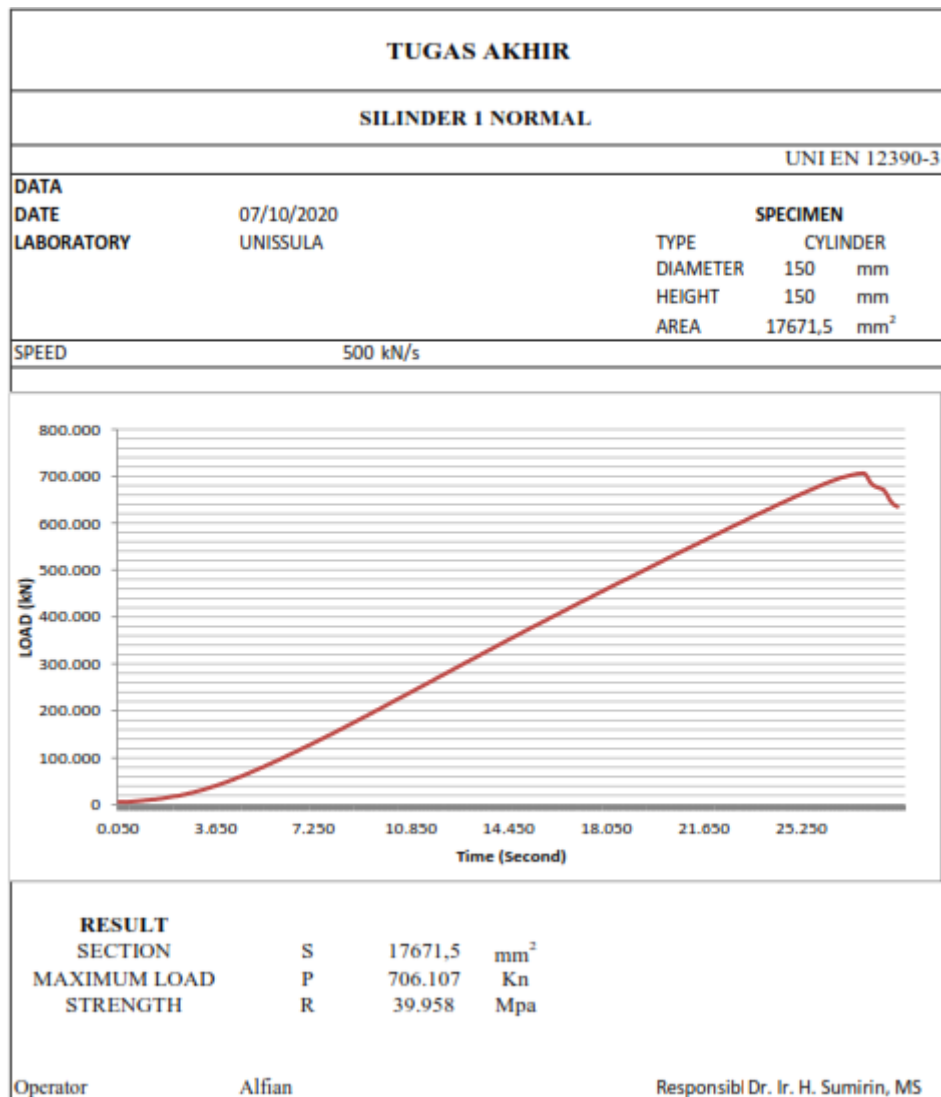
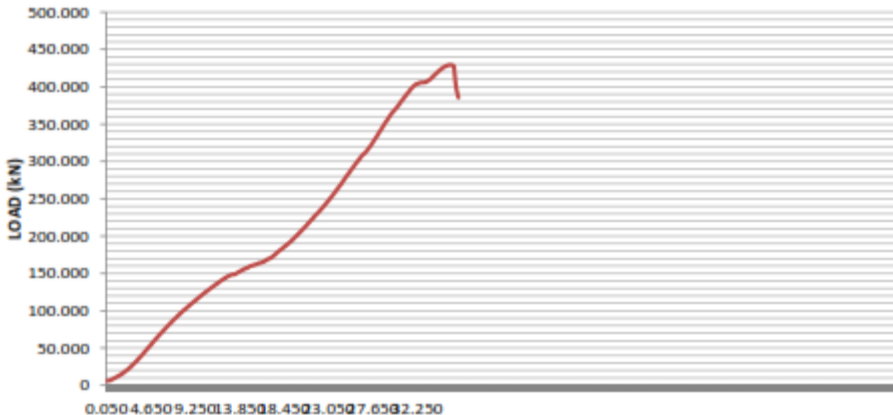


