LAMPIRAN

Lampiran 1 Data sekunder pengujian *slump-flow*

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
1	Properties of self-compacting concrete containing class F fly ash	Siddique R	2011	465	85	910	590	227.7	10.73	673.3
2				440	110	910	590	228.3	11.01	690
3				385	165	910	590	234.4	9.91	673.3
4				355	195	910	590	241.6	9.91	633.3
5	A simple mix design method for self-compacting concrete	Su N, Hsu K, Chai H	2001	200	157	961	743	176	7.6	720
6				250	154	945	731	173	8.5	710
7				300	148	928	718	172	8.2	700
8	Self-compacting concrete with different levels of pulverized fuel ash	Liu M	2010	539	0	743	924	178	5.93	720
9				437	80	743	924	176	4.65	700
10				333	162	743	924	173	3.71	705
11				225	247	743	924	170	3.21	715
12				115	336	743	924	167	2.93	730
13				0	439	743	924	158	1.98	715
14	Study on Durability Characteristics of Self-Compacting Concrete with Fly Ash	S Dhiyaneshwaran, P Ramanathan, I Baskar, dan R Venkatasubramani	2013	530	0	768	668	238.5	4.6	660
15				477	53	768	668	238.5	4.6	675
16				424	106	768	668	238.5	4.6	685
17				371	159	768	668	238.5	4.6	690
18				318	212	768	668	238.5	4.6	685
19				265	265	768	668	238.5	4.6	678

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
20	Comparative study on effects of Class F fly ash, nano silica and silica fume on properties of high performance self compacting concrete	Jalal M, Pouladkhan A, Harandi O, dan Jafari D	2015	400	0	1003	578	152	2.5	750
21				380	20	1003	578	152	2.5	760
22				360	40	1003	578	152	2.5	800
23				340	60	1003	578	152	2.5	830
24				500	0	1003	578	190	3.12	840
25				475	25	1003	578	190	3.12	870
26	Influence of waterpowder ratio on strength properties of self-compacting concrete containing coal fly ash and bottom ash	Siddique R, Aggarwal P, dan Aggarwal Y	2012	465	85	910	590	225.5	10.73	675
27				440	110	910	590	225.5	11	690
28				385	165	910	590	236.5	9.9	675
29				355	195	910	590	242	9.9	635
30	Evaluation of strength at early ages of self-compacting concrete with high volume fly ash	Sukumar B, Nagamani K, dan Raghavan R	2008	250	275	842	772	178.5	2.1	793
31				333	215	835	766	180.8	2.2	786
32				417	153	828	759	182.4	2.9	773
33				500	101	820	753	192.3	3.6	766
34				583	50	813	745	196.2	4.4	742
35	Performance of Self-Compacting Concrete Containing Different Mineral Admixtures	Ramanathan P, Baskar I, Muthupriya P, dan Venkatasubramami R	2013	350	150	900	600	175	11	660
36				300	200	900	600	175	10.75	675
37				250	250	900	600	175	10.5	680
38	Development Of High-Strength Self-Compacting Concrete With Reduced Segregation Potential	Ravindahrarajah R, Siladyi D, dan Adamopoulos B	2003	350	147	838	934	172	2.68	650
39				350	147	852	921	175	2.68	665
40				350	147	840	921	192.5	2.68	750
41				350	161	840	921	192.5	2.75	695
42				350	168	835	917	192.5	2.79	740
43	Mechanical properties of high-volume fly ash self-compacting concrete mixtures	Dinakar P, Babu K. G., dan Santhanam M.	2008	165	385	656	834	187	11	790
44				225	525	487	620	247.5	15	800
45				275	275	691	880	187	13.75	770
46				325	325	611	777	221	13	800
47				385	165	732	931	170.5	13.75	680
48				495	55	756	962	159.5	16.5	560

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
49	Effects of different curing regimes on the compressive strength properties of self compacting concrete incorporating fly ash and silica fume	Bingol A. F., dan Tohumcu I	2013	500	0	967	694	175	8	630
50				375	125	938	673	175	7.5	660
51				300	200	923	663	175	7.5	680
52				225	275	908	652	175	7.5	700
53	Strength Characteristics of Self Compacting Concrete Containing Flyash	Krishnapal, P., Yadav, R. K., dan Rajeev, C	2013	480	0	890	810	192	13.3	650
54				432	48	890	810	192	9.9	665
55				384	96	890	810	192	9.68	685
56				336	144	890	810	192	9.4	680
57				450	0	890	810	202	9.25	687
58				405	45	890	810	202	8.2	689
59				360	90	890	810	202	6.4	690
60				315	135	890	810	202	4.8	695

Lampiran 2 *Rules* prediksi pengujian *slump-flow*

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
1	L	L	L	L	L	L	L
2	L	L	L	L	L	H	L
3	L	L	L	L	H	L	L
4	L	L	L	L	H	H	L
5	L	L	L	M	L	L	L
6	L	L	L	M	L	H	L
7	L	L	L	M	H	L	L
8	L	L	L	M	H	H	L
9	L	L	L	H	L	L	L
10	L	L	L	H	L	H	L
11	L	L	L	H	H	L	L
12	L	L	L	H	H	H	L
13	L	L	M	L	L	L	L
14	L	L	M	L	L	H	L
15	L	L	M	L	H	L	L
16	L	L	M	L	H	H	L
17	L	L	M	M	L	L	M
18	L	L	M	M	L	H	M
19	L	L	M	M	H	L	M
20	L	L	M	M	H	H	M
21	L	L	M	H	L	L	L
22	L	L	M	H	L	H	L
23	L	L	M	H	H	L	L
24	L	L	M	H	H	H	L
25	L	L	H	L	L	L	M
26	L	L	H	L	L	H	M
27	L	L	H	L	H	L	M
28	L	L	H	L	H	H	M
29	L	L	H	M	L	L	M
30	L	L	H	M	L	H	M
31	L	L	H	M	H	L	M
32	L	L	H	M	H	H	M
33	L	L	H	H	L	L	M
34	L	L	H	H	L	H	M
35	L	L	H	H	H	L	M
36	L	L	H	H	H	H	M
37	L	M	L	L	L	L	M
38	L	M	L	L	L	H	M
39	L	M	L	L	H	L	M
40	L	M	L	L	H	H	M
41	L	M	L	M	L	L	M
42	L	M	L	M	L	H	M
43	L	M	L	M	H	L	M
44	L	M	L	M	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
45	L	M	L	H	L	L	L
46	L	M	L	H	L	H	L
47	L	M	L	H	H	L	L
48	L	M	L	H	H	H	L
49	L	M	M	L	L	L	M
50	L	M	M	L	L	H	M
51	L	M	M	L	H	L	M
52	L	M	M	L	H	H	M
53	L	M	M	M	L	L	M
54	L	M	M	M	L	H	M
55	L	M	M	M	H	L	M
56	L	M	M	M	H	H	M
57	L	M	M	H	L	L	L
58	L	M	M	H	L	H	L
59	L	M	M	H	H	L	L
60	L	M	M	H	H	H	L
61	L	M	H	L	L	L	H
62	L	M	H	L	L	H	H
63	L	M	H	L	H	L	H
64	L	M	H	L	H	H	H
65	L	M	H	M	L	L	M
66	L	M	H	M	L	H	M
67	L	M	H	M	H	L	M
68	L	M	H	M	H	H	M
69	L	M	H	H	L	L	M
70	L	M	H	H	L	H	M
71	L	M	H	H	H	L	M
72	L	M	H	H	H	H	M
73	L	H	L	L	L	L	M
74	L	H	L	L	L	H	M
75	L	H	L	L	H	L	L
76	L	H	L	L	H	H	L
77	L	H	L	M	L	L	M
78	L	H	L	M	L	H	M
79	L	H	L	M	H	L	L
80	L	H	L	M	H	H	L
81	L	H	L	H	L	L	L
82	L	H	L	H	L	H	L
83	L	H	L	H	H	L	L
84	L	H	L	H	H	H	L
85	L	H	M	L	L	L	M
86	L	H	M	L	L	H	M
87	L	H	M	L	H	L	M
88	L	H	M	L	H	H	M
89	L	H	M	M	L	L	M
90	L	H	M	M	L	H	M
91	L	H	M	M	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
92	L	H	M	M	H	H	M
93	L	H	M	H	L	L	M
94	L	H	M	H	L	H	M
95	L	H	M	H	H	L	M
96	L	H	M	H	H	H	M
97	L	H	H	L	L	L	H
98	L	H	H	L	L	H	H
99	L	H	H	L	H	L	H
100	L	H	H	L	H	H	H
101	L	H	H	M	L	L	M
102	L	H	H	M	L	H	M
103	L	H	H	M	H	L	M
104	L	H	H	M	H	H	M
105	L	H	H	H	L	L	M
106	L	H	H	H	L	H	M
107	L	H	H	H	H	L	M
108	L	H	H	H	H	H	M
109	M	L	L	L	L	L	M
110	M	L	L	L	L	H	M
111	M	L	L	L	H	L	M
112	M	L	L	L	H	H	M
113	M	L	L	M	L	L	M
114	M	L	L	M	L	H	M
115	M	L	L	M	H	L	M
116	M	L	L	M	H	H	M
117	M	L	L	H	L	L	L
118	M	L	L	H	L	H	L
119	M	L	L	H	H	L	L
120	M	L	L	H	H	H	L
121	M	L	M	L	L	L	M
122	M	L	M	L	L	H	M
123	M	L	M	L	H	L	M
124	M	L	M	L	H	H	M
125	M	L	M	M	L	L	H
126	M	L	M	M	L	H	H
127	M	L	M	M	H	L	M
128	M	L	M	M	H	H	M
129	M	L	M	H	L	L	M
130	M	L	M	H	L	H	M
131	M	L	M	H	H	L	M
132	M	L	M	H	H	H	M
133	M	L	H	L	L	L	H
134	M	L	H	L	L	H	H
135	M	L	H	L	H	L	M
136	M	L	H	L	H	H	L
137	M	L	H	M	L	L	L
138	M	L	H	M	L	H	L

