

DAFTAR PUSTAKA

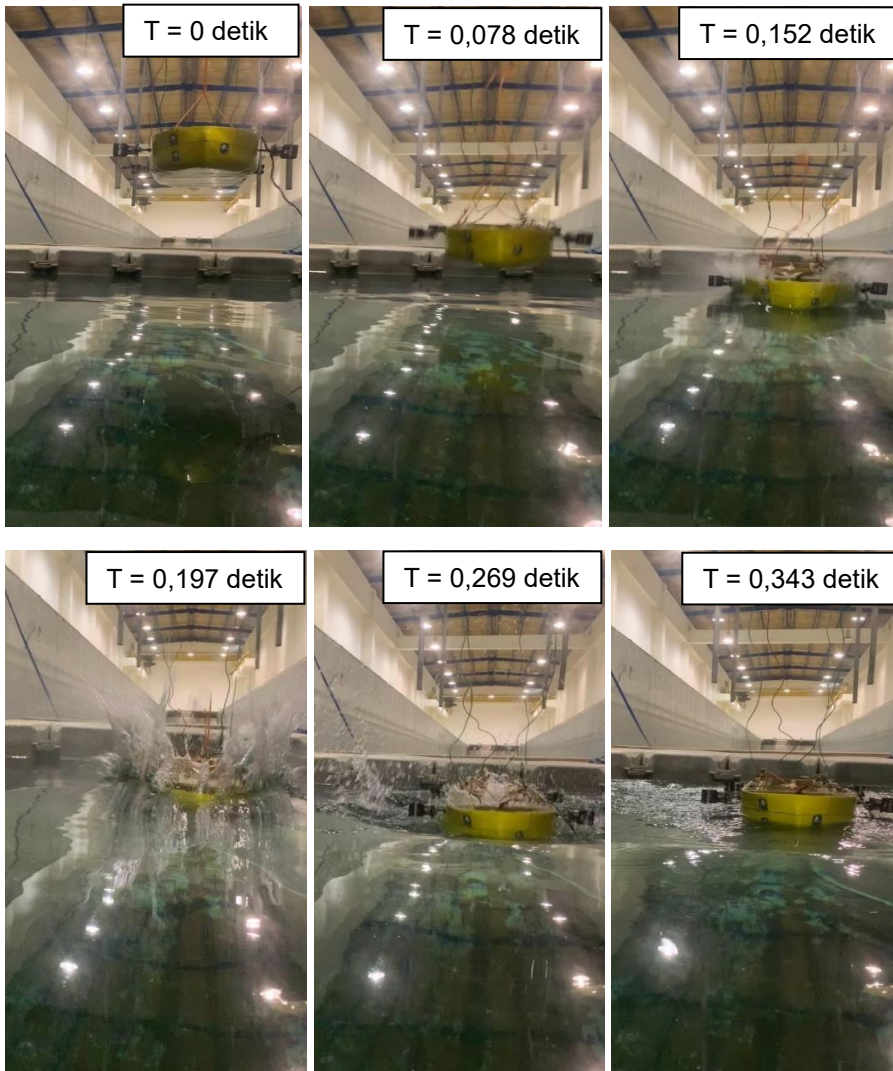
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LAMPIRAN

Lampiran 1. Data hasil pengujian droptest pada kemiringan 5 derajat

Time history dropping test kemiringan 5 derajat.



