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LAMPIRAN

No	Panjang Model (B) cm	Sedimen (d50) mm	Berat Jenis Sedimen (γs) gr/cm3	Berat Jenis Air gr/cm3	d50/(γs)	Permeabilty ζ
1	2	3	4	5	6	7
1	10	0.13	2.71	1.00	0.05	0.25
2	10	0.13	2.71	1.00	0.05	0.25
3	10	0.13	2.71	1.00	0.05	0.25
4	10	0.13	2.71	1.00	0.05	0.48
5	10	0.13	2.71	1.00	0.05	0.48
6	10	0.13	2.71	1.00	0.05	0.48
7	10	0.13	2.71	1.00	0.05	0.61
8	10	0.13	2.71	1.00	0.05	0.61
9	10	0.13	2.71	1.00	0.05	0.61
10	10	0.27	2.79	1.00	0.10	0.25
11	10	0.27	2.79	1.00	0.10	0.25
12	10	0.27	2.79	1.00	0.10	0.25
13	10	0.27	2.79	1.00	0.10	0.48
14	10	0.27	2.79	1.00	0.10	0.48
15	10	0.27	2.79	1.00	0.10	0.48
16	10	0.27	2.79	1.00	0.10	0.61
17	10	0.27	2.79	1.00	0.10	0.61
18	10	0.27	2.79	1.00	0.10	0.61
19	10	0.4	2.8	1.00	0.14	0.25
20	10	0.4	2.8	1.00	0.14	0.25
21	10	0.4	2.8	1.00	0.14	0.25
22	10	0.4	2.8	1.00	0.14	0.48
23	10	0.4	2.8	1.00	0.14	0.48
24	10	0.4	2.8	1.00	0.14	0.48
25	10	0.4	2.8	1.00	0.14	0.61
26	10	0.4	2.8	1.00	0.14	0.61
27	10	0.4	2.8	1.00	0.14	0.61
28	20	0.13	2.71	1.00	0.05	0.25
29	20	0.13	2.71	1.00	0.05	0.25
30	20	0.13	2.71	1.00	0.05	0.25
31	20	0.13	2.71	1.00	0.05	0.48
32	20	0.13	2.71	1.00	0.05	0.48
33	20	0.13	2.71	1.00	0.05	0.48
34	20	0.13	2.71	1.00	0.05	0.61
35	20	0.13	2.71	1.00	0.05	0.61
36	20	0.13	2.71	1.00	0.05	0.61
37	20	0.27	2.79	1.00	0.10	0.25
38	20	0.27	2.79	1.00	0.10	0.25
39	20	0.27	2.79	1.00	0.10	0.25
40	20	0.27	2.79	1.00	0.10	0.48
41	20	0.27	2.79	1.00	0.10	0.48
42	20	0.27	2.79	1.00	0.10	0.48
43	20	0.27	2.79	1.00	0.10	0.61
44	20	0.27	2.79	1.00	0.10	0.61
45	20	0.27	2.79	1.00	0.10	0.61
46	20	0.4	2.8	1.00	0.14	0.25
47	20	0.4	2.8	1.00	0.14	0.25

No	Panjang Model (B) cm	Sedimen (d50) mm	Berat Jenis Sedimen (γs) gr/cm3	Berat Jenis Air gr/cm3	$d50/(γs)$	Permeabilty ζ
1	2	3	4	5	6	7
48	20	0.4	2.8	1.00	0.14	0.25
49	20	0.4	2.8	1.00	0.14	0.48
50	20	0.4	2.8	1.00	0.14	0.48
51	20	0.4	2.8	1.00	0.14	0.48
52	20	0.4	2.8	1.00	0.14	0.61
53	20	0.4	2.8	1.00	0.14	0.61
54	20	0.4	2.8	1.00	0.14	0.61
55	10	0.13	2.71	1.00	0.05	0.25
56	10	0.13	2.71	1.00	0.05	0.25
57	10	0.13	2.71	1.00	0.05	0.25
58	10	0.13	2.71	1.00	0.05	0.48
59	10	0.13	2.71	1.00	0.05	0.48
60	10	0.13	2.71	1.00	0.05	0.48
61	10	0.13	2.71	1.00	0.05	0.61
62	10	0.13	2.71	1.00	0.05	0.61
63	10	0.13	2.71	1.00	0.05	0.61
64	10	0.27	2.79	1.00	0.10	0.25
65	10	0.27	2.79	1.00	0.10	0.25
66	10	0.27	2.79	1.00	0.10	0.25
67	10	0.27	2.79	1.00	0.10	0.48
68	10	0.27	2.79	1.00	0.10	0.48
69	10	0.27	2.79	1.00	0.10	0.48
70	10	0.27	2.79	1.00	0.10	0.61
71	10	0.27	2.79	1.00	0.10	0.61
72	10	0.27	2.79	1.00	0.10	0.61
73	10	0.4	2.8	1.00	0.14	0.25
74	10	0.4	2.8	1.00	0.14	0.25
75	10	0.4	2.8	1.00	0.14	0.25
76	10	0.4	2.8	1.00	0.14	0.48
77	10	0.4	2.8	1.00	0.14	0.48
78	10	0.4	2.8	1.00	0.14	0.48
79	10	0.4	2.8	1.00	0.14	0.61
80	10	0.4	2.8	1.00	0.14	0.61
81	10	0.4	2.8	1.00	0.14	0.61
82	20	0.13	2.71	1.00	0.05	0.25
83	20	0.13	2.71	1.00	0.05	0.25
84	20	0.13	2.71	1.00	0.05	0.25
85	20	0.13	2.71	1.00	0.05	0.48
86	20	0.13	2.71	1.00	0.05	0.48
87	20	0.13	2.71	1.00	0.05	0.48
88	20	0.13	2.71	1.00	0.05	0.61
89	20	0.13	2.71	1.00	0.05	0.61
90	20	0.13	2.71	1.00	0.05	0.61
91	20	0.27	2.79	1.00	0.10	0.25
92	20	0.27	2.79	1.00	0.10	0.25
93	20	0.27	2.79	1.00	0.10	0.25

No	Panjang	Sedimen (d50)	Berat Jenis Sedimen (γs)	Berat Jenis Air	d50/(γs)	Permeabilty
	Model (B) cm	mm	gr/cm3	gr/cm3		ζ
1	2	3	4	5	6	7
94	20	0.27	2.79	1.00	0.10	0.48
95	20	0.27	2.79	1.00	0.10	0.48
96	20	0.27	2.79	1.00	0.10	0.48
97	20	0.27	2.79	1.00	0.10	0.61
98	20	0.27	2.79	1.00	0.10	0.61
99	20	0.27	2.79	1.00	0.10	0.61
100	20	0.4	2.8	1.00	0.14	0.25
101	20	0.4	2.8	1.00	0.14	0.25
102	20	0.4	2.8	1.00	0.14	0.25
103	20	0.4	2.8	1.00	0.14	0.48
104	20	0.4	2.8	1.00	0.14	0.48
105	20	0.4	2.8	1.00	0.14	0.48
106	20	0.4	2.8	1.00	0.14	0.61
107	20	0.4	2.8	1.00	0.14	0.61
108	20	0.4	2.8	1.00	0.14	0.61
109	10	0.13	2.71	1.00	0.05	0.25
110	10	0.13	2.71	1.00	0.05	0.25
111	10	0.13	2.71	1.00	0.05	0.25
112	10	0.13	2.71	1.00	0.05	0.48
113	10	0.13	2.71	1.00	0.05	0.48
114	10	0.13	2.71	1.00	0.05	0.48
115	10	0.13	2.71	1.00	0.05	0.61
116	10	0.13	2.71	1.00	0.05	0.61
117	10	0.13	2.71	1.00	0.05	0.61
118	10	0.27	2.79	1.00	0.10	0.25
119	10	0.27	2.79	1.00	0.10	0.25
120	10	0.27	2.79	1.00	0.10	0.25
121	10	0.27	2.79	1.00	0.10	0.48
122	10	0.27	2.79	1.00	0.10	0.48
123	10	0.27	2.79	1.00	0.10	0.48
124	10	0.27	2.79	1.00	0.10	0.61
125	10	0.27	2.79	1.00	0.10	0.61
126	10	0.27	2.79	1.00	0.10	0.61
127	10	0.4	2.8	1.00	0.14	0.25
128	10	0.4	2.8	1.00	0.14	0.25
129	10	0.4	2.8	1.00	0.14	0.25
130	10	0.4	2.8	1.00	0.14	0.48
131	10	0.4	2.8	1.00	0.14	0.48
132	10	0.4	2.8	1.00	0.14	0.48
133	10	0.4	2.8	1.00	0.14	0.61
134	10	0.4	2.8	1.00	0.14	0.61
135	10	0.4	2.8	1.00	0.14	0.61
136	20	0.13	2.71	1.00	0.05	0.25
137	20	0.13	2.71	1.00	0.05	0.25
138	20	0.13	2.71	1.00	0.05	0.25
139	20	0.13	2.71	1.00	0.05	0.48

No	Panjang	Sedimen (d50)	Berat Jenis Sedimen (γs)	Berat Jenis Air	d50/(γs)	Permeabilty
	Model (B) cm	mm	gr/cm3	gr/cm3		ζ
1	2	3	4	5	6	7
140	20	0.13	2.71	1.00	0.05	0.48
141	20	0.13	2.71	1.00	0.05	0.48
142	20	0.13	2.71	1.00	0.05	0.61
143	20	0.13	2.71	1.00	0.05	0.61
144	20	0.13	2.71	1.00	0.05	0.61
145	20	0.27	2.79	1.00	0.10	0.25
146	20	0.27	2.79	1.00	0.10	0.25
147	20	0.27	2.79	1.00	0.10	0.25
148	20	0.27	2.79	1.00	0.10	0.48
149	20	0.27	2.79	1.00	0.10	0.48
150	20	0.27	2.79	1.00	0.10	0.48
151	20	0.27	2.79	1.00	0.10	0.61
152	20	0.27	2.79	1.00	0.10	0.61
153	20	0.27	2.79	1.00	0.10	0.61
154	20	0.4	2.8	1.00	0.14	0.25
155	20	0.4	2.8	1.00	0.14	0.25
156	20	0.4	2.8	1.00	0.14	0.25
157	20	0.4	2.8	1.00	0.14	0.48
158	20	0.4	2.8	1.00	0.14	0.48
159	20	0.4	2.8	1.00	0.14	0.48
160	20	0.4	2.8	1.00	0.14	0.61
161	20	0.4	2.8	1.00	0.14	0.61
162	20	0.4	2.8	1.00	0.14	0.61