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
139	M	L	H	M	H	L	M
140	M	L	H	M	H	H	M
141	M	L	H	H	L	L	M
142	M	L	H	H	L	H	M
143	M	L	H	H	H	L	M
144	M	L	H	H	H	H	M
145	M	M	L	L	L	L	L
146	M	M	L	L	L	H	L
147	M	M	L	L	H	L	L
148	M	M	L	L	H	H	L
149	M	M	L	M	L	L	H
150	M	M	L	M	L	H	H
151	M	M	L	M	H	L	M
152	M	M	L	M	H	H	M
153	M	M	L	H	L	L	H
154	M	M	L	H	L	H	H
155	M	M	L	H	H	L	M
156	M	M	L	H	H	H	M
157	M	M	M	L	L	L	M
158	M	M	M	L	L	H	M
159	M	M	M	L	H	L	L
160	M	M	M	L	H	H	L
161	M	M	M	M	L	L	M
162	M	M	M	M	L	H	M
163	M	M	M	M	H	L	M
164	M	M	M	M	H	H	M
165	M	M	M	H	L	L	M
166	M	M	M	H	L	H	M
167	M	M	M	H	H	L	M
168	M	M	M	H	H	H	M
169	M	M	H	L	L	L	M
170	M	M	H	L	L	H	L
171	M	M	H	L	H	L	L
172	M	M	H	L	H	H	L
173	M	M	H	M	L	L	M
174	M	M	H	M	L	H	L
175	M	M	H	M	H	L	L
176	M	M	H	M	H	H	L
177	M	M	H	H	L	L	L
178	M	M	H	H	L	H	L
179	M	M	H	H	H	L	L
180	M	M	H	H	H	H	L
181	M	H	L	L	L	L	M
182	M	H	L	L	L	H	M
183	M	H	L	L	H	L	M
184	M	H	L	L	H	H	M
185	M	H	L	M	L	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
186	M	H	L	M	L	H	M
187	M	H	L	M	H	L	M
188	M	H	L	M	H	H	M
189	M	H	L	H	L	L	L
190	M	H	L	H	L	H	L
191	M	H	L	H	H	L	L
192	M	H	L	H	H	H	L
193	M	H	M	L	L	L	M
194	M	H	M	L	L	H	M
195	M	H	M	L	H	L	L
196	M	H	M	L	H	H	L
197	M	H	M	M	L	L	M
198	M	H	M	M	L	H	M
199	M	H	M	M	H	L	M
200	M	H	M	M	H	H	M
201	M	H	M	H	L	L	M
202	M	H	M	H	L	H	M
203	M	H	M	H	H	L	M
204	M	H	M	H	H	H	M
205	M	H	H	L	L	L	H
206	M	H	H	L	L	H	H
207	M	H	H	L	H	L	H
208	M	H	H	L	H	H	H
209	M	H	H	M	L	L	H
210	M	H	H	M	L	H	H
211	M	H	H	M	H	L	H
212	M	H	H	M	H	H	H
213	M	H	H	H	L	L	M
214	M	H	H	H	L	H	M
215	M	H	H	H	H	L	M
216	M	H	H	H	H	H	M
217	H	L	L	L	L	L	L
218	H	L	L	L	L	H	L
219	H	L	L	L	H	L	L
220	H	L	L	L	H	H	L
221	H	L	L	M	L	L	L
222	H	L	L	M	L	H	L
223	H	L	L	M	H	L	L
224	H	L	L	M	H	H	L
225	H	L	L	H	L	L	L
226	H	L	L	H	L	H	L
227	H	L	L	H	H	L	L
228	H	L	L	H	H	H	L
229	H	L	M	L	L	L	M
230	H	L	M	L	L	H	M
231	H	L	M	L	H	L	M
232	H	L	M	L	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
233	H	L	M	M	L	L	M
234	H	L	M	M	L	H	M
235	H	L	M	M	H	L	M
236	H	L	M	M	H	H	M
237	H	L	M	H	L	L	M
238	H	L	M	H	L	H	L
239	H	L	M	H	H	L	M
240	H	L	M	H	H	H	M
241	H	L	H	L	L	L	H
242	H	L	H	L	L	H	H
243	H	L	H	L	H	L	H
244	H	L	H	L	H	H	M
245	H	L	H	M	L	L	L
246	H	L	H	M	L	H	L
247	H	L	H	M	H	L	L
248	H	L	H	M	H	H	L
249	H	L	H	H	L	L	L
250	H	L	H	H	L	H	L
251	H	L	H	H	H	L	L
252	H	L	H	H	H	H	L
253	H	M	L	L	L	L	M
254	H	M	L	L	L	H	M
255	H	M	L	L	H	L	M
256	H	M	L	L	H	H	M
257	H	M	L	M	L	L	M
258	H	M	L	M	L	H	M
259	H	M	L	M	H	L	L
260	H	M	L	M	H	H	L
261	H	M	L	H	L	L	L
262	H	M	L	H	L	H	L
263	H	M	L	H	H	L	L
264	H	M	L	H	H	H	L
265	H	M	M	L	L	L	H
266	H	M	M	L	L	H	H
267	H	M	M	L	H	L	M
268	H	M	M	L	H	H	M
269	H	M	M	M	L	L	M
270	H	M	M	M	L	H	M
271	H	M	M	M	H	L	M
272	H	M	M	M	H	H	M
273	H	M	M	H	L	L	M
274	H	M	M	H	L	H	M
275	H	M	M	H	H	L	L
276	H	M	M	H	H	H	L
277	H	M	H	L	L	L	H
278	H	M	H	L	L	H	H
279	H	M	H	L	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*Slump-flow* (mm)
280	H	M	H	L	H	H	M
281	H	M	H	M	L	L	M
282	H	M	H	M	L	H	M
283	H	M	H	M	H	L	M
284	H	M	H	M	H	H	M
285	H	M	H	H	L	L	M
286	H	M	H	H	L	H	M
287	H	M	H	H	H	L	M
288	H	M	H	H	H	H	M
289	H	H	L	L	L	L	M
290	H	H	L	L	L	H	M
291	H	H	L	L	H	L	M
292	H	H	L	L	H	H	M
293	H	H	L	M	L	L	M
294	H	H	L	M	L	H	M
295	H	H	L	M	H	L	L
296	H	H	L	M	H	H	L
297	H	H	L	H	L	L	L
298	H	H	L	H	L	H	L
299	H	H	L	H	H	L	L
300	H	H	L	H	H	H	L
301	H	H	M	L	L	L	M
302	H	H	M	L	L	H	M
303	H	H	M	L	H	L	M
304	H	H	M	L	H	H	M
305	H	H	M	M	L	L	M
306	H	H	M	M	L	H	M
307	H	H	M	M	H	L	M
308	H	H	M	M	H	H	M
309	H	H	M	H	L	L	L
310	H	H	M	H	L	H	L
311	H	H	M	H	H	L	L
312	H	H	M	H	H	H	L
313	H	H	H	L	L	L	H
314	H	H	H	L	L	H	H
315	H	H	H	L	H	L	H
316	H	H	H	L	H	H	H
317	H	H	H	M	L	L	M
318	H	H	H	M	L	H	M
319	H	H	H	M	H	L	M
320	H	H	H	M	H	H	M
321	H	H	H	H	L	L	M
322	H	H	H	H	L	H	M
323	H	H	H	H	H	L	M
324	H	H	H	H	H	H	M