Pembacaan sensor pada Arduino di sudut 5 derajat

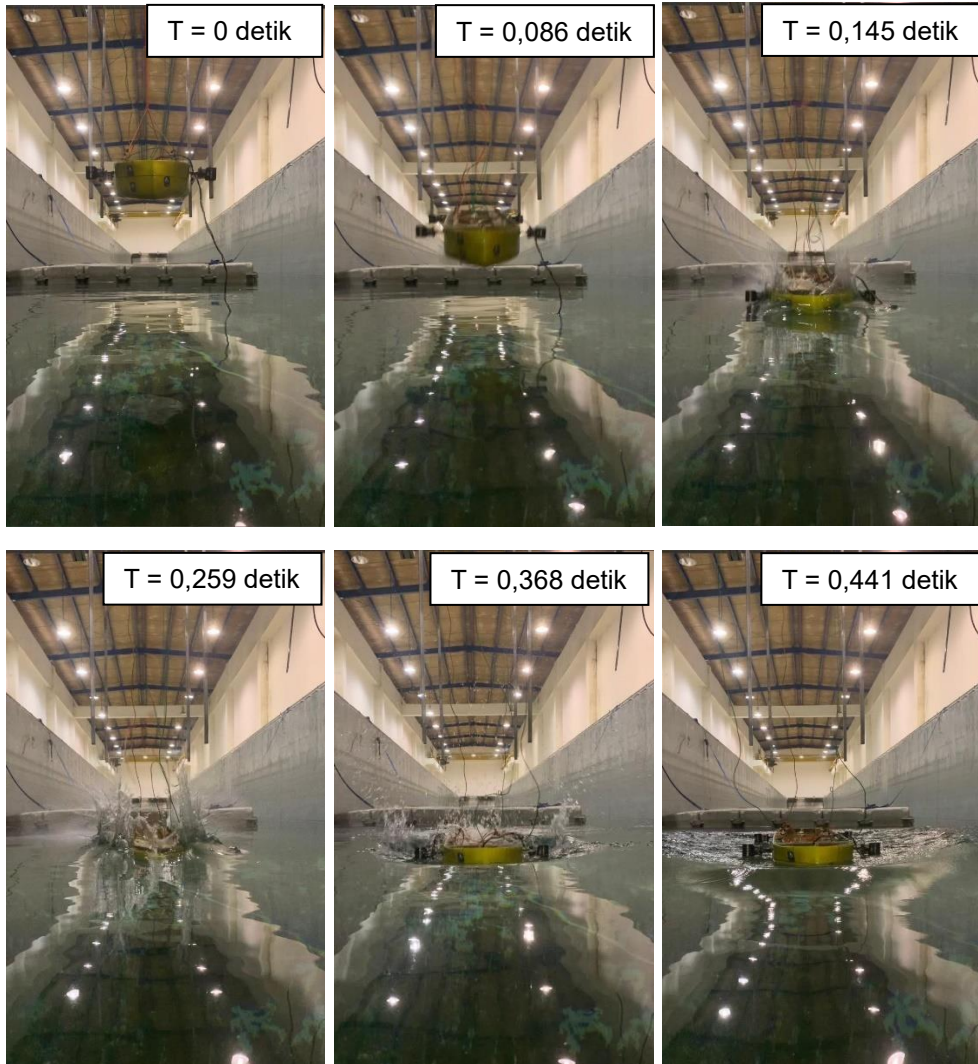
14:00:04.026 -> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
14:00:04.104 -> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
14:00:04.178 -> Weight: 3.21 kg	Weight: 2.27 kg	Weight: 1.04 kg
14:00:04.223 -> Weight: 1.63 kg	Weight: 1.13 kg	Weight: 0.67 kg
14:00:04.295 -> Weight: 0.78 kg	Weight: 0.49 kg	Weight: 0.28 kg
14:00:04.369 -> Weight: 0.61 kg	Weight: 0.34 kg	Weight: 0.14 kg
14:00:04.481 -> Weight: 0.48 kg	Weight: 0.23 kg	Weight: 0.11 kg
14:00:04.547 -> Weight: 0.34 kg	Weight: 0.15 kg	Weight: 0.08 kg
14:00:04.589 -> Weight: 0.30 kg	Weight: 0.19 kg	Weight: 0.04 kg
14:00:04.661 -> Weight: 0.23 kg	Weight: 0.14 kg	Weight: 0.02 kg
14:00:05.195 -> Weight: 0.18 kg	Weight: 0.14 kg	Weight: 0.02 kg
14:00:05.219 -> Weight: 0.16 kg	Weight: 0.13 kg	Weight: 0.03 kg
14:00:05.281 -> Weight: 0.16 kg	Weight: 0.13 kg	Weight: 0.01 kg
14:00:05.347 -> Weight: 0.14 kg	Weight: 0.11kg	Weight: 0.01 kg
14:00:05.389 -> Weight: 0.13 kg	Weight: 0.09 kg	Weight: 0.01 kg
14:00:05.461 -> Weight: 0.13 kg	Weight: 0.04 kg	Weight: 0.01 kg

