

## **LAMPIRAN**

Lampiran L1 Berat Jenis Tanah (kalibrasi Erlenmayer)

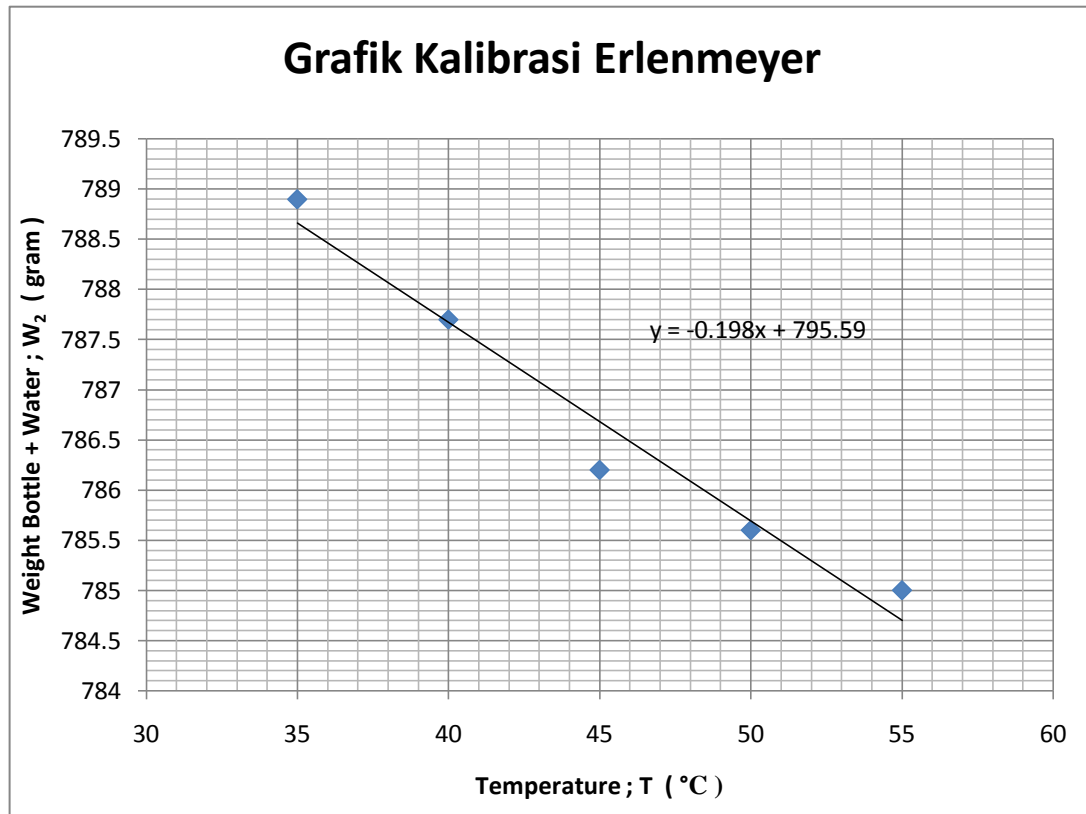
## ERLENMEYER CALIBRATION

**Erlenmeyer Data**

Erlenmeyer No : 5  
Wt. of bottle ;  $W_b$  : 193 gr

Form No. :  
Test No. : 1  
Date : 4 Desember 2010  
Tested by : Christian Stevanus

Determination No.	1	2	3	4	5
Wt. Bottle + Water ; $W_2$ ( gr )	785,00	785,60	786,20	787,70	788,90
Temperatur ; T ( °C )	55	50	45	40	35





Lampiran L3 Sieve Analysis Test

## SIEVE ANALYSIS

Soil Sample : Pasir Trass	Form No. :
Location : Sumedang	Test No. : 2
Boring No. : - depth : m	Date : 17 November 2010
Sample No. : - $G_s$ : 2,66	Tested by : Christian Stevanus

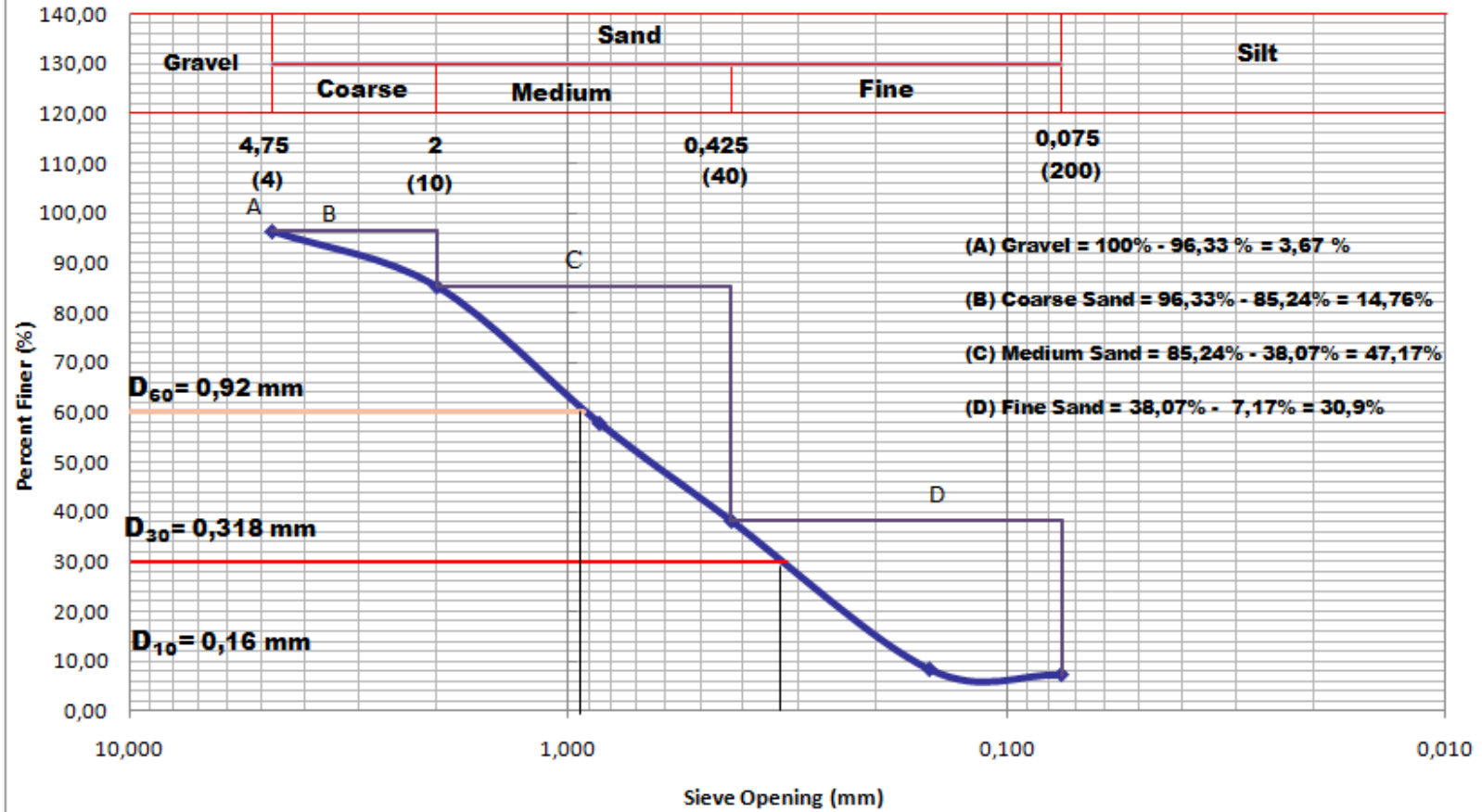
### SOIL SAMPLE WEIGHT

Container Number	: 2
Weight Container	; ( $W_1$ ) = 210,00 gram
Weight Container + Dry Soil	; ( $W_2$ ) = 810,00 gram
Weight of Dry Soil Used	; ( $W_3$ ) = 600,00 gram

