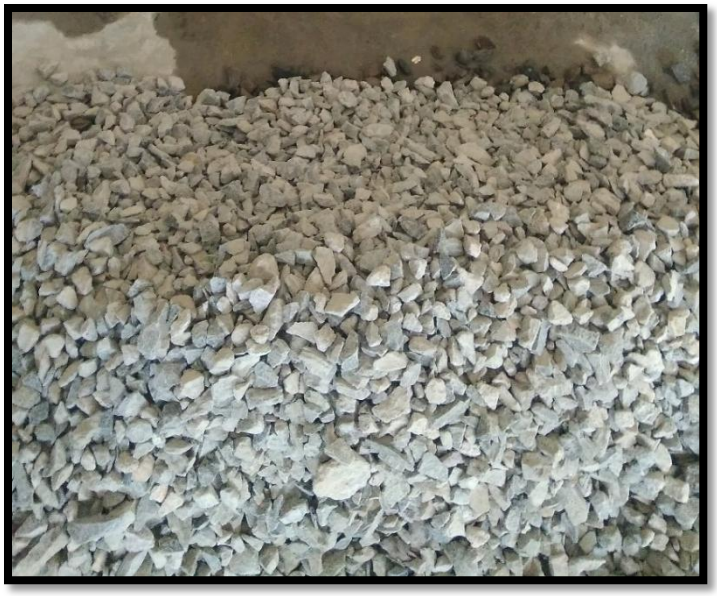
LAMPIRAN

FOTO DOKUMENTASI PENELITIAN

Gambar 1.1 Semen

Gambar 1.2 Pasir



Gambar 2.1 Batu pecah (split)

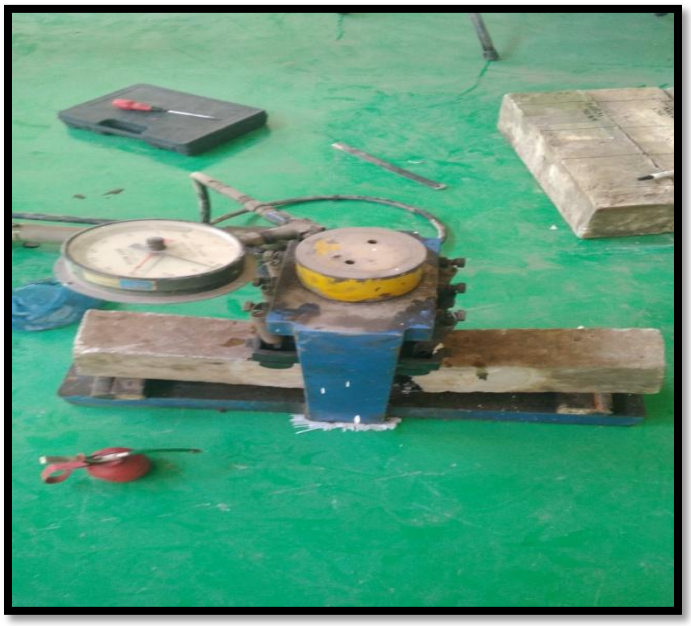
Gambar 2.2 air

Gambar 3.1 Superplasticizer (conplast SP337)

Gambar 3.2 Limbah plastik jenis HDPE

Gambar 4.1 Uji Kuat tekan Beton

Gambar 4.2 Pengujian Kuat Tarik Belah Beton



Gambar 5.1 *Hydraulic Concrete*

(a) (b)

Gambar 5.2 (a) dan (b) Campuran beton dan adiktif

Gambar 6.1 *Slump Test*

(a) (b)