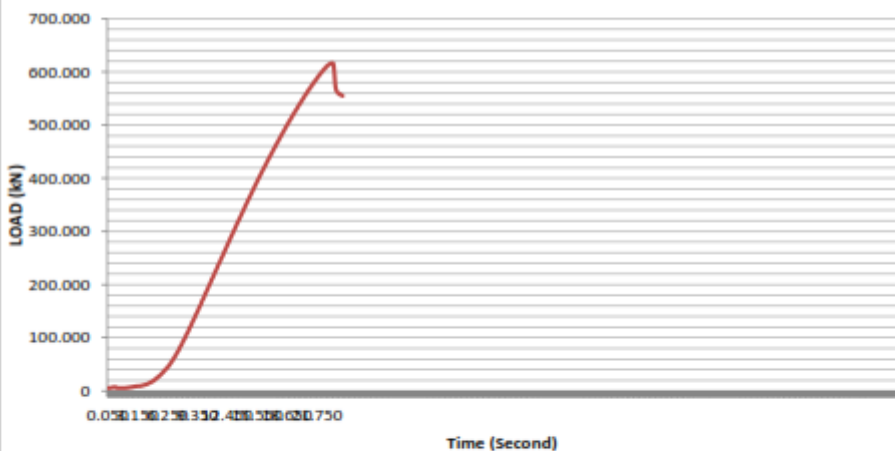
LAMPIRAN

Lampiran 1 : Grafik Pengujian Kuat Tekan Beton

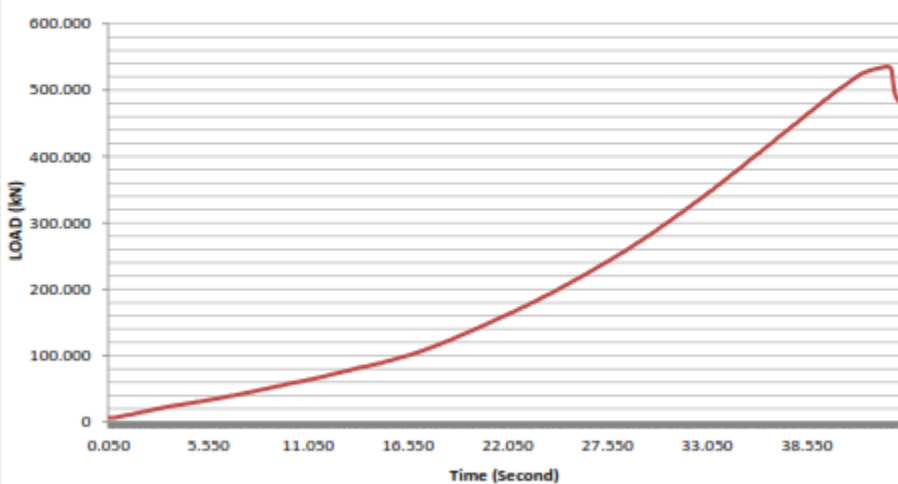


TUGAS AKHIR			
SILINDER 2 NORMAL			
UNI EN 12390-3			
DATA			
DATE	07/10/2020	SPECIMEN	
LABORATORY	UNISSULA	TYPE	CYLINDER
		DIAMETER	150 mm
		HEIGHT	150 mm
		AREA	17671,5 mm ²
SPEED	500 kN/s		
			
RESULT			
SECTION	S	17671,5	mm ²
MAXIMUM LOAD	P	429248,00	Kn
STRENGTH	R	24.290	Mpa
Operator	Alfian	Responsibl Dr. Ir. H. Sumirin, MS	

