000	8.224	0.918	12.357	0.777	
650	0.650	50	9.800	1.000	8.553	0.914	12.402	0.790	
675	0.675	50.5	9.898	1.000	8.882	0.911	12.447	0.795	
700	0.700	51.2	10.035	1.000	9.211	0.908	12.492	0.803	
725	0.725	51.8	10.153	1.000	9.539	0.905	12.537	0.810	
750	0.750	52.5	10.290	1.000	9.868	0.901	12.583	0.818	
775	0.775	52.7	10.329	1.000	10.197	0.898	12.629	0.818	
800	0.800	53	10.388	1.000	10.526	0.895	12.675	0.820	
825	0.825	53.2	10.427	1.000	10.855	0.891	12.722	0.820	
850	0.850	53.7	10.525	1.000	11.184	0.888	12.769	0.824	
875	0.875	54.4	10.662	1.000	11.513	0.885	12.817	0.832	
900	0.900	54.8	10.741	1.000	11.842	0.882	12.865	0.835	
925	0.925	55.1	10.800	1.000	12.171	0.878	12.913	0.836	
950	0.950	55.4	10.858	1.000	12.500	0.875	12.961	0.838	
975	0.975	55.6	10.898	1.000	12.829	0.872	13.010	0.838	
1000	1.000	55.9	10.956	1.000	13.158	0.868	13.060	0.839	
1025	1.025	56.2	11.015	1.000	13.487	0.865	13.109	0.840	
1050	1.050	56.5	11.074	1.000	13.816	0.862	13.159	0.842	
1075	1.075	56.8	11.133	1.000	14.145	0.859	13.210	0.843	
1100	1.100	57	11.172	1.000	14.474	0.855	13.260	0.843	
1125	1.125	57.2	11.211	1.000	14.803	0.852	13.312	0.842	
1150	1.150	57.5	11.270	1.000	15.132	0.849	13.363	0.843	
1175	1.175	57.7	11.309	1.000	15.461	0.845	13.415	0.843	
1200	1.200	58	11.368	1.000	15.789	0.842	13.468	0.844	
1225	1.225	58.1	11.388	1.000	16.118	0.839	13.520	0.842	
1250	1.250	58.2	11.407	1.000	16.447	0.836	13.574	0.840	
1275	1.275	58.4	11.446	1.000	16.776	0.832	13.627	0.840	
1300	1.300	58.5	11.466	1.000	17.105	0.829	13.681	0.838	
1325	1.325	58.8	11.525	1.000	17.434	0.826	13.736	0.839	
1350	1.350	58.9	11.544	1.000	17.763	0.822	13.791	0.837	
1375	1.375	59	11.564	1.000	18.092	0.819	13.846	0.835	
1400	1.400	59.1	11.584	1.000	18.421	0.816	13.902	0.833	
1425	1.425	59.2	11.603	1.000	18.750	0.813	13.958	0.831	
1450	1.450	59.4	11.642	1.000	19.079	0.809	14.015	0.831	
1475	1.475	59.4	11.642	1.000	19.408	0.806	14.072	0.827	
1500	1.500	59.6	11.682	1.000	19.737	0.803	14.130	0.827	
1525	1.525	59.6	11.682	1.000	20.066	0.799	14.188	0.823	
1550	1.550	59.8	11.721	1.000	20.395	0.796	14.247	0.823	
1575	1.575	60	11.760	1.000	20.724	0.793	14.306	0.822	
1600	1.600	60	11.760	1.000	21.053	0.789	14.365	0.819	

Perhitungan data :

Tegangan lateral (σ ₃) =	1.000 kg/cm ²
Tegangan deviator maksimum (Δσ = σ ₁ -σ ₃) =	0.844 kg/cm ²
Tegangan vertikal maksimum (σ ₁ = Δσ+σ ₃) =	1.844 kg/cm ²
Regangan saat tegangan vertikal maximum =	15.789 %

TRIAXIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline Pc=200 kPa, wo=100%
 No. pengeboran :
 No. sampel : 3
 Kedalaman :