Sieve No.	Sieve Opening (mm)	Wt. Sieve (gram)	Wt. Sieve + Soil (gram)	Wt. Soil Retained (gram)	Percent Retained (%)	Percent Cumulative (%)	Percent Finer (%)
<b>4</b>	<b>4,750</b>	359,00	381,00	22,00	3,67	3,67	96,33
<b>10</b>	<b>2,000</b>	451,80	518,30	66,50	11,09	14,76	85,24
<b>20</b>	<b>0,850</b>	400,00	565,00	165,00	27,51	42,27	57,73
<b>40</b>	<b>0,425</b>	293,70	411,60	117,90	19,66	61,93	38,07
<b>100</b>	<b>0,150</b>	290,10	469,10	179,00	29,85	91,78	8,22
<b>200</b>	<b>0,075</b>	<b>278,40</b>	<b>284,70</b>	<b>6,30</b>	1,05	<b>92,83</b>	<b>7,17</b>
<b>Pan</b>		368,00	411,00	43,00	7,17	100,00	0,00

$\Sigma$ =	599,70	100,00
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## GRAIN SIZE DISTRIBUTION CURVE



## Lampiran L5 Berat Isi Tanah

### UJI BERAT ISI TANAH (Cohensionless / Cohesive) Soil

Soil Sample : Pasir trass lolos ayakan #20 #40      Form No. :  
Location : Sumedang      Test No. : 3  
Boring No. :      depth : - m      Date : 14 Januari 2011  
Sample No. :       $G_s$  : 2,660      Tested by : Christian Stevanus

no	1
tinggi mold, t (cm)	11,63167
diameter mold, d (cm)	10,125
volume mold, V (cm <sup>3</sup> )	936,9074
berat mold, W1 (gr)	4205
berat tanah kering + mold, W2 (gr)	5590
berat tanah kering, $W_s = W2 - W1$ (gr)	1385
berat isi tanah maks	1,478268

no	2
tinggi mold, t (cm)	11,63167
diameter mold, d (cm)	10,125
volume mold, V (cm <sup>3</sup> )	936,9074
berat mold, W1 (gr)	4205
berat tanah kering + mold, W2 (gr)	5455
berat tanah kering, $W_s = W2 - W1$ (gr)	1250
berat isi tanah min	1,334177

**Lampiran L6 Direct Shear Test 1 (Normal Stress = 0,1 kg/cm<sup>2</sup>)**

**DIRECT SHEAR TEST  
(Cohesionless / Cohesive) Soil**

Soil Sample	: Pasir lolos ayakan #20 #40	Form No.	:
Location	: Sumedang	Test No.	: 4
Boring No.	:	depth	: - m
Sample No.	:	G <sub>s</sub>	: 2,660
		Date	: 12 Februari 2011
		Tested by	: Christian Stevanus

**SOIL SPECIMEN :**

Diameter	;	( D ) =	6,236	cm
Height	;	( t ) =	1,913	cm
Area	;	( A ) =	30,527	cm <sup>2</sup>
Volume	;	( V ) =	58,398	cm <sup>3</sup>
Wet Density	;	( $\gamma_{wet}$ ) =	1,570	gr/cm <sup>3</sup>
Dry Density	;	( $\gamma_{dry}$ ) =	1,259	gr/cm <sup>3</sup>
Void Ratio	;	( e ) =	0,800	
Porositas	;	( n ) =	0,444	
		Sr =	81,974	%

**WATER CONTENT DETERMINATION :**

Container No	:	1
Wt. of Container	;	W <sub>1</sub> = 64,000 gram
Wt. Cont + Wet Soil	;	W <sub>2</sub> = 154,000 gram
Wt. Cont + Dry Soil	;	W <sub>3</sub> = 136,200 gram
Wt. of Water	;	W <sub>w</sub> = 17,800 gram
Wt. of Dry Soil	;	W <sub>s</sub> = 72,200 gram
WATER CONTENT	;	w = 24,654 %
STRAIN RATE	=	1,1183 % / min

NORMAL STRESS = 0,10532 Kg/cm<sup>2</sup>

RING CONSTANT = 0,13 Kg/div

Elapsed Time (minute)	Horizontal Dial (0,0254 mm)	Strain (%)	Vertical Dial ( 0,01 mm)	Vertical Displacement	Proving Ring Dial (div)	Shear Force (Kg)	Shear Stress (Kg/cm <sup>2</sup> )
0,29	10	0,400	0	0,0000	5	0,650	0,021
1,22	20	0,800	1	0,0005	7	0,910	0,030
1,82	30	1,200	3	0,0016	9	1,170	0,038
2,13	40	1,600	5	0,0026	12	1,560	0,051
2,42	50	2,000	8	0,0042	14	1,820	0,060
2,70	60	2,400	11	0,0058	16	2,080	0,068
2,90	70	2,800	13,5	0,0071	17	2,210	0,072
3,23	80	3,200	16,2	0,0085	18	2,340	0,077
3,52	90	3,600	19	0,0099	18,5	2,405	0,079
3,78	100	4,000	20,8	0,0109	19	2,470	0,081
4,05	110	4,400	22	0,0115	19,2	2,496	0,082
4,33	120	4,800	23,7	0,0124	19,8	2,574	0,084
4,65	130	5,200	26,5	0,0139	20,5	2,665	0,087
4,85	140	5,600	29	0,0152	21	2,730	0,089

5,04	150	6,000	29,2	0,0153	21,5	2,795	0,092
5,21	160	6,400	30	0,0157	19	2,470	0,081
5,47	170	6,800	31	0,0162	18	2,340	0,077
6,02	180	7,200	31,6	0,0165	17,5	2,275	0,075
6,31	190	7,600	32	0,0167	17	2,210	0,072
6,48	200	8,000	32,2	0,0168	16	2,080	0,068
7,00	210	8,400	31	0,0162	15	1,950	0,064



**Lampiran L7 Direct Shear Test 1 (Normal Stress = 0,2 kg/cm<sup>2</sup>)**

**DIRECT SHEAR TEST  
(Cohensionless / Cohesive) Soil**

Soil Sample	: Pasir lolos ayakan #20 #40	Form No.	:
Location	: Sumedang	Test No.	: 5
Boring No.	:	depth	: - m
Sample No.	:	G <sub>s</sub>	: 2,660
		Date	: 12 Februari 2011
		Tested by	: Christian Stevanus

**SOIL SPECIMEN :**

Diameter	; ( D ) =	6,236	cm
Height	; ( t ) =	1,913	cm
Area	; ( A ) =	30,527	cm <sup>2</sup>
Volume	; ( V ) =	58,398	cm <sup>3</sup>
Wet Density	; ( $\gamma_{wet}$ ) =	1,570	gr/cm <sup>3</sup>
Dry Density	; ( $\gamma_{dry}$ ) =	1,259	gr/cm <sup>3</sup>
Void Ratio	; ( e ) =	0,800	
Porositas	; ( n ) =	0,444	
	Sr =	81,974	%

**WATER CONTENT DETERMINATION :**

Container No	:	1
Wt. of Container	; W <sub>1</sub> =	64,000 gram
Wt. Cont + Wet Soil	; W <sub>2</sub> =	154,000 gram
Wt. Cont + Dry Soil	; W <sub>3</sub> =	136,200 gram
Wt. of Water	; W <sub>w</sub> =	17,800 gram
Wt. of Dry Soil	; W <sub>s</sub> =	72,200 gram
WATER CONTENT	; w =	24,654 %