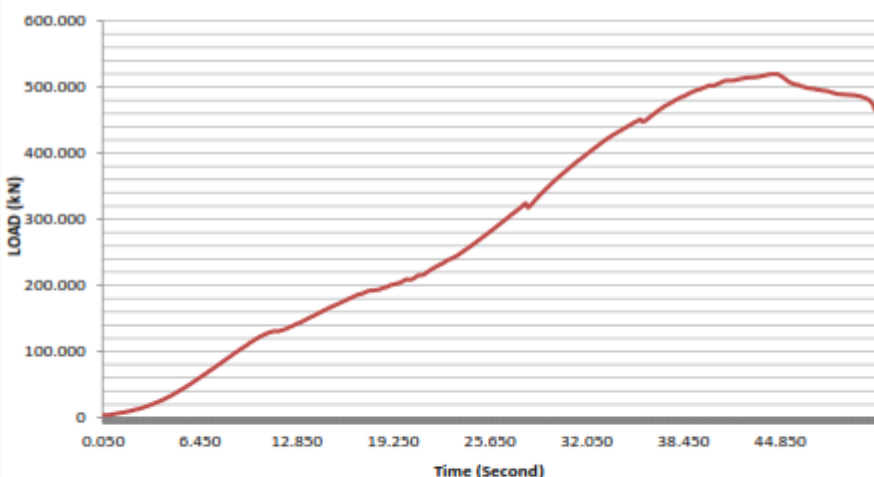


TUGAS AKHIR				
SILINDER 3 NORMAL				
UNI EN 12390-3				
DATA				
DATE	07/10/2020		SPECIMEN	
LABORATORY	UNISSULA		TYPE	CYLINDER
			DIAMETER	150 mm
			HEIGHT	150 mm
			AREA	17671,5 mm ²
SPEED	500 kN/s			
				
RESULT				
SECTION	S	17671,5	mm ²	
MAXIMUM LOAD	P	616,43	Kn	
STRENGTH	R	34.883	Mpa	
Operator	Alfian		Responsibl Dr. Ir. H. Sumirin, MS	

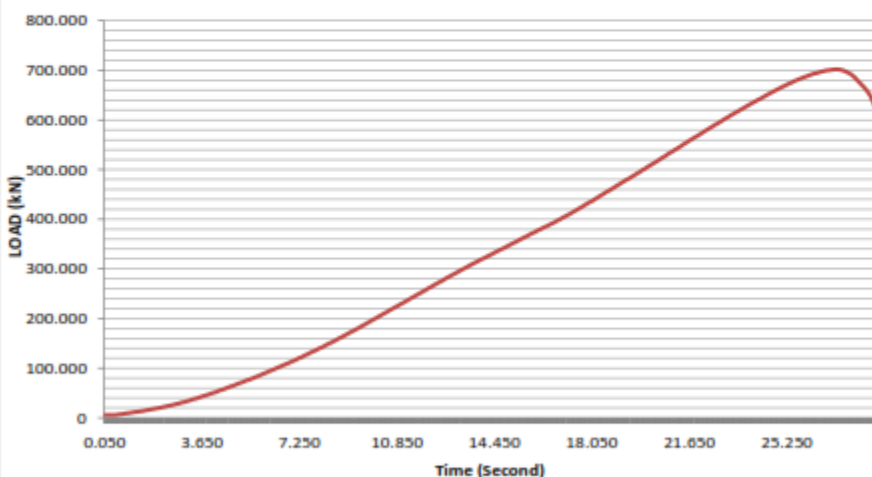


TUGAS AKHIR				
SILINDER 1 SS PERKUATAN				
UNI EN 12390-3				
DATA				
DATE	07/10/2020		SPECIMEN	
LABORATORY	UNISSULA		TYPE	CYLINDER
			DIAMETER	150 mm
			HEIGHT	150 mm
			AREA	17671,5 mm ²
SPEED	500 kN/s			
				
RESULT				
SECTION	S	17671,5	mm ²	
MAXIMUM LOAD	P	535,54	Kn	
STRENGTH	R	30.305	Mpa	
Operator	Alfian		Responsibl Dr. Ir. H. Sumirin, MS	