Hasil perhitungan tekanan pada sudut 5 derajat

		S1	S2	S3	S1	S2	S3	S1	S2	S3
	t (detik)	w(kg)	w(kg)	w(kg)	f(N)	f(N)	f(N)	P(N/m ²)	P(N/m ²)	P(N/m ²)
	0	0	0	0	0	0	0	0	0	0
0,026	0,068	0	0	0	0	0	0	0	0	0
0,104	0,078	0	0	0	0	0	0	0	0	0
0,178	0,152	3,21	2,27	1,04	31,46	22,25	10,19	34953	24718	11324
0,223	0,197	1,63	1,13	0,67	15,97	11,07	6,57	17749	12304	7296
0,295	0,269	0,78	0,49	0,28	7,64	4,80	2,74	8493	5336	3049
0,369	0,343	0,61	0,34	0,14	5,98	3,33	1,37	6642	3702	1524
0,481	0,455	0,48	0,23	0,11	4,70	2,25	1,08	5227	2504	1198
0,547	0,521	0,34	0,15	0,08	3,33	1,47	0,78	3702	1633	871
0,589	0,563	0,30	0,19	0,04	2,94	1,86	0,39	3267	2069	436
0,661	0,635	0,23	0,14	0,02	2,25	1,37	0,20	2504	1524	218

Lampiran 2. Data hasil pengujian *droptest* pada kemiringan 10 derajat.

Time history dropping test kemiringan 10 derajat.



Pembacaan sensor pada *Arduino* di sudut 10 derajat

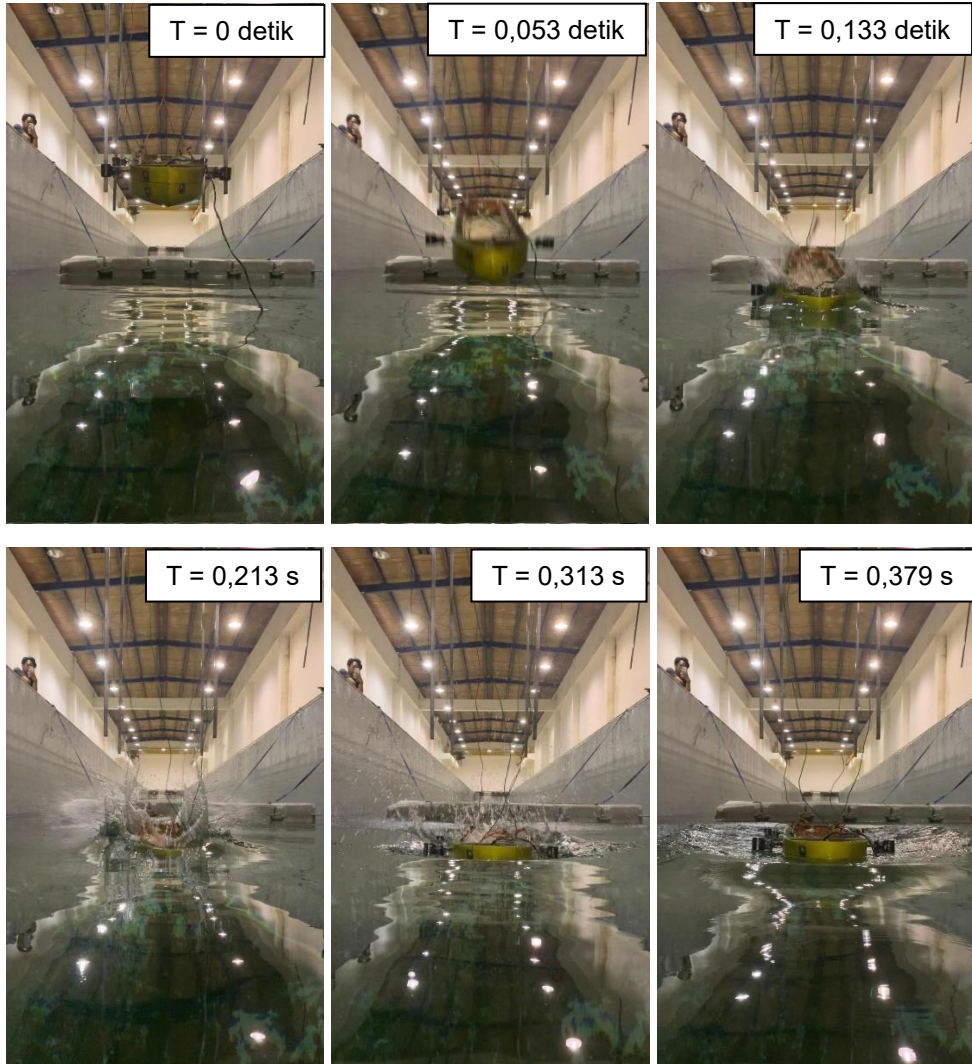
13:56:50.018 -> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
13:56:50.104 -> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
13:56:50.163 -> Weight: 2.92 kg	Weight: 1.73 kg	Weight: 0.86 kg
13:56:50.277 -> Weight: 1.06 kg	Weight: 0.53 kg	Weight: 0.27 kg
13:56:50.386 -> Weight: 0.58 kg	Weight: 0.35 kg	Weight: 0.18 kg
13:56:50.459 -> Weight: 0.37 kg	Weight: 0.28 kg	Weight: 0.12 kg
13:56:50.575 -> Weight: 0.41 kg	Weight: 0.24 kg	Weight: 0.09 kg
13:56:50.646 -> Weight: 0.35 kg	Weight: 0.21 kg	Weight: 0.06 kg
13:56:50.724 -> Weight: 0.33 kg	Weight: 0.18 kg	Weight: 0.08 kg
13:56:50.833 -> Weight: 0.28 kg	Weight: 0.15 kg	Weight: 0.05 kg
13:56:50.986 -> Weight: 0.22 kg	Weight: 0.15 kg	Weight: 0.05 kg
13:56:51.149 -> Weight: 0.18 kg	Weight: 0.14 kg	Weight: 0.04 kg
13:56:51.175 -> Weight: 0.17 kg	Weight: 0.14 kg	Weight: 0.03 kg
13:56:51.246 -> Weight: 0.15 kg	Weight: 0.11 kg	Weight: 0.02 kg
13:56:51.324 -> Weight: 0.14 kg	Weight: 0.08 kg	Weight: 0.02 kg
13:56:51.433 -> Weight: 0.11 kg	Weight: 0.05 kg	Weight: 0.01 kg