STRAIN RATE = 1,1183 % / min

NORMAL STRESS = 0,22439 Kg/cm<sup>2</sup>

RING CONSTANT = 0,13 Kg/div

Elapsed Time (minute)	Horizontal Dial (0,0254 mm)	Strain (%)	Vertical Dial ( 0,01 mm)	Vertical Displacement	Proving Ring Dial (div)	Shear Force (Kg)	Shear Stress (Kg/cm <sup>2</sup> )
0,35	10	0,400	1	0,0005	10	1,300	0,043
1,22	20	0,800	3,9	0,0020	16	2,080	0,068
1,82	30	1,200	9	0,0047	22	2,860	0,094
2,13	40	1,600	14	0,0073	25	3,250	0,106
2,42	50	2,000	19,1	0,0100	31	4,030	0,132
2,70	60	2,400	24,9	0,0130	34	4,420	0,145
2,90	70	2,800	32	0,0167	35	4,550	0,149
3,23	80	3,200	39	0,0204	36	4,680	0,153
3,52	90	3,600	44	0,0230	37	4,810	0,158
3,78	100	4,000	50	0,0261	38	4,940	0,162
4,05	110	4,400	53,5	0,0280	39	5,070	0,166
4,33	120	4,800	56,7	0,0296	38	4,940	0,162
4,47	130	5,200	59	0,0308	37,5	4,875	0,160
4,58	140	5,600	60	0,0314	36	4,680	0,153

4,65	150	6,000	59	0,0308	35	4,550	0,149
4,77	160	6,400	57	0,0298	34	4,420	0,145
5,11	170	6,800	56	0,0293	33,5	4,355	0,143
5,27	180	7,200	55,2	0,0289	32,5	4,225	0,138
5,43	190	7,600	54,7	0,0286	32	4,160	0,136
5,59	200	8,000	53	0,0277	31	4,030	0,132

**Lampiran L8 Direct Shear Test 1 (Normal Stress = 0,3 kg/cm<sup>2</sup>)**

**DIRECT SHEAR TEST  
(Cohensionless / Cohesive) Soil**

Soil Sample	: Pasir lolos ayakan #20 #40	Form No.	:
Location	: Maranatha	Test No.	: 6
Boring No.	:	depth	: - m
Sample No.	:	G <sub>s</sub>	: 2,660
		Date	: 12 Februari 2011
		Tested by	: Christian Stevanus

**SOIL SPECIMEN :**

Diameter	; ( D ) =	6,236	cm
Height	; ( t ) =	1,913	cm
Area	; ( A ) =	30,527	cm <sup>2</sup>
Volume	; ( V ) =	58,398	cm <sup>3</sup>
Wet Density	; ( $\gamma_{wet}$ ) =	1,570	gr/cm <sup>3</sup>
Dry Density	; ( $\gamma_{dry}$ ) =	1,204	gr/cm <sup>3</sup>
Void Ratio	; ( e ) =	0,800	
Porositas	; ( n ) =	0,444	
	Sr =	101,013	%

**WATER CONTENT DETERMINATION :**

Container No	:	1
Wt. of Container	; W <sub>1</sub> =	64,000 gram
Wt. Cont + Wet Soil	; W <sub>2</sub> =	167,000 gram
Wt. Cont + Dry Soil	; W <sub>3</sub> =	143,000 gram
Wt. of Water	; W <sub>w</sub> =	24,000 gram
Wt. of Dry Soil	; W <sub>s</sub> =	79,000 gram
WATER CONTENT	; w =	30,380 %

STRAIN RATE = 1,1183 % / min

NORMAL STRESS = 0,31612 Kg/cm<sup>2</sup>

RING CONSTANT = 0,13 Kg/div

Elapsed Time (minute)	Horizontal Dial (0,0254 mm)	Strain (%)	Vertical Dial ( 0,01 mm)	Vertical Displacement	Proving Ring Dial (div)	Shear Force (Kg)	Shear Stress (Kg/cm <sup>2</sup> )
0,35	10	0,400	2	0,0010	45	5,850	0,192
1,22	20	0,800	4	0,0021	51	6,630	0,217
1,82	30	1,200	5	0,0026	52	6,760	0,221
2,13	40	1,600	3	0,0016	53	6,890	0,226
2,42	50	2,000	2	0,0010	54	7,020	0,230
2,70	60	2,400	1,5	0,0008	52	6,760	0,221
2,90	70	2,800	1	0,0005	50	6,500	0,213
3,23	80	3,200	0,8	0,0004	49	6,370	0,209

**Lampiran L9 Direct Shear Test 2 (Normal Stress = 0,1 kg/cm<sup>2</sup>)**

**DIRECT SHEAR TEST  
(Cohensionless / Cohesive) Soil**

Soil Sample : Pasir lolos ayakan #20 #40      Form No. :  
 Location : Maranatha      Test No. : 7  
 Boring No. :      depth : - m      Date : 17 Februari 2011  
 Sample No. :      G<sub>s</sub> : 2,660      Tested by : Christian Stevanus

**SOIL SPECIMEN :**

Diameter ; ( D ) = 6,236 cm  
 Height ; ( t ) = 1,913 cm  
 Area ; ( A ) = 30,527 cm<sup>2</sup>  
 Volume ; ( V ) = 58,398 cm<sup>3</sup>  
 Wet Density ; ( γ<sub>wet</sub> ) = 1,570 gr/cm<sup>3</sup>  
 Dry Density ; ( γ<sub>dry</sub> ) = 1,259 gr/cm<sup>3</sup>  
 Void Ratio ; ( e ) = 0,800  
 Porositas ; ( n ) = 0,444  
                                  Sr = 81,974 %

**WATER CONTENT DETERMINATION :**

Container No : 1  
 Wt. of Container ; W<sub>1</sub> = 64,000 gram  
 Wt. Cont + Wet Soil ; W<sub>2</sub> = 154,000 gram  
 Wt. Cont + Dry Soil ; W<sub>3</sub> = 136,200 gram  
 Wt. of Water ; W<sub>w</sub> = 17,800 gram  
 Wt. of Dry Soil ; W<sub>s</sub> = 72,200 gram  
 WATER CONTENT ; w = 24,654 %  
 STRAIN RATE = 1,1183 % / min

NORMAL STRESS = 0,10532 Kg/cm<sup>2</sup>      RING CONSTANT = 0,13 Kg/div

Elapsed Time (minute)	Horizontal Dial (0,0254 mm)	Strain (%)	Vertical Dial (0,01 mm)	Vertical Displacement	Proving Ring Dial (div)	Shear Force (Kg)	Shear Stress (Kg/cm <sup>2</sup> )
0,24	10	0,400	0	0,0000	5	0,650	0,021
1,22	20	0,800	1	0,0005	8	1,040	0,034
1,82	30	1,200	3	0,0016	10	1,300	0,043
2,13	40	1,600	5	0,0026	12	1,560	0,051
2,42	50	2,000	8	0,0042	14	1,820	0,060
2,70	60	2,400	11	0,0058	16	2,080	0,068
2,90	70	2,800	13,5	0,0071	18	2,340	0,077
3,23	80	3,200	16,2	0,0085	19	2,470	0,081
3,52	90	3,600	19	0,0099	20	2,600	0,085
3,78	100	4,000	20,8	0,0109	20,5	2,665	0,087
4,05	110	4,400	22	0,0115	21	2,730	0,089
4,12	120	4,800	23,7	0,0124	21,2	2,756	0,090
4,34	130	5,200	26,5	0,0139	20,5	2,665	0,087
4,57	140	5,600	29	0,0152	19	2,470	0,081