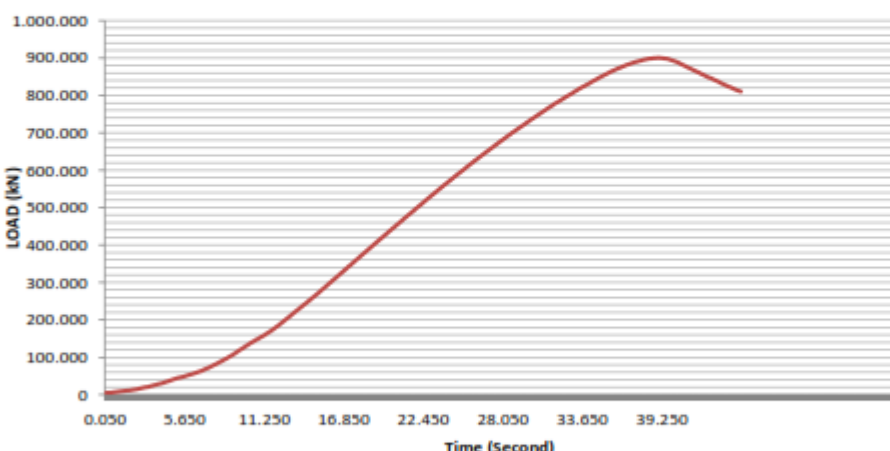


TUGAS AKHIR			
SILINDER 2 SS PERKUATAN			
UNI EN 12390-3			
DATA			
DATE	07/10/2020	SPECIMEN	
LABORATORY	UNISSULA	TYPE	CYLINDER
		DIAMETER	150 mm
		HEIGHT	150 mm
		AREA	17671,5 mm ²
SPEED	500 kN/s		
			
RESULT			
SECTION	S	17671,5	mm ²
MAXIMUM LOAD	P	519,688	Kn
STRENGTH	R	29.408	Mpa
Operator	Alfian		Responsibl Dr. Ir. H. Sumirin, MS

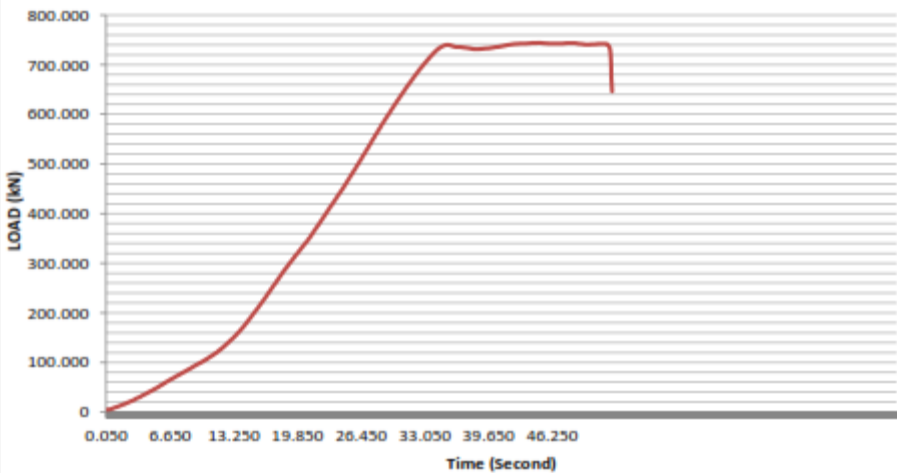


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UNI EN 12390-3			
DATA			
DATE	07/10/2020		SPECIMEN
LABORATORY	UNISSULA	TYPE	CYLINDER
		DIAMETER	150 mm
		HEIGHT	150 mm
		AREA	17671,5 mm ²
SPEED	500 kN/s		
			
RESULT			
SECTION	S	17671,5	mm ²
MAXIMUM LOAD	P	701,90	Kn
STRENGTH	R	39.719	Mpa
Operator	Alfian		Responsibl Dr. Ir. H. Sumirin, MS

