



PENGUJIAN PENELITIAN TUGAS AKHIR

A. AGREGAT HALUS (PASIR)

Bahan : Pasir

Asal : Merapi

Jenis Pengujian : Pemeriksaan gradasi besar butiran agregat halus (pasir)

Diperiksa : 25 Februari 2016

- a. Berat cawan kosong = 213,02 gram
b. Berat pasir SSD = 1000 gram
c. Berat pasir + cawan = 1213,02 gram

Tabel 1. Hasil analisis gradasi pasir

Ukuran Saringan	Lubang Ayakan (mm)	Berat Tertahan (gram)	Berat Tertahan (%)	Berat Tertahan Komulatif (%)	Berat lolos Komulatif (%)
No. 4	4,8	0	0	0	100
No. 8	2,4	0	0	0	100
No. 16	1,2	165	16,5	16,5	83,5
No. 30	0,6	281	28,1	44,6	55,4
No. 50	0,3	268	26,8	71,4	28,6
No. 100	0,15	196	19,6	91	9
Pan		90	9	100	0
Total		1000	100	223,5	Daerah 2

Sumber : Data penelitian Tugas Akhir, 2016

Analisis hitungan

a. Persen berat tertahan = $\frac{\text{Berat tertahan}}{\text{Total}}$

Contoh untuh saringan No.8 = $\frac{165}{1000} \times 100 = 16,5\%$

b. Persen berat tertahan komulatif

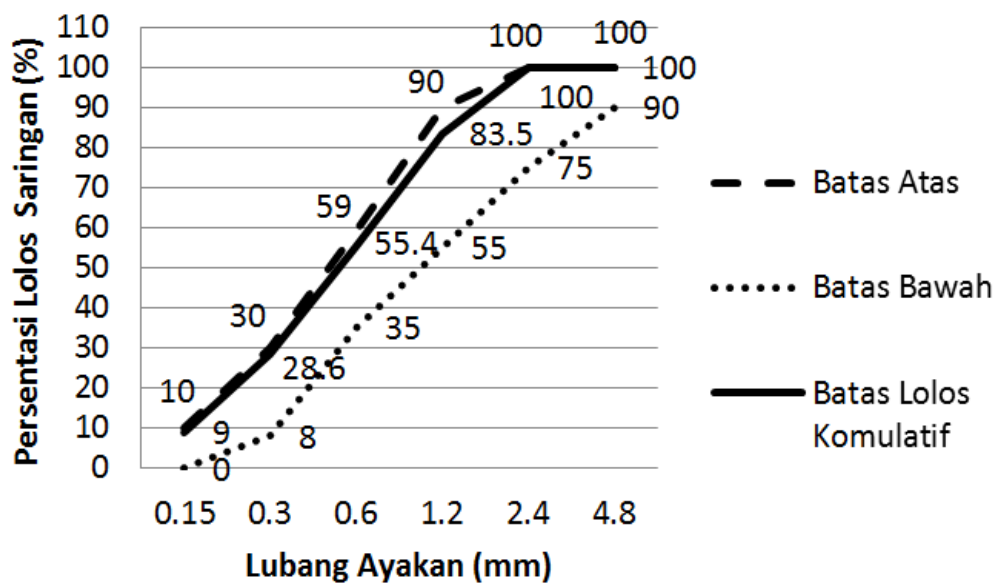
Contoh saringan No.16 = Persen berat tertahan no. 8 + persen berat tertahan No. 16
= 0 + 16,5 = 16,5%

c. Persen berat lolos kumulatif = 100 – persen berat tertahan kumulatif

Contoh saringan No. 16 = 100 – 16,5 = 83,5%

d. MHB Butir Halus Modulus = $\frac{\text{jumlah berat tertahan kumulatif \%}}{\text{jumlah berat tertahan}}$

$$= \frac{223,5}{1000} = 2,235$$



Gambar I. Grafik Gradasi Agregat Halus



PENGUJIAN PENELITIAN TUGAS AKHIR

A. AGREGAT HALUS (PASIR)

Bahan : Pasir

Asal : Merapi

Jenis Pengujian : Pemeriksaan berat jenis dan penyerapan air agregat halus (pasir)