No	Kemiringan	Kecepatan (v) cm/det									
		0	20	40	60	80	100	120	140	160	180
1	8	9									
1	0.00005	15.75	14.89	14.47	12.93	11.98	25.46	27.33	70.03	69.65	72.36
2	0.0028	11.93	12.23	10.42	10.86	11.79	17.92	19.74	67.28	71.16	70.30
3	0.012	17.84	15.30	11.79	13.48	11.74	49.22	56.23	55.79	43.01	45.16
4	0.00005	16.94	15.81	14.92	14.45	14.58	63.33	65.61	71.06	70.11	67.46
5	0.0028	24.11	15.82	14.17	15.85	17.64	18.38	21.99	35.92	44.62	69.70
6	0.012	20.64	18.58	17.35	18.52	17.33	38.89	63.04	52.51	67.42	59.81
7	0.00005	18.31	18.26	18.10	18.14	18.38	66.93	67.31	65.08	71.12	67.44
8	0.0028	20.83	19.23	18.75	17.72	16.68	25.99	36.21	64.67	61.69	62.36
9	0.012	33.80	32.11	28.04	19.90	18.57	65.47	67.27	63.45	63.61	66.47
10	0.00005	15.75	14.89	14.47	12.93	11.98	25.46	27.33	70.03	69.65	72.36
11	0.0028	11.93	12.23	10.42	10.86	11.79	17.92	19.74	67.28	71.16	70.30
12	0.012	17.84	15.30	11.79	13.48	11.74	49.22	56.23	55.79	43.01	45.16
13	0.00005	16.94	15.81	14.92	14.45	14.58	63.33	65.61	71.06	70.11	67.46
14	0.0028	24.11	15.82	14.17	15.85	17.64	18.38	21.99	35.92	44.62	69.70
15	0.012	20.64	18.58	17.35	18.52	17.33	38.89	63.04	52.51	67.42	59.81
16	0.00005	18.31	18.26	18.10	18.14	18.38	66.93	67.31	65.08	71.12	67.44
17	0.0028	20.83	19.23	18.75	17.72	16.68	25.99	36.21	64.67	61.69	62.36
18	0.012	33.80	32.11	28.04	19.90	18.57	65.47	67.27	63.45	63.61	66.47
19	0.00005	15.75	14.89	14.47	12.93	11.98	25.46	27.33	70.03	69.65	72.36
20	0.0028	11.93	12.23	10.42	10.86	11.79	17.92	19.74	67.28	71.16	70.30
21	0.012	17.84	15.30	11.79	13.48	11.74	49.22	56.23	55.79	43.01	45.16
22	0.00005	16.94	15.81	14.92	14.45	14.58	63.33	65.61	71.06	70.11	67.46
23	0.0028	24.11	15.82	14.17	15.85	17.64	18.38	21.99	35.92	44.62	69.70
24	0.012	20.64	18.58	17.35	18.52	17.33	38.89	63.04	52.51	67.42	59.81
25	0.00005	18.31	18.26	18.10	18.14	18.38	66.93	67.31	65.08	71.12	67.44
26	0.0028	20.83	19.23	18.75	17.72	16.68	25.99	36.21	64.67	61.69	62.36
27	0.012	33.80	32.11	28.04	19.90	18.57	65.47	67.27	63.45	63.61	66.47
28	0.00005	12.35	8.98	10.43	9.71	10.45	54.36	59.23	63.40	68.88	71.31
29	0.0028	18.54	12.28	9.06	10.64	12.28	64.47	68.51	70.42	72.53	70.47
30	0.012	31.34	24.24	13.73	11.41	9.63	60.55	63.65	66.90	67.35	67.94
31	0.00005	27.49	16.74	13.83	11.48	13.83	56.52	60.74	63.53	67.14	70.86
32	0.0028	39.69	25.78	19.18	15.11	10.75	62.84	65.88	68.22	68.63	69.63
33	0.012	19.88	15.57	13.78	11.80	10.93	71.87	66.76	70.64	62.44	69.78
34	0.00005	23.11	14.43	14.19	13.93	14.07	31.96	28.04	31.61	60.75	66.31
35	0.0028	35.12	22.40	17.14	13.80	17.14	62.17	63.89	68.30	67.21	69.00
36	0.012	39.23	31.73	19.16	17.67	17.30	61.30	64.08	66.70	65.55	70.11
37	0.00005	12.35	8.98	10.43	9.71	10.45	54.36	59.23	63.40	68.88	71.31
38	0.0028	18.54	12.28	9.06	10.64	12.28	64.47	68.51	70.42	72.53	70.47
39	0.012	31.34	24.24	13.73	11.41	9.63	60.55	63.65	66.90	67.35	67.94
40	0.00005	27.49	16.74	13.83	11.48	13.83	56.52	60.74	63.53	67.14	70.86
41	0.0028	39.69	25.78	19.18	15.11	10.75	62.84	65.88	68.22	68.63	69.63
42	0.012	19.88	15.57	13.78	11.80	10.93	71.87	66.76	70.64	62.44	69.78
43	0.00005	23.11	14.43	14.19	13.93	14.07	31.96	28.04	31.61	60.75	66.31
44	0.0028	35.12	22.40	17.14	13.80	17.14	62.17	63.89	68.30	67.21	69.00
45	0.012	39.23	31.73	19.16	17.67	17.30	61.30	64.08	66.70	65.55	70.11
46	0.00005	12.35	8.98	10.43	9.71	10.45	54.36	59.23	63.40	68.88	71.31
47	0.0028	18.54	12.28	9.06	10.64	12.28	64.47	68.51	70.42	72.53	70.47

No	Kemiringan	Kecepatan (v) cm/det									
		0	20	40	60	80	100	120	140	160	180
1	8	9									
48	0.012	31.34	24.24	13.73	11.41	9.63	60.55	63.65	66.90	67.35	67.94
49	0.00005	27.49	16.74	13.83	11.48	13.83	56.52	60.74	63.53	67.14	70.86
50	0.0028	39.69	25.78	19.18	15.11	10.75	62.84	65.88	68.22	68.63	69.63
51	0.012	19.88	15.57	13.78	11.80	10.93	71.87	66.76	70.64	62.44	69.78
52	0.00005	23.11	14.43	14.19	13.93	14.07	31.96	28.04	31.61	60.75	66.31
53	0.0028	35.12	22.40	17.14	13.80	17.14	62.17	63.89	68.30	67.21	69.00
54	0.012	39.23	31.73	19.16	17.67	17.30	61.30	64.08	66.70	65.55	70.11
55	0.00005	15.75	14.89	14.47	12.93	11.98	25.46	27.33	70.03	69.65	72.36
56	0.0028	11.93	12.23	10.42	10.86	11.79	17.92	19.74	67.28	71.16	70.30
57	0.012	17.84	15.30	11.79	13.48	11.74	49.22	56.23	55.79	43.01	45.16
58	0.00005	16.94	15.81	14.92	14.45	14.58	63.33	65.61	71.06	70.11	67.46
59	0.0028	24.11	15.82	14.17	15.85	17.64	18.38	21.99	35.92	44.62	69.70
60	0.012	20.64	18.58	17.35	18.52	17.33	38.89	63.04	52.51	67.42	59.81
61	0.00005	18.31	18.26	18.10	18.14	18.38	66.93	67.31	65.08	71.12	67.44
62	0.0028	20.83	19.23	18.75	17.72	16.68	25.99	36.21	64.67	61.69	62.36
63	0.012	33.80	32.11	28.04	19.90	18.57	65.47	67.27	63.45	63.61	66.47
64	0.00005	15.75	14.89	14.47	12.93	11.98	25.46	27.33	70.03	69.65	72.36
65	0.0028	11.93	12.23	10.42	10.86	11.79	17.92	19.74	67.28	71.16	70.30
66	0.012	17.84	15.30	11.79	13.48	11.74	49.22	56.23	55.79	43.01	45.16
67	0.00005	16.94	15.81	14.92	14.45	14.58	63.33	65.61	71.06	70.11	67.46
68	0.0028	24.11	15.82	14.17	15.85	17.64	18.38	21.99	35.92	44.62	69.70
69	0.012	20.64	18.58	17.35	18.52	17.33	38.89	63.04	52.51	67.42	59.81
70	0.00005	18.31	18.26	18.10	18.14	18.38	66.93	67.31	65.08	71.12	67.44
71	0.0028	20.83	19.23	18.75	17.72	16.68	25.99	36.21	64.67	61.69	62.36
72	0.012	33.80	32.11	28.04	19.90	18.57	65.47	67.27	63.45	63.61	66.47
73	0.00005	15.75	14.89	14.47	12.93	11.98	25.46	27.33	70.03	69.65	72.36
74	0.0028	11.93	12.23	10.42	10.86	11.79	17.92	19.74	67.28	71.16	70.30
75	0.012	17.84	15.30	11.79	13.48	11.74	49.22	56.23	55.79	43.01	45.16
76	0.00005	16.94	15.81	14.92	14.45	14.58	63.33	65.61	71.06	70.11	67.46
77	0.0028	24.11	15.82	14.17	15.85	17.64	18.38	21.99	35.92	44.62	69.70
78	0.012	20.64	18.58	17.35	18.52	17.33	38.89	63.04	52.51	67.42	59.81
79	0.00005	18.31	18.26	18.10	18.14	18.38	66.93	67.31	65.08	71.12	67.44
80	0.0028	20.83	19.23	18.75	17.72	16.68	25.99	36.21	64.67	61.69	62.36
81	0.012	33.80	32.11	28.04	19.90	18.57	65.47	67.27	63.45	63.61	66.47
82	0.00005	12.35	8.98	10.43	9.71	10.45	54.36	59.23	63.40	68.88	71.31
83	0.0028	18.54	12.28	9.06	10.64	12.28	64.47	68.51	70.42	72.53	70.47
84	0.012	31.34	24.24	13.73	11.41	9.63	60.55	63.65	66.90	67.35	67.94
85	0.00005	27.49	16.74	13.83	11.48	13.83	56.52	60.74	63.53	67.14	70.86
86	0.0028	39.69	25.78	19.18	15.11	10.75	62.84	65.88	68.22	68.63	69.63
87	0.012	19.88	15.57	13.78	11.80	10.93	71.87	66.76	70.64	62.44	69.78
88	0.00005	23.11	14.43	14.19	13.93	14.07	31.96	28.04	31.61	60.75	66.31
89	0.0028	35.12	22.40	17.14	13.80	17.14	62.17	63.89	68.30	67.21	69.00
90	0.012	39.23	31.73	19.16	17.67	17.30	61.30	64.08	66.70	65.55	70.11
91	0.00005	12.35	8.98	10.43	9.71	10.45	54.36	59.23	63.40	68.88	71.31
92	0.0028	18.54	12.28	9.06	10.64	12.28	64.47	68.51	70.42	72.53	70.47
93	0.012	31.34	24.24	13.73	11.41	9.63	60.55	63.65	66.90	67.35	67.94

No	Kemiringan	Kecepatan (v) cm/det									
		0	20	40	60	80	100	120	140	160	180
1	8	9									
94	0.00005	27.49	16.74	13.83	11.48	13.83	56.52	60.74	63.53	67.14	70.86
95	0.0028	39.69	25.78	19.18	15.11	10.75	62.84	65.88	68.22	68.63	69.63
96	0.012	19.88	15.57	13.78	11.80	10.93	71.87	66.76	70.64	62.44	69.78
97	0.00005	23.11	14.43	14.19	13.93	14.07	31.96	28.04	31.61	60.75	66.31
98	0.0028	35.12	22.40	17.14	13.80	17.14	62.17	63.89	68.30	67.21	69.00
99	0.012	39.23	31.73	19.16	17.67	17.30	61.30	64.08	66.70	65.55	70.11
100	0.00005	12.35	8.98	10.43	9.71	10.45	54.36	59.23	63.40	68.88	71.31
101	0.0028	18.54	12.28	9.06	10.64	12.28	64.47	68.51	70.42	72.53	70.47
102	0.012	31.34	24.24	13.73	11.41	9.63	60.55	63.65	66.90	67.35	67.94
103	0.00005	27.49	16.74	13.83	11.48	13.83	56.52	60.74	63.53	67.14	70.86
104	0.0028	39.69	25.78	19.18	15.11	10.75	62.84	65.88	68.22	68.63	69.63
105	0.012	19.88	15.57	13.78	11.80	10.93	71.87	66.76	70.64	62.44	69.78
106	0.00005	23.11	14.43	14.19	13.93	14.07	31.96	28.04	31.61	60.75	66.31
107	0.0028	35.12	22.40	17.14	13.80	17.14	62.17	63.89	68.30	67.21	69.00
108	0.012	39.23	31.73	19.16	17.67	17.30	61.30	64.08	66.70	65.55	70.11
109	0.00005	15.75	14.89	14.47	12.93	11.98	25.46	27.33	70.03	69.65	72.36
110	0.0028	11.93	12.23	10.42	10.86	11.79	17.92	19.74	67.28	71.16	70.30
111	0.012	17.84	15.30	11.79	13.48	11.74	49.22	56.23	55.79	43.01	45.16
112	0.00005	16.94	15.81	14.92	14.45	14.58	63.33	65.61	71.06	70.11	67.46
113	0.0028	24.11	15.82	14.17	15.85	17.64	18.38	21.99	35.92	44.62	69.70
114	0.012	20.64	18.58	17.35	18.52	17.33	38.89	63.04	52.51	67.42	59.81
115	0.00005	18.31	18.26	18.10	18.14	18.38	66.93	67.31	65.08	71.12	67.44
116	0.0028	20.83	19.23	18.75	17.72	16.68	25.99	36.21	64.67	61.69	62.36
117	0.012	33.80	32.11	28.04	19.90	18.57	65.47	67.27	63.45	63.61	66.47
118	0.00005	15.75	14.89	14.47	12.93	11.98	25.46	27.33	70.03	69.65	72.36
119	0.0028	11.93	12.23	10.42	10.86	11.79	17.92	19.74	67.28	71.16	70.30
120	0.012	17.84	15.30	11.79	13.48	11.74	49.22	56.23	55.79	43.01	45.16
121	0.00005	16.94	15.81	14.92	14.45	14.58	63.33	65.61	71.06	70.11	67.46
122	0.0028	24.11	15.82	14.17	15.85	17.64	18.38	21.99	35.92	44.62	69.70
123	0.012	20.64	18.58	17.35	18.52	17.33	38.89	63.04	52.51	67.42	59.81
124	0.00005	18.31	18.26	18.10	18.14	18.38	66.93	67.31	65.08	71.12	67.44
125	0.0028	20.83	19.23	18.75	17.72	16.68	25.99	36.21	64.67	61.69	62.36
126	0.012	33.80	32.11	28.04	19.90	18.57	65.47	67.27	63.45	63.61	66.47
127	0.00005	15.75	14.89	14.47	12.93	11.98	25.46	27.33	70.03	69.65	72.36
128	0.0028	11.93	12.23	10.42	10.86	11.79	17.92	19.74	67.28	71.16	70.30
129	0.012	17.84	15.30	11.79	13.48	11.74	49.22	56.23	55.79	43.01	45.16
130	0.00005	16.94	15.81	14.92	14.45	14.58	63.33	65.61	71.06	70.11	67.46
131	0.0028	24.11	15.82	14.17	15.85	17.64	18.38	21.99	35.92	44.62	69.70
132	0.012	20.64	18.58	17.35	18.52	17.33	38.89	63.04	52.51	67.42	59.81
133	0.00005	18.31	18.26	18.10	18.14	18.38	66.93	67.31	65.08	71.12	67.44
134	0.0028	20.83	19.23	18.75	17.72	16.68	25.99	36.21	64.67	61.69	62.36
135	0.012	33.80	32.11	28.04	19.90	18.57	65.47	67.27	63.45	63.61	66.47
136	0.00005	12.35	8.98	10.43	9.71	10.45	54.36	59.23	63.40	68.88	71.31
137	0.0028	18.54	12.28	9.06	10.64	12.28	64.47	68.51	70.42	72.53	70.47
138	0.012	31.34	24.24	13.73	11.41	9.63	60.55	63.65	66.90	67.35	67.94
139	0.00005	27.49	16.74	13.83	11.48	13.83	56.52	60.74	63.53	67.14	70.86