Tanggal : 3-Dec-08
 Jenis pengujian triaksial : UU - test
 Diuji oleh : Taufik Hidayat

Data alat :
 Load ring constant (LRC) 0.196 kg/div
 Strain rate 1.00 mm/menit

Data sampel :
 Kode sampel :
 Diameter (φ) : 3.60 cm
 Tinggi awal (Ho) : 7.20 cm
 Luas penampang (Ao) : 10.18 cm²
 Volume (V) : 103.61 cm³

Waktu Berjalan (menit)	Deformasi (ΔH)		Beban (P)		Tegangan Sel (σ ₃) (kg/cm ²)	Regangan (ε) (ΔH/Ho) (%)	Faktor Koreksi Luas (1-ε)	Luas Pen. Terkoreksi (Ao/[1-ε]) (cm ²)	Tegangan Deviator (σ ₁ -σ ₃) (kg/cm ²)
	1 div = 0.001 cm (div)	0.001 cm (cm)	1 div = 0.196 kg (div)	0.196 kg (kg)					
0	0	0.000	0	0.000	1.500	0.000	1.000	10.179	0.000
25	0.025	11	2.156	1.500	0.347	0.997	10.214	0.211	
50	0.050	14	2.744	1.500	0.694	0.993	10.250	0.269	
75	0.075	16.8	3.293	1.500	1.042	0.990	10.286	0.320	
100	0.100	19	3.724	1.500	1.389	0.986	10.322	0.361	
125	0.125	20.5	4.018	1.500	1.736	0.983	10.359	0.388	
150	0.150	23.8	4.665	1.500	2.083	0.979	10.395	0.449	
175	0.175	26	5.096	1.500	2.431	0.976	10.432	0.488	
200	0.200	28.2	5.527	1.500	2.778	0.972	10.470	0.528	
225	0.225	30	5.880	1.500	3.125	0.969	10.507	0.560	
250	0.250	30.8	6.037	1.500	3.472	0.965	10.545	0.572	
275	0.275	33.5	6.566	1.500	3.819	0.962	10.583	0.620	
300	0.300	35.3	6.919	1.500	4.167	0.958	10.621	0.651	
325	0.325	37	7.252	1.500	4.514	0.955	10.660	0.680	
350	0.350	38	7.448	1.500	4.861	0.951	10.699	0.696	
375	0.375	39.3	7.703	1.500	5.208	0.948	10.738	0.717	
400	0.400	40.2	7.879	1.500	5.556	0.944	10.778	0.731	
425	0.425	41	8.036	1.500	5.903	0.941	10.817	0.743	
450	0.450	42.5	8.330	1.500	6.250	0.938	10.857	0.767	
475	0.475	44	8.624	1.500	6.597	0.934	10.898	0.791	
500	0.500	45	8.820	1.500	6.944	0.931	10.938	0.806	
525	0.525	45.6	8.938	1.500	7.292	0.927	10.979	0.814	
550	0.550	46.5	9.114	1.500	7.639	0.924	11.021	0.827	
575	0.575	47.2	9.251	1.500	7.986	0.920	11.062	0.836	
600	0.600	48	9.408	1.500	8.333	0.917	11.104	0.847	
625	0.625	48.5	9.506	1.500	8.681	0.913	11.146	0.853	