Diperiksa : 25 Februari 2016

Tabel 2. Hasil analisis berat jenis pasir

Uraian Pemeriksaan	I	II
A. Berat Piknometer	215 gr	215 gr
B. Berat jenuh kering muka SSD	500 gr	500 gr
C. Berat Piknometer + air + contoh SSD (Bt)	1025 gr	1024 gr
D. Berat Piknometer + air (B)	715 gr	715 gr
E. Berat pasir setelah kering (Bk)	495 gr	496 gr
Berat Jenis Tampak = $\frac{Bk}{(B + Bk - Bt)}$	2,67	2,65
Berat jenis curah = $\frac{Bk}{(B + SSD - Bt)}$	2,60	2,59
Berat jenis jenuh kering muka = $\frac{SSD}{(B + SSD - Bt)}$	2,63	2,61
Penyerapan air agregat halus = $\frac{SSD - Bk}{Bk} \times 100 \%$	1,01 %	0.806 %
RATA-RATA		
Berat Jenis Tampak	2,66	
Berat jenis curah	2,59	
Berat jenis jenuh kering muka	2,62	
Penyerapan air agregat halus	1.816 %	

Sumber : Data penelitian Tugas Akhir, 2016



PENGUJIAN PENELITIAN TUGAS AKHIR

A. AGREGAT HALUS (PASIR)

Bahan : Pasir

Asal : Merapi

Jenis Pengujian : Pemeriksaan kadar air agregat halus (pasir)

Diperiksa : 26 Februari 2016

Tabel 3. Hasil analisis kadar air agregat halus (pasir)

No	Uraian	Satuan	Benda uji	Benda uji	Benda uji
			1	2	3
1	Berat wadah (W1)	gram	130	130	130
2	Berat wadah + contoh basah (W2)	gram	290	290	290
3	Berat wadah + contoh kering (W3)	gram	283	285	281
4	Berat air (W4=W2-W3)	gram	7	5	3
5	Kadar air	%	4.575	3.22	3.184
6.	Rata-rata kadar air	%	3.66		

Sumber : Data pengujian tugas akhir, 2016

Analisis hitungan

a. - Berat air benda uji 1= W2-W3

$$= 290-283$$

$$= 7 \text{ gram}$$

- Berat air benda uji 2= W2-W3

$$= 290-285$$

$$= 5 \text{ gram}$$

- Berat air benda uji 3= W2-W3

$$= 290-281$$

$$= 9 \text{ gram}$$

b. - Kadar air benda uji 1 = $\frac{W_4}{W_3 - W_1} \times 100\%$

$$= \frac{7}{283 - 130} \times 100$$

$$= 4,575\%$$

- Kadar air benda uji 2 = $\frac{W_4}{W_3 - W_1} \times 100\%$

$$= \frac{5}{285 - 130} \times 100$$

$$= 3,22\%$$

- Kadar air benda uji 3 = $\frac{W_4}{W_3 - W_1} \times 100\%$

$$= \frac{3}{287 - 130} \times 100$$

$$= 3,184\%$$

c. Rata-rata kadar air

$$= \frac{4.575 + 3.22 + 3.184}{3}$$

$$= 3.66 \%$$



PENGUJIAN PENELITIAN TUGAS AKHIR

A. AGREGAT HALUS (PASIR)

Bahan : Pasir

Asal : Merapi

Jenis Pengujian : Pemeriksaan berat satuan agregat halus (pasir)

Diperiksa : 27 Februari 2016

Tabel 4. Hasil pemeriksaan berat satuan agregat halus (pasir)

Uraian	Satuan	Benda uji	
		I	II
Berat bejana kosong (B1)	g	10400	10900
Tinggi bejana	cm	30,26	15
Lebar bejana	cm	30,22	15,1
Berat bejana kosong + pasir (B2)	g	19100	19400
Berat satuan (Bsat)	g/cm ³	1,62	1,51
Berat satuan rata-rata	g/cm ³	1,565	