No	Kemiringan	Kecepatan (v) cm/det									
		0	20	40	60	80	100	120	140	160	180
1	8	9									
140	0.0028	39.69	25.78	19.18	15.11	10.75	62.84	65.88	68.22	68.63	69.63
141	0.012	19.88	15.57	13.78	11.80	10.93	71.87	66.76	70.64	62.44	69.78
142	0.00005	23.11	14.43	14.19	13.93	14.07	31.96	28.04	31.61	60.75	66.31
143	0.0028	35.12	22.40	17.14	13.80	17.14	62.17	63.89	68.30	67.21	69.00
144	0.012	39.23	31.73	19.16	17.67	17.30	61.30	64.08	66.70	65.55	70.11
145	0.00005	12.35	8.98	10.43	9.71	10.45	54.36	59.23	63.40	68.88	71.31
146	0.0028	18.54	12.28	9.06	10.64	12.28	64.47	68.51	70.42	72.53	70.47
147	0.012	31.34	24.24	13.73	11.41	9.63	60.55	63.65	66.90	67.35	67.94
148	0.00005	27.49	16.74	13.83	11.48	13.83	56.52	60.74	63.53	67.14	70.86
149	0.0028	39.69	25.78	19.18	15.11	10.75	62.84	65.88	68.22	68.63	69.63
150	0.012	19.88	15.57	13.78	11.80	10.93	71.87	66.76	70.64	62.44	69.78
151	0.00005	23.11	14.43	14.19	13.93	14.07	31.96	28.04	31.61	60.75	66.31
152	0.0028	35.12	22.40	17.14	13.80	17.14	62.17	63.89	68.30	67.21	69.00
153	0.012	39.23	31.73	19.16	17.67	17.30	61.30	64.08	66.70	65.55	70.11
154	0.00005	12.35	8.98	10.43	9.71	10.45	54.36	59.23	63.40	68.88	71.31
155	0.0028	18.54	12.28	9.06	10.64	12.28	64.47	68.51	70.42	72.53	70.47
156	0.012	31.34	24.24	13.73	11.41	9.63	60.55	63.65	66.90	67.35	67.94
157	0.00005	27.49	16.74	13.83	11.48	13.83	56.52	60.74	63.53	67.14	70.86
158	0.0028	39.69	25.78	19.18	15.11	10.75	62.84	65.88	68.22	68.63	69.63
159	0.012	19.88	15.57	13.78	11.80	10.93	71.87	66.76	70.64	62.44	69.78
160	0.00005	23.11	14.43	14.19	13.93	14.07	31.96	28.04	31.61	60.75	66.31
161	0.0028	35.12	22.40	17.14	13.80	17.14	62.17	63.89	68.30	67.21	69.00
162	0.012	39.23	31.73	19.16	17.67	17.30	61.30	64.08	66.70	65.55	70.11

No	V Rata2	V Kosong	Nilai n	V hitung	Tinggi A 0	20	40	60	80
1	10	11	12	13					1
1	11.98	18.21	0.0263	3.63	10.99	11.13	11.09	11.11	11.27
2	17.92	20.85	0.0263	26.72	10.50	10.52	10.60	10.71	10.85
3	49.22	35.06	0.0263	53.01	9.46	9.65	9.74	9.94	9.97
4	15.81	18.21	0.0263	3.54	9.28	9.33	9.39	9.41	9.54
5	18.38	20.85	0.0263	26.02	8.66	8.66	8.74	8.88	9.00
6	38.89	35.06	0.0263	51.02	7.19	7.20	7.30	7.54	7.49
7	18.38	18.21	0.0263	3.53	8.96	8.88	8.95	9.02	9.07
8	25.99	20.85	0.0263	25.90	8.12	8.25	8.27	8.42	8.56
9	65.47	35.06	0.0263	49.46	5.43	5.54	5.96	6.06	6.22
10	11.98	18.21	0.0304	3.13	10.99	11.13	11.09	11.11	11.27
11	17.92	20.85	0.0304	23.08	10.50	10.52	10.60	10.71	10.85
12	49.22	35.06	0.0304	45.80	9.46	9.65	9.74	9.94	9.97
13	15.81	18.21	0.0304	3.05	9.28	9.33	9.39	9.41	9.54
14	18.38	20.85	0.0304	22.48	8.66	8.66	8.74	8.88	9.00
15	38.89	35.06	0.0304	44.08	7.19	7.20	7.30	7.54	7.49
16	18.38	18.21	0.0304	3.05	8.96	8.88	8.95	9.02	9.07
17	25.99	20.85	0.0304	22.38	8.12	8.25	8.27	8.42	8.56
18	65.47	35.06	0.0304	42.74	5.43	5.54	5.96	6.06	6.22
19	11.98	18.21	0.0329	2.90	10.99	11.13	11.09	11.11	11.27
20	17.92	20.85	0.0329	21.34	10.50	10.52	10.60	10.71	10.85
21	49.22	35.06	0.0329	42.34	9.46	9.65	9.74	9.94	9.97
22	15.81	18.21	0.0329	2.82	9.28	9.33	9.39	9.41	9.54
23	18.38	20.85	0.0329	20.78	8.66	8.66	8.74	8.88	9.00
24	38.89	35.06	0.0329	40.75	7.19	7.20	7.30	7.54	7.49
25	18.38	18.21	0.0329	2.82	8.96	8.88	8.95	9.02	9.07
26	25.99	20.85	0.0329	20.69	8.12	8.25	8.27	8.42	8.56
27	65.47	35.06	0.0329	39.51	5.43	5.54	5.96	6.06	6.22
28	10.45	18.21	0.0263	3.72	12.84	12.81	12.82	13	12.98
29	12.28	20.85	0.0263	27.53	12.64	12.62	12.67	12.83	12.88
30	13.73	35.06	0.0263	56.01	11.76	11.82	11.93	12.06	12.14
31	13.83	18.21	0.0263	3.59	10.15	10.16	10.22	10.35	10.47
32	15.11	20.85	0.0263	26.55	9.74	9.74	9.82	9.90	10.06
33	19.88	35.06	0.0263	54.27	9.36	9.43	9.47	9.62	9.73
34	14.43	18.21	0.0263	3.53	9.06	8.97	9.09	9.2	9.26
35	17.14	20.85	0.0263	26.03	8.48	8.42	8.50	8.66	8.67
36	19.16	35.06	0.0263	52.36	7.34	7.42	7.57	7.75	7.83
37	10.45	18.21	0.0304	3.22	12.84	12.81	12.82	13	12.98
38	12.28	20.85	0.0304	23.79	12.64	12.62	12.67	12.83	12.88
39	13.73	35.06	0.0304	48.39	11.76	11.82	11.93	12.06	12.14
40	13.83	18.21	0.0304	3.11	10.15	10.16	10.22	10.35	10.47
41	15.11	20.85	0.0304	22.94	9.74	9.74	9.82	9.90	10.06
42	19.88	35.06	0.0304	46.89	9.36	9.43	9.47	9.62	9.73
43	14.43	18.21	0.0304	3.05	9.06	8.97	9.09	9.2	9.26
44	17.14	20.85	0.0304	22.49	8.48	8.42	8.50	8.66	8.67
45	19.16	35.06	0.0304	45.24	7.34	7.42	7.57	7.75	7.83
46	10.45	18.21	0.0329	2.97	12.84	12.81	12.82	13	12.98
47	12.28	20.85	0.0329	21.99	12.64	12.62	12.67	12.83	12.88

No	V Rata2	V Kosong	Nilai n	V hitung	Tinggi A				
					0	20	40	60	80
1	10	11	12	13					1
48	13.73	35.06	0.0329	44.73	11.76	11.82	11.93	12.06	12.14
49	13.83	18.21	0.0329	2.87	10.15	10.16	10.22	10.35	10.47
50	15.11	20.85	0.0329	21.21	9.74	9.74	9.82	9.90	10.06
51	19.88	35.06	0.0329	43.34	9.36	9.43	9.47	9.62	9.73
52	14.43	18.21	0.0329	2.82	9.06	8.97	9.09	9.2	9.26
53	17.14	20.85	0.0329	20.79	8.48	8.42	8.50	8.66	8.67
54	19.16	35.06	0.0329	41.82	7.34	7.42	7.57	7.75	7.83
55	11.98	18.21	0.0263	3.63	10.99	11.13	11.09	11.11	11.27
56	17.92	20.85	0.0263	26.72	10.50	10.52	10.60	10.71	10.85
57	49.22	35.06	0.0263	53.01	9.46	9.65	9.74	9.94	9.97
58	15.81	18.21	0.0263	3.54	9.28	9.33	9.39	9.41	9.54
59	18.38	20.85	0.0263	26.02	8.66	8.66	8.74	8.88	9.00
60	38.89	35.06	0.0263	51.02	7.19	7.20	7.30	7.54	7.49
61	18.38	18.21	0.0263	3.53	8.96	8.88	8.95	9.02	9.07
62	25.99	20.85	0.0263	25.90	8.12	8.25	8.27	8.42	8.56
63	65.47	35.06	0.0263	49.46	5.43	5.54	5.96	6.06	6.22
64	11.98	18.21	0.0304	3.13	10.99	11.13	11.09	11.11	11.27
65	17.92	20.85	0.0304	23.08	10.50	10.52	10.60	10.71	10.85
66	49.22	35.06	0.0304	45.80	9.46	9.65	9.74	9.94	9.97
67	15.81	18.21	0.0304	3.05	9.28	9.33	9.39	9.41	9.54
68	18.38	20.85	0.0304	22.48	8.66	8.66	8.74	8.88	9.00
69	38.89	35.06	0.0304	44.08	7.19	7.20	7.30	7.54	7.49
70	18.38	18.21	0.0304	3.05	8.96	8.88	8.95	9.02	9.07
71	25.99	20.85	0.0304	22.38	8.12	8.25	8.27	8.42	8.56
72	65.47	35.06	0.0304	42.74	5.43	5.54	5.96	6.06	6.22
73	11.98	18.21	0.0329	2.90	10.99	11.13	11.09	11.11	11.27
74	17.92	20.85	0.0329	21.34	10.50	10.52	10.60	10.71	10.85
75	49.22	35.06	0.0329	42.34	9.46	9.65	9.74	9.94	9.97
76	15.81	18.21	0.0329	2.82	9.28	9.33	9.39	9.41	9.54
77	18.38	20.85	0.0329	20.78	8.66	8.66	8.74	8.88	9.00
78	38.89	35.06	0.0329	40.75	7.19	7.20	7.30	7.54	7.49
79	18.38	18.21	0.0329	2.82	8.96	8.88	8.95	9.02	9.07
80	25.99	20.85	0.0329	20.69	8.12	8.25	8.27	8.42	8.56
81	65.47	35.06	0.0329	39.51	5.43	5.54	5.96	6.06	6.22
82	10.45	18.21	0.0263	3.72	12.84	12.81	12.82	13	12.98
83	12.28	20.85	0.0263	27.53	12.64	12.62	12.67	12.83	12.88
84	13.73	35.06	0.0263	56.01	11.76	11.82	11.93	12.06	12.14
85	13.83	18.21	0.0263	3.59	10.15	10.16	10.22	10.35	10.47
86	15.11	20.85	0.0263	26.55	9.74	9.74	9.82	9.90	10.06
87	19.88	35.06	0.0263	54.27	9.36	9.43	9.47	9.62	9.73
88	14.43	18.21	0.0263	3.53	9.06	8.97	9.09	9.2	9.26
89	17.14	20.85	0.0263	26.03	8.48	8.42	8.50	8.66	8.67
90	19.16	35.06	0.0263	52.36	7.34	7.42	7.57	7.75	7.83
91	10.45	18.21	0.0304	3.22	12.84	12.81	12.82	13	12.98
92	12.28	20.85	0.0304	23.79	12.64	12.62	12.67	12.83	12.88
93	13.73	35.06	0.0304	48.39	11.76	11.82	11.93	12.06	12.14