4,68	150	6,000	29,2	0,0153	18	2,340	0,077
4,75	160	6,400	30	0,0157	17	2,210	0,072
5,09	170	6,800	31	0,0162	15	1,950	0,064
5,24	180	7,200	31,6	0,0165	14	1,820	0,060
5,37	190	7,600	32	0,0167	13	1,690	0,055
5,54	200	8,000	32,2	0,0168	12	1,560	0,051
5,65	210	8,400	31	0,0162	11	1,430	0,047

Lampiran L10 Direct Shear Test 2 (Normal Stress = 0,2 kg/cm<sup>2</sup>)

## DIRECT SHEAR TEST (Cohesionless / Cohesive) Soil

Soil Sample : Pasir lolos ayakan #20 #40	Form No. :
Location : Maranatha	Test No. : 8
Boring No. : depth : - m	Date : 17 Februari 2011
Sample No. : $G_s$ : 2,660	Tested by : Christian Stevanus

**SOIL SPECIMEN :**

Diameter	; ( D ) =	6,236	cm
Height	; ( t ) =	1,913	cm
Area	; ( A ) =	30,527	cm <sup>2</sup>
Volume	; ( V ) =	58,398	cm <sup>3</sup>
Wet Density	; ( $\gamma_{wet}$ ) =	1,570	gr/cm <sup>3</sup>
Dry Density	; ( $\gamma_{dry}$ ) =	1,259	gr/cm <sup>3</sup>
Void Ratio	; ( e ) =	0,800	
Porositas	; ( n ) =	0,444	
	$S_r$ =	81,974	%

**WATER CONTENT DETERMINATION :**

Container No	:	1
Wt. of Container	; $W_1$ =	64,000 gram
Wt. Cont + Wet Soil	; $W_2$ =	154,000 gram
Wt. Cont + Dry Soil	; $W_3$ =	136,200 gram
Wt. of Water	; $W_w$ =	17,800 gram
Wt. of Dry Soil	; $W_s$ =	72,200 gram
WATER CONTENT	; w =	24,654 %

STRAIN RATE = 1,1183 % / min

NORMAL STRESS = 0,22439 Kg/cm<sup>2</sup>

RING CONSTANT = 0,13 Kg/div

Elapsed Time (minute)	Horizontal Dial (0,0254 mm)	Strain (%)	Vertical Dial ( 0,01 mm)	Vertical Displacement	Proving Ring Dial (div)	Shear Force (Kg)	Shear Stress (Kg/cm <sup>2</sup> )
0,35	10	0,400	1	0,0005	11	1,430	0,047
1,22	20	0,800	3,9	0,0020	15	1,950	0,064
1,82	30	1,200	9	0,0047	20	2,600	0,085
2,13	40	1,600	14	0,0073	23	2,990	0,098
2,42	50	2,000	19,1	0,0100	25	3,250	0,106
2,70	60	2,400	24,9	0,0130	27	3,510	0,115
2,90	70	2,800	32	0,0167	28	3,640	0,119
3,00	80	3,200	39	0,0204	29	3,770	0,123
3,07	90	3,600	44	0,0230	30	3,900	0,128
3,15	100	4,000	50	0,0261	31	4,030	0,132
3,21	110	4,400	53,5	0,0280	32	4,160	0,136
3,38	120	4,800	56,7	0,0296	32,5	4,225	0,138
3,47	130	5,200	59	0,0308	34	4,420	0,145
3,52	140	5,600	60	0,0314	35	4,550	0,149

3,78	150	6,000	59	0,0308	36	4,680	0,153
4,05	160	6,400	57	0,0298	36,5	4,745	0,155
4,19	170	6,800	56	0,0293	37	4,810	0,158
4,25	180	7,200	55,2	0,0289	38	4,940	0,162
4,32	190	7,600	54,7	0,0286	39	5,070	0,166
4,48	200	8,000	53	0,0277	38	4,940	0,162
4,61	210	8,400	52	0,0272	36,5	4,745	0,155
4,74	220	8,800	50	0,0261	35	4,550	0,149
5,12	230	9,200	49	0,0256	34	4,420	0,145
5,27	240	9,600	47	0,0246	32	4,160	0,136
5,44	250	10,000	46	0,0240	30	3,900	0,128
5,59	260	10,400	45	0,0235	29	3,770	0,123

Lampiran L11 Direct Shear Test 2 (Normal Stress = 0,3 kg/cm<sup>2</sup>)

## DIRECT SHEAR TEST (Cohesionless / Cohesive) Soil

Soil Sample : Pasir lolos ayakan #20 #40	Form No. :
Location : Maranatha	Test No. :
Boring No. :	depth : - m
Sample No. :	Date : 14 Januari 2011
	Tested by : Christian Stevanus
	G <sub>s</sub> : 2,660

**SOIL SPECIMEN :**

Diameter	; ( D ) =	6,236	cm
Height	; ( t ) =	1,913	cm
Area	; ( A ) =	30,527	cm <sup>2</sup>
Volume	; ( V ) =	58,398	cm <sup>3</sup>
Wet Density	; ( $\gamma_{wet}$ ) =	1,570	gr/cm <sup>3</sup>
Dry Density	; ( $\gamma_{dry}$ ) =	1,204	gr/cm <sup>3</sup>
Void Ratio	; ( e ) =	0,800	
Porositas	; ( n ) =	0,444	
	Sr =	101,013	%

**WATER CONTENT DETERMINATION :**

Container No	:	1
Wt. of Container	; W <sub>1</sub> =	64,000 gram
Wt. Cont + Wet Soil	; W <sub>2</sub> =	167,000 gram
Wt. Cont + Dry Soil	; W <sub>3</sub> =	143,000 gram
Wt. of Water	; W <sub>w</sub> =	24,000 gram
Wt. of Dry Soil	; W <sub>s</sub> =	79,000 gram
WATER CONTENT	; w =	30,380 %