650	0.650	48.1	9.624	1.500	9.028	0.910	11.189	0.860	
675	0.675	49.8	9.761	1.500	9.375	0.906	11.232	0.869	
700	0.700	50.1	9.820	1.500	9.722	0.903	11.275	0.871	
725	0.725	50.5	9.898	1.500	10.069	0.899	11.318	0.875	
750	0.750	51	9.996	1.500	10.417	0.896	11.362	0.880	
775	0.775	52	10.192	1.500	10.764	0.892	11.407	0.894	
800	0.800	52.8	10.349	1.500	11.111	0.889	11.451	0.904	
825	0.825	53.2	10.427	1.500	11.458	0.885	11.496	0.907	
850	0.850	53.5	10.486	1.500	11.806	0.882	11.541	0.909	
875	0.875	54.2	10.623	1.500	12.153	0.878	11.587	0.917	
900	0.900	54.8	10.741	1.500	12.500	0.875	11.633	0.923	
925	0.925	55	10.780	1.500	12.847	0.872	11.679	0.923	
950	0.950	55.8	10.937	1.500	13.194	0.868	11.726	0.933	
975	0.975	56	10.976	1.500	13.542	0.865	11.773	0.932	
1000	1.000	56.5	11.074	1.500	13.889	0.861	11.820	0.937	
1025	1.025	57	11.172	1.500	14.236	0.858	11.868	0.941	
1050	1.050	57.4	11.250	1.500	14.583	0.854	11.917	0.944	
1075	1.075	57.8	11.329	1.500	14.931	0.851	11.965	0.947	
1100	1.100	58.1	11.388	1.500	15.278	0.847	12.014	0.948	
1125	1.125	58.3	11.427	1.500	15.625	0.844	12.064	0.947	
1150	1.150	58.6	11.486	1.500	15.972	0.840	12.114	0.948	
1175	1.175	58.8	11.525	1.500	16.319	0.837	12.164	0.947	
1200	1.200	58.9	11.544	1.500	16.667	0.833	12.215	0.945	
1225	1.225	59	11.564	1.500	17.014	0.830	12.266	0.943	
1250	1.250	59.4	11.642	1.500	17.361	0.826	12.317	0.945	
1275	1.275	59.6	11.682	1.500	17.708	0.823	12.369	0.944	
1300	1.300	59.8	11.721	1.500	18.056	0.819	12.422	0.944	
1325	1.325	59.9	11.740	1.500	18.403	0.816	12.474	0.941	
1350	1.350	60	11.760	1.500	18.750	0.813	12.528	0.939	
1375	1.375	60.2	11.799	1.500	19.097	0.809	12.581	0.938	
1400	1.400	60.6	11.878	1.500	19.444	0.806	12.636	0.940	
1425	1.425	60.7	11.897	1.500	19.792	0.802	12.690	0.937	
1450	1.450	60.8	11.917	1.500	20.139	0.799	12.746	0.935	
1475	1.475	61	11.956	1.500	20.486	0.795	12.801	0.934	
1500	1.500	61	11.956	1.500	20.833	0.792	12.857	0.930	
1525	1.525	61	11.956	1.500	21.181	0.788	12.914	0.926	