Sumber : Data pengujian tugas akhir, 2016

Analisis Hitungan

- volume bejana kosong I (V) $= 1/4 \times \pi \times d^2 \times h$
 $= 1/4 \times \pi \times (15)^2 \times 30,26$
 $= 5347,38 \text{ cm}^3$
- volume bejana kosong II (V) $= 1/4 \times \pi \times d^2 \times h$
 $= 1/4 \times \pi \times (15,1)^2 \times 30,22$
 $= 5411,76 \text{ cm}^3$
- Berat satuan Benda Uji I $= \frac{B2-B1}{V}$
 $= \frac{19100 - 10400}{5347,38}$
 $= 1,62 \text{ gr/cm}^3$
- Berat satuan Benda Uji II $= \frac{B2-B1}{V}$
 $= \frac{19400 - 10900}{5411,76}$
 $= 1,51 \text{ gr/cm}^3$

- Berat satuan rata-rata = $\frac{1,62 + 1,51}{2} = 1,565 \text{ gr/cm}$



PENGUJIAN PENELITIAN TUGAS AKHIR

A. AGREGAT HALUS (PASIR)

Bahan : Pasir
Asal : Merapi
Jenis Pengujian : Pemeriksaan kadar lumpur agregat halus
Diperiksa : 28 Februari 2016

Tabel 5. Hasil Pemeriksaan kadar lumpur agregat halus

No	Uraian	Satuan	Benda uji		
			1	2	3
1	Pasir jenuh kering muka (B ₁)	gram	1014	1016	1010
2	Pasir setelah keluar oven (B ₂)	gram	964	974	975
3	Kandungan air (B ₃ = B ₁ - B ₂)	gram	50	42	35
4	Kadar lumpur (KL)	%	4,931	4,134	3.465
5	Rata-rata kadar lumpur	%	4,176		

Sumber : Data pengujian tugas akhir, 2016

Analisis hitungan

- a. Kandungan air = B₁-B₂
Benda uji 1 = 1014 - 964
= 50 gram
- b. Kandungan air = B₁-B₂
Benda uji 2 = 1016 - 974
= 42 gram
- c. Kandungan air = B₁-B₂
Benda uji 3 = 1010 - 975
= 35 gram
- d. Kadar lumpur = $\frac{B_1-B_2}{B_1} \times 100\%$
Benda uji 1 = $\frac{1014-964}{1014} \times 100$
= 4,391%

$$\text{e. Kadar lumpur} = \frac{B1-B2}{B1} \times 100\%$$

$$\begin{aligned} \text{Benda uji 2} &= \frac{1016-974}{1016} \times 100 \\ &= 4,134\% \end{aligned}$$

$$\text{f. Kadar lumpur} = \frac{B1-B2}{B1} \times 100\%$$

$$\begin{aligned} \text{Benda uji 3} &= \frac{1010-975}{1010} \times 100 \\ &= 3.465\% \end{aligned}$$

$$\begin{aligned} \text{g. Rata-rata kadar lumpur} &= \frac{KL1+KL2+KL3}{3} \\ &= \frac{4,931+4,134+3.465}{3} \\ &= 4,176\% \end{aligned}$$



PENGUJIAN PENELITIAN TUGAS AKHIR

B. AGREGAT KASAR (Batu Pecah)

Bahan : Batu Pecah

Asal : Clereng

Jenis Pengujian : Pemeriksaan berat jenis dan penyerapan air agregat kasar (Batu Pecah)

Diperiksa : 29 Februari 2016

Tabel 6. Hasil pemeriksaan berat jenis agregat kasar (Batu Pecah)