Hasil perhitungan tekanan pada sudut 10 derajat

		S1	S2	S3	S1	S2	S3	S1	S2	S3
	t (detik)	w(kg)	w(kg)	w(kg)	f(N)	f(N)	f(N)	P(N/m ²)	P(N/m ²)	P(N/m ²)
	0	0	0	0	0	0	0	0	0	0
0,018	0,076	0	0	0	0	0	0	0	0	0
0,104	0,086	0	0	0	0	0	0	0	0	0
0,163	0,145	2,92	1,73	0,86	28,62	16,95	8,43	31796	18838	9364
0,277	0,259	1,06	0,53	0,27	10,39	5,19	2,65	11542	5771	2940
0,386	0,368	0,58	0,35	0,18	5,68	3,43	1,76	6316	3811	1960
0,459	0,441	0,37	0,28	0,12	3,63	2,74	1,18	4029	3049	1307
0,575	0,557	0,41	0,24	0,09	4,02	2,35	0,88	4464	2613	980
0,646	0,628	0,35	0,21	0,06	3,43	2,06	0,59	3811	2287	653
0,724	0,706	0,33	0,18	0,08	3,23	1,76	0,78	3593	1960	871
0,833	0,815	0,28	0,15	0,05	2,74	1,47	0,49	3049	1633	544

Lampiran 3. Data hasil pengujian droptest pada kemiringan 15 derajat

Time history dropping test kemiringan 15 derajat.