Lampiran 3 Data sekunder pengujian *T50*

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*T50* (s)
1	Properties of self-compacting concrete containing class F fly ash	Siddique R	2011	465	85	910	590	227.7	10.73	4.5
2				440	110	910	590	228.3	11.01	3
3				415	135	910	590	233.3	9.91	4.4
4				385	165	910	590	234.4	9.91	3
5				355	195	910	590	241.6	9.91	4
6	Study on Durability Characteristics of Self-Compacting Concrete with Fly Ash	S Dhiyaneshwaran, P Ramanathan, I Baskar, dan R Venkatasubramani	2013	530	0	768	668	238.5	4.6	5
7				477	53	768	668	238.5	4.6	4
8				424	106	768	668	238.5	4.6	3.6
9				371	159	768	668	238.5	4.6	3.1
10				318	212	768	668	238.5	4.6	3.4
11				265	265	768	668	238.5	4.6	3.7
12	Comparative study on effects of Class F fly ash, nano silica and silica fume on properties of high performance self compacting concrete	Jalal M, Pouladkhan A, Harandi O, dan Jafari D	2015	400	0	1003	578	152	2.5	2
13				380	20	1003	578	152	2.5	2
14				360	40	1003	578	152	2.5	1.7
15				340	60	1003	578	152	2.5	1.5
16	Influence of waterpowder ratio on strength properties of self-compacting concrete containing coal fly ash and bottom ash	Siddique R, Aggarwal P, dan Aggarwal Y	2012	465	85	910	590	225.5	10.73	4.5
17				440	110	910	590	225.5	11	3
18				415	135	910	590	231	9.9	4.5
19				385	165	910	590	236.5	9.9	3
20				355	195	910	590	242	9.9	4
21	Evaluation of strength at early ages of self-compacting concrete with high volume fly ash	Sukumar B, Nagamani K, dan Raghavan R	2008	250	275	842	772	178.5	2.1	1
22				333	215	835	766	180.8	2.2	1
23				500	101	820	753	192.3	3.6	1.5
24				583	50	813	745	196.2	4.4	2

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*T50* (s)
25	Performance of Self-Compacting Concrete Containing Different Mineral Admixtures	Ramanathan P, Baskar I, Muthupriya P, dan Venkatasubramami R	2013	350	150	900	600	175	11	6.1
26				300	200	900	600	175	10.75	6.6
27				250	250	900	600	175	10.5	7
28	Effects of different curing regimes on the compressive strength properties of self compacting concrete incorporating fly ash and silica fume	Bingol A. F., dan Tohumcu I	2013	500	0	967	694	175	8	6.13
29	Strength Characteristics of Self Compacting Concrete Containing Flyash	Krishnapal dkk	2013	480	0	890	810	192	13.3	5
30				432	48	890	810	192	9.9	4
31				384	96	890	810	192	9.68	3.6
32				336	144	890	810	192	9.4	3
33				450	0	890	810	202	9.25	4.1
34				405	45	890	810	202	8.2	3.5
35				360	90	890	810	202	6.4	3
36				315	135	890	810	202	4.8	3