Urraian Pemeriksaan	I	II
A. Berat Contoh Tanah SSD	5000 gr	5000 gr
B. Berat Cawan Kosong	213,02 gr	213,02 gr
C. Berat Setelah Di Oven (Bk)	5080 gr	5210 gr
D. Berat Contoh Dalam Air (Ba)	3391 gr	3035 gr
E. Berat Batu Pecah keadaan jenuh kering muka (Bj)	5207 gr	5228 gr
Berat Jenis Tampak = $\frac{Bk}{(Bk - Ba)}$	3	2,39
Berat jenis curah = $\frac{Bk}{(Bj - Ba)}$	2,797	2,37
Berat jenis jenuh kering muka = $\frac{Bj}{(Bj - Ba)}$	2,867	2,39
Penyerapan air agregat halus = $\frac{Bj - Bk}{Bk} \times 100 \%$	2,5 %	0,345 %
RATA-RATA		
Berat Jenis Tampak	2,69	
Berat jenis curah	2,58	
Berat jenis jenuh kering muka	2,63	
Penyerapan air agregat kasar	1,42	

Sumber : Data pengujian tugas akhir, 2016



PENGUJIAN PENELITIAN TUGAS AKHIR

B. AGREGAT KASAR (Batu Pecah)

Bahan : Batu Pecah

Asal : Clereng

Jenis Pengujian : Pemeriksaan kadar air agregat kasar (Batu Pecah)

Diperiksa : 29 Februari 2016

Tabel 7. Hasil analisis kadar air Agregat Kasar (Batu Pecah)

No	Uraian	Satuan	Benda uji	
			1	2
1	Berat wadah (W1)	gram	132	195
2	Berat wadah + contoh basah (W2)	gram	1132	1207
3	Berat wadah + contoh kering (W3)	gram	1130	1198
4	Berat air (W4=W2-W3)	gram	2	9
5	Kadar air (KA)	%	0,200	0,897
6	Rata-rata kadar air	%	0,549	

Sumber : Data pengujian tugas akhir, 2016

Analisis hitungan

a. Berat air = $W_2 - W_3$

Benda uji 1 = $1132 - 1130 = 2$ gram

b. Kadar air = $\frac{W_4}{W_3 - W_1} \times 100\%$

Benda uji 1 = $\frac{2}{1130 - 132} \times 100\%$
 $= 0,200\%$

c. Rata-rata kadar air = $\frac{KA_1 + KA_2}{2}$
 $= \frac{0,200 + 0,897}{2} = 0,549\%$



PENGUJIAN PENELITIAN TUGAS AKHIR

B. AGREGAT KASAR (Batu Pecah)

Bahan : Batu Pecah

Asal : Clereng

Jenis Pengujian : Pemeriksaan kadar lumpur agregat kasar (Batu Pecah)

Diperiksa : 1 Maret 2016

Tabel 8. Hasil analisis kadar lumpur agregat kasar (Batu Pecahl)

No	Uraian	Satuan	Benda uji	
			1	2
1	Batu Pecah jenuh kering muka (B ₁)	gram	1000	1000
2	Batu Pecah setelah keluar oven (B ₂)	gram	984	981
3	Kandungan air (B ₁ - B ₂)	gram	16	19
4	Kadar lumpur (KL)	%	1,6	1,9
5	Rata-rata kadar lumpur	%	1,75	

Sumber : Data pengujian tugas akhir, 2016

Analisis hitungan

a. Kandungan air = B₁-B₂

$$\text{Benda uji 1} = 1000 - 984 = 16 \text{ gram}$$

b. Kadar lumpur = $\frac{B_1-B_2}{B_1} \times 100\%$

$$\begin{aligned} \text{Benda uji 1} &= \frac{1000-984}{1000} \times 100 \% \\ &= 1,6\% \end{aligned}$$

c. Kadar lumpur = $\frac{B_1-B_2}{B_1} \times 100\%$

$$\begin{aligned} \text{Benda uji 1} &= \frac{1000-981}{1000} \times 100 \% \\ &= 1,9\% \end{aligned}$$

d. Rata-rata kadar lumpur = $\frac{KL_1+KL_2}{2}$

$$= \frac{1,6+1,9}{2} = 1,75 \%$$



PENGUJIAN PENELITIAN TUGAS AKHIR

B. AGREGAT KASAR (Batu Pecah)

Bahan : Batu Pecah
Asal : Clereng
Jenis Pengujian : Pemeriksaan berat satuan agregat kasar (batu Pecah)
Diperiksa : 1 Maret 2016