STRAIN RATE = 1,1183 % / min

NORMAL STRESS = 0,31612 Kg/cm<sup>2</sup>

RING CONSTANT = 0,13 Kg/div

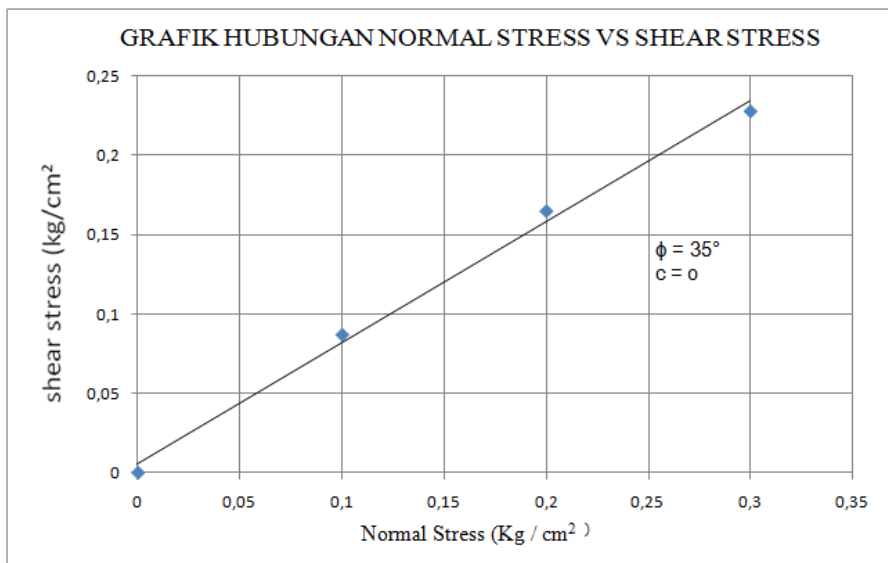
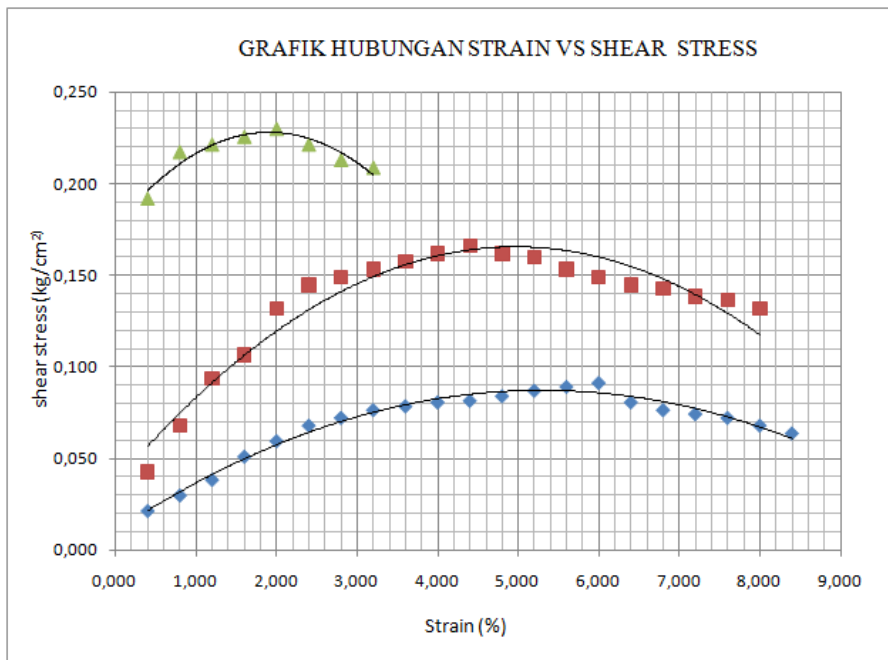
Elapsed Time (minute)	Horizontal Dial (0,0254 mm)	Strain (%)	Vertical Dial ( 0,01 mm)	Vertical Displacement	Proving Ring Dial (div)	Shear Force (Kg)	Shear Stress (Kg/cm <sup>2</sup> )
0,35	10	0,400	2	0,0010	38	4,940	0,162
1,22	20	0,800	4	0,0021	42	5,460	0,179
1,82	30	1,200	5	0,0026	48	6,240	0,204
2,13	40	1,600	3	0,0016	49	6,370	0,209
2,42	50	2,000	2	0,0010	50	6,500	0,213
2,70	60	2,400	1,5	0,0008	51,5	6,695	0,219
2,90	70	2,800	1	0,0005	52	6,760	0,221
3,23	80	3,200	0,8	0,0004	53	6,890	0,226
3,38	90	3,600	0,8	0,0004	54	7,020	0,230
3,47	100	4,000	0,8	0,0004	53	6,890	0,226
3,65	110	4,400	0,8	0,0004	52	6,760	0,221
3,74	120	4,800	0,8	0,0004	51,5	6,695	0,219
3,90	130	5,200	0,8	0,0004	50	6,500	0,213



## Lampiran L12 Grafik *Direct Shear*

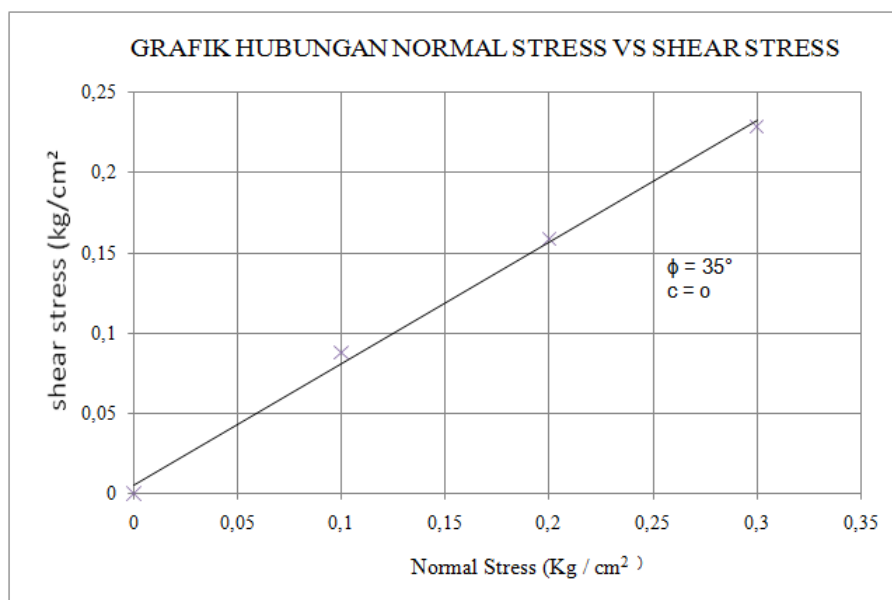
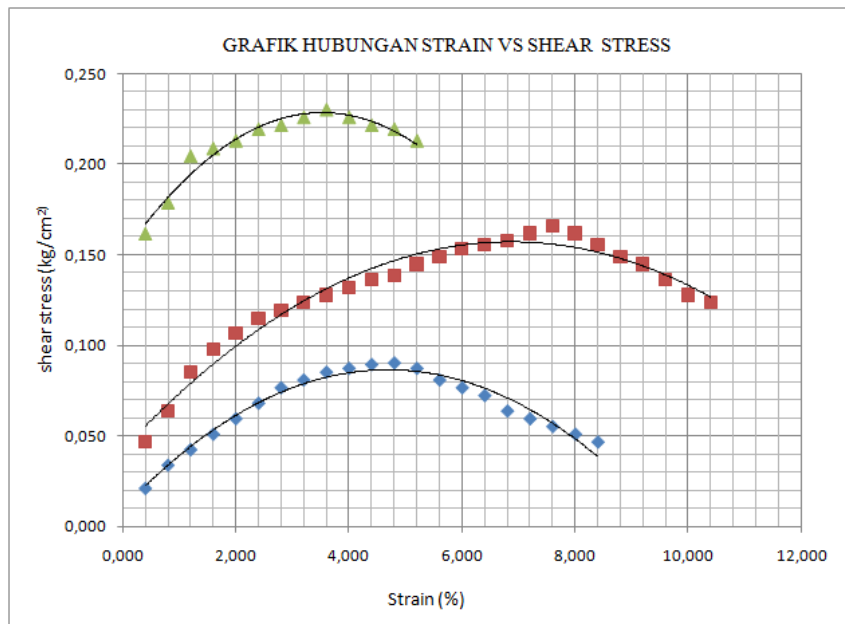
### Pengujian 1

normal stress (kg/cm <sup>2</sup> )	shear strength (kg/cm <sup>2</sup> )
0,1	0,087
0,2	0,165
0,3	0,228



## Pengujian 2

normal stress (kg/cm <sup>2</sup> )	shear strength (kg/cm <sup>2</sup> )
0,1	0,088
0,2	0,159
0,3	0,229