No	V Rata2	V Kosong	Nilai n	V hitung	Tinggi A				
					0	20	40	60	80
1	10	11	12	13					1
94	13.83	18.21	0.0304	3.11	10.15	10.16	10.22	10.35	10.47
95	15.11	20.85	0.0304	22.94	9.74	9.74	9.82	9.90	10.06
96	19.88	35.06	0.0304	46.89	9.36	9.43	9.47	9.62	9.73
97	14.43	18.21	0.0304	3.05	9.06	8.97	9.09	9.2	9.26
98	17.14	20.85	0.0304	22.49	8.48	8.42	8.50	8.66	8.67
99	19.16	35.06	0.0304	45.24	7.34	7.42	7.57	7.75	7.83
100	10.45	18.21	0.0329	2.97	12.84	12.81	12.82	13	12.98
101	12.28	20.85	0.0329	21.99	12.64	12.62	12.67	12.83	12.88
102	13.73	35.06	0.0329	44.73	11.76	11.82	11.93	12.06	12.14
103	13.83	18.21	0.0329	2.87	10.15	10.16	10.22	10.35	10.47
104	15.11	20.85	0.0329	21.21	9.74	9.74	9.82	9.90	10.06
105	19.88	35.06	0.0329	43.34	9.36	9.43	9.47	9.62	9.73
106	14.43	18.21	0.0329	2.82	9.06	8.97	9.09	9.2	9.26
107	17.14	20.85	0.0329	20.79	8.48	8.42	8.50	8.66	8.67
108	19.16	35.06	0.0329	41.82	7.34	7.42	7.57	7.75	7.83
109	11.98	18.21	0.0263	3.63	10.99	11.13	11.09	11.11	11.27
110	17.92	20.85	0.0263	26.72	10.50	10.52	10.60	10.71	10.85
111	49.22	35.06	0.0263	53.01	9.46	9.65	9.74	9.94	9.97
112	15.81	18.21	0.0263	3.54	9.28	9.33	9.39	9.41	9.54
113	18.38	20.85	0.0263	26.02	8.66	8.66	8.74	8.88	9.00
114	38.89	35.06	0.0263	51.02	7.19	7.20	7.30	7.54	7.49
115	18.38	18.21	0.0263	3.53	8.96	8.88	8.95	9.02	9.07
116	25.99	20.85	0.0263	25.90	8.12	8.25	8.27	8.42	8.56
117	65.47	35.06	0.0263	49.46	5.43	5.54	5.96	6.06	6.22
118	11.98	18.21	0.0304	3.13	10.99	11.13	11.09	11.11	11.27
119	17.92	20.85	0.0304	23.08	10.50	10.52	10.60	10.71	10.85
120	49.22	35.06	0.0304	45.80	9.46	9.65	9.74	9.94	9.97
121	15.81	18.21	0.0304	3.05	9.28	9.33	9.39	9.41	9.54
122	18.38	20.85	0.0304	22.48	8.66	8.66	8.74	8.88	9.00
123	38.89	35.06	0.0304	44.08	7.19	7.20	7.30	7.54	7.49
124	18.38	18.21	0.0304	3.05	8.96	8.88	8.95	9.02	9.07
125	25.99	20.85	0.0304	22.38	8.12	8.25	8.27	8.42	8.56
126	65.47	35.06	0.0304	42.74	5.43	5.54	5.96	6.06	6.22
127	11.98	18.21	0.0329	2.90	10.99	11.13	11.09	11.11	11.27
128	17.92	20.85	0.0329	21.34	10.50	10.52	10.60	10.71	10.85
129	49.22	35.06	0.0329	42.34	9.46	9.65	9.74	9.94	9.97
130	15.81	18.21	0.0329	2.82	9.28	9.33	9.39	9.41	9.54
131	18.38	20.85	0.0329	20.78	8.66	8.66	8.74	8.88	9.00
132	38.89	35.06	0.0329	40.75	7.19	7.20	7.30	7.54	7.49
133	18.38	18.21	0.0329	2.82	8.96	8.88	8.95	9.02	9.07
134	25.99	20.85	0.0329	20.69	8.12	8.25	8.27	8.42	8.56
135	65.47	35.06	0.0329	39.51	5.43	5.54	5.96	6.06	6.22
136	10.45	18.21	0.0263	3.72	12.84	12.81	12.82	13	12.98
137	12.28	20.85	0.0263	27.53	12.64	12.62	12.67	12.83	12.88
138	13.73	35.06	0.0263	56.01	11.76	11.82	11.93	12.06	12.14
139	13.83	18.21	0.0263	3.59	10.15	10.16	10.22	10.35	10.47

No	V Rata2	V Kosong	Nilai n	V hitung	Tinggi A				
					0	20	40	60	80
1	10	11	12	13					1
140	15.11	20.85	0.0263	26.55	9.74	9.74	9.82	9.90	10.06
141	19.88	35.06	0.0263	54.27	9.36	9.43	9.47	9.62	9.73
142	14.43	18.21	0.0263	3.53	9.06	8.97	9.09	9.2	9.26
143	17.14	20.85	0.0263	26.03	8.48	8.42	8.50	8.66	8.67
144	19.16	35.06	0.0263	52.36	7.34	7.42	7.57	7.75	7.83
145	10.45	18.21	0.0304	3.22	12.84	12.81	12.82	13	12.98
146	12.28	20.85	0.0304	23.79	12.64	12.62	12.67	12.83	12.88
147	13.73	35.06	0.0304	48.39	11.76	11.82	11.93	12.06	12.14
148	13.83	18.21	0.0304	3.11	10.15	10.16	10.22	10.35	10.47
149	15.11	20.85	0.0304	22.94	9.74	9.74	9.82	9.90	10.06
150	19.88	35.06	0.0304	46.89	9.36	9.43	9.47	9.62	9.73
151	14.43	18.21	0.0304	3.05	9.06	8.97	9.09	9.2	9.26
152	17.14	20.85	0.0304	22.49	8.48	8.42	8.50	8.66	8.67
153	19.16	35.06	0.0304	45.24	7.34	7.42	7.57	7.75	7.83
154	10.45	18.21	0.0329	2.97	12.84	12.81	12.82	13	12.98
155	12.28	20.85	0.0329	21.99	12.64	12.62	12.67	12.83	12.88
156	13.73	35.06	0.0329	44.73	11.76	11.82	11.93	12.06	12.14
157	13.83	18.21	0.0329	2.87	10.15	10.16	10.22	10.35	10.47
158	15.11	20.85	0.0329	21.21	9.74	9.74	9.82	9.90	10.06
159	19.88	35.06	0.0329	43.34	9.36	9.43	9.47	9.62	9.73
160	14.43	18.21	0.0329	2.82	9.06	8.97	9.09	9.2	9.26
161	17.14	20.85	0.0329	20.79	8.48	8.42	8.50	8.66	8.67
162	19.16	35.06	0.0329	41.82	7.34	7.42	7.57	7.75	7.83

No	ir (h) cm					h	Waktu				Ked
	100	120	140	160	180	Rata2	(t)	0	20	40	60
1	4					15	16				
1	8.18	8.39	8.45	8.39	8.33	9.73	10	0	0	0	-0.10
2	7.31	7.75	7.73	7.75	7.73	9.15	10	0	0	0	-0.12
3	4.44	5.69	5.77	5.90	6.00	7.66	10	0	0	0	-0.38
4	8.27	8.15	8.27	8.20	8.14	8.80	10	0	0	0	0.00
5	7.57	7.66	7.63	7.56	7.70	8.21	10	0	0	0	-0.31
6	4.30	5.60	5.63	5.79	5.87	6.39	10	0	0	0	-0.28
7	8.50	8.57	8.45	8.50	8.42	8.73	10	0	0	0	-0.43
8	7.69	7.79	7.82	7.76	7.83	8.05	10	0	0	0	-1.09
9	3.63	5.19	5.26	5.36	5.57	5.42	10	0	0	0	-0.39
10	8.18	8.39	8.45	8.39	8.33	9.73	10	0	0	0	-0.62
11	7.31	7.75	7.73	7.75	7.73	9.15	10	0	0	0	0.00
12	4.44	5.69	5.77	5.90	6.00	7.66	10	0	0	0	-0.26
13	8.27	8.15	8.27	8.20	8.14	8.80	10	0	0	0	-0.41
14	7.57	7.66	7.63	7.56	7.70	8.21	10	0	0	0	-0.25
15	4.30	5.60	5.63	5.79	5.87	6.39	10	0	0	0	-0.24
16	8.50	8.57	8.45	8.50	8.42	8.73	10	0	0	0	-0.07
17	7.69	7.79	7.82	7.76	7.83	8.05	10	0	0	0	-0.28
18	3.63	5.19	5.26	5.36	5.57	5.42	10	0	0	0	-0.15
19	8.18	8.39	8.45	8.39	8.33	9.73	10	0	0	0	-0.25
20	7.31	7.75	7.73	7.75	7.73	9.15	10	0	0	0	-0.35
21	4.44	5.69	5.77	5.90	6.00	7.66	10	0	0	0	-0.47
22	8.27	8.15	8.27	8.20	8.14	8.80	10	0	0	0	-0.29
23	7.57	7.66	7.63	7.56	7.70	8.21	10	0	0	0	0.00
24	4.30	5.60	5.63	5.79	5.87	6.39	10	0	0	0	0.00
25	8.50	8.57	8.45	8.50	8.42	8.73	10	0	0	0	-0.40
26	7.69	7.79	7.82	7.76	7.83	8.05	10	0	0	0	-0.21
27	3.63	5.19	5.26	5.36	5.57	5.42	10	0	0	0	-0.62
28	8.4	8.64	8.61	8.47	8.49	10.71	10	0	0	0	-0.15
29	7.63	7.91	7.78	7.8	7.86	10.26	10	0	0	0	-0.44
30	6.93	7.38	7.34	7.30	7.39	9.61	10	0	0	0	-0.41
31	8.60	8.56	8.48	8.47	8.44	9.39	10	0	0	0	-0.38
32	8.07	8.07	7.96	7.94	7.91	8.92	10	0	0	0	-0.58
33	7.33	7.45	7.49	7.38	7.43	8.47	10	0	0	0	-0.71
34	8.48	8.55	8.44	8.3	8.26	8.76	10	0	0	0	-1.10
35	7.91	7.95	7.93	7.87	7.88	8.23	10	0	0	0	-0.13
36	6.83	6.92	6.94	6.88	6.93	7.24	10	0	0	0	0.00
37	8.4	8.64	8.61	8.47	8.49	10.71	10	0	0	0	-0.65
38	7.63	7.91	7.78	7.8	7.86	10.26	10	0	0	0	-0.57
39	6.93	7.38	7.34	7.30	7.39	9.61	10	0	0	0	-0.35
40	8.60	8.56	8.48	8.47	8.44	9.39	10	0	0	0	-0.39
41	8.07	8.07	7.96	7.94	7.91	8.92	10	0	0	0	-0.56
42	7.33	7.45	7.49	7.38	7.43	8.47	10	0	0	0	-0.57
43	8.48	8.55	8.44	8.3	8.26	8.76	10	0	0	0	-0.68
44	7.91	7.95	7.93	7.87	7.88	8.23	10	0	0	0	-1.00
45	6.83	6.92	6.94	6.88	6.93	7.24	10	0	0	0	-0.90
46	8.4	8.64	8.61	8.47	8.49	10.71	10	0	0	0	-0.18
47	7.63	7.91	7.78	7.8	7.86	10.26	10	0	0	0	-0.49