Lampiran 4 *Rules* prediksi pengujian *T50*

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*T50* (s)
1	L	L	L	L	L	L	L
2	L	L	L	L	L	H	L
3	L	L	L	L	H	L	L
4	L	L	L	L	H	H	L
5	L	L	L	M	L	L	L
6	L	L	L	M	L	H	L
7	L	L	L	M	H	L	L
8	L	L	L	M	H	H	L
9	L	L	L	H	L	L	L
10	L	L	L	H	L	H	L
11	L	L	L	H	H	L	L
12	L	L	L	H	H	H	L
13	L	L	M	L	L	L	L
14	L	L	M	L	L	H	L
15	L	L	M	L	H	L	L
16	L	L	M	L	H	H	L
17	L	L	M	M	L	L	M
18	L	L	M	M	L	H	M
19	L	L	M	M	H	L	M
20	L	L	M	M	H	H	M
21	L	L	M	H	L	L	L
22	L	L	M	H	L	H	L
23	L	L	M	H	H	L	L
24	L	L	M	H	H	H	L
25	L	L	H	L	L	L	M
26	L	L	H	L	L	H	M
27	L	L	H	L	H	L	M
28	L	L	H	L	H	H	M
29	L	L	H	M	L	L	M
30	L	L	H	M	L	H	M
31	L	L	H	M	H	L	M
32	L	L	H	M	H	H	M
33	L	L	H	H	L	L	M
34	L	L	H	H	L	H	M
35	L	L	H	H	H	L	M
36	L	L	H	H	H	H	M
37	L	M	L	L	L	L	M
38	L	M	L	L	L	H	M
39	L	M	L	L	H	L	M
40	L	M	L	L	H	H	M
41	L	M	L	M	L	L	M
42	L	M	L	M	L	H	M
43	L	M	L	M	H	L	M
44	L	M	L	M	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*T50* (s)
45	L	M	L	H	L	L	L
46	L	M	L	H	L	H	L
47	L	M	L	H	H	L	L
48	L	M	L	H	H	H	L
49	L	M	M	L	L	L	M
50	L	M	M	L	L	H	M
51	L	M	M	L	H	L	M
52	L	M	M	L	H	H	M
53	L	M	M	M	L	L	M
54	L	M	M	M	L	H	M
55	L	M	M	M	H	L	M
56	L	M	M	M	H	H	M
57	L	M	M	H	L	L	L
58	L	M	M	H	L	H	L
59	L	M	M	H	H	L	L
60	L	M	M	H	H	H	L
61	L	M	H	L	L	L	H
62	L	M	H	L	L	H	H
63	L	M	H	L	H	L	H
64	L	M	H	L	H	H	H
65	L	M	H	M	L	L	M
66	L	M	H	M	L	H	M
67	L	M	H	M	H	L	M
68	L	M	H	M	H	H	M
69	L	M	H	H	L	L	M
70	L	M	H	H	L	H	M
71	L	M	H	H	H	L	M
72	L	M	H	H	H	H	M
73	L	H	L	L	L	L	M
74	L	H	L	L	L	H	M
75	L	H	L	L	H	L	L
76	L	H	L	L	H	H	L
77	L	H	L	M	L	L	M
78	L	H	L	M	L	H	M
79	L	H	L	M	H	L	L
80	L	H	L	M	H	H	L
81	L	H	L	H	L	L	L
82	L	H	L	H	L	H	L
83	L	H	L	H	H	L	L
84	L	H	L	H	H	H	L
85	L	H	M	L	L	L	M
86	L	H	M	L	L	H	M
87	L	H	M	L	H	L	M
88	L	H	M	L	H	H	M
89	L	H	M	M	L	L	M
90	L	H	M	M	L	H	M
91	L	H	M	M	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*T50* (s)
92	L	H	M	M	H	H	M
93	L	H	M	H	L	L	M
94	L	H	M	H	L	H	M
95	L	H	M	H	H	L	M
96	L	H	M	H	H	H	M
97	L	H	H	L	L	L	H
98	L	H	H	L	L	H	H
99	L	H	H	L	H	L	H
100	L	H	H	L	H	H	H
101	L	H	H	M	L	L	M
102	L	H	H	M	L	H	M
103	L	H	H	M	H	L	M
104	L	H	H	M	H	H	M
105	L	H	H	H	L	L	M
106	L	H	H	H	L	H	M
107	L	H	H	H	H	L	M
108	L	H	H	H	H	H	M
109	M	L	L	L	L	L	M
110	M	L	L	L	L	H	M
111	M	L	L	L	H	L	M
112	M	L	L	L	H	H	M
113	M	L	L	M	L	L	M
114	M	L	L	M	L	H	M
115	M	L	L	M	H	L	M
116	M	L	L	M	H	H	M
117	M	L	L	H	L	L	L
118	M	L	L	H	L	H	L
119	M	L	L	H	H	L	L
120	M	L	L	H	H	H	L
121	M	L	M	L	L	L	H
122	M	L	M	L	L	H	H
123	M	L	M	L	H	L	L
124	M	L	M	L	H	H	M
125	M	L	M	M	L	L	M
126	M	L	M	M	L	H	L
127	M	L	M	M	H	L	L
128	M	L	M	M	H	H	L
129	M	L	M	H	L	L	M
130	M	L	M	H	L	H	M
131	M	L	M	H	H	L	M
132	M	L	M	H	H	H	M
133	M	L	H	L	L	L	L
134	M	L	H	L	L	H	H
135	M	L	H	L	H	L	M
136	M	L	H	L	H	H	L
137	M	L	H	M	L	L	L
138	M	L	H	M	L	H	L

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*T50* (s)
139	M	L	H	M	H	L	L
140	M	L	H	M	H	H	M
141	M	L	H	H	L	L	M
142	M	L	H	H	L	H	M
143	M	L	H	H	H	L	M
144	M	L	H	H	H	H	M
145	M	M	L	L	L	L	L
146	M	M	L	L	L	H	L
147	M	M	L	L	H	L	L
148	M	M	L	L	H	H	L
149	M	M	L	M	L	L	H
150	M	M	L	M	L	H	H
151	M	M	L	M	H	L	M
152	M	M	L	M	H	H	M
153	M	M	L	H	L	L	H
154	M	M	L	H	L	H	H
155	M	M	L	H	H	L	M
156	M	M	L	H	H	H	M
157	M	M	M	L	L	L	H
158	M	M	M	L	L	H	H
159	M	M	M	L	H	L	M
160	M	M	M	L	H	H	M
161	M	M	M	M	L	L	L
162	M	M	M	M	L	H	L
163	M	M	M	M	H	L	L
164	M	M	M	M	H	H	L
165	M	M	M	H	L	L	M
166	M	M	M	H	L	H	M
167	M	M	M	H	H	L	M
168	M	M	M	H	H	H	M
169	M	M	H	L	L	L	H
170	M	M	H	L	L	H	H
171	M	M	H	L	H	L	M
172	M	M	H	L	H	H	M
173	M	M	H	M	L	L	L
174	M	M	H	M	L	H	L
175	M	M	H	M	H	L	L
176	M	M	H	M	H	H	L
177	M	M	H	H	L	L	L
178	M	M	H	H	L	H	L
179	M	M	H	H	H	L	L
180	M	M	H	H	H	H	L
181	M	H	L	L	L	L	M
182	M	H	L	L	L	H	M
183	M	H	L	L	H	L	M
184	M	H	L	L	H	H	M
185	M	H	L	M	L	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*T50* (s)
186	M	H	L	M	L	H	M
187	M	H	L	M	H	L	M
188	M	H	L	M	H	H	M
189	M	H	L	H	L	L	L
190	M	H	L	H	L	H	L
191	M	H	L	H	H	L	L
192	M	H	L	H	H	H	L
193	M	H	M	L	L	L	M
194	M	H	M	L	L	H	M
195	M	H	M	L	H	L	L
196	M	H	M	L	H	H	L
197	M	H	M	M	L	L	M
198	M	H	M	M	L	H	M
199	M	H	M	M	H	L	M
200	M	H	M	M	H	H	M
201	M	H	M	H	L	L	M
202	M	H	M	H	L	H	M
203	M	H	M	H	H	L	M
204	M	H	M	H	H	H	M
205	M	H	H	L	L	L	H
206	M	H	H	L	L	H	H
207	M	H	H	L	H	L	H
208	M	H	H	L	H	H	H
209	M	H	H	M	L	L	H
210	M	H	H	M	L	H	H
211	M	H	H	M	H	L	H
212	M	H	H	M	H	H	H
213	M	H	H	H	L	L	M
214	M	H	H	H	L	H	M
215	M	H	H	H	H	L	M
216	M	H	H	H	H	H	M
217	H	L	L	L	L	L	L
218	H	L	L	L	L	H	L
219	H	L	L	L	H	L	L
220	H	L	L	L	H	H	L
221	H	L	L	M	L	L	L
222	H	L	L	M	L	H	L
223	H	L	L	M	H	L	L
224	H	L	L	M	H	H	L
225	H	L	L	H	L	L	L
226	H	L	L	H	L	H	L
227	H	L	L	H	H	L	L
228	H	L	L	H	H	H	L
229	H	L	M	L	L	L	H
230	H	L	M	L	L	H	H
231	H	L	M	L	H	L	H
232	H	L	M	L	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*T50* (s)
233	H	L	M	M	L	L	L
234	H	L	M	M	L	H	H
235	H	L	M	M	H	L	L
236	H	L	M	M	H	H	L
237	H	L	M	H	L	L	M
238	H	L	M	H	L	H	L
239	H	L	M	H	H	L	M
240	H	L	M	H	H	H	M
241	H	L	H	L	L	L	H
242	H	L	H	L	L	H	H
243	H	L	H	L	H	L	H
244	H	L	H	L	H	H	M
245	H	L	H	M	L	L	H
246	H	L	H	M	L	H	H
247	H	L	H	M	H	L	L
248	H	L	H	M	H	H	L
249	H	L	H	H	L	L	L
250	H	L	H	H	L	H	L
251	H	L	H	H	H	L	L
252	H	L	H	H	H	H	L
253	H	M	L	L	L	L	M
254	H	M	L	L	L	H	M
255	H	M	L	L	H	L	M
256	H	M	L	L	H	H	M
257	H	M	L	M	L	L	M
258	H	M	L	M	L	H	M
259	H	M	L	M	H	L	L
260	H	M	L	M	H	H	L
261	H	M	L	H	L	L	L
262	H	M	L	H	L	H	L
263	H	M	L	H	H	L	L
264	H	M	L	H	H	H	L
265	H	M	M	L	L	L	H
266	H	M	M	L	L	H	H
267	H	M	M	L	H	L	M
268	H	M	M	L	H	H	M
269	H	M	M	M	L	L	L
270	H	M	M	M	L	H	L
271	H	M	M	M	H	L	L
272	H	M	M	M	H	H	M
273	H	M	M	H	L	L	M
274	H	M	M	H	L	H	M
275	H	M	M	H	H	L	L
276	H	M	M	H	H	H	L
277	H	M	H	L	L	L	H
278	H	M	H	L	L	H	H
279	H	M	H	L	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*T50* (s)
280	H	M	H	L	H	H	M
281	H	M	H	M	L	L	L
282	H	M	H	M	L	H	H
283	H	M	H	M	H	L	L
284	H	M	H	M	H	H	M
285	H	M	H	H	L	L	M
286	H	M	H	H	L	H	M
287	H	M	H	H	H	L	M
288	H	M	H	H	H	H	M
289	H	H	L	L	L	L	M
290	H	H	L	L	L	H	M
291	H	H	L	L	H	L	M
292	H	H	L	L	H	H	M
293	H	H	L	M	L	L	M
294	H	H	L	M	L	H	M
295	H	H	L	M	H	L	L
296	H	H	L	M	H	H	L
297	H	H	L	H	L	L	L
298	H	H	L	H	L	H	L
299	H	H	L	H	H	L	L
300	H	H	L	H	H	H	L
301	H	H	M	L	L	L	M
302	H	H	M	L	L	H	M
303	H	H	M	L	H	L	M
304	H	H	M	L	H	H	M
305	H	H	M	M	L	L	M
306	H	H	M	M	L	H	M
307	H	H	M	M	H	L	M
308	H	H	M	M	H	H	M
309	H	H	M	H	L	L	L
310	H	H	M	H	L	H	L
311	H	H	M	H	H	L	L
312	H	H	M	H	H	H	L
313	H	H	H	L	L	L	H
314	H	H	H	L	L	H	H
315	H	H	H	L	H	L	H
316	H	H	H	L	H	H	H
317	H	H	H	M	L	L	M
318	H	H	H	M	L	H	M
319	H	H	H	M	H	L	M
320	H	H	H	M	H	H	M
321	H	H	H	H	L	L	M
322	H	H	H	H	L	H	M
323	H	H	H	H	H	L	M
324	H	H	H	H	H	H	M