Gambar 6.2 (a) dan (b) *slump flow test*

Gambar 7.1 *(V Funnel Test)*

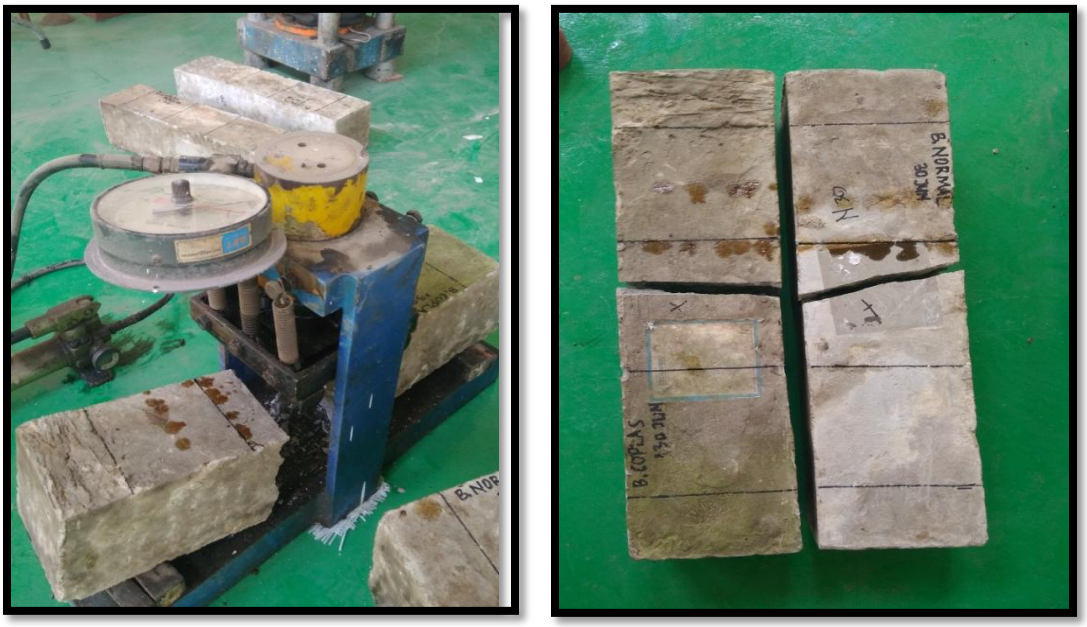
Gambar 7.2 Pembuatan Benda Uji

Gambar 8.1. curring beton

(a)

(b)

Gambar 8.2 (a) dan (b) *capping silinder*



Gambar 9.1 Uji Kuat Lentur Balok

Tabel 1. Perencanaan Campuran Beton Dengan Metode Standar Nasional Indonesia (SK.SNI.7394.2008)

No	Berat Material (Kg)				W/C Ratio	Total Berat (Kg)	Mutu
	Semen	Pasir	Kerikil	Air			
1	413	681	1.021	215	0,52	2.330,00	K 300

Tabel 2. Rencana Campuran Beton Normal

No	Material	BETON NORMAL		Satuan
		3 *Silinder*	1 Balok	
1	Semen	6,565	5,576	Kg
2	Pasir	10,825	9,194	Kg
3	Kerikil	16,230	13,784	Kg
4	Air	3,418	2,903	Liter

Tabel 3. Rencana Campuran Beton SCC

No	Material	Beton SCC		Satuan
		3 *Silinder*	1 Balok	
1	Air	6,565	5,576	Liter
2	Semen	10,832	9,194	Kg
3	Pasir	16,230	13,784	Kg
4	Kerikil	3,418	2,903	Kg
5	Conplast SP337	135,4	114,92	Mil

Tabel 4. Rencana Campuran Beton SCC + Plastik

No	Material	Beton SCC + Plastik 20%		Satuan
		3 *Silinder*	1 Balok	
1	Air	6,565	5,5755	Liter
2	Semen	10,832	9,1935	Kg
3	Pasir	16,230	13,7835	Kg
4	Kerikil	3,418	2,9025	Kg
5	Plastik	0,58	0,51	Kg
6	Conplast SP337	135,4	114,92	Mil

Tabel 5. Hasil Pengukuran Nilai *Slump Test*

Benda Uji	*SLUMP* (cm)		
	Terendah	Tertinggi	Rata – rata
Beton Normal	8	12	10
Beton SCC	26	28	27
Beton SCC + Plastik 20%	27	28	27,5

Tabel 6.* Hasil uji *V-Funnel Test

NO	JENIS BETON	NILAI *V-FUNNEL*
1	BETON SCC	9 DETIK
2	BETON SCC + PLASTIK	11 DETIK

Tabel 7. Berat Jenis Beton

JENIS BETON	BERAT (Kg)	Berat Jenis (Kg/m3)	Berat Jenis Rata - Rata (Kg/m3)
BETON NORMAL I	12,25	2311,866	2311,236
BETON NORMAL II	12,15	2292,993	
BETON NORMAL III	12,34	2328,851	
BETON SCC I	12,20	2302,429	2318,156
BETON SCC II	12,25	2311,866	
BETON SCC III	12,40	2340,174	
BETON SCC + PLASTIK I	11,75	2217,504	2199,889
BETON SCC + PLASTIK II	11,60	2189,195	
BETON SCC + PLASTIK III	11,62	2192,970	