Pembacaan sensor pada Arduino di sudut 15 derajat

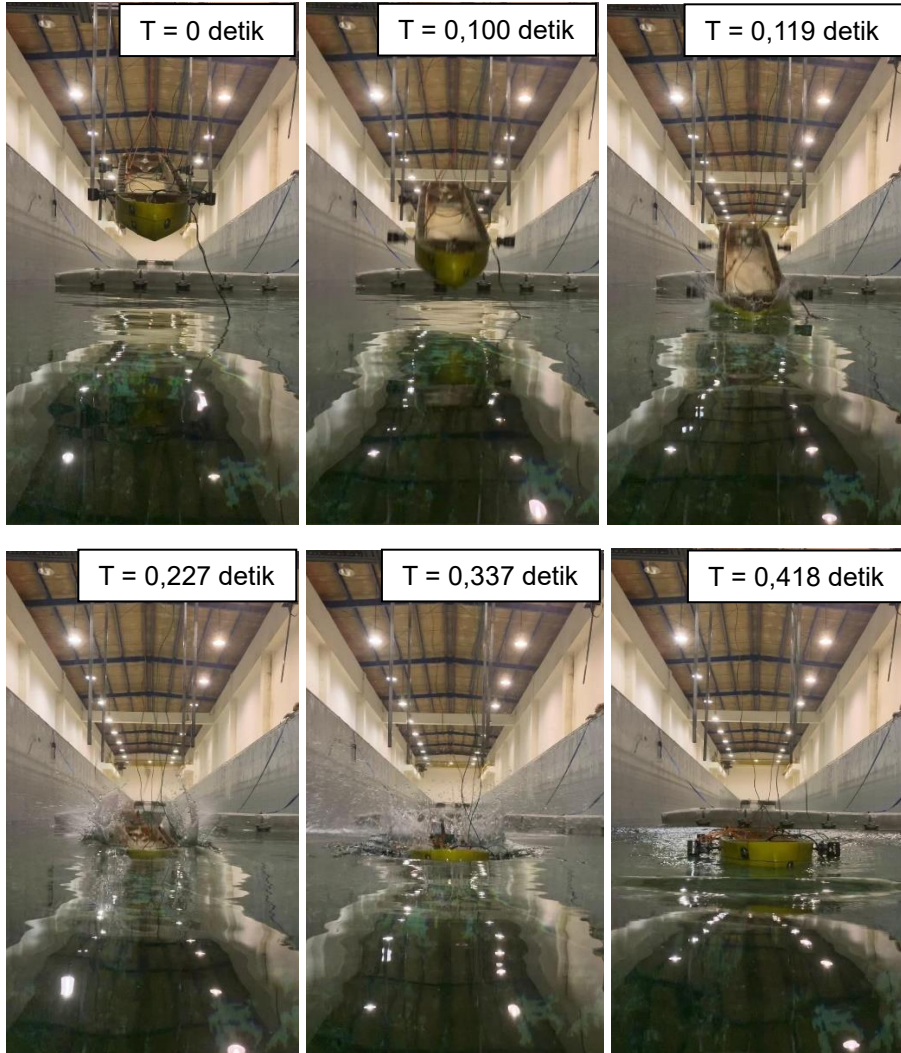
14:37:50.248 -> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
14:37:50.301 -> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
14:37:50.381 -> Weight: 2.18 kg	Weight: 1.12 kg	Weight: 0.77 kg
14:37:50.461 -> Weight: 0.94 kg	Weight: 0.48 kg	Weight: 0.18 kg
14:37:50.561 -> Weight: 0.52 kg	Weight: 0.29 kg	Weight: 0.13 kg
14:37:50.627 -> Weight: 0.47 kg	Weight: 0.34 kg	Weight: 0.11 kg
14:37:50.730 -> Weight: 0.36 kg	Weight: 0.26 kg	Weight: 0.08 kg
14:37:50.811 -> Weight: 0.31 kg	Weight: 0.21 kg	Weight: 0.06 kg
14:37:50.911 -> Weight: 0.22 kg	Weight: 0.13 kg	Weight: 0.04 kg
14:37:50.954 -> Weight: 0.18 kg	Weight: 0.12 kg	Weight: 0.04 kg
14:37:51.161 -> Weight: 0.17 kg	Weight: 0.11 kg	Weight: 0.03 kg
14:37:51.227 -> Weight: 0.17 kg	Weight: 0.11 kg	Weight: 0.03 kg
14:37:51.370 -> Weight: 0.16 kg	Weight: 0.09 kg	Weight: 0.02 kg
14:37:51.411 -> Weight: 0.15 kg	Weight: 0.08 kg	Weight: 0.01 kg
14:37:51.491 -> Weight: 0.14 kg	Weight: 0.07 kg	Weight: 0.00 kg
14:37:51.552 -> Weight: 0.13 kg	Weight: 0.06 kg	Weight: 0.00 kg

Hasil perhitungan tekanan pada sudut 15 derajat

		S1	S2	S3	S1	S2	S3	S1	S2	S3
	t (detik)	w(kg)	w(kg)	w(kg)	f(N)	f(N)	f(N)	P(N/m ²)	P(N/m ²)	P(N/m ²)
	0	0	0	0	0	0	0	0	0	0
0,248	0,057	0	0	0	0	0	0	0	0	0
0,301	0,053	0	0	0	0	0	0	0	0	0
0,381	0,133	2,18	1,12	0,77	21,36	10,98	7,55	23738	12196	8384
0,461	0,213	0,94	0,48	0,18	9,21	4,70	1,76	10236	5227	1960
0,561	0,313	0,52	0,29	0,13	5,10	2,84	1,27	5662	3158	1416
0,627	0,379	0,47	0,34	0,11	4,61	3,33	1,08	5118	3702	1198
0,73	0,482	0,36	0,26	0,08	3,53	2,55	0,78	3920	2831	871
0,811	0,563	0,31	0,21	0,06	3,04	2,06	0,59	3376	2287	653
0,911	0,663	0,22	0,13	0,04	2,16	1,27	0,39	2396	1416	436
0,954	0,706	0,18	0,12	0,04	1,76	1,18	0,39	1960	1307	436

Lampiran 4. Data hasil pengujian droptest pada kemiringan 20 derajat

Time history dropping test kemiringan 20 derajat.