No	ir (h) cm					h	Waktu				Ked
	100	120	140	160	180	Rata2	(t)	0	20	40	60
1	4					15	16				
48	6.93	7.38	7.34	7.30	7.39	9.61	10	0	0	0	-0.52
49	8.60	8.56	8.48	8.47	8.44	9.39	10	0	0	0	0.00
50	8.07	8.07	7.96	7.94	7.91	8.92	10	0	0	0	0.00
51	7.33	7.45	7.49	7.38	7.43	8.47	10	0	0	0	-0.78
52	8.48	8.55	8.44	8.3	8.26	8.76	10	0	0	0	-0.45
53	7.91	7.95	7.93	7.87	7.88	8.23	10	0	0	0	-0.24
54	6.83	6.92	6.94	6.88	6.93	7.24	10	0	0	0	-0.02
55	8.18	8.39	8.45	8.39	8.33	9.73	10	0	0	0	-0.18
56	7.31	7.75	7.73	7.75	7.73	9.15	10	0	0	0	-0.05
57	4.44	5.69	5.77	5.90	6.00	7.66	10	0	0	0	-0.32
58	8.27	8.15	8.27	8.20	8.14	8.80	10	0	0	0	0.00
59	7.57	7.66	7.63	7.56	7.70	8.21	10	0	0	0	-0.28
60	4.30	5.60	5.63	5.79	5.87	6.39	10	0	0	0	-0.34
61	8.50	8.57	8.45	8.50	8.42	8.73	10	0	0	0	-0.22
62	7.69	7.79	7.82	7.76	7.83	8.05	10	0	0	0	-1.16
63	3.63	5.19	5.26	5.36	5.57	5.42	10	0	0	0	-0.52
64	8.18	8.39	8.45	8.39	8.33	9.73	10	0	0	0	-0.39
65	7.31	7.75	7.73	7.75	7.73	9.15	10	0	0	0	-0.32
66	4.44	5.69	5.77	5.90	6.00	7.66	10	0	0	0	-0.21
67	8.27	8.15	8.27	8.20	8.14	8.80	10	0	0	0	-0.37
68	7.57	7.66	7.63	7.56	7.70	8.21	10	0	0	0	-0.45
69	4.30	5.60	5.63	5.79	5.87	6.39	10	0	0	0	-0.14
70	8.50	8.57	8.45	8.50	8.42	8.73	10	0	0	0	-0.18
71	7.69	7.79	7.82	7.76	7.83	8.05	10	0	0	0	0.00
72	3.63	5.19	5.26	5.36	5.57	5.42	10	0	0	0	-0.30
73	8.18	8.39	8.45	8.39	8.33	9.73	10	0	0	0	-0.10
74	7.31	7.75	7.73	7.75	7.73	9.15	10	0	0	0	-0.35
75	4.44	5.69	5.77	5.90	6.00	7.66	10	0	0	0	-0.25
76	8.27	8.15	8.27	8.20	8.14	8.80	10	0	0	0	-0.15
77	7.57	7.66	7.63	7.56	7.70	8.21	10	0	0	0	0.00
78	4.30	5.60	5.63	5.79	5.87	6.39	10	0	0	0	-0.01
79	8.50	8.57	8.45	8.50	8.42	8.73	10	0	0	0	-0.52
80	7.69	7.79	7.82	7.76	7.83	8.05	10	0	0	0	-0.58
81	3.63	5.19	5.26	5.36	5.57	5.42	10	0	0	0	-0.23
82	8.4	8.64	8.61	8.47	8.49	10.71	10	0	0	0	-0.62
83	7.63	7.91	7.78	7.8	7.86	10.26	10	0	0	0	-0.18
84	6.93	7.38	7.34	7.30	7.39	9.61	10	0	0	0	-0.20
85	8.60	8.56	8.48	8.47	8.44	9.39	10	0	0	0	0.00
86	8.07	8.07	7.96	7.94	7.91	8.92	10	0	0	0	-0.85
87	7.33	7.45	7.49	7.38	7.43	8.47	10	0	0	0	-0.01
88	8.48	8.55	8.44	8.3	8.26	8.76	10	0	0	0	-0.55
89	7.91	7.95	7.93	7.87	7.88	8.23	10	0	0	0	-0.14
90	6.83	6.92	6.94	6.88	6.93	7.24	10	0	0	0	-0.28
91	8.4	8.64	8.61	8.47	8.49	10.71	10	0	0	0	-0.80
92	7.63	7.91	7.78	7.8	7.86	10.26	10	0	0	0	-0.77
93	6.93	7.38	7.34	7.30	7.39	9.61	10	0	0	0	-0.30

No	ir (h) cm					h	Waktu				Ked
	100	120	140	160	180	Rata2	(t)	0	20	40	60
1	4					15	16				
94	8.60	8.56	8.48	8.47	8.44	9.39	10	0	0	0	-0.36
95	8.07	8.07	7.96	7.94	7.91	8.92	10	0	0	0	-0.45
96	7.33	7.45	7.49	7.38	7.43	8.47	10	0	0	0	-0.39
97	8.48	8.55	8.44	8.3	8.26	8.76	10	0	0	0	-0.52
98	7.91	7.95	7.93	7.87	7.88	8.23	10	0	0	0	-0.98
99	6.83	6.92	6.94	6.88	6.93	7.24	10	0	0	0	-0.85
100	8.4	8.64	8.61	8.47	8.49	10.71	10	0	0	0	-0.08
101	7.63	7.91	7.78	7.8	7.86	10.26	10	0	0	0	-0.15
102	6.93	7.38	7.34	7.30	7.39	9.61	10	0	0	0	-0.31
103	8.60	8.56	8.48	8.47	8.44	9.39	10	0	0	0	0.00
104	8.07	8.07	7.96	7.94	7.91	8.92	10	0	0	0	0.00
105	7.33	7.45	7.49	7.38	7.43	8.47	10	0	0	0	-0.18
106	8.48	8.55	8.44	8.3	8.26	8.76	10	0	0	0	-0.14
107	7.91	7.95	7.93	7.87	7.88	8.23	10	0	0	0	-0.08
108	6.83	6.92	6.94	6.88	6.93	7.24	10	0	0	0	0.00
109	8.18	8.39	8.45	8.39	8.33	9.73	10	0	0	0	-0.42
110	7.31	7.75	7.73	7.75	7.73	9.15	10	0	0	0	0.00
111	4.44	5.69	5.77	5.90	6.00	7.66	10	0	0	0	-0.82
112	8.27	8.15	8.27	8.20	8.14	8.80	10	0	0	0	-0.04
113	7.57	7.66	7.63	7.56	7.70	8.21	10	0	0	0	-0.28
114	4.30	5.60	5.63	5.79	5.87	6.39	10	0	0	0	-0.44
115	8.50	8.57	8.45	8.50	8.42	8.73	10	0	0	0	-0.48
116	7.69	7.79	7.82	7.76	7.83	8.05	10	0	0	0	-0.56
117	3.63	5.19	5.26	5.36	5.57	5.42	10	0	0	0	-0.50
118	8.18	8.39	8.45	8.39	8.33	9.73	10	0	0	0	-0.15
119	7.31	7.75	7.73	7.75	7.73	9.15	10	0	0	0	-0.20
120	4.44	5.69	5.77	5.90	6.00	7.66	10	0	0	0	-0.25
121	8.27	8.15	8.27	8.20	8.14	8.80	10	0	0	0	-0.09
122	7.57	7.66	7.63	7.56	7.70	8.21	10	0	0	0	-0.20
123	4.30	5.60	5.63	5.79	5.87	6.39	10	0	0	0	-0.28
124	8.50	8.57	8.45	8.50	8.42	8.73	10	0	0	0	-0.21
125	7.69	7.79	7.82	7.76	7.83	8.05	10	0	0	0	-0.07
126	3.63	5.19	5.26	5.36	5.57	5.42	10	0	0	0	-0.51
127	8.18	8.39	8.45	8.39	8.33	9.73	10	0	0	0	-0.04
128	7.31	7.75	7.73	7.75	7.73	9.15	10	0	0	0	-0.30
129	4.44	5.69	5.77	5.90	6.00	7.66	10	0	0	0	-0.35
130	8.27	8.15	8.27	8.20	8.14	8.80	10	0	0	0	-0.15
131	7.57	7.66	7.63	7.56	7.70	8.21	10	0	0	0	0.00
132	4.30	5.60	5.63	5.79	5.87	6.39	10	0	0	0	0.00
133	8.50	8.57	8.45	8.50	8.42	8.73	10	0	0	0	-0.67
134	7.69	7.79	7.82	7.76	7.83	8.05	10	0	0	0	-0.14
135	3.63	5.19	5.26	5.36	5.57	5.42	10	0	0	0	-0.43
136	8.4	8.64	8.61	8.47	8.49	10.71	10	0	0	0	0.00
137	7.63	7.91	7.78	7.8	7.86	10.26	10	0	0	0	-0.60
138	6.93	7.38	7.34	7.30	7.39	9.61	10	0	0	40	-0.34
139	8.60	8.56	8.48	8.47	8.44	9.39	10	0	0	0	-0.32

| No | ir (h) cm | | | | | h | Waktu | | | | Ked |
	100	120	140	160	180	Rata2	(t)	0	20	40	60
1	4					15	16				
140	8.07	8.07	7.96	7.94	7.91	8.92	10	0	0	0	-0.65
141	7.33	7.45	7.49	7.38	7.43	8.47	10	0	0	0	0.00
142	8.48	8.55	8.44	8.3	8.26	8.76	10	0	0	0	-0.31
143	7.91	7.95	7.93	7.87	7.88	8.23	10	0	0	0	-0.32
144	6.83	6.92	6.94	6.88	6.93	7.24	10	0	0	0	-0.41
145	8.4	8.64	8.61	8.47	8.49	10.71	10	0	0	0	-0.88
146	7.63	7.91	7.78	7.8	7.86	10.26	10	0	0	0	-0.35
147	6.93	7.38	7.34	7.30	7.39	9.61	10	0	0	0	-0.60
148	8.60	8.56	8.48	8.47	8.44	9.39	10	0	0	0	-0.55
149	8.07	8.07	7.96	7.94	7.91	8.92	10	0	0	0	-0.83
150	7.33	7.45	7.49	7.38	7.43	8.47	10	0	0	0	-0.85
151	8.48	8.55	8.44	8.3	8.26	8.76	10	0	0	0	-0.85
152	7.91	7.95	7.93	7.87	7.88	8.23	10	0	0	0	-1.02
153	6.83	6.92	6.94	6.88	6.93	7.24	10	0	0	0	-0.54
154	8.4	8.64	8.61	8.47	8.49	10.71	10	0	0	0	-0.02
155	7.63	7.91	7.78	7.8	7.86	10.26	10	0	0	0	-0.26
156	6.93	7.38	7.34	7.30	7.39	9.61	10	0	0	0	-0.20
157	8.60	8.56	8.48	8.47	8.44	9.39	10	0	0	0	0.00
158	8.07	8.07	7.96	7.94	7.91	8.92	10	0	0	0	-0.06
159	7.33	7.45	7.49	7.38	7.43	8.47	10	0	0	0	0.00
160	8.48	8.55	8.44	8.3	8.26	8.76	10	0	0	0	-0.35
161	7.91	7.95	7.93	7.87	7.88	8.23	10	0	0	0	0.00
162	6.83	6.92	6.94	6.88	6.93	7.24	10	0	0	0	-0.17