Tabel 8. Perhitungan Kuat Tekan (Mpa)

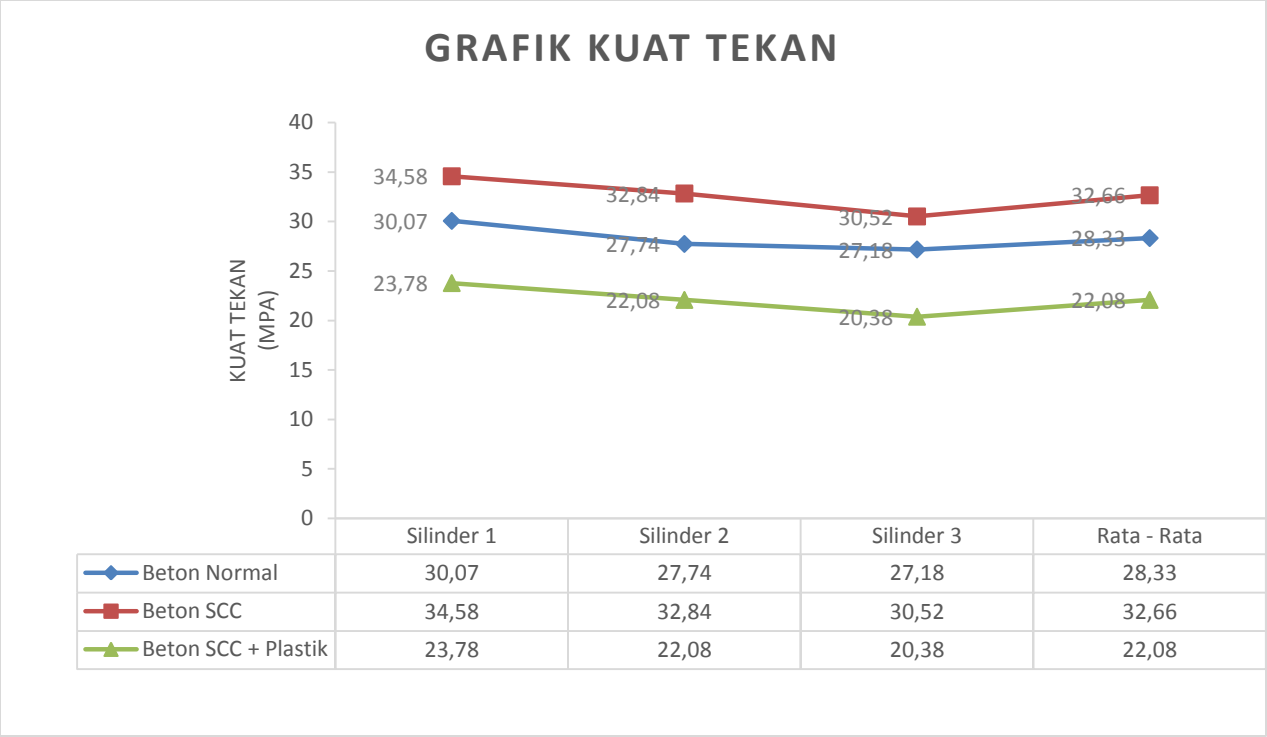
No.	Benda Uji	Beban Maks (kN)	Kuat tekan (MPa)	Rata - Rata Kuat Tekan (MPa)	Presentase selisih
1	BETON NORMAL 1	530	30,07	28,33	1,00
2	BETON NORMAL 2	490	27,74		
3	BETON NORMAL 3	480	27,18		
4	BETON SCC 1	610	34,58	32,66	1,29
5	BETON SCC 2	580	32,84		
6	BETON SCC 3	540	30,57		
7	BETON SCC + PLASTIK 1	420	23,78	22,08	0,80
8	BETON SCC + PLASTIK 2	390	22,08		
9	BETON SCC + PLASTIK 3	360	20,38		

Tabel 9. Hasil Perhitungan Kuat Belah Beton Silinder (Mpa)