## UJI PEMBEBANAN PONDASI DANGKAL

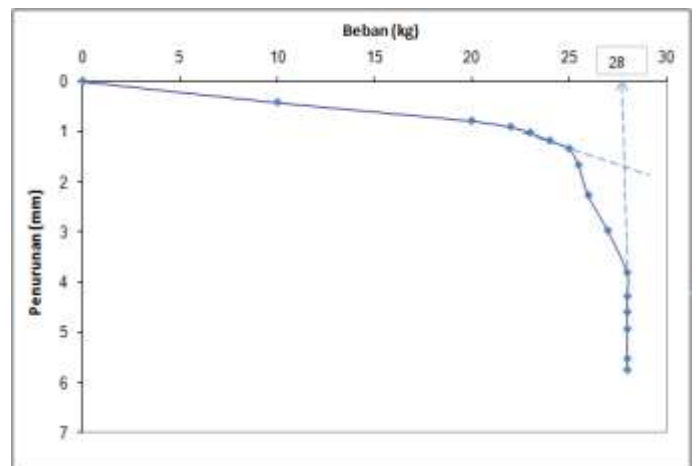
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 1  
 Test Type : Lereng pasir jarak 0,5B  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	42	0,42
20	79	0,79
22	91	0,91
23	102	1,02
24	118	1,18
25	134	1,34
25,5	167	1,67
26	227	2,27
27	297	2,97
28	381	3,81
28	428	4,28
28	459	4,59
28	493	4,93
28	552	5,52
28	574	5,74

**GRAFIK BEBAN VS PENURUNAN**



## UJI PEMBEBANAN PONDASI DANGKAL

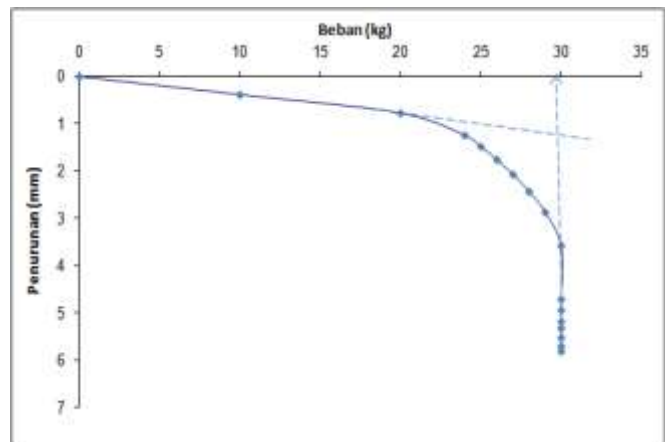
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 2  
 Test Type : Lereng pasir jarak 0,5B  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	38	0,38
20	77	0,77
24	124	1,24
25	148	1,48
26	176	1,76
27	207	2,07
28	243	2,43
29	287	2,87
30	358	3,58
30	472	4,72
30	495	4,95
30	519	5,19
30	533	5,33
30	553	5,53
30	571	5,71
30	582	5,82

**GRAFIK BEBAN VS PENURUNAN**



# UJI PEMBEBANAN PONDASI DANGKAL

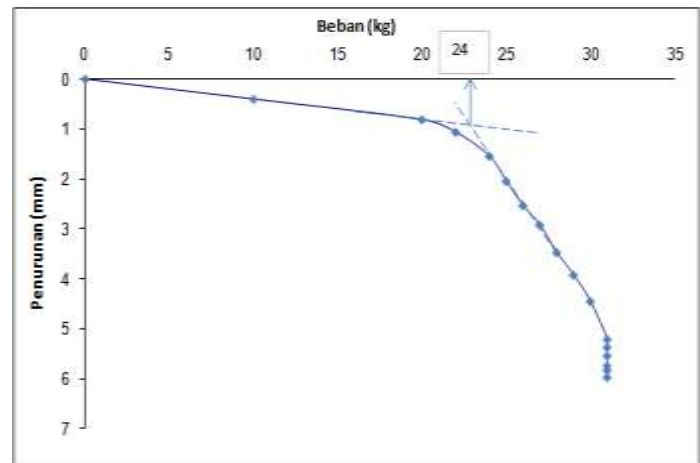
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 3  
 Test Type : Lereng pasir jarak 0,5B  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	40	0,4
20	81	0,81
22	106	1,06
24	154	1,54
25	204	2,04
26	253	2,53
27	292	2,92
28	347	3,47
29	392	3,92
30	445	4,45
31	521	5,21
31	537	5,37
31	554	5,54
31	574	5,74
31	583	5,83
31	597	5,97

**GRAFIK BEBAN VS PENURUNAN**



## UJI PEMBEBANAN PONDASI DANGKAL

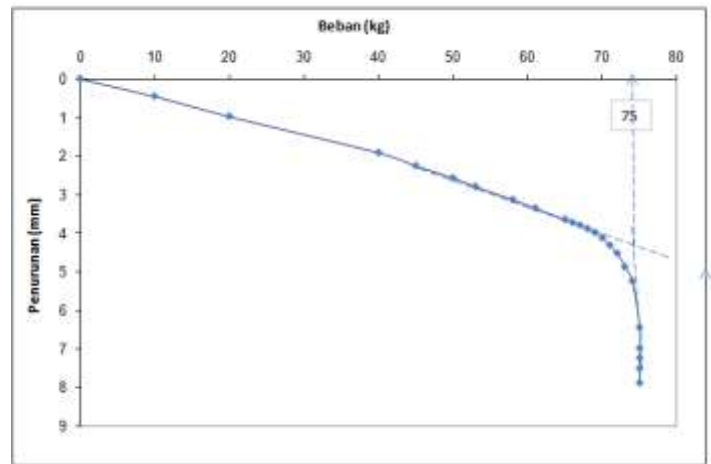
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 4  
 Test Type : Lereng pasir jarak 1,5B  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (Kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	45	0,45
20	97	0,97
40	191	1,91
45	225	2,25
50	257	2,57
53	279	2,79
58	313	3,13
61	335	3,35
65	364	3,64
66	372	3,72
67	379	3,79
68	388	3,88
69	398	3,98
70	412	4,12
71	431	4,31
72	452	4,52
73	487	4,87
74	524	5,24
75	644	6,44
75	698	6,98
75	724	7,24
75	751	7,51
75	788	7,88

**GRAFIK BEBAN VS PENURUNAN**



# UJI PEMBEBANAN PONDASI DANGKAL

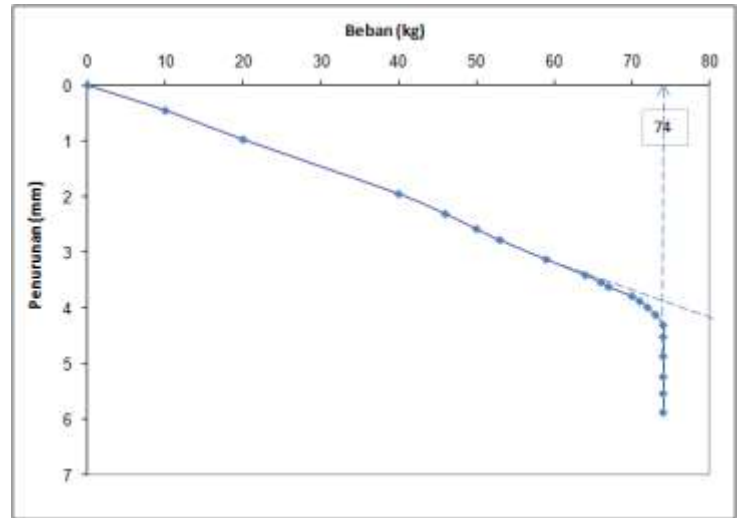
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 5  
 Test Type : Lereng pasir jarak 1,5B  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (Kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	45	0,45
20	97	0,97
40	195	1,95
46	231	2,31
50	258	2,58
53	278	2,78
59	313	3,13
64	341	3,41
66	354	3,54
67	362	3,62
70	379	3,79
71	388	3,88
72	399	3,99
73	412	4,12
74	431	4,31
74	452	4,52
74	487	4,87
74	524	5,24
74	554	5,54
74	588	5,88
74	724	7,24
74	751	7,51
74	790	7,9