Lampiran 5 Data pengujian *v-funnel*

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*V-funnel* (s)
1	Properties of self-compacting concrete containing class F fly ash	Siddique, R.	2011	465	85	910	590	227.7	10.73	7.5
2				440	110	910	590	228.3	11.01	4.5
3				415	135	910	590	233.3	9.91	5.2
4				385	165	910	590	234.4	9.91	6.1
5				355	195	910	590	241.6	9.91	10
6	A simple mix design method for self-compacting concrete	Su N, Hsu K,Chai H	2001	200	157	961	743	176	7.6	14
7				250	154	945	731	173	8.5	12
8				300	148	928	718	172	8.2	11
9	Self-compacting concrete with different levels of pulverized fuel ash	Liu M	2010	539	0	743	924	178	5.93	8.1
10				437	80	743	924	176	4.65	8.1
11				333	162	743	924	173	3.71	6.1
12				225	247	743	924	170	3.21	6.3
13				115	336	743	924	167	2.93	7.2
14				0	439	743	924	158	1.98	9.1
15	Study on Durability Characteristics of Self-Compacting Concrete with Fly Ash	S Dhiyaneshwaran, P Ramanathan, I Baskar, dan R Venkatasubramani	2013	530	0	768	668	238.5	4.6	12
16				477	53	768	668	238.5	4.6	10.6
17				424	106	768	668	238.5	4.6	9.8
18				371	159	768	668	238.5	4.6	8.5
19				318	212	768	668	238.5	4.6	7.9
20				265	265	768	668	238.5	4.6	7.6
21	Comparative study on effects of Class F fly ash, nano silica and silica fume on properties of high performance self compacting concrete	Jalal M, Pouladkhan A, Harandi O, dan Jafari D	2015	400	0	1003	578	152	2.5	9
22				380	20	1003	578	152	2.5	8
23				360	40	1003	578	152	2.5	7
24				340	60	1003	578	152	2.5	6
25				500	0	1003	578	190	3.12	4
26				475	25	1003	578	190	3.12	3.5

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*V-funnel* (s)
27	Influence of waterpowder ratio on strength properties of self-compacting concrete containing coal fly ash and bottom ash	Siddique R, Aggarwal P, dan Aggarwal Y	2012	465	85	910	590	225.5	10.73	7.5
28				440	110	910	590	225.5	11	4.5
29				415	135	910	590	231	9.9	7
30				385	165	910	590	236.5	9.9	5
31				355	195	910	590	242	9.9	10
32	Evaluation of strength at early ages of self-compacting concrete with high volume fly ash	Sukumar B, Nagamani K, dan Raghavan R	2008	333	215	835	766	180.8	2.2	4
33				417	153	828	759	182.4	2.9	4
34	Performance of Self-Compacting Concrete Containing Different Mineral Admixtures	Ramanathan P., dkk	2013	350	150	900	600	175	11	10
35				300	200	900	600	175	10.75	9
36				250	250	900	600	175	10.5	9.15
37	Mechanical properties of high-volume fly ash self-compacting concrete mixtures	Dinakar, P., Babu, K. G., dan Santhanam, M.	2008	82.5	467.5	624	794	225.5	11	6
38				165	385	656	834	187	11	5
39				225	525	487	620	247.5	15	6
40				275	275	691	880	187	13.75	11
41				325	325	611	777	221	13	7
42				385	165	732	931	170.5	13.75	12
43				350	150	707	901	180	8.75	10
44				495	55	756	962	159.5	16.5	15
45	Effects of different curing regimes on the compressive strength properties of self compacting concrete incorporating fly ash and silica fume	Bingol, A. F., dan Tohumcu, .I	2013	500	0	967	694	175	8	6.08
46				225	275	908	652	175	7.5	7
47	Strength Characteristics of Self Compacting Concrete Containing Flyash	Krishnapal, P., Yadav, R. K., dan Rajeev, C	2013	480	0	890	810	192	13.3	12
48				432	48	890	810	192	9.9	9
49				384	96	890	810	192	9.68	8.4
50				336	144	890	810	192	9.4	8.1
51				450	0	890	810	202	9.25	9
52				405	45	890	810	202	8.2	8.6
53				360	90	890	810	202	6.4	8
54				315	135	890	810	202	4.8	8