Pembacaan sensor pada Arduino di sudut 20 derajat

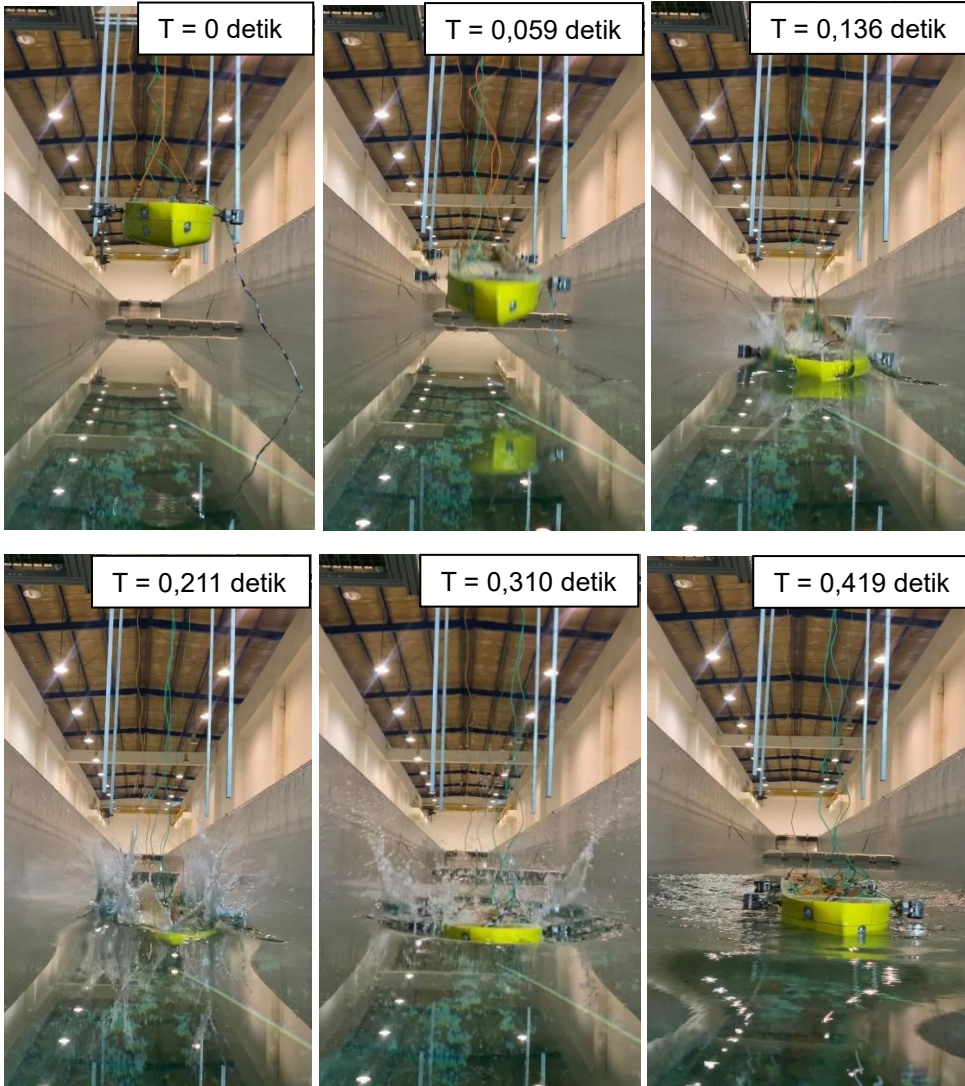
15:56:50.011-> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
15:56:50.111 -> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
15:56:50.130 -> Weight: 1.71 kg	Weight: 0.92 kg	Weight: 0.54 kg
15:56:50.238 -> Weight: 0.88 kg	Weight: 0.36 kg	Weight: 0.14 kg
15:56:50.348 -> Weight: 0.48 kg	Weight: 0.29 kg	Weight: 0.11 kg
15:56:50.429 -> Weight: 0.37 kg	Weight: 0.24 kg	Weight: 0.08 kg
15:56:50.532 -> Weight: 0.26 kg	Weight: 0.16 kg	Weight: 0.08 kg
15:56:50.612 -> Weight: 0.28 kg	Weight: 0.14 kg	Weight: 0.06 kg
15:56:50.728 -> Weight: 0.19 kg	Weight: 0.12 kg	Weight: 0.03 kg
15:56:50.804 -> Weight: 0.13 kg	Weight: 0.09 kg	Weight: 0.03 kg
15:56:50.948 -> Weight: 0.12 kg	Weight: 0.09 kg	Weight: 0.02 kg
15:56:51.129 -> Weight: 0.11 kg	Weight: 0.08 kg	Weight: 0.02 kg
15:56:51.232 -> Weight: 0.10 kg	Weight: 0.08 kg	Weight: 0.01 kg
15:56:51.312 -> Weight: 0.08 kg	Weight: 0.07 kg	Weight: 0.01 kg
15:56:51.428 -> Weight: 0.03 kg	Weight: 0.06 kg	Weight: 0.00 kg
15:56:51.444 -> Weight: 0.03 kg	Weight: 0.02 kg	Weight: 0.00 kg