No.	Benda Uji	Beban Maks (kN)	Kuat tarik (MPa)	Rata - Rata Kuat Tarik (MPa)	Presentase Penurunan
1	BETON NORMAL 1	180	2,55	2,45	1,00
2	BETON NORMAL 2	175	2,48		
3	BETON NORMAL 3	164	2,32		
4	BETON SCC 1	215	3,04	2,74	1,29
5	BETON SCC 2	190	2,69		
6	BETON SCC 3	175	2,48		
7	BETON SCC + PLASTIK 1	122	1,73	1,68	0,80
8	BETON SCC + PLASTIK 2	118	1,67		
9	BETON SCC + PLASTIK 3	115	1,63		

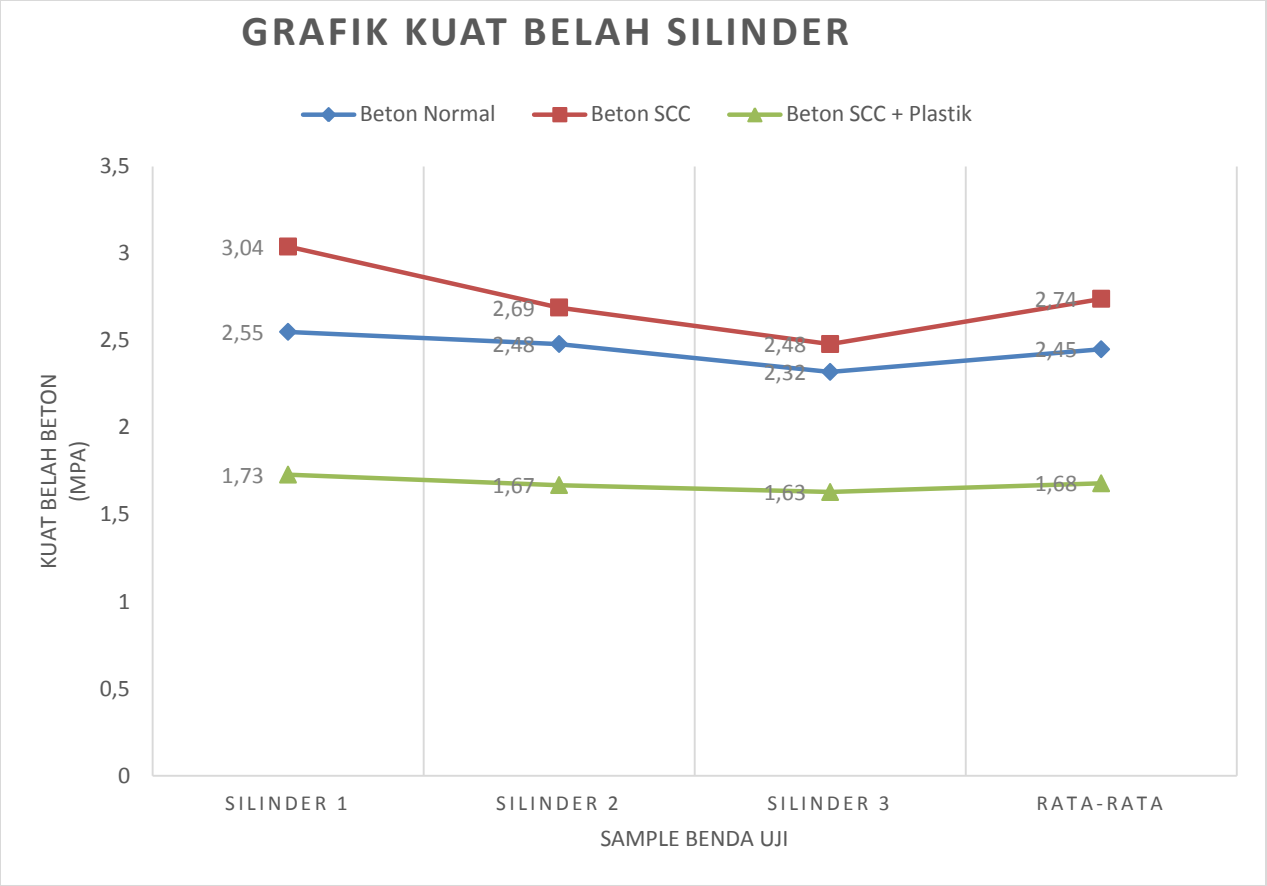
Tabel 10. Hasil Perhitungan Kuat Lentur Balok