Lampiran 6 *Rules* prediksi pengujian *v-funnel*

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*V-funnel* (s)
1	L	L	L	L	L	L	L
2	L	L	L	L	L	H	L
3	L	L	L	L	H	L	L
4	L	L	L	L	H	H	L
5	L	L	L	M	L	L	L
6	L	L	L	M	L	H	L
7	L	L	L	M	H	L	L
8	L	L	L	M	H	H	L
9	L	L	L	H	L	L	L
10	L	L	L	H	L	H	L
11	L	L	L	H	H	L	L
12	L	L	L	H	H	H	L
13	L	L	M	L	L	L	L
14	L	L	M	L	L	H	L
15	L	L	M	L	H	L	L
16	L	L	M	L	H	H	L
17	L	L	M	M	L	L	M
18	L	L	M	M	L	H	M
19	L	L	M	M	H	L	M
20	L	L	M	M	H	H	M
21	L	L	M	H	L	L	L
22	L	L	M	H	L	H	L
23	L	L	M	H	H	L	L
24	L	L	M	H	H	H	L
25	L	L	H	L	L	L	M
26	L	L	H	L	L	H	M
27	L	L	H	L	H	L	M
28	L	L	H	L	H	H	M
29	L	L	H	M	L	L	M
30	L	L	H	M	L	H	M
31	L	L	H	M	H	L	M
32	L	L	H	M	H	H	M
33	L	L	H	H	L	L	M
34	L	L	H	H	L	H	M
35	L	L	H	H	H	L	M
36	L	L	H	H	H	H	M
37	L	M	L	L	L	L	M
38	L	M	L	L	L	H	M
39	L	M	L	L	H	L	M
40	L	M	L	L	H	H	M
41	L	M	L	M	L	L	M
42	L	M	L	M	L	H	M
43	L	M	L	M	H	L	M
44	L	M	L	M	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*V-funnel* (s)
45	L	M	L	H	L	L	L
46	L	M	L	H	L	H	L
47	L	M	L	H	H	L	L
48	L	M	L	H	H	H	L
49	L	M	M	L	L	L	M
50	L	M	M	L	L	H	M
51	L	M	M	L	H	L	M
52	L	M	M	L	H	H	M
53	L	M	M	M	L	L	L
54	L	M	M	M	L	H	L
55	L	M	M	M	H	L	M
56	L	M	M	M	H	H	M
57	L	M	M	H	L	L	M
58	L	M	M	H	L	H	L
59	L	M	M	H	H	L	L
60	L	M	M	H	H	H	L
61	L	M	H	L	L	L	H
62	L	M	H	L	L	H	H
63	L	M	H	L	H	L	H
64	L	M	H	L	H	H	H
65	L	M	H	M	L	L	M
66	L	M	H	M	L	H	M
67	L	M	H	M	H	L	M
68	L	M	H	M	H	H	M
69	L	M	H	H	L	L	M
70	L	M	H	H	L	H	M
71	L	M	H	H	H	L	M
72	L	M	H	H	H	H	M
73	L	H	L	L	L	L	M
74	L	H	L	L	L	H	M
75	L	H	L	L	H	L	L
76	L	H	L	L	H	H	L
77	L	H	L	M	L	L	M
78	L	H	L	M	L	H	M
79	L	H	L	M	H	L	L
80	L	H	L	M	H	H	L
81	L	H	L	H	L	L	L
82	L	H	L	H	L	H	L
83	L	H	L	H	H	L	L
84	L	H	L	H	H	H	L
85	L	H	M	L	L	L	M
86	L	H	M	L	L	H	M
87	L	H	M	L	H	L	M
88	L	H	M	L	H	H	M
89	L	H	M	M	L	L	L
90	L	H	M	M	L	H	L
91	L	H	M	M	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*V-funnel* (s)
92	L	H	M	M	H	H	M
93	L	H	M	H	L	L	MH
94	L	H	M	H	L	H	M
95	L	H	M	H	H	L	M
96	L	H	M	H	H	H	M
97	L	H	H	L	L	L	H
98	L	H	H	L	L	H	H
99	L	H	H	L	H	L	H
100	L	H	H	L	H	H	H
101	L	H	H	M	L	L	M
102	L	H	H	M	L	H	M
103	L	H	H	M	H	L	M
104	L	H	H	M	H	H	M
105	L	H	H	H	L	L	M
106	L	H	H	H	L	H	M
107	L	H	H	H	H	L	M
108	L	H	H	H	H	H	M
109	M	L	L	L	L	L	M
110	M	L	L	L	L	H	M
111	M	L	L	L	H	L	M
112	M	L	L	L	H	H	M
113	M	L	L	M	L	L	M
114	M	L	L	M	L	H	M
115	M	L	L	M	H	L	M
116	M	L	L	M	H	H	M
117	M	L	L	H	L	L	L
118	M	L	L	H	L	H	L
119	M	L	L	H	H	L	L
120	M	L	L	H	H	H	L
121	M	L	M	L	L	L	M
122	M	L	M	L	L	H	M
123	M	L	M	L	H	L	MH
124	M	L	M	L	H	H	M
125	M	L	M	M	L	L	L
126	M	L	M	M	L	H	L
127	M	L	M	M	H	L	MH
128	M	L	M	M	H	H	M
129	M	L	M	H	L	L	M
130	M	L	M	H	L	H	M
131	M	L	M	H	H	L	M
132	M	L	M	H	H	H	M
133	M	L	H	L	L	L	M
134	M	L	H	L	L	H	H
135	M	L	H	L	H	L	M
136	M	L	H	L	H	H	L
137	M	L	H	M	L	L	H
138	M	L	H	M	L	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*V-funnel* (s)
139	M	L	H	M	H	L	L
140	M	L	H	M	H	H	M
141	M	L	H	H	L	L	M
142	M	L	H	H	L	H	M
143	M	L	H	H	H	L	M
144	M	L	H	H	H	H	M
145	M	M	L	L	L	L	L
146	M	M	L	L	L	H	L
147	M	M	L	L	H	L	L
148	M	M	L	L	H	H	L
149	M	M	L	M	L	L	H
150	M	M	L	M	L	H	H
151	M	M	L	M	H	L	M
152	M	M	L	M	H	H	M
153	M	M	L	H	L	L	H
154	M	M	L	H	L	H	H
155	M	M	L	H	H	L	M
156	M	M	L	H	H	H	M
157	M	M	M	L	L	L	M
158	M	M	M	L	L	H	H
159	M	M	M	L	H	L	MH
160	M	M	M	L	H	H	M
161	M	M	M	M	L	L	L
162	M	M	M	M	L	H	L
163	M	M	M	M	H	L	M
164	M	M	M	M	H	H	M
165	M	M	M	H	L	L	M
166	M	M	M	H	L	H	H
167	M	M	M	H	H	L	M
168	M	M	M	H	H	H	M
169	M	M	H	L	L	L	M
170	M	M	H	L	L	H	M
171	M	M	H	L	H	L	M
172	M	M	H	L	H	H	M
173	M	M	H	M	L	L	H
174	M	M	H	M	L	H	M
175	M	M	H	M	H	L	M
176	M	M	H	M	H	H	L
177	M	M	H	H	L	L	L
178	M	M	H	H	L	H	L
179	M	M	H	H	H	L	L
180	M	M	H	H	H	H	L
181	M	H	L	L	L	L	M
182	M	H	L	L	L	H	M
183	M	H	L	L	H	L	M
184	M	H	L	L	H	H	M
185	M	H	L	M	L	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*V-funnel* (s)
186	M	H	L	M	L	H	M
187	M	H	L	M	H	L	M
188	M	H	L	M	H	H	M
189	M	H	L	H	L	L	L
190	M	H	L	H	L	H	L
191	M	H	L	H	H	L	L
192	M	H	L	H	H	H	L
193	M	H	M	L	L	L	M
194	M	H	M	L	L	H	M
195	M	H	M	L	H	L	L
196	M	H	M	L	H	H	L
197	M	H	M	M	L	L	L
198	M	H	M	M	L	H	L
199	M	H	M	M	H	L	M
200	M	H	M	M	H	H	M
201	M	H	M	H	L	L	M
202	M	H	M	H	L	H	M
203	M	H	M	H	H	L	M
204	M	H	M	H	H	H	M
205	M	H	H	L	L	L	H
206	M	H	H	L	L	H	H
207	M	H	H	L	H	L	H
208	M	H	H	L	H	H	H
209	M	H	H	M	L	L	H
210	M	H	H	M	L	H	H
211	M	H	H	M	H	L	H
212	M	H	H	M	H	H	H
213	M	H	H	H	L	L	M
214	M	H	H	H	L	H	M
215	M	H	H	H	H	L	M
216	M	H	H	H	H	H	M
217	H	L	L	L	L	L	L
218	H	L	L	L	L	H	L
219	H	L	L	L	H	L	L
220	H	L	L	L	H	H	L
221	H	L	L	M	L	L	L
222	H	L	L	M	L	H	L
223	H	L	L	M	H	L	L
224	H	L	L	M	H	H	L
225	H	L	L	H	L	L	L
226	H	L	L	H	L	H	L
227	H	L	L	H	H	L	L
228	H	L	L	H	H	H	L
229	H	L	M	L	L	L	M
230	H	L	M	L	L	H	M
231	H	L	M	L	H	L	MH
232	H	L	M	L	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*V-funnel* (s)
233	H	L	M	M	L	L	M
234	H	L	M	M	L	H	MH
235	H	L	M	M	H	L	H
236	H	L	M	M	H	H	MH
237	H	L	M	H	L	L	MH
238	H	L	M	H	L	H	H
239	H	L	M	H	H	L	M
240	H	L	M	H	H	H	M
241	H	L	H	L	L	L	L
242	H	L	H	L	L	H	M
243	H	L	H	L	H	L	M
244	H	L	H	L	H	H	M
245	H	L	H	M	L	L	M
246	H	L	H	M	L	H	MH
247	H	L	H	M	H	L	L
248	H	L	H	M	H	H	MH
249	H	L	H	H	L	L	L
250	H	L	H	H	L	H	L
251	H	L	H	H	H	L	L
252	H	L	H	H	H	H	L
253	H	M	L	L	L	L	M
254	H	M	L	L	L	H	M
255	H	M	L	L	H	L	M
256	H	M	L	L	H	H	M
257	H	M	L	M	L	L	M
258	H	M	L	M	L	H	M
259	H	M	L	M	H	L	L
260	H	M	L	M	H	H	L
261	H	M	L	H	L	L	L
262	H	M	L	H	L	H	L
263	H	M	L	H	H	L	L
264	H	M	L	H	H	H	L
265	H	M	M	L	L	L	H
266	H	M	M	L	L	H	H
267	H	M	M	L	H	L	M
268	H	M	M	L	H	H	M
269	H	M	M	M	L	L	M
270	H	M	M	M	L	H	M
271	H	M	M	M	H	L	M
272	H	M	M	M	H	H	M
273	H	M	M	H	L	L	M
274	H	M	M	H	L	H	M
275	H	M	M	H	H	L	L
276	H	M	M	H	H	H	L
277	H	M	H	L	L	L	H
278	H	M	H	L	L	H	H
279	H	M	H	L	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*V-funnel* (s)
280	H	M	H	L	H	H	M
281	H	M	H	M	L	L	M
282	H	M	H	M	L	H	M
283	H	M	H	M	H	L	M
284	H	M	H	M	H	H	M
285	H	M	H	H	L	L	M
286	H	M	H	H	L	H	M
287	H	M	H	H	H	L	M
288	H	M	H	H	H	H	M
289	H	H	L	L	L	L	M
290	H	H	L	L	L	H	M
291	H	H	L	L	H	L	M
292	H	H	L	L	H	H	M
293	H	H	L	M	L	L	M
294	H	H	L	M	L	H	M
295	H	H	L	M	H	L	L
296	H	H	L	M	H	H	L
297	H	H	L	H	L	L	L
298	H	H	L	H	L	H	L
299	H	H	L	H	H	L	L
300	H	H	L	H	H	H	L
301	H	H	M	L	L	L	M
302	H	H	M	L	L	H	M
303	H	H	M	L	H	L	M
304	H	H	M	L	H	H	M
305	H	H	M	M	L	L	M
306	H	H	M	M	L	H	M
307	H	H	M	M	H	L	M
308	H	H	M	M	H	H	M
309	H	H	M	H	L	L	L
310	H	H	M	H	L	H	L
311	H	H	M	H	H	L	L
312	H	H	M	H	H	H	L
313	H	H	H	L	L	L	H
314	H	H	H	L	L	H	H
315	H	H	H	L	H	L	H
316	H	H	H	L	H	H	H
317	H	H	H	M	L	L	M
318	H	H	H	M	L	H	M
319	H	H	H	M	H	L	M
320	H	H	H	M	H	H	M
321	H	H	H	H	L	L	M
322	H	H	H	H	L	H	M
323	H	H	H	H	H	L	M
324	H	H	H	H	H	H	M