No	alaman Gerusan (ds) cm						ds	g	ds/B
	80	100	120	140	160	180	Max		
1	17						18	19	20
1	-1.31	-3.08	0.00	0.00	0.00	0.00	3.08	9.81	0.31
2	-1.04	-3.50	0.00	0.00	0.00	0.00	3.50	9.81	0.35
3	-0.95	-4.20	0.00	0.00	0.00	-0.86	4.20	9.81	0.42
4	-0.31	-1.60	-0.73	-0.84	0.00	0.00	1.60	9.81	0.16
5	-0.11	-1.73	-0.31	-0.36	0.00	0.00	1.73	9.81	0.17
6	-0.44	-2.49	0.00	0.00	-0.94	-0.79	2.49	9.81	0.25
7	-0.22	-0.64	-0.65	-0.50	0.00	0.00	0.65	9.81	0.07
8	-0.49	-0.12	-0.38	-0.59	0.00	0.00	1.09	9.81	0.11
9	-0.44	-1.50	-0.78	-0.43	-0.44	0.00	1.50	9.81	0.15
10	-1.66	-2.90	0.00	-0.72	-0.42	0.00	2.90	9.81	0.29
11	-0.53	-3.00	0.00	-0.15	0.00	0.00	3.00	9.81	0.30
12	-2.16	-3.52	0.00	-0.11	-0.29	0.00	3.52	9.81	0.35
13	-0.97	-1.25	-1.06	-0.36	0.00	0.00	1.25	9.81	0.13
14	-1.20	-1.10	-1.27	-0.72	0.00	0.00	1.27	9.81	0.13
15	-1.60	-2.22	-0.06	-0.49	0.00	0.00	2.22	9.81	0.22
16	-0.42	-0.01	-0.35	-0.19	0.00	0.00	0.42	9.81	0.04
17	-0.44	-0.03	-0.30	-0.20	0.00	0.00	0.44	9.81	0.04
18	-0.15	-0.39	-1.10	-0.55	0.00	0.00	1.10	9.81	0.11
19	-2.00	-0.55	0.00	0.00	0.00	0.00	2.00	9.81	0.20
20	-2.30	-0.85	0.00	-0.35	0.00	0.00	2.30	9.81	0.23
21	-2.79	-0.38	0.00	-0.28	-0.14	0.00	2.79	9.81	0.28
22	-1.03	0.00	-0.12	-0.11	0.00	0.00	1.03	9.81	0.10
23	-1.20	0.00	0.00	0.00	0.00	0.00	1.20	9.81	0.12
24	-1.80	-0.11	0.00	0.00	0.00	0.00	1.80	9.81	0.18
25	-0.40	-0.40	-0.40	-0.32	0.00	0.00	0.40	9.81	0.04
26	-0.50	-0.28	-0.30	-0.28	0.00	0.00	0.50	9.81	0.05
27	-0.60	-0.13	-0.49	-0.42	0.00	0.00	0.62	9.81	0.06
28	-3.68	-5.20	0.00	0.00	-0.10	-0.38	5.20	9.81	0.26
29	-5.79	-4.17	0.00	0.00	-0.77	-1.09	5.79	9.81	0.29
30	-6.25	-4.21	-0.23	0.00	0.00	-0.89	6.25	9.81	0.31
31	-2.62	-0.98	-0.30	-0.41	-0.66	0.00	2.62	9.81	0.13
32	-2.73	-2.14	0.00	-1.17	-1.64	0.00	2.73	9.81	0.14
33	-5.06	-3.21	0.00	0.00	-0.96	-1.61	5.06	9.81	0.25
34	-1.81	-1.10	-1.73	-1.34	0.00	0.00	1.81	9.81	0.09
35	-0.33	-1.91	-0.70	-0.33	0.00	0.00	1.91	9.81	0.10
36	-0.20	-2.45	-0.25	-0.33	-0.48	0.00	2.45	9.81	0.12
37	-3.60	-4.10	0.00	-1.49	-0.24	-0.63	4.10	9.81	0.21
38	-4.30	-3.81	0.00	-0.21	0.00	0.00	4.30	9.81	0.22
39	-4.09	-4.40	0.00	0.00	-0.06	0.00	4.40	9.81	0.22
40	-1.60	-2.40	-0.54	-1.23	0.00	0.00	2.40	9.81	0.12
41	-2.84	-2.00	-2.21	-1.67	0.00	0.00	2.84	9.81	0.14
42	-3.32	-3.81	-0.63	-1.42	-0.68	0.00	3.81	9.81	0.19
43	-1.07	-1.43	-1.35	-1.15	0.00	0.00	1.43	9.81	0.07
44	-1.15	-1.20	-1.00	-1.20	0.00	0.00	1.20	9.81	0.06
45	-1.25	-1.55	-1.70	-1.21	-1.58	0.00	1.70	9.81	0.09
46	-3.00	-3.20	0.00	0.00	0.00	0.00	3.20	9.81	0.16
47	-3.37	-3.44	0.00	0.00	-0.42	0.00	3.44	9.81	0.17

No	alaman Gerusan (ds) cm						ds	g	ds/B
	80	100	120	140	160	180	Max		
1	17						18	19	20
48	-4.32	-4.58	0.00	0.00	0.00	-0.19	4.58	9.81	0.23
49	-1.46	-1.32	-0.11	0.00	0.00	0.00	1.46	9.81	0.07
50	-0.67	-2.16	0.00	0.00	0.00	0.00	2.16	9.81	0.11
51	-2.70	-3.01	0.00	-0.79	-0.74	0.00	3.01	9.81	0.15
52	-0.33	-0.57	-0.57	-0.51	0.00	0.00	0.57	9.81	0.03
53	-0.19	-0.90	-0.05	-0.20	0.00	0.00	0.90	9.81	0.05
54	-0.90	-1.08	0.00	-0.11	0.00	0.00	1.08	9.81	0.05
55	-2.03	-3.41	0.00	0.00	0.00	0.00	3.41	9.81	0.34
56	-0.68	-4.13	0.00	0.00	0.00	0.00	4.13	9.81	0.41
57	-1.35	-4.53	0.00	0.00	0.00	0.00	4.53	9.81	0.45
58	-0.22	-1.91	0.00	-0.28	0.00	0.00	1.91	9.81	0.19
59	-0.07	-2.20	0.00	-0.35	0.00	0.00	2.20	9.81	0.22
60	-1.05	-2.83	-0.02	0.00	-0.25	-0.45	2.83	9.81	0.28
61	-0.16	-1.51	-0.41	-0.97	0.00	0.00	1.51	9.81	0.15
62	-0.26	-1.71	-0.51	-0.52	0.00	0.00	1.71	9.81	0.17
63	-0.49	-2.10	-1.00	-0.40	-0.90	0.00	2.10	9.81	0.21
64	-1.74	-2.80	0.00	-0.60	-0.49	0.00	2.80	9.81	0.28
65	-1.82	-3.36	0.00	-0.16	-0.18	0.00	3.36	9.81	0.34
66	-2.36	-3.66	0.00	0.00	-0.33	0.00	3.66	9.81	0.37
67	-1.57	-1.44	-0.85	-0.35	0.00	0.00	1.57	9.81	0.16
68	-1.35	-1.80	-0.80	-0.90	0.00	0.00	1.80	9.81	0.18
69	-1.98	-2.25	0.00	-0.50	0.00	0.00	2.25	9.81	0.23
70	-0.28	-0.28	-0.71	-0.18	0.00	0.00	0.71	9.81	0.07
71	-0.26	0.00	-0.93	-0.21	0.00	0.00	0.93	9.81	0.09
72	-0.60	-0.47	-1.30	-0.65	0.00	0.00	1.30	9.81	0.13
73	-2.20	-1.34	0.00	0.00	0.00	0.00	2.20	9.81	0.22
74	-2.40	-1.15	0.00	0.00	0.00	0.00	2.40	9.81	0.24
75	-3.05	-2.15	-0.43	0.00	0.00	0.00	3.05	9.81	0.31
76	-1.40	0.00	-0.16	-0.13	0.00	0.00	1.40	9.81	0.14
77	-1.57	-0.95	0.00	-0.01	0.00	0.00	1.57	9.81	0.16
78	-1.70	-0.41	0.00	0.00	0.00	0.00	1.70	9.81	0.17
79	-0.31	-0.50	-0.50	-0.37	0.00	0.00	0.52	9.81	0.05
80	-0.58	-0.47	-0.70	-0.41	0.00	0.00	0.70	9.81	0.07
81	-1.00	0.00	0.00	-0.17	0.00	0.00	1.00	9.81	0.10
82	-6.40	-4.79	0.00	0.00	-1.19	-1.09	6.40	9.81	0.32
83	-6.80	-4.24	0.00	0.00	0.00	-0.50	6.80	9.81	0.34
84	-7.87	-5.27	-0.34	0.00	0.00	0.00	7.87	9.81	0.39
85	-3.08	-2.31	0.00	-0.04	-0.36	-0.82	3.08	9.81	0.15
86	-4.05	-3.05	0.00	-1.23	-1.75	0.00	4.05	9.81	0.20
87	-5.28	-3.06	0.00	0.00	0.00	-0.40	5.28	9.81	0.26
88	-1.90	-1.13	-0.98	-0.61	0.00	0.00	1.90	9.81	0.10
89	-0.41	-0.60	-2.10	-0.38	0.00	0.00	2.10	9.81	0.11
90	-1.08	-3.72	-1.01	-0.78	-0.88	0.00	3.72	9.81	0.19
91	-4.41	-4.55	0.00	-0.60	-0.37	0.00	4.55	9.81	0.23
92	-4.45	-5.13	0.00	0.00	0.00	0.00	5.13	9.81	0.26
93	-4.35	-6.23	0.00	0.00	0.00	0.00	6.23	9.81	0.31

No	alaman Gerusan (ds) cm						ds	g	ds/B
	80	100	120	140	160	180	Max		
1	17						18	19	20
94	-2.00	-2.97	-0.55	-1.19	0.00	0.00	2.97	9.81	0.15
95	-3.13	-2.72	-0.77	-1.37	0.00	0.00	3.13	9.81	0.16
96	-3.64	-4.21	0.00	0.00	-0.34	0.00	4.21	9.81	0.21
97	-1.16	-1.41	-1.31	-1.21	0.00	0.00	1.41	9.81	0.07
98	-1.35	-1.99	-1.99	-1.54	0.00	0.00	1.99	9.81	0.10
99	-1.69	-2.05	-1.75	-1.70	-1.85	0.00	2.05	9.81	0.10
100	-3.95	-4.00	0.00	0.00	0.00	0.00	4.00	9.81	0.20
101	-4.00	-4.10	0.00	0.00	-0.20	0.00	4.10	9.81	0.21
102	-4.01	-5.33	0.00	0.00	0.00	0.00	5.33	9.81	0.27
103	-1.94	-2.54	0.00	0.00	0.00	0.00	2.54	9.81	0.13
104	-1.48	-2.38	0.00	0.00	0.00	0.00	2.38	9.81	0.12
105	-2.55	-3.23	-0.35	0.00	-0.50	0.00	3.23	9.81	0.16
106	-0.04	-0.67	-0.55	-0.27	0.00	0.00	0.67	9.81	0.03
107	-0.17	-0.99	-0.07	-0.13	0.00	0.00	0.99	9.81	0.05
108	-1.20	0.00	-0.45	0.00	0.00	0.00	1.20	9.81	0.06
109	-3.05	-3.92	0.00	0.00	0.00	0.00	3.92	9.81	0.39
110	-1.38	-4.37	0.00	0.00	0.00	0.00	4.37	9.81	0.44
111	-1.91	-5.43	-0.51	-0.41	-0.17	-0.43	5.43	9.81	0.54
112	-0.29	-2.11	0.00	-0.02	0.00	0.00	2.11	9.81	0.21
113	-0.22	-2.53	0.00	-0.38	0.00	0.00	2.53	9.81	0.25
114	-0.67	-3.18	-0.17	-0.63	-0.57	-0.30	3.18	9.81	0.32
115	-0.27	-1.78	-0.70	-0.55	0.00	0.00	1.78	9.81	0.18
116	-0.63	-2.11	-0.89	-0.64	0.00	0.00	2.11	9.81	0.21
117	-0.74	-3.30	-1.05	-1.04	-1.05	-0.94	3.30	9.81	0.33
118	-1.82	-3.05	0.00	0.00	0.00	0.00	3.05	9.81	0.31
119	-2.05	-3.45	-0.12	0.00	-0.40	0.00	3.45	9.81	0.35
120	-2.84	-4.34	0.00	0.00	-0.02	-0.35	4.34	9.81	0.43
121	-1.78	-1.14	-0.97	-0.32	0.00	0.00	1.78	9.81	0.18
122	-2.10	-2.10	-0.09	-0.54	0.00	0.00	2.10	9.81	0.21
123	-3.40	-2.96	0.00	-0.40	-0.20	0.00	3.40	9.81	0.34
124	-0.36	-0.31	-1.00	-0.11	0.00	0.00	1.00	9.81	0.10
125	-0.02	-0.06	-1.26	-0.31	0.00	0.00	1.26	9.81	0.13
126	-0.90	-0.75	-2.10	-0.65	0.00	0.00	2.10	9.81	0.21
127	-2.37	-1.95	0.00	0.00	0.00	0.00	2.37	9.81	0.24
128	-2.70	-2.15	0.00	-0.15	0.00	0.00	2.70	9.81	0.27
129	-3.31	-2.49	0.00	-0.07	0.00	0.00	3.31	9.81	0.33
130	-1.54	0.00	0.00	0.00	0.00	0.00	1.54	9.81	0.15
131	-1.69	0.00	0.00	0.00	0.00	0.00	1.69	9.81	0.17
132	-2.24	-0.14	0.00	-0.05	0.00	0.00	2.24	9.81	0.22
133	-0.83	-0.81	-0.82	-0.39	0.00	0.00	0.83	9.81	0.08
134	-0.08	-0.33	-0.97	-0.22	0.00	0.00	0.97	9.81	0.10
135	-1.57	0.00	0.00	-0.40	0.00	0.00	1.57	9.81	0.16
136	-6.50	-4.45	0.00	0.00	0.00	-0.37	6.50	9.81	0.33
137	-6.90	-4.58	-0.25	0.00	0.00	-1.10	6.90	9.81	0.35
138	-8.26	-4.64	-0.58	0.00	0.00	0.00	8.26	9.81	0.41
139	-4.60	-2.81	0.00	-0.89	-0.72	-1.10	4.60	9.81	0.23