NO	JENIS BALOK	KUAT LENTUR BALOK (Mpa)	RATIO (%)
1	BETON NORMAL	3,06	1,00
2	BETON SCC	3,25	1,65
3	BETON SCC + PLASTIK	2,93	0,65

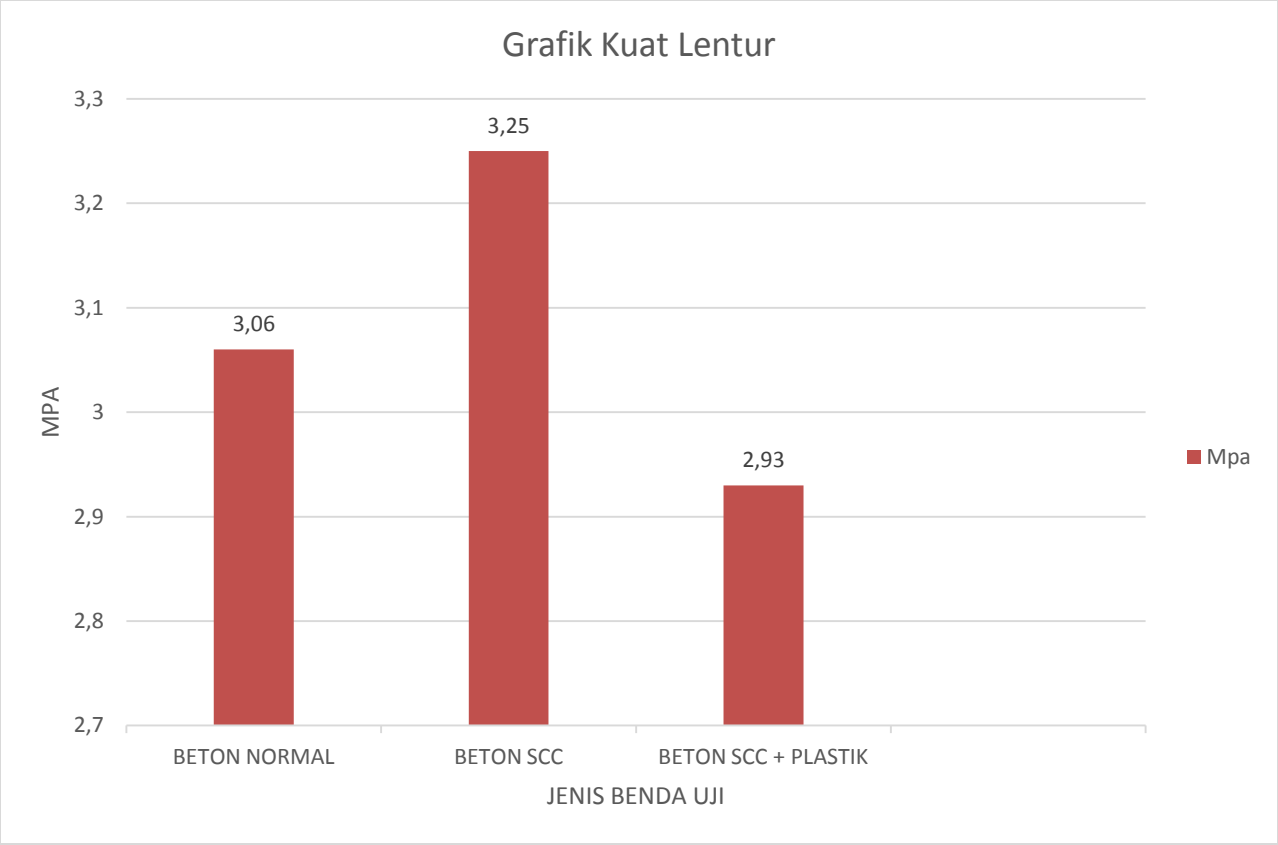


	Silinder 1	Silinder 2	Silinder 3	Rata - Rata
Beton Normal	30,07	27,74	27,18	28,33
Beton SCC	34,58	32,84	30,52	32,66
Beton SCC + Plastik	23,78	22,08	20,38	22,08

Gambar 2.1 GRAFIK KUAT TEKAN BETON SILINDER



Gambar 2.2 GRAFIK KUAT TARIK BELAH BETON SILINDER



Gambar 2.3 : GRAFIK KUAT LENTUR BALOK