Perhitungan data :

Tegangan lateral (σ ₃) =	1.500 kg/cm ²
Tegangan deviator maksimum (Δσ = σ ₁ -σ ₃) =	0.948 kg/cm ²
Tegangan vertikal maksimum (σ ₁ = Δσ+σ ₃) =	2.448 kg/cm ²
Regangan saat tegangan vertikal maximum =	15.972 %

TRIAxIAL COMPRESSION TEST

Proyek : Skripsi grup kaoline Tanggal: 3-Dec-08
 Lokasi : Lab. MekTan FTUI
 Deskripsi tanah : Kaoline Pc=200 kPa, w_o=100% Jenis pengujian
 No. pengeboran : --- Triaksial: UU - test
 No. sampel : ---
 Kedalaman : --- Diuji oleh: Taufik Hidayat

No. sampel		1	2	3	Catatan
Kode sampel		-	-	0	
Teg. normal saat runtuh ($\Delta\sigma$)	(kg/cm ²)	0.90	0.84	0.95	
Tegangan lateral (σ_3)	(kg/cm ²)	0.50	1.00	1.50	
Tegangan normal total (σ_1)	(kg/cm ²)	1.40	1.84	2.45	
Regangan saat runtuh	(%)	13.73	15.79	15.97	

Berat jenis tanah basah (γ_{wet})
 = 1.643 gr/cm³

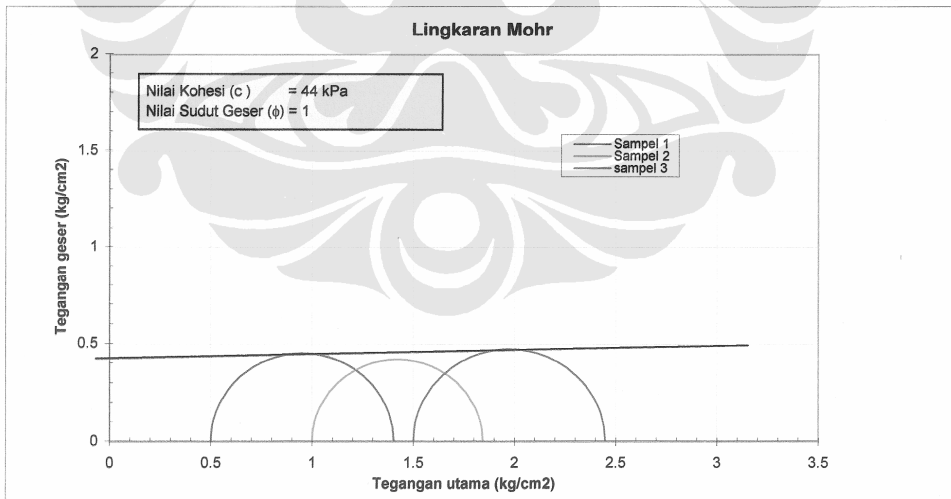
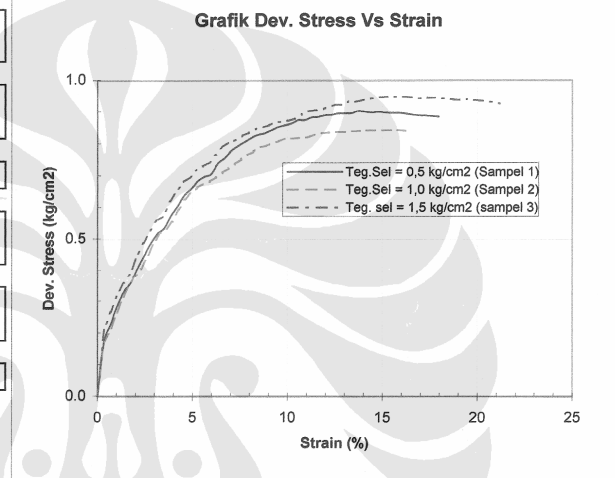
Berat jenis tanah kering (γ_{dry})
 = 1.064 gr/cm³