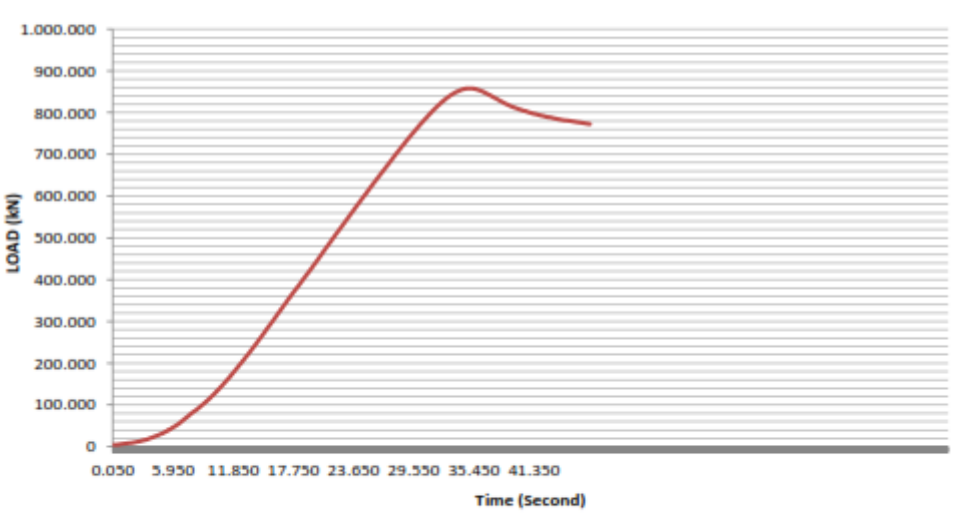


TUGAS AKHIR				
SILINDER 1 FULL PERKUATAN				
UNI EN 12390-3				
DATA				
DATE	07/10/2020		SPECIMEN	
LABORATORY	UNISSULA		TYPE	CYLINDER
			DIAMETER	150 mm
			HEIGHT	150 mm
			AREA	17671,5 mm ²
SPEED	500 kN/s			
				
RESULT				
SECTION	S	17671,5	mm ²	
MAXIMUM LOAD	P	900,19	Kn	
STRENGTH	R	50.940	Mpa	
Operator	Alfian		Responsibl Dr. Ir. H. Sumirin, MS	

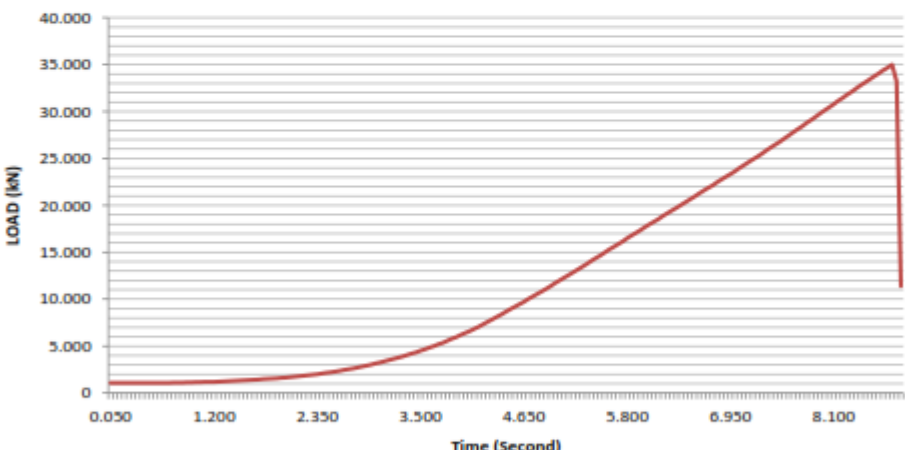
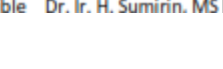