No	alaman Gerusan (ds) cm						ds	g	ds/B
	80	100	120	140	160	180	Max		
1	17						18	19	20
140	-4.51	-3.27	0.00	0.00	-1.57	0.00	4.51	9.81	0.23
141	-5.93	-2.98	0.00	0.00	0.00	0.00	5.93	9.81	0.30
142	-2.23	-1.00	-0.66	-0.49	0.00	0.00	2.23	9.81	0.11
143	-0.56	-2.50	-0.58	-0.36	0.00	0.00	2.50	9.81	0.13
144	-1.11	-3.97	-1.33	-0.76	-1.06	0.00	3.97	9.81	0.20
145	-4.70	-5.33	-0.60	0.00	-0.85	0.00	5.33	9.81	0.27
146	-4.65	-5.55	0.00	0.00	0.00	0.00	5.55	9.81	0.28
147	-6.04	-6.39	-0.09	0.00	0.00	-0.24	6.39	9.81	0.32
148	-2.55	-3.24	0.00	-1.15	0.00	0.00	3.24	9.81	0.16
149	-3.37	-3.72	0.00	-1.41	0.00	0.00	3.72	9.81	0.19
150	-4.75	-4.47	-0.90	-0.23	-0.34	0.00	4.75	9.81	0.24
151	-1.27	-1.60	-1.40	-1.66	0.00	0.00	1.66	9.81	0.08
152	-1.69	-2.24	-1.78	-1.44	0.00	0.00	2.24	9.81	0.11
153	-1.30	-1.47	-2.41	-1.94	-1.27	0.00	2.41	9.81	0.12
154	-4.23	-4.23	0.00	0.00	0.00	0.00	4.23	9.81	0.21
155	-4.36	-4.44	-1.21	0.00	-0.10	0.00	4.44	9.81	0.22
156	-4.10	-5.33	0.00	0.00	-0.20	0.00	5.33	9.81	0.27
157	-2.00	-2.54	0.00	0.00	0.00	0.00	2.54	9.81	0.13
158	-2.66	-2.76	0.00	0.00	0.00	0.00	2.76	9.81	0.14
159	-2.43	-3.40	0.00	0.00	0.00	0.00	3.40	9.81	0.17
160	-0.25	-0.62	-0.57	-0.39	0.00	0.00	0.62	9.81	0.03
161	-0.07	-1.00	-0.13	0.00	0.00	0.00	1.00	9.81	0.05
162	-1.11	-1.76	-0.01	-0.09	0.00	0.00	1.76	9.81	0.09

No	ds/h	d50/h	V/Vg.h	B/h	γs/γw	h/gt²
1	21	22	23	24	25	26
1	2.37	0.0013	0.12	1.03	2.710	35.717
2	2.69	0.0014	0.89	1.09	2.710	33.560
3	3.23	0.0017	1.93	1.31	2.710	28.095
4	1.23	0.0015	0.12	1.14	2.710	32.286
5	1.33	0.0016	0.92	1.22	2.710	30.114
6	1.92	0.0020	2.04	1.56	2.710	23.453
7	0.50	0.0015	0.12	1.15	2.710	32.044
8	0.84	0.0016	0.92	1.24	2.710	29.545
9	1.15	0.0024	2.15	1.84	2.710	19.897
10	1.07	0.0028	0.10	1.03	2.790	35.717
11	1.11	0.0030	0.77	1.09	2.790	33.560
12	1.30	0.0035	1.67	1.31	2.790	28.095
13	0.46	0.0031	0.10	1.14	2.790	32.286
14	0.47	0.0033	0.79	1.22	2.790	30.114
15	0.82	0.0042	1.76	1.56	2.790	23.453
16	0.16	0.0031	0.10	1.15	2.790	32.044
17	0.16	0.0034	0.80	1.24	2.790	29.545
18	0.41	0.0050	1.85	1.84	2.790	19.897
19	0.50	0.0041	0.09	1.03	2.800	35.717
20	0.58	0.0044	0.71	1.09	2.800	33.560
21	0.70	0.0052	1.55	1.31	2.800	28.095
22	0.26	0.0045	0.10	1.14	2.800	32.286
23	0.30	0.0049	0.73	1.22	2.800	30.114
24	0.45	0.0063	1.63	1.56	2.800	23.453
25	0.10	0.0046	0.10	1.15	2.800	32.044
26	0.13	0.0050	0.74	1.24	2.800	29.545
27	0.16	0.0074	1.71	1.84	2.800	19.897
28	2.00	0.0012	0.11	1.87	2.710	39.288
29	2.23	0.0013	0.87	1.95	2.710	37.659
30	2.40	0.0014	1.82	2.08	2.710	35.248
31	1.01	0.0014	0.12	2.13	2.710	34.459
32	1.05	0.0015	0.90	2.24	2.710	32.738
33	1.95	0.0015	1.88	2.36	2.710	31.079
34	0.70	0.0015	0.12	2.28	2.710	32.150
35	0.73	0.0016	0.92	2.43	2.710	30.191
36	0.94	0.0018	1.96	2.76	2.710	26.572
37	0.76	0.0025	0.10	1.87	2.790	39.288
38	0.80	0.0026	0.75	1.95	2.790	37.659
39	0.81	0.0028	1.58	2.08	2.790	35.248
40	0.44	0.0029	0.10	2.13	2.790	34.459
41	0.53	0.0030	0.78	2.24	2.790	32.738
42	0.71	0.0032	1.63	2.36	2.790	31.079
43	0.26	0.0031	0.10	2.28	2.790	32.150
44	0.22	0.0033	0.79	2.43	2.790	30.191
45	0.31	0.0037	1.70	2.76	2.790	26.572
46	0.40	0.0037	0.09	1.87	2.800	39.288
47	0.43	0.0039	0.69	1.95	2.800	37.659

No	ds/h	d50/h	V/Vg.h	B/h	$\gamma s/\gamma w$	h/gt^2
1	21	22	23	24	25	26
48	0.57	0.0042	1.46	2.08	2.800	35.248
49	0.18	0.0043	0.09	2.13	2.800	34.459
50	0.27	0.0045	0.72	2.24	2.800	32.738
51	0.38	0.0047	1.50	2.36	2.800	31.079
52	0.07	0.0046	0.10	2.28	2.800	32.150
53	0.11	0.0049	0.73	2.43	2.800	30.191
54	0.14	0.0055	1.57	2.76	2.800	26.572
55	2.62	0.0013	0.12	1.03	2.710	35.717
56	3.18	0.0014	0.89	1.09	2.710	33.560
57	3.48	0.0017	1.93	1.31	2.710	28.095
58	1.47	0.0015	0.12	1.14	2.710	32.286
59	1.69	0.0016	0.92	1.22	2.710	30.114
60	2.18	0.0020	2.04	1.56	2.710	23.453
61	1.16	0.0015	0.12	1.15	2.710	32.044
62	1.32	0.0016	0.92	1.24	2.710	29.545
63	1.62	0.0024	2.15	1.84	2.710	19.897
64	1.04	0.0028	0.10	1.03	2.790	35.717
65	1.24	0.0030	0.77	1.09	2.790	33.560
66	1.36	0.0035	1.67	1.31	2.790	28.095
67	0.58	0.0031	0.10	1.14	2.790	32.286
68	0.67	0.0033	0.79	1.22	2.790	30.114
69	0.83	0.0042	1.76	1.56	2.790	23.453
70	0.26	0.0031	0.10	1.15	2.790	32.044
71	0.34	0.0034	0.80	1.24	2.790	29.545
72	0.48	0.0050	1.85	1.84	2.790	19.897
73	0.55	0.0041	0.09	1.03	2.800	35.717
74	0.60	0.0044	0.71	1.09	2.800	33.560
75	0.76	0.0052	1.55	1.31	2.800	28.095
76	0.35	0.0045	0.10	1.14	2.800	32.286
77	0.39	0.0049	0.73	1.22	2.800	30.114
78	0.43	0.0063	1.63	1.56	2.800	23.453
79	0.13	0.0046	0.10	1.15	2.800	32.044
80	0.18	0.0050	0.74	1.24	2.800	29.545
81	0.25	0.0074	1.71	1.84	2.800	19.897
82	2.46	0.0012	0.11	1.87	2.710	39.288
83	2.62	0.0013	0.87	1.95	2.710	37.659
84	3.03	0.0014	1.82	2.08	2.710	35.248
85	1.18	0.0014	0.12	2.13	2.710	34.459
86	1.56	0.0015	0.90	2.24	2.710	32.738
87	2.03	0.0015	1.88	2.36	2.710	31.079
88	0.73	0.0015	0.12	2.28	2.710	32.150
89	0.81	0.0016	0.92	2.43	2.710	30.191
90	1.43	0.0018	1.96	2.76	2.710	26.572
91	0.84	0.0025	0.10	1.87	2.790	39.288
92	0.95	0.0026	0.75	1.95	2.790	37.659
93	1.15	0.0028	1.58	2.08	2.790	35.248

No	ds/h	d50/h	V/Vg.h	B/h	γs/γw	h/gt²
1	21	22	23	24	25	26
94	0.55	0.0029	0.10	2.13	2.790	34.459
95	0.58	0.0030	0.78	2.24	2.790	32.738
96	0.78	0.0032	1.63	2.36	2.790	31.079
97	0.26	0.0031	0.10	2.28	2.790	32.150
98	0.37	0.0033	0.79	2.43	2.790	30.191
99	0.38	0.0037	1.70	2.76	2.790	26.572
100	0.50	0.0037	0.09	1.87	2.800	39.288
101	0.51	0.0039	0.69	1.95	2.800	37.659
102	0.67	0.0042	1.46	2.08	2.800	35.248
103	0.32	0.0043	0.09	2.13	2.800	34.459
104	0.30	0.0045	0.72	2.24	2.800	32.738
105	0.40	0.0047	1.50	2.36	2.800	31.079
106	0.08	0.0046	0.10	2.28	2.800	32.150
107	0.12	0.0049	0.73	2.43	2.800	30.191
108	0.15	0.0055	1.57	2.76	2.800	26.572
109	3.02	0.0013	0.12	1.03	2.710	35.717
110	3.36	0.0014	0.89	1.09	2.710	33.560
111	4.18	0.0017	1.93	1.31	2.710	28.095
112	1.62	0.0015	0.12	1.14	2.710	32.286
113	1.95	0.0016	0.92	1.22	2.710	30.114
114	2.45	0.0020	2.04	1.56	2.710	23.453
115	1.37	0.0015	0.12	1.15	2.710	32.044
116	1.62	0.0016	0.92	1.24	2.710	29.545
117	2.54	0.0024	2.15	1.84	2.710	19.897
118	1.13	0.0028	0.10	1.03	2.790	35.717
119	1.28	0.0030	0.77	1.09	2.790	33.560
120	1.61	0.0035	1.67	1.31	2.790	28.095
121	0.66	0.0031	0.10	1.14	2.790	32.286
122	0.78	0.0033	0.79	1.22	2.790	30.114
123	1.26	0.0042	1.76	1.56	2.790	23.453
124	0.37	0.0031	0.10	1.15	2.790	32.044
125	0.47	0.0034	0.80	1.24	2.790	29.545
126	0.78	0.0050	1.85	1.84	2.790	19.897
127	0.59	0.0041	0.09	1.03	2.800	35.717
128	0.68	0.0044	0.71	1.09	2.800	33.560
129	0.83	0.0052	1.55	1.31	2.800	28.095
130	0.39	0.0045	0.10	1.14	2.800	32.286
131	0.42	0.0049	0.73	1.22	2.800	30.114
132	0.56	0.0063	1.63	1.56	2.800	23.453
133	0.21	0.0046	0.10	1.15	2.800	32.044
134	0.24	0.0050	0.74	1.24	2.800	29.545
135	0.39	0.0074	1.71	1.84	2.800	19.897
136	2.50	0.0012	0.11	1.87	2.710	39.288
137	2.65	0.0013	0.87	1.95	2.710	37.659
138	3.18	0.0014	1.82	2.08	2.710	35.248
139	1.77	0.0014	0.12	2.13	2.710	34.459