Kadar air (w) = 57.14 %

Nilai tahanan kohesi (c)
 = 0.44 kg/cm²

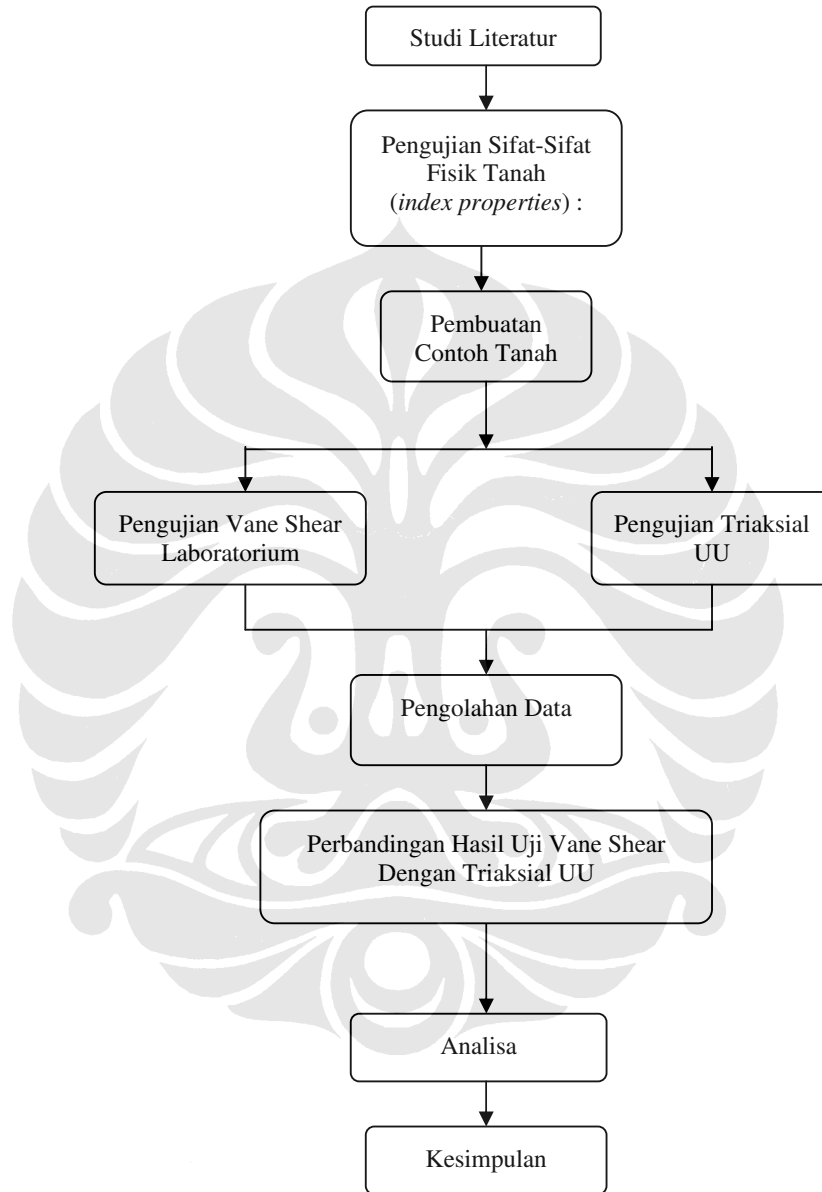
Nilai tahanan sudut geser (ϕ)
 = 1

Strain rate = 1 mm/min



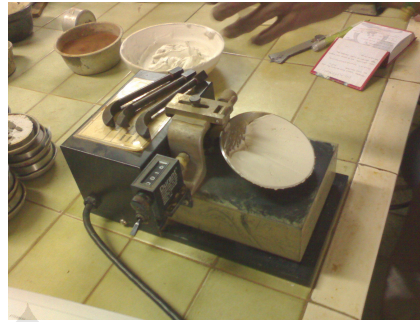
LAMPIRAN 2

1. Diagram Alir Pengujian Kuat Geser Tanah Kaolin



2. Gambar Pengujian Atterberg Limit

- Pengujian Liquid Limit (Alat Cassagrande)



- Pengujian Plastic Limit



3. Gambar Pengujian Specific Gravity (Alat Pycnometer)



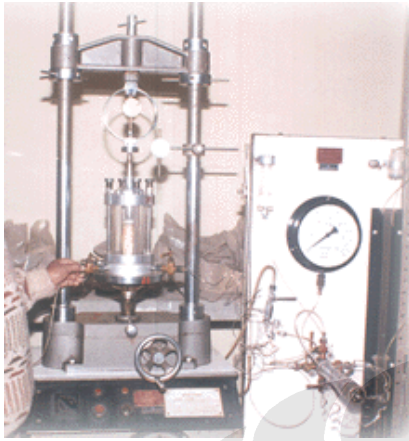
4. Gambar Pengujian Hydrometer



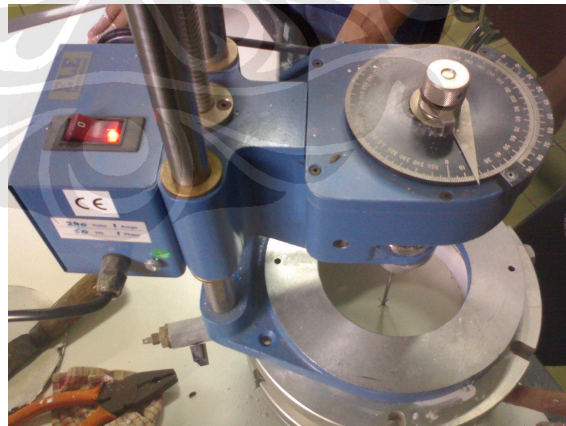
5. Gambar Pembuatan Contoh Tanah (Alat Rowe Cell)