Tabel 9. Hasil analisis berat satuan agregat kasar (Batu Pecah)

Uraian Pemeriksaan	Berat (Kg)
Berat silinder (B1)	10.3
Berat silinde + Batu Pecah SSD (B2)	18.5
Berat satuan g/cm ³)	1.55

Sumber : Data pengujian tugas akhir, 2016

- bejana : d = 15 cm, h = 30 cm
- berat bejana kosong (B₁) = 10300 gram
- berat bejana berisi Batu Pecah SSD (B₂) = 18500 gram
- volume bejana kosong (V) = $\frac{1}{4} \times \pi \times d^2 \times h$
 $= \frac{1}{4} \times \pi \times (15)^2 \times 30$
 $= 5301,44 \text{ cm}^3$

$$\begin{aligned} \text{Berat satuan} &= \frac{B_2 - B_1}{V} \\ &= \frac{18500 - 10300}{5301,44} \\ &= 1,55 \text{ g/cm}^3 \end{aligned}$$



PENGUJIAN PENELITIAN TUGAS AKHIR

B. AGREGAT KASAR (Batu Pecah)

Bahan : Batu Pecah
Asal : Clereng
Jenis Pengujian : Pemeriksaan pemeriksaan keausan agregat kasar (Batu Pecah)
Diperiksa : 1 Maret 2016

Tabel 10. Hasil pemeriksaan keausan agregat kasar (Batu Pecah)

No.	Uraian	Satuan	Benda Uji
			1
1.	Berat sebelum masuk mesin <i>Los Angeles</i> (B_1)	gram	5000
2.	Berat setelah masuk mesin <i>Los Angeles</i> (B_2)	gram	3932
3.	Keausan	%	21.360

Sumber : Data pengujian tugas akhir, 2016

Analisis hitungan

$$\begin{aligned} \text{a. Keausan} &= \frac{B_1 - B_2}{B_1} \times 100\% \\ &= \frac{5000 - 3932}{5000} \times 100\% \\ &= 21,360\% \end{aligned}$$

PERHITUNGAN CAMPURAN BETON (SK SNI 03-2847-2002)

fas 0,5

NO	Keterangan	Nilai	Satuan
1	Kuat tekan pada umur 28 hari	20	Mpa
2	Deviasi standart (sd)		
3	Nilai tambah (M)	8.5	Mpa
4	Kuat tekan rata-rata rencana ($f'_{cr}=f'_c+M$)	33.5	Mpa
5	Jenis semen	Portland (Tipe 1)	
6	Jenis agregat halus (alami/pecahan)	Alami	
7	Jenis agregat kasar (alami/batu pecah)	Batu Pecah	
8	Faktor air semen	0.3	
9	FAS maksimum	0.6	
10	Dipakai FAS	0.5	
11	Nilai slump	7,5-15	cm
12	Ukuran maks agregat kasar	16	mm
13	Kebutuhan air	205	liter/m ³
14	Kebutuhan semen ($w_s=\text{point } 13/\text{FAS}$)	410	kg/m ³
15	Kebutuhan semen minimum	275	kg/m ³
16	Dipakai kebutuhan semen (terbesar point 14 dan 15)	410	kg/m ³
17	Penyesuaian jumlah air atau FAS	Tidak Ada	
18	Daerah gradasi agregat halus	Daerah 2	
19	Perb.agregat halus dan kasar	40 dan 60	%
20	Bj agregat camp ($P/100*B_j \text{ agg. Hls}+k/100*B_j \text{ agg. Kasar}$)	2.66	
21	Berat beton	2385	kg/m ³
22	Kebutuhan agregat camp (point 21-13-14)	1770	kg/m ³
23	Keb. Agregat halus (point 22*19)	708	kg/m ³
24	Keb. Agregat kasar (point 22-23)	1062	kg/m ³
25	Kesimpulan	1 Benda Uji	
26	Air	1.086794709	liter/m ³
27	Semen	2.173589417	kg/m ³
28	Agregat halus	3.753417823	kg/m ³
29	Agregat kasar	5.630XII6734	kg/m ³
30	Total	XII.64392868	kg/m ³

Alat dan Bahan Pembuatan Benda Uji



Gambar 1. Kaliper



Gambar 2. Cetok, Mistar/penggaris, Penumbuk, Spatula.