Lampiran 7 Data sekunder pengujian *l-box*

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*L-box*
1	Properties of self-compacting concrete containing class F fly ash	Siddique R	2011	465	85	910	590	227.7	10.73	0.89
2				415	135	910	590	233.3	9.91	0.85
3				355	195	910	590	241.6	9.91	0.92
4	Study on Durability Characteristics of Self-Compacting Concrete with Fly Ash	S Dhiyaneshwaran, P Ramanathan, I Baskar, dan R Venkatasubramani	2013	530	0	768	668	238.5	4.6	0.92
5				477	53	768	668	238.5	4.6	0.933
6				424	106	768	668	238.5	4.6	0.946
7				371	159	768	668	238.5	4.6	0.953
8				318	212	768	668	238.5	4.6	0.95
9				265	265	768	668	238.5	4.6	0.946
10	Influence of waterpowder ratio on strength properties of self-compacting concrete containing coal fly ash and bottom ash	Siddique R, Aggarwal P, dan Aggarwal Y	2012	465	85	910	590	225.5	10.73	0.9
11				440	110	910	590	225.5	11	0.9
12				355	195	910	590	242	9.9	0.92
13	Evaluation of strength at early ages of self-compacting concrete with high volume fly ash	Sukumar B, Nagamani K, dan Raghavan R	2008	250	275	842	772	178.5	2.1	1
14				333	215	835	766	180.8	2.2	0.99
15				417	153	828	759	182.4	2.9	0.96
16				500	101	820	753	192.3	3.6	0.95
17				583	50	813	745	196.2	4.4	0.95
18	Performance of Self-Compacting Concrete Containing Different Mineral Admixtures	Ramanathan P, Baskar I, Muthupriya P, dan Venkatasubramami R	2013	350	150	900	600	175	11	0.9
19				300	200	900	600	175	10.75	0.93
20				250	250	900	600	175	10.5	0.95
21	Effects of different curing regimes on the compressive strength properties of self compacting concrete incorporating fly ash and silica fume	Bingol A. F., dan Tohumcu I	2013	500	0	967	694	175	8	0.84
22				375	125	938	673	175	7.5	0.85
23				300	200	923	663	175	7.5	0.88
24				225	275	908	652	175	7.5	0.91

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*L-box*
25	Strength Characteristics of Self Compacting Concrete Containing Flyash	Krishnapal dkk	2013	480	0	890	810	192	13.3	0.88
26				432	48	890	810	192	9.9	0.85
27				384	96	890	810	192	9.68	0.82
28				450	0	890	810	202	9.25	0.8