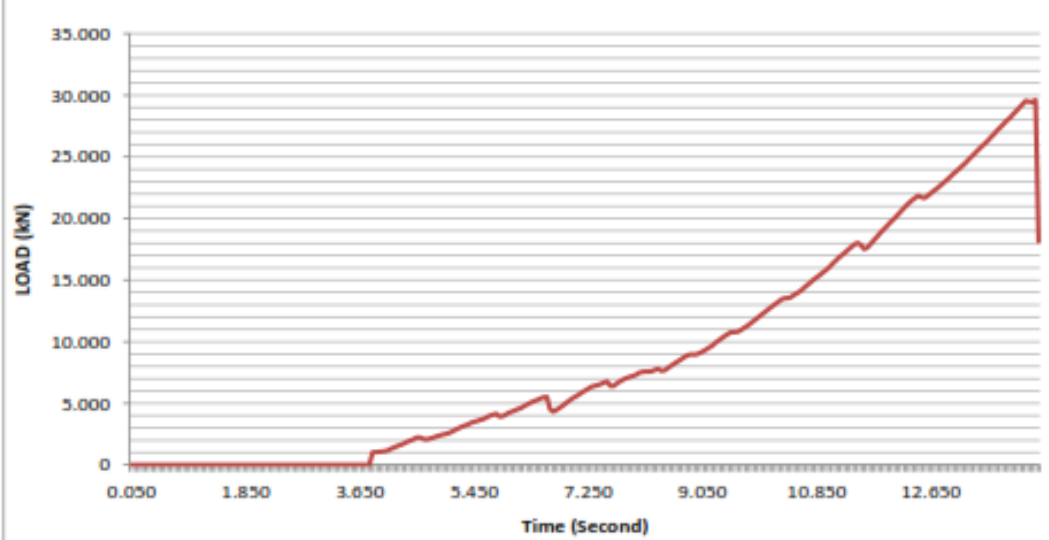
TUGAS AKHIR															
SILINDER 2 FULL PERKUATAN															
UNI EN 12390-3															
DATA DATE 07/10/2020 LABORATORY UNISSULA SPECIMEN TYPE CYLINDER DIAMETER 150 mm HEIGHT 150 mm AREA 17671,5 mm²															
SPEED		500 kN/s													
 The graph plots Load (kN) on the y-axis (0 to 800,000) against Time (Second) on the x-axis (0.050 to 46.250). The curve shows a steady linear increase in load over time, reaching a peak of approximately 744 kN at 46.25 seconds, after which the load drops sharply.															
RESULT <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">SECTION</td> <td style="width: 10%;">S</td> <td style="width: 20%;">17671,5</td> <td style="width: 40%;">mm²</td> </tr> <tr> <td>MAXIMUM LOAD</td> <td>P</td> <td>744,04</td> <td>Kn</td> </tr> <tr> <td>STRENGTH</td> <td>R</td> <td>42.104</td> <td>Mpa</td> </tr> </table>				SECTION	S	17671,5	mm ²	MAXIMUM LOAD	P	744,04	Kn	STRENGTH	R	42.104	Mpa
SECTION	S	17671,5	mm ²												
MAXIMUM LOAD	P	744,04	Kn												
STRENGTH	R	42.104	Mpa												
Operator		Alfian Responsible Dr. Ir. H. Sumirin, MS													



TUGAS AKHIR				
SILINDER 3 FULL PERKUATAN				
UNI EN 12390-3				
DATA				
DATE	07/10/2020	SPECIMEN		
LABORATORY	UNISSULA	TYPE	CYLINDER	
		DIAMETER	150	mm
		HEIGHT	150	mm
		AREA	17671,5	mm ²
SPEED	500 kN/s			
				
SECTION	S	17671,5	mm ²	
MAXIMUM LOAD	P	857,92	Kn	
STRENGTH	R	48.549	Mpa	
Operator	Alfian	Responsibl Dr. Ir. H. Sumirin, MS		



TUGAS AKHIR																			
BALOK 1																			
UNI EN 12390-3																			
DATA																			
DATE	07/10/2020	SPECIMEN																	
LABORATORY	UNISSULA	TYPE	CUBE																
		WIDTH	150 mm																
		HEIGHT	150 mm																
		UPPER SPAN	150 mm																
		LOWER SPAN	450 mm																
		AREA	7500 mm ²																
SPEED		500 kN/s																	
																			
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left; padding-bottom: 5px;">RESULT</th> </tr> </thead> <tbody> <tr> <td style="width: 30%; padding: 5px;">SECTION</td> <td style="width: 10%; padding: 5px;">S</td> <td style="width: 20%; padding: 5px;">7500</td> <td style="width: 40%; padding: 5px;">mm²</td> </tr> <tr> <td style="padding: 5px;">MAXIMUM LOAD</td> <td style="padding: 5px;">P</td> <td style="padding: 5px;">34,99</td> <td style="padding: 5px;">Kn</td> </tr> <tr> <td style="padding: 5px;">STRENGTH</td> <td style="padding: 5px;">R</td> <td style="padding: 5px;">4.665</td> <td style="padding: 5px;">Mpa</td> </tr> </tbody> </table>				RESULT				SECTION	S	7500	mm ²	MAXIMUM LOAD	P	34,99	Kn	STRENGTH	R	4.665	Mpa
RESULT																			
SECTION	S	7500	mm ²																
MAXIMUM LOAD	P	34,99	Kn																
STRENGTH	R	4.665	Mpa																
Operator		Responsible																	
																			

TUGAS AKHIR				
BALOK 2				
UNI EN 12390-3				
DATA				
DATE	07/10/2020		SPECIMEN	
LABORATORY	UNISSULA		TYPE	CUBE
			WIDTH	150 mm
			HEIGHT	150 mm
			UPPER SPAN	150 mm
			LOWER SPAN	450 mm
			AREA	7500 mm ²
SPEED	500 kN/s			
				