Hasil perhitungan tekanan pada sudut 20 derajat

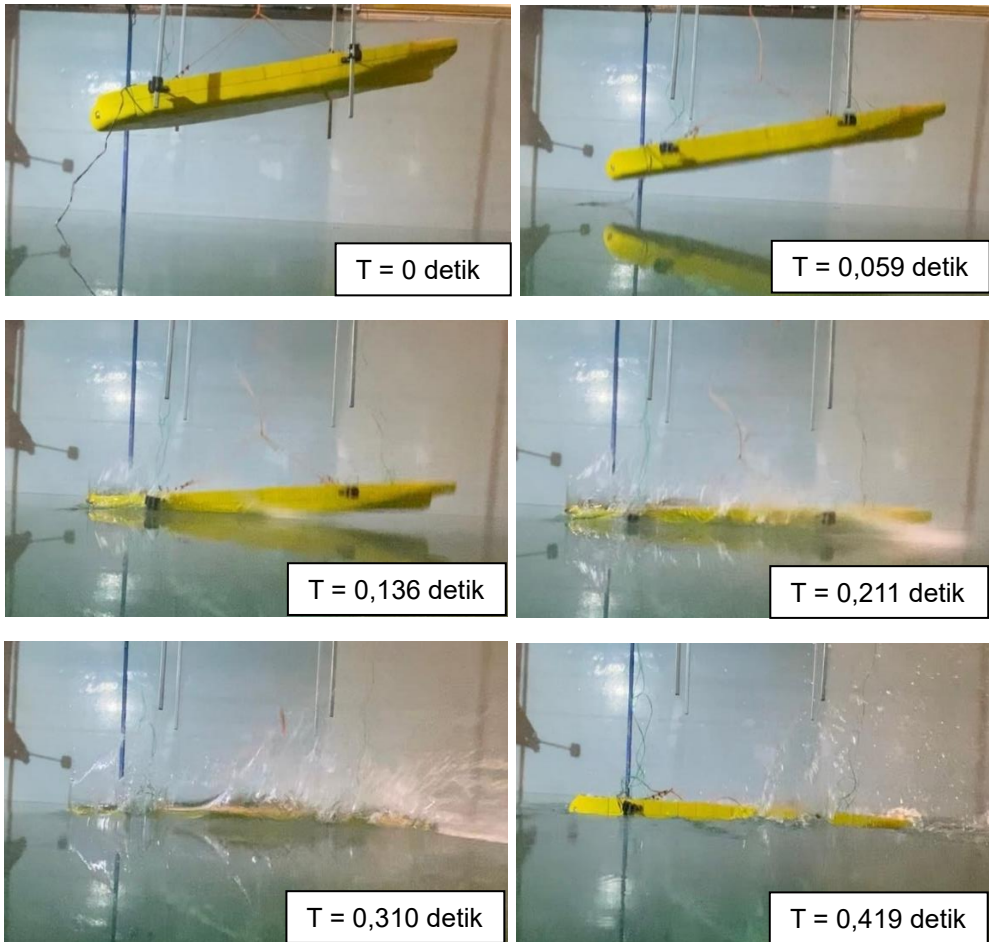
		S1	S2	S3	S1	S2	S3	S1	S2	S3
	t (detik)	w(kg)	w(kg)	w(kg)	f(N)	f(N)	f(N)	P(N/m ²)	P(N/m ²)	P(N/m ²)
	0	0	0	0	0	0	0	0	0	0
0,011	0,097	0	0	0	0	0	0	0	0	0
0,111	0,100	0	0	0	0	0	0	0	0	0
0,130	0,119	1,71	0,92	0,54	16,76	9,02	5,29	18620	10018	5880
0,238	0,227	0,88	0,36	0,14	8,62	3,53	1,37	9582	3920	1524
0,348	0,337	0,48	0,29	0,11	4,70	2,84	1,08	5227	3158	1198
0,429	0,418	0,37	0,24	0,08	3,63	2,35	0,78	4029	2613	871
0,532	0,521	0,26	0,16	0,08	2,55	1,57	0,78	2831	1742	871
0,612	0,601	0,28	0,14	0,06	2,74	1,37	0,59	3049	1524	653
0,728	0,717	0,19	0,12	0,03	1,86	1,18	0,29	2069	1307	327
0,804	0,793	0,13	0,09	0,03	1,27	0,88	0,29	1416	980	327