No	ds/h	d50/h	V/Vg.h	B/h	$\gamma s/\gamma w$	h/gt^2
1	21	22	23	24	25	26
140	1.73	0.0015	0.90	2.24	2.710	32.738
141	2.28	0.0015	1.88	2.36	2.710	31.079
142	0.86	0.0015	0.12	2.28	2.710	32.150
143	0.96	0.0016	0.92	2.43	2.710	30.191
144	1.53	0.0018	1.96	2.76	2.710	26.572
145	0.99	0.0025	0.10	1.87	2.790	39.288
146	1.03	0.0026	0.75	1.95	2.790	37.659
147	1.18	0.0028	1.58	2.08	2.790	35.248
148	0.60	0.0029	0.10	2.13	2.790	34.459
149	0.69	0.0030	0.78	2.24	2.790	32.738
150	0.88	0.0032	1.63	2.36	2.790	31.079
151	0.31	0.0031	0.10	2.28	2.790	32.150
152	0.41	0.0033	0.79	2.43	2.790	30.191
153	0.45	0.0037	1.70	2.76	2.790	26.572
154	0.53	0.0037	0.09	1.87	2.800	39.288
155	0.56	0.0039	0.69	1.95	2.800	37.659
156	0.67	0.0042	1.46	2.08	2.800	35.248
157	0.32	0.0043	0.09	2.13	2.800	34.459
158	0.35	0.0045	0.72	2.24	2.800	32.738
159	0.43	0.0047	1.50	2.36	2.800	31.079
160	0.08	0.0046	0.10	2.28	2.800	32.150
161	0.13	0.0049	0.73	2.43	2.800	30.191
162	0.22	0.0055	1.57	2.76	2.800	26.572

DOKUMENTASI PENELITIAN

Persiapan pembuatan model struktur *Hybrid Engineering*
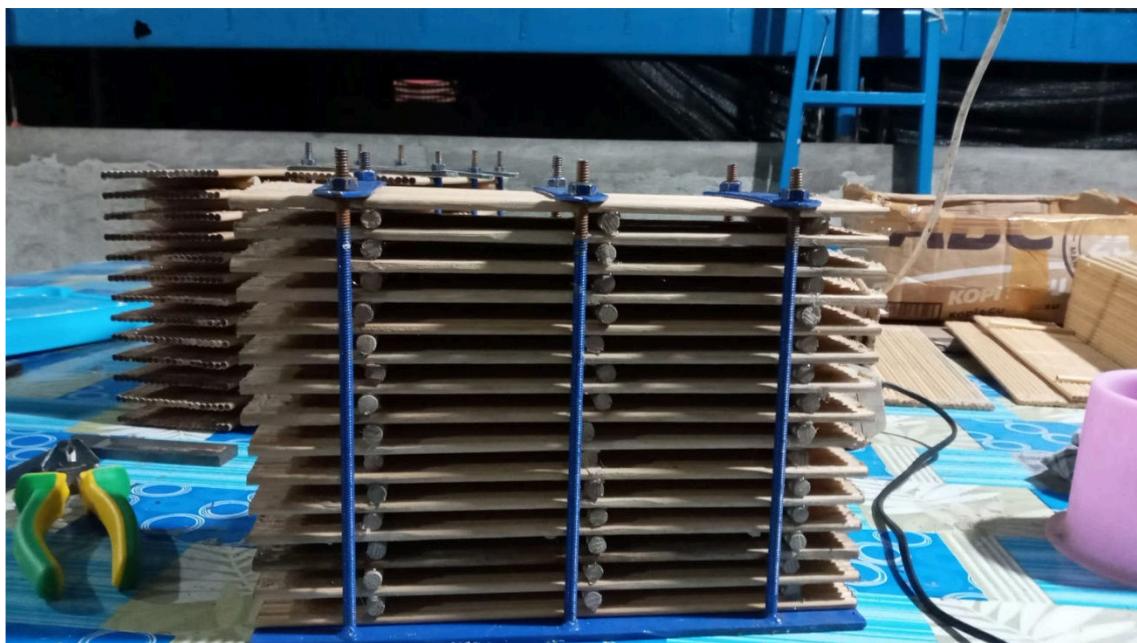
Persiapan pembuatan model struktur *Hybrid Engineering*

DOKUMENTASI PENELITIAN

Pembuatan dasar pada saluran uji *(flume)*

Pengambilan data kecepatan aliran

DOKUMENTASI PENELITIAN
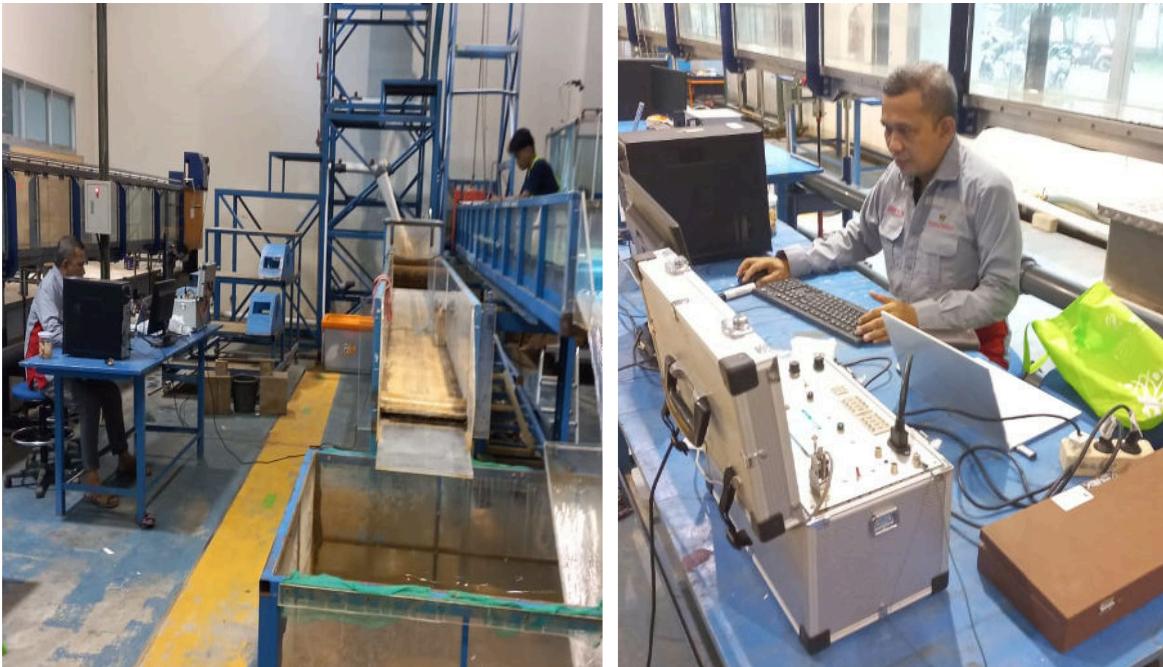
Pengambilan data kecepatan aliran
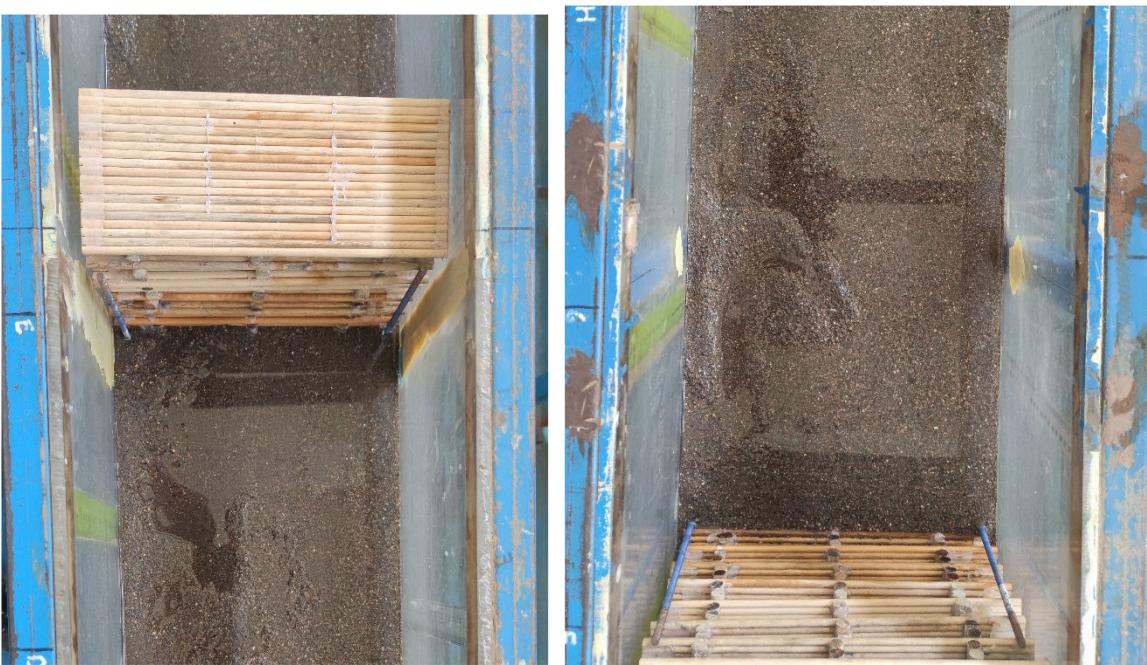
Pola gerusan di bagian hulu dan hilir struktur

DOKUMENTASI PENELITIAN

Kedalaman gerusan pada model struktur $\zeta=25\%$ pada i=0.012 dengan γs=2.79 gr/cm^3

Kedalaman gerusan pada model struktur $\zeta=48\%$ pada i=0.012 dengan γs=2.79 gr/cm^3

DOKUMENTASI PENELITIAN

Kedalaman gerusan pada model struktur $\zeta=61\%$ pada i=0.012 dengan γs=2.79 gr/cm^3

Pola gerusan di bagian hulu pada model struktur $\zeta=61\%$ pada i=0.012 dengan γs=2.79 gr/cm^3

DOKUMENTASI PENELITIAN

Kedalaman gerusan pada model struktur $\zeta=25\%$ pada i=0.012 dengan $\gamma s=2.80$ gr/cm^3

Kedalaman gerusan pada model struktur $\zeta=48\%$ pada i=0.012 dengan $\gamma s=2.80$ gr/cm^3

DOKUMENTASI PENELITIAN

Kedalaman gerusan pada model struktur $\zeta=61\%$ pada i=0.012 dengan γs=2.80 gr/cm^3

Pola gerusan di bagian hulu pada model struktur $\zeta=61\%$ pada i=0.012 dengan γs=2.80 gr/cm^3

DOKUMENTASI PENELITIAN
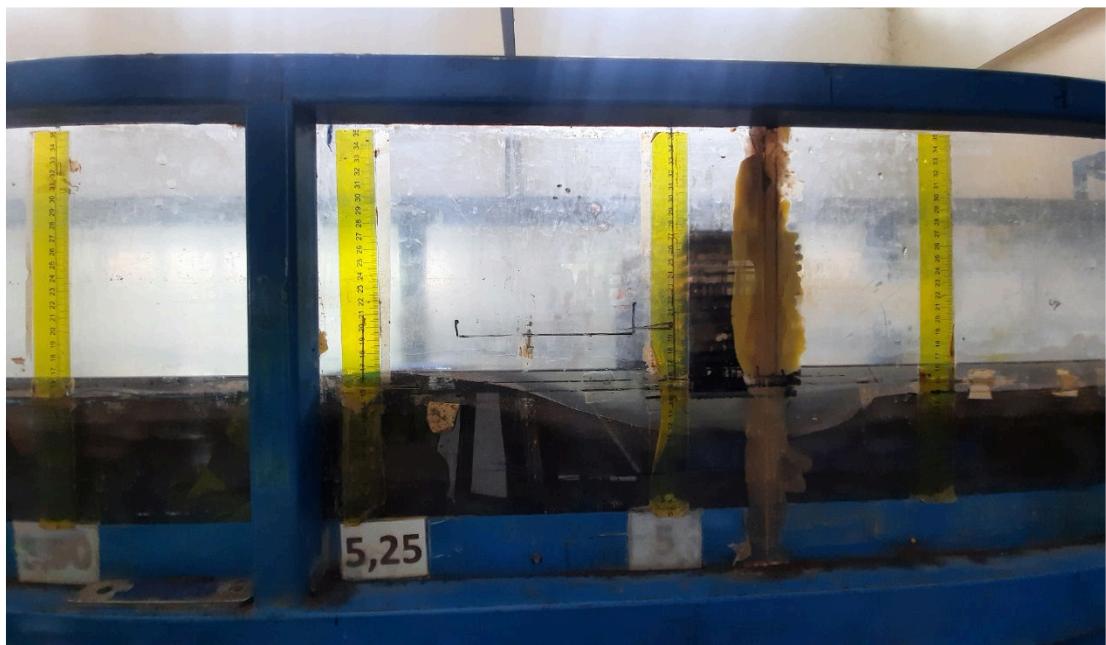
Kedalaman gerusan pada model struktur $\zeta=25\%$ pada i=0.012 dengan γs=2.71 gr/cm^3

Kedalaman gerusan pada model struktur $\zeta=48\%$ pada i=0.012 dengan γs=2.71 gr/cm^3

DOKUMENTASI PENELITIAN

Kedalaman gerusan pada model struktur $\zeta=61\%$ pada i=0.012 dengan γs=2.71 gr/cm^3

Pola gerusan di bagian hulu pada model struktur $\zeta=61\%$ pada i=0.012 dengan γs=2.71 gr/cm^3