GRAFIK BEBAN VS PENURUNAN



## UJI PEMBEBANAN PONDASI DANGKAL

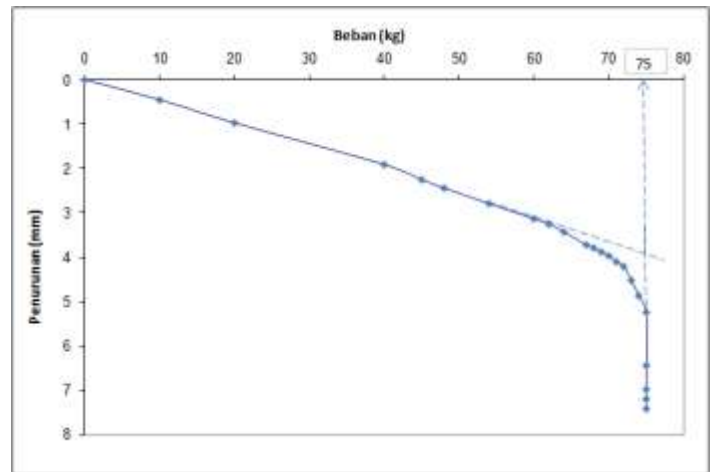
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 6  
 Test Type : Lereng pasir jarak 1,5B  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	45	0,45
20	97	0,97
40	191	1,91
45	225	2,25
48	244	2,44
54	279	2,79
60	313	3,13
62	325	3,25
64	343	3,43
67	372	3,72
68	379	3,79
69	388	3,88
70	397	3,97
71	410	4,1
72	421	4,21
73	452	4,52
74	487	4,87
75	524	5,24
75	644	6,44
75	698	6,98
75	720	7,2
75	742	7,42
75	778	7,78

**GRAFIK BEBAN VS PENURUNAN**





## UJI PEMBEBANAN PONDASI DANGKAL

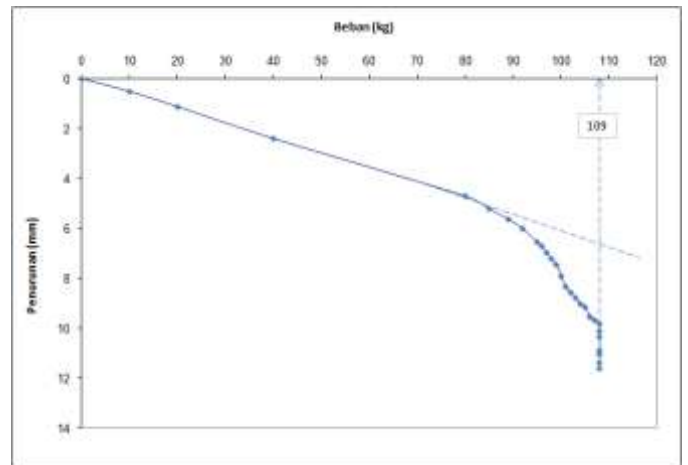
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 7  
 Test Type : Lereng pasir jarak 2,5B  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (Kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	51	0,51
20	112	1,12
40	239	2,39
80	470	4,7
85	521	5,21
89	563	5,63
92	601	6,01
95	654	6,54
96	671	6,71
97	697	6,97
98	722	7,22
99	745	7,45
100	791	7,91
101	834	8,34
102	856	8,56
103	878	8,78
104	902	9,02
105	915	9,15
106	954	9,54
107	968	9,68
108	982	9,82
108	1012	10,12
108	1035	10,35
108	1089	10,89
108	1105	11,05
108	1138	11,38
108	1161	11,61

**GRAFIK BEBAN VS PENURUNAN**



## UJI PEMBEBANAN PONDASI DANGKAL

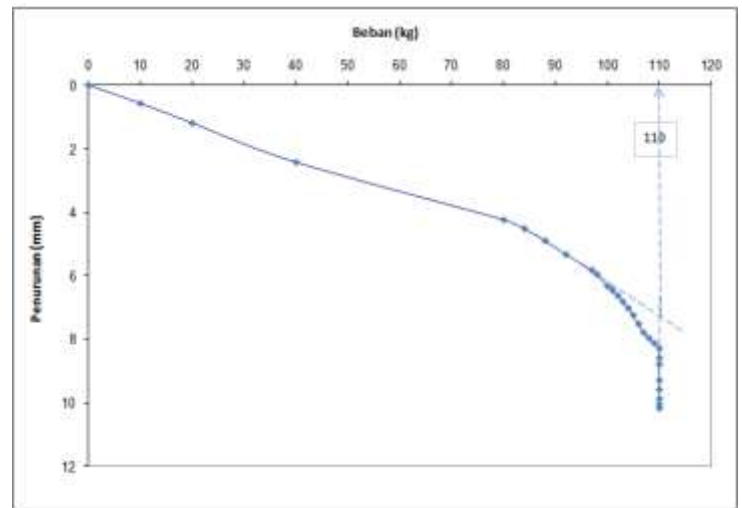
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 8  
 Test Type : Lereng pasir jarak 2,5B  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (Kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	57	0,57
20	119	1,19
40	242	2,42
80	423	4,23
84	451	4,51
88	489	4,89
92	532	5,32
97	581	5,81
98	595	5,95
100	632	6,32
101	645	6,45
102	662	6,62
103	681	6,81
104	701	7,01
105	723	7,23
106	751	7,51
107	778	7,78
108	795	7,95
109	811	8,11
110	828	8,28
110	858	8,58
110	878	8,78
110	928	9,28
110	957	9,57
110	986	9,86
110	1004	10,04
110	1016	10,16

**GRAFIK BEBAN VS PENURUNAN**



## UJI PEMBEBANAN PONDASI DANGKAL

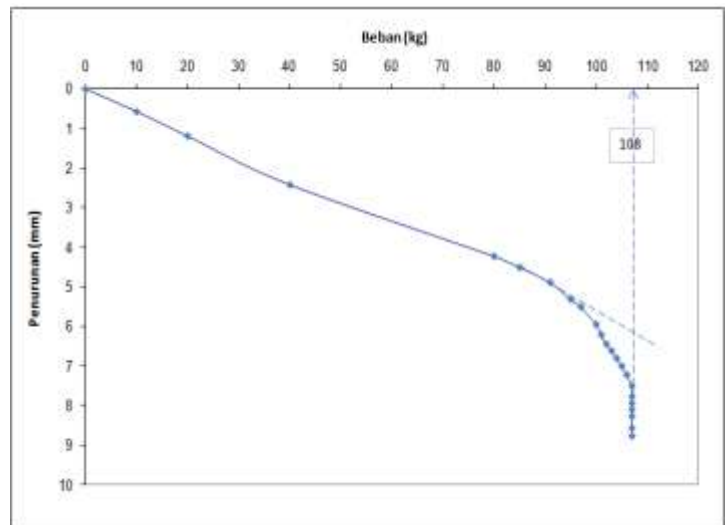
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 9  
 Test Type : Lereng pasir jarak 2,5B  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (Kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	57	0,57
20	119	1,19
40	242	2,42
80	423	4,23
85	451	4,51
91	489	4,89
95	532	5,32
97	551	5,51
100	595	5,95
101	622	6,22
102	645	6,45
103	662	6,62
104	681	6,81
105	701	7,01
106	723	7,23
107	751	7,51
107	778	7,78
107	795	7,95
107	811	8,11
107	828	8,28
107	858	8,58
107	878	8,78