RESULT				
SECTION	S	7500	mm ²	
MAXIMUM LOAD	P	29,62	Kn	
STRENGTH	R	3.949	Mpa	
Operator	Alfian		Responsible	Dr. Ir. H. Sumirin, MS

Lampiran 2 : (Bahan dan Peralatan)





Lampiran 3 : Proses Pengujian Bahan







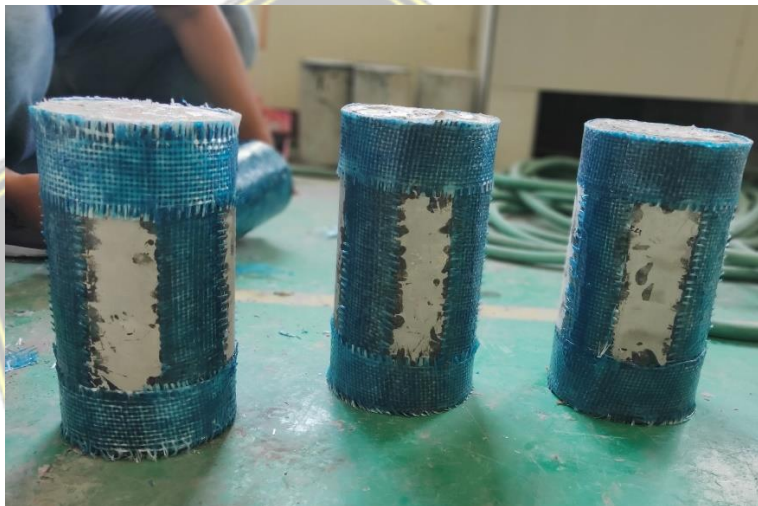
Lampiran 4 : Proses Pengecoran benda uji silinder





Lampiran 5: Proses pemasangan lapisan GFRP

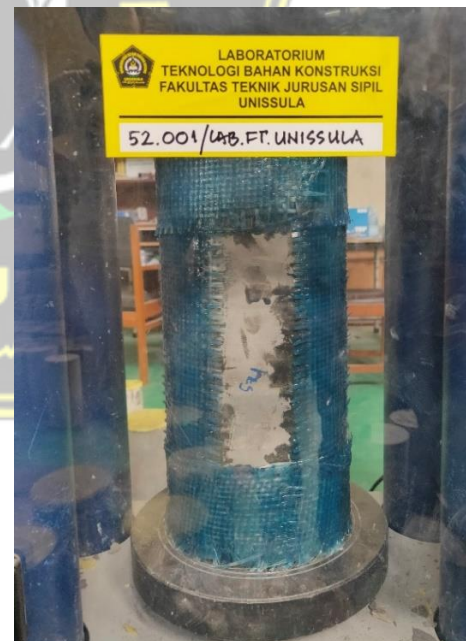


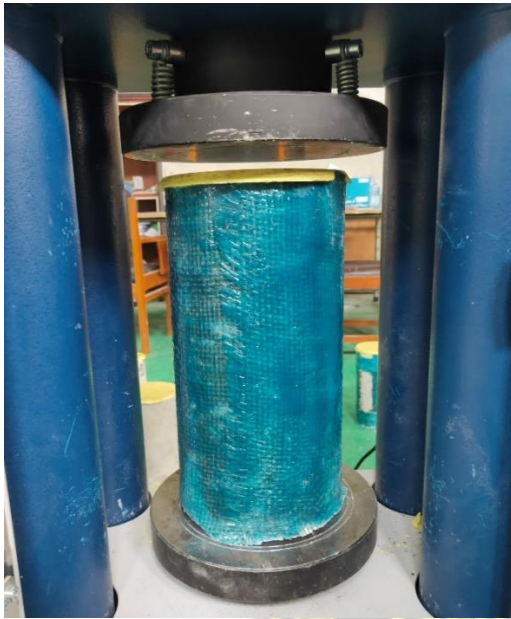


Lampiran 6 : proses capping benda uji silinder beton



Lampiran 7 : proses pengujian benda uji silinder beton





Lampiran 8 : Gambar benda uji setelah proses pengujian kuat tekan beton.





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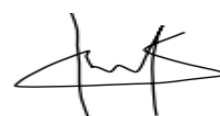
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