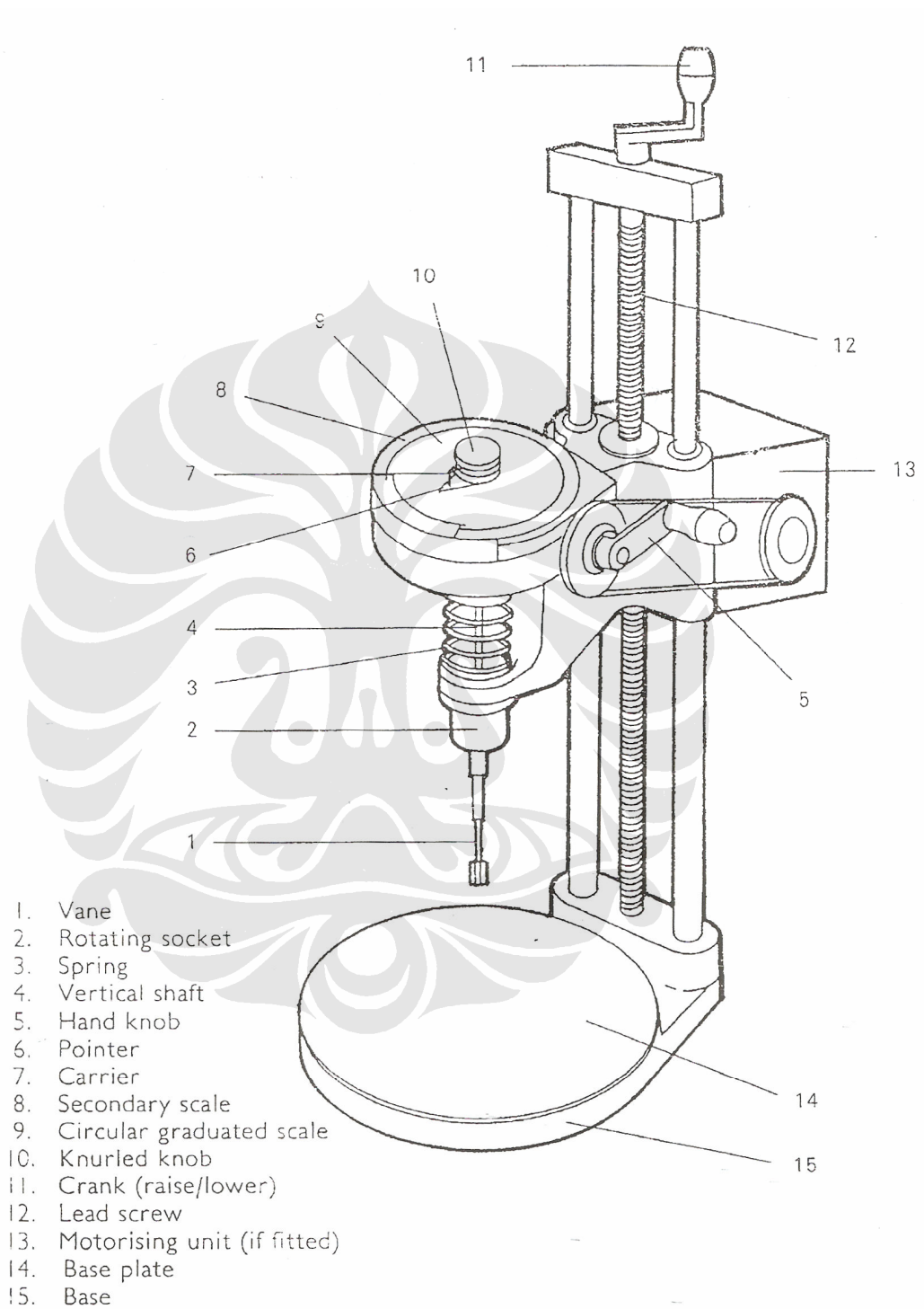
6. Gambar Pengujian Triaksial UU



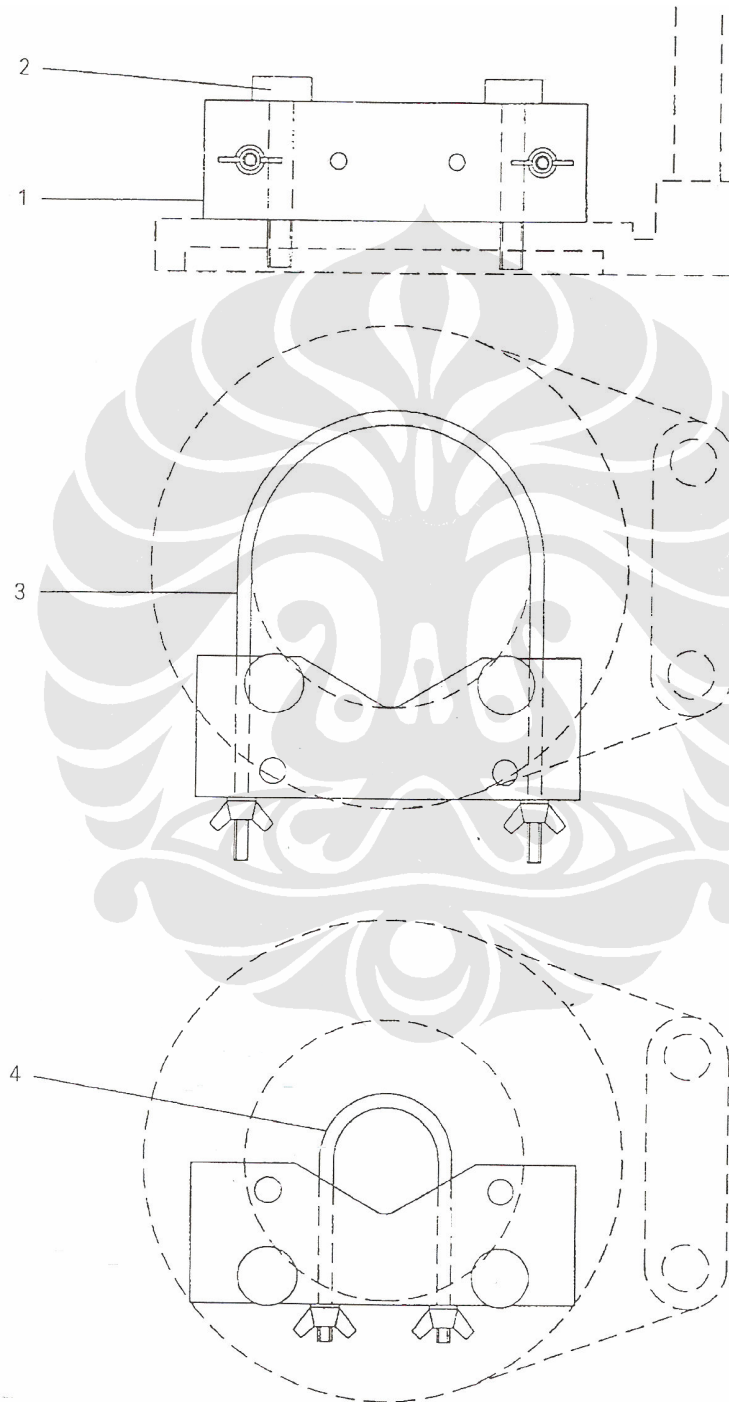
7. Gambar Pengujian Vane Shear Laboratorium



8. Gambar Komponen-Komponen Vane Shear Laboratorium



9. Gambar Tampak Atas Vane Shear Laboratorium



10. Gambar Titik Pengujian Vane Shear Laboratorium Dan Triaksial