Gambar 3. Timbangan



Gambar 4. Oven



Gambar 5. Kuas, Oli, dan Ember



Gambar 6. Mesin uji tekan beton *Merk Hung Ta*



Gambar.7. *Elenmeyer*



Gambar 8. Gelas ukur 1000 ml



Gambar 9. Timbangan dalam air



Gambar 10. Mesin *Los Angeles*



Gambar 11. Mesin pengaduk (molen)



Gambar 12. Kerucut Abrams



Gambar 13. Silinder Beton



Gambar 14. Saringan ASTM



Gambar 15. Nampan



Gambar 16. Kerikil/ batu pecah (Clereng)



Gambar 17. Pasir (Merapi)



Gambar 18 Semen *Portland* Bima



Gambar 19. Semen *Portland* Holcim

Proses Pembuatan Benda Uji



Gambar 20. Pencucian agregat kasar



Gambar 21. Proses pengayakan agregat halus/kasar



Gambar 22. Proses penimbangan untuk takaran semua material



Gambar 23. Persiapan agregat dan semen



Gambar 24. Persiapan takaran air



Gambar 25. Persiapan silinder/cetakan beton

segar kemudian pengujian *slump*



Gambar 26. Beton segar



Gambar 27. Pematatan beton segar kedalam silinder/cetakan



Gambar 28. Beton segar yang telah dipadatkan



Gambar 29. Pengukuran diameter



Gambar 30. Pengukuran tinggi beton



Gambar 31. Pengujian kuat tekan



Gambar 32. Beton setelah dilakukan pengujian

Lampiran XIV
Hasil Pengujian Kuat Tekan

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT.UMY								
Test Date		4/21/2016			Report No.			Slidr.P2,B 0,5		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	179.55	38560	3054.4	215.0	2.0	350.0	1.0	7		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA									
Manufacturer		Hungta									
Contractor		-									
Customer		Lab. JTS. FT.UMY									
Test Date		4/21/2016				Report No.			Sldr.P3,B 0,5		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark	
1	178.13	39780	3176.2	223.5	2.0	350.0	1.0	7			