Lampiran 5. Data hasil pengujian droptest pada air tenang

Time history dropping test kemiringan 15 derajat pada kondisi air tenang tampak depan



Time history dropping test kemiringan 15 derajat pada kondisi air tenang tampak depan



Pembacaan sensor pada Arduino di saat air tenang

13:58:32.674-> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
13:58:32.733 -> Weight: 0 kg	Weight: 0 kg	Weight: 0 kg
13:58:32.810 -> Weight: 2.42 kg	Weight: 1.28 kg	Weight: 0.94 kg
13:58:32.885 -> Weight: 1.18 kg	Weight: 0.77 kg	Weight: 0.51 kg
13:58:32.914 -> Weight: 0.78 kg	Weight: 0.53 kg	Weight: 0.32 kg
13:58:32.984 -> Weight: 0.42 kg	Weight: 0.37 kg	Weight: 0.24 kg
13:58:33.093 -> Weight: 0.36 kg	Weight: 0.24 kg	Weight: 0.18 kg
13:58:33.178 -> Weight: 0.28 kg	Weight: 0.18 kg	Weight: 0.13 kg
13:58:33.254 -> Weight: 0.22 kg	Weight: 0.14 kg	Weight: 0.11 kg
13:58:33.374 -> Weight: 0.17 kg	Weight: 0.11 kg	Weight: 0.08 kg
13:58:33.450 -> Weight: 0.14 kg	Weight: 0.09 kg	Weight: 0.05 kg
13:58:33.563 -> Weight: 0.12 kg	Weight: 0.08 kg	Weight: 0.04 kg
13:58:33.631 -> Weight: 0.10 kg	Weight: 0.07 kg	Weight: 0.03 kg
13:58:33.742 -> Weight: 0.08 kg	Weight: 0.06 kg	Weight: 0.02 kg
13:58:33.814 -> Weight: 0.05 kg	Weight: 0.04 kg	Weight: 0.01 kg
13:58:33.917 -> Weight: 0.03 kg	Weight: 0.02 kg	Weight: 0.00 kg
13:58:34.077 -> Weight: 0.01 kg	Weight: 0.00 kg	Weight: 0.00 kg
13:58:34.153 -> Weight: 0.00 kg	Weight: 0.00 kg	Weight: 0.00 kg

Hasil perhitungan tekanan pada sudut 15 derajat kondisi air tenang

		S1	S2	S3	S1	S2	S3	S1	S2	S3
	t (detik)	w(kg)	w(kg)	w(kg)	f(N)	f(N)	f(N)	P(N/m ²)	P(N/m ²)	P(N/m ²)
	0	0	0	0	0	0	0	0	0	0
0,011	0,097	0	0	0	0	0	0	0	0	0
0,111	0,100	0	0	0	0	0	0	0	0	0
0,130	0,119	1,71	0,92	0,54	16,76	9,02	5,29	18620	10018	5880
0,238	0,227	0,88	0,36	0,14	8,62	3,53	1,37	9582	3920	1524
0,348	0,337	0,48	0,29	0,11	4,70	2,84	1,08	5227	3158	1198
0,429	0,418	0,37	0,24	0,08	3,63	2,35	0,78	4029	2613	871
0,532	0,521	0,26	0,16	0,08	2,55	1,57	0,78	2831	1742	871
0,612	0,601	0,28	0,14	0,06	2,74	1,37	0,59	3049	1524	653
0,728	0,717	0,19	0,12	0,03	1,86	1,18	0,29	2069	1307	327
0,804	0,793	0,13	0,09	0,03	1,27	0,88	0,29	1416	980	327