**GRAFIK BEBAN VS PENURUNAN**



## UJI PEMBEBANAN PONDASI DANGKAL

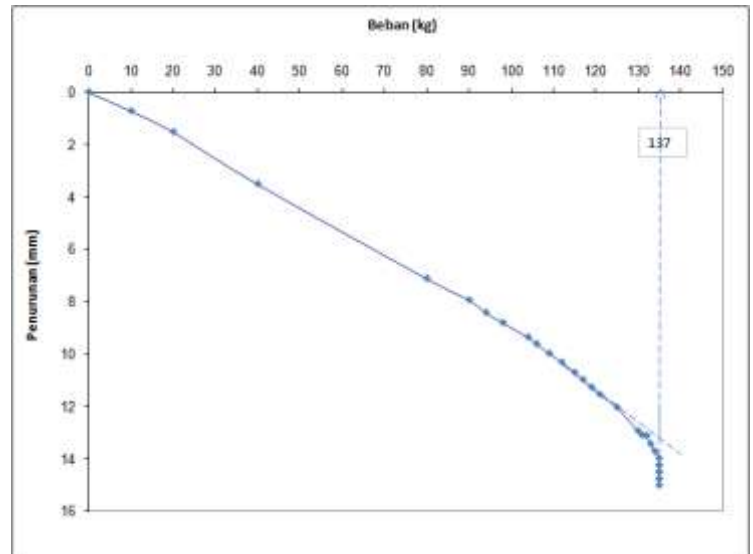
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 10  
 Test Type : Tidak ada lereng  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (Kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	72	0,72
20	152	1,52
40	351	3,51
80	712	7,12
90	794	7,94
94	842	8,42
98	881	8,81
104	936	9,36
106	962	9,62
109	998	9,98
112	1032	10,32
115	1071	10,71
117	1098	10,98
119	1127	11,27
121	1155	11,55
125	1204	12,04
130	1294	12,94
131	1310	13,1
132	1312	13,12
133	1344	13,44
134	1372	13,72
135	1398	13,98
135	1425	14,25
135	1451	14,51
135	1478	14,78
135	1425	14,25
135	1451	14,51
135	1478	14,78
135	1502	15,02

**GRAFIK BEBAN VS PENURUNAN**



## UJI PEMBEBANAN PONDASI DANGKAL

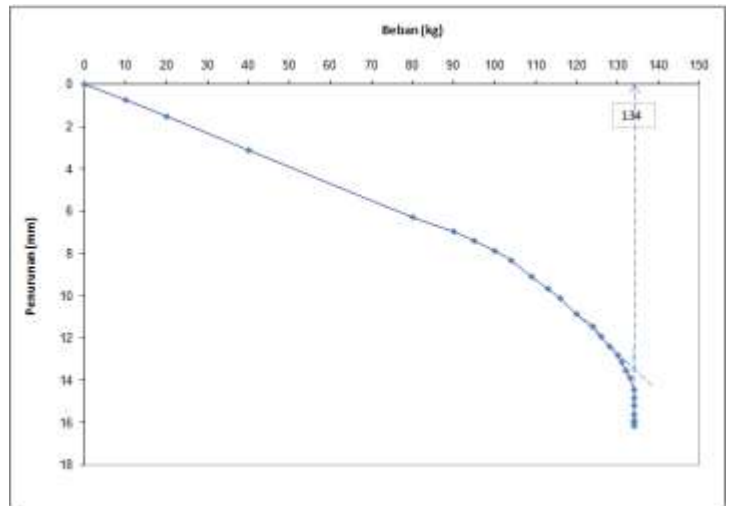
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 11  
 Test Type : Tidak ada lereng  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (Kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	74	0,74
20	152	1,52
40	312	3,12
80	629	6,29
90	697	6,97
95	741	7,41
100	789	7,89
104	834	8,34
109	911	9,11
113	968	9,68
116	1013	10,13
120	1088	10,88
124	1147	11,47
126	1195	11,95
128	1241	12,41
130	1283	12,83
131	1315	13,15
132	1357	13,57
133	1390	13,9
134	1447	14,47
134	1486	14,86
134	1521	15,21
134	1566	15,66
134	1594	15,94
134	1601	16,01
<u>134</u>	<u>1618</u>	<u>16,18</u>

**GRAFIK BEBAN VS PENURUNAN**



## UJI PEMBEBANAN PONDASI DANGKAL

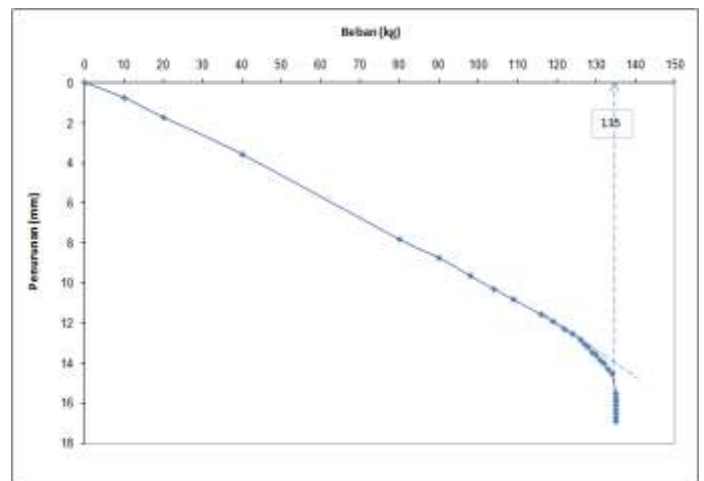
Soil Sample : Pasir trass  
 Location : Sumedang  
 Boring No. : -  
 Sample No. : -

Form No. :  
 Test No. : 12  
 Test Type : Tidak ada lereng  
 Tested by : Christian Stevanus

$G_s$  : 2,66

Beban (Kg)	Pembacaan dial	penurunan (mm)
0	0	0
10	75	0,75
20	173	1,73
40	358	3,58
80	782	7,82
90	874	8,74
98	964	9,64
104	1031	10,31
109	1083	10,83
116	1158	11,58
119	1193	11,93
122	1232	12,32
124	1255	12,55
126	1284	12,84
127	1307	13,07
128	1322	13,22
129	1348	13,48
130	1361	13,61
131	1387	13,87
132	1402	14,02
133	1431	14,31
134	1453	14,53
135	1554	15,54
135	1578	15,78
135	1593	15,93
135	1612	16,12
135	1635	16,35
135	1653	16,53
135	1674	16,74
135	1693	16,93

**GRAFIK BEBAN VS PENURUNAN**



**Lampiran L17 Gambar alat – alat pengujian**

**1. Berat Jenis Tanah (*Spesific Grafity*)**

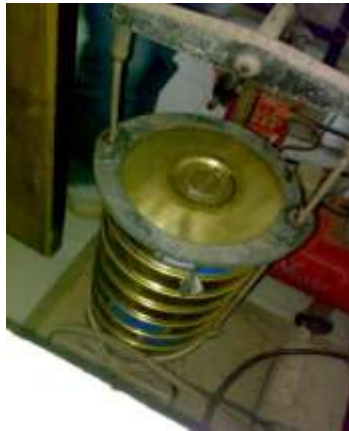


Erlenmeyer



Thermometer

**2. Distribusi Ukuran Butir (*Sieve Analysis*)**



Mesin pengguncang



Susunan tapis

### 3. Berat Isi Tanah



Mold

Jangka sorong

### 4. Uji Geser Langsung (*Direct Shear*)



Shear box bagian atas

Pembebanan

Shear box bagian bawah  
& blok pengaku



Alat *Direct Shear*



## Lampiran L18 Sketsa pengujian pembebanan model pondasi