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT. UMY								
Test Date		4/21/2016			Report No.			Sldr.P4,B 0,5		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	179.79	39330	3111.3	218.8	2.0	350.0	1.0	7		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT. UMY								
Test Date		4/21/2016			Report No.			Sldr.H1.H 0,5		
No.	Area (cm²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	178.60	29890	2380.2	167.5	2.0	350.0	1.0	7		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT. UMY								
Test Date		4/21/2016			Report No.			Sldr.H3.H 0,5		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	174.83	32410	2636.5	185.9	2.0	350.0	1.0	7		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT.UMY								
Test Date		4/21/2016			Report No.			Sldr.H5.H 0,5		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kgf/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	178.37	32600	2599.5	183.0	2.0	350.0	1.0	7		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT.UMY								
Test Date		4/22/2016			Report No.			Sldr.P4. B14		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kgf/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	185.06	41590	3196.4	224.3	2.0	350.0	1.0	14		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT.UMY								
Test Date		4/22/2016			Report No.			Slr.P3. B14		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	180.27	42900	3384.7	238.2	2.0	350.0	1.0	14		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT. UMY								
Test Date		04/22/2016			Report No.			Sldr.P1. B14		
No.	Area (cm²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	182.18	41580	3246.2	228.0	2.0	350.0	1.0	14		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT.UMY								
Test Date		4/22/2016			Report No.			Sldr.H1. B14		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	178.13	38090	3041.3	213.8	2.0	350.0	1.0	14		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT.UMY								
Test Date		4/22/2016			Report No.			Sldr.H3. B14		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kgf/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	176.95	32980	2650.8	186.4	2.0	350.0	1.0	14		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT. UMY								
Test Date		4/22/2016			Report No.			Slr.H4. B14		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kgf/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	182.89	40190	3125.4	219.5	2.0	350.0	1.0	14		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT.UMY								
Test Date		5/4/2016			Report No.			Slidr.P 2		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	181.70	59360	4646.5	326.0	2.0	350.0	1.0	28		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT. UMY								
Test Date		5/4/2016			Report No.			Sldr.P 3		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	179.08	59600	4733.5	332.1	2.0	300.0	1.0	28		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT.UMY								
Test Date		5/4/2016			Report No.			Sldr.P 4		
No.	Area (cm²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	185.30	55260	4241.5	297.3	2.0	350.0	1.0	28		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT. UMY								
Test Date		5/4/2016				Report No.			Slr.H 1	
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	177.42	38960	3123.2	219.6	2.0	350.0	1.0	28		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT. UMY								
Test Date		5/4/2016			Report No.			Slidr.H 3		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kgf/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	177.19	38260	3071.1	215.9	2.0	350.0	1.0	28		

Q.C. Department : _____

Tester : _____

Concrete Testing

Construction Name		TA								
Manufacturer		Hungta								
Contractor		-								
Customer		Lab. JTS. FT.UMY								
Test Date		5/4/2016			Report No.			Sldr.H 5		
No.	Area (cm ²)	Peak Force (Kg)	Compression Stress (psi)	Adjust Stress (Kg/cm ²)	H/D Ratio	Design Stress	Adjust Ratio	Life	Break Style	Remark
1	183.13	37070	2879.0	202.2	2.0	350.0	1.0	28		

Q.C. Department : _____

Tester : _____



FAKULTAS TEKNIK UNIVERSITAS MUHAMMADIYAH YOGYAKARTA
PROGRAM STUDI S1. TEKNIK SIPIL

Alamat : Jl. Lingkar Barat, Tamantirto, Kasihan, Bantul Yogyakarta-55183, Telp. 0274-387656 Fax.0274-387646

2015/Gasal

LEMBAR MONITORING PELAKSANAAN TUGAS AKHIR

Nama Mahasiswa : Dias Gandy Prakoso

Nomor Mahasiswa : 20120110003

Dosen Pembimbing : I. Ir. As'at Pujianto, M.T.
II. Restu Faizah, S.T., M.T.

Judul TA : Perbandingan kuat tekan beton pada semen Bima dan semen Holcim dengan variasi umur 7, 14, dan 28 hari menggunakan nilas fas 0,5

Mulai TA : 10 Maret 2016

Batas TA :

NO	TANGGAL	URAIAN	PARAF DOSEN
1.	25/5/16	- tata tulis diperbaiki - penomoran tabel & gambar sesuai	Rest
2.	27/5/16	- pembahasan dituliskan sumber spesimen - pembahasan kawat & tujuannya ^{perbandingan} _{kekuatannya}	Rest
3.	29/5/16	- pembahasan perbandingan beton ^{perbandingan} _{hampai}	Rest
4.	31/5/16	- tambahkan pembahasan - konsultasikan ke DP 1.	Rest
5.			
6.	6/6-16	Perbaiki sesuai catatan	Asy.
7.			
8.	9/6-16	- buat masalah seminar	Asy.
9.	11/6-16	- lengkapi lampiran	Asy.
10.		Daftar pustaka, isi, dll.	Asy.
11.			
12.	16/6-16	Boleh seminar	Asy.
13.			
14.			
15.			

Yogyakarta,

Dosen Pembimbing I

Dosen Pembimbing II

Ir. As'at Pujianto, M.T.

Restu Faizah, S.T., M.T.