Lampiran 8 *Rules* prediksi pengujian *l-box*

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*L-box*
1	L	L	L	L	L	L	L
2	L	L	L	L	L	H	L
3	L	L	L	L	H	L	L
4	L	L	L	L	H	H	L
5	L	L	L	M	L	L	L
6	L	L	L	M	L	H	L
7	L	L	L	M	H	L	L
8	L	L	L	M	H	H	L
9	L	L	L	H	L	L	L
10	L	L	L	H	L	H	L
11	L	L	L	H	H	L	L
12	L	L	L	H	H	H	L
13	L	L	M	L	L	L	L
14	L	L	M	L	L	H	L
15	L	L	M	L	H	L	L
16	L	L	M	L	H	H	L
17	L	L	M	M	L	L	M
18	L	L	M	M	L	H	M
19	L	L	M	M	H	L	M
20	L	L	M	M	H	H	M
21	L	L	M	H	L	L	L
22	L	L	M	H	L	H	L
23	L	L	M	H	H	L	L
24	L	L	M	H	H	H	L
25	L	L	H	L	L	L	M
26	L	L	H	L	L	H	M
27	L	L	H	L	H	L	M
28	L	L	H	L	H	H	M
29	L	L	H	M	L	L	M
30	L	L	H	M	L	H	M
31	L	L	H	M	H	L	M
32	L	L	H	M	H	H	M
33	L	L	H	H	L	L	M
34	L	L	H	H	L	H	M
35	L	L	H	H	H	L	M
36	L	L	H	H	H	H	M
37	L	M	L	L	L	L	M
38	L	M	L	L	L	H	M
39	L	M	L	L	H	L	M
40	L	M	L	L	H	H	M
41	L	M	L	M	L	L	M
42	L	M	L	M	L	H	M
43	L	M	L	M	H	L	M
44	L	M	L	M	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*L-box*
45	L	M	L	H	L	L	L
46	L	M	L	H	L	H	L
47	L	M	L	H	H	L	L
48	L	M	L	H	H	H	L
49	L	M	M	L	L	L	M
50	L	M	M	L	L	H	M
51	L	M	M	L	H	L	M
52	L	M	M	L	H	H	M
53	L	M	M	M	L	L	M
54	L	M	M	M	L	H	M
55	L	M	M	M	H	L	M
56	L	M	M	M	H	H	M
57	L	M	M	H	L	L	L
58	L	M	M	H	L	H	L
59	L	M	M	H	H	L	L
60	L	M	M	H	H	H	L
61	L	M	H	L	L	L	H
62	L	M	H	L	L	H	H
63	L	M	H	L	H	L	H
64	L	M	H	L	H	H	H
65	L	M	H	M	L	L	M
66	L	M	H	M	L	H	M
67	L	M	H	M	H	L	M
68	L	M	H	M	H	H	M
69	L	M	H	H	L	L	M
70	L	M	H	H	L	H	M
71	L	M	H	H	H	L	M
72	L	M	H	H	H	H	M
73	L	H	L	L	L	L	M
74	L	H	L	L	L	H	M
75	L	H	L	L	H	L	L
76	L	H	L	L	H	H	L
77	L	H	L	M	L	L	M
78	L	H	L	M	L	H	M
79	L	H	L	M	H	L	L
80	L	H	L	M	H	H	L
81	L	H	L	H	L	L	L
82	L	H	L	H	L	H	L
83	L	H	L	H	H	L	L
84	L	H	L	H	H	H	L
85	L	H	M	L	L	L	M
86	L	H	M	L	L	H	M
87	L	H	M	L	H	L	M
88	L	H	M	L	H	H	M
89	L	H	M	M	L	L	M
90	L	H	M	M	L	H	M
91	L	H	M	M	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*L-box*
92	L	H	M	M	H	H	M
93	L	H	M	H	L	L	M
94	L	H	M	H	L	H	M
95	L	H	M	H	H	L	M
96	L	H	M	H	H	H	M
97	L	H	H	L	L	L	H
98	L	H	H	L	L	H	H
99	L	H	H	L	H	L	H
100	L	H	H	L	H	H	H
101	L	H	H	M	L	L	M
102	L	H	H	M	L	H	M
103	L	H	H	M	H	L	M
104	L	H	H	M	H	H	M
105	L	H	H	H	L	L	M
106	L	H	H	H	L	H	M
107	L	H	H	H	H	L	M
108	L	H	H	H	H	H	M
109	M	L	L	L	L	L	M
110	M	L	L	L	L	H	M
111	M	L	L	L	H	L	M
112	M	L	L	L	H	H	M
113	M	L	L	M	L	L	M
114	M	L	L	M	L	H	M
115	M	L	L	M	H	L	M
116	M	L	L	M	H	H	M
117	M	L	L	H	L	L	L
118	M	L	L	H	L	H	L
119	M	L	L	H	H	L	L
120	M	L	L	H	H	H	L
121	M	L	M	L	L	L	M
122	M	L	M	L	L	H	M
123	M	L	M	L	H	L	M
124	M	L	M	L	H	H	M
125	M	L	M	M	L	L	M
126	M	L	M	M	L	H	M
127	M	L	M	M	H	L	M
128	M	L	M	M	H	H	M
129	M	L	M	H	L	L	M
130	M	L	M	H	L	H	M
131	M	L	M	H	H	L	M
132	M	L	M	H	H	H	M
133	M	L	H	L	L	L	M
134	M	L	H	L	L	H	H
135	M	L	H	L	H	L	M
136	M	L	H	L	H	H	L
137	M	L	H	M	L	L	L
138	M	L	H	M	L	H	L

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*L-box*
139	M	L	H	M	H	L	L
140	M	L	H	M	H	H	M
141	M	L	H	H	L	L	M
142	M	L	H	H	L	H	M
143	M	L	H	H	H	L	M
144	M	L	H	H	H	H	M
145	M	M	L	L	L	L	L
146	M	M	L	L	L	H	L
147	M	M	L	L	H	L	L
148	M	M	L	L	H	H	L
149	M	M	L	M	L	L	H
150	M	M	L	M	L	H	H
151	M	M	L	M	H	L	M
152	M	M	L	M	H	H	M
153	M	M	L	H	L	L	H
154	M	M	L	H	L	H	H
155	M	M	L	H	H	L	M
156	M	M	L	H	H	H	M
157	M	M	M	L	L	L	M
158	M	M	M	L	L	H	H
159	M	M	M	L	H	L	H
160	M	M	M	L	H	H	M
161	M	M	M	M	L	L	H
162	M	M	M	M	L	H	M
163	M	M	M	M	H	L	L
164	M	M	M	M	H	H	M
165	M	M	M	H	L	L	M
166	M	M	M	H	L	H	M
167	M	M	M	H	H	L	M
168	M	M	M	H	H	H	M
169	M	M	H	L	L	L	M
170	M	M	H	L	L	H	M
171	M	M	H	L	H	L	M
172	M	M	H	L	H	H	M
173	M	M	H	M	L	L	L
174	M	M	H	M	L	H	L
175	M	M	H	M	H	L	L
176	M	M	H	M	H	H	L
177	M	M	H	H	L	L	L
178	M	M	H	H	L	H	L
179	M	M	H	H	H	L	L
180	M	M	H	H	H	H	L
181	M	H	L	L	L	L	M
182	M	H	L	L	L	H	M
183	M	H	L	L	H	L	M
184	M	H	L	L	H	H	M
185	M	H	L	M	L	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*L-box*
186	M	H	L	M	L	H	M
187	M	H	L	M	H	L	M
188	M	H	L	M	H	H	M
189	M	H	L	H	L	L	L
190	M	H	L	H	L	H	L
191	M	H	L	H	H	L	L
192	M	H	L	H	H	H	L
193	M	H	M	L	L	L	M
194	M	H	M	L	L	H	M
195	M	H	M	L	H	L	L
196	M	H	M	L	H	H	L
197	M	H	M	M	L	L	M
198	M	H	M	M	L	H	M
199	M	H	M	M	H	L	M
200	M	H	M	M	H	H	M
201	M	H	M	H	L	L	M
202	M	H	M	H	L	H	M
203	M	H	M	H	H	L	M
204	M	H	M	H	H	H	M
205	M	H	H	L	L	L	H
206	M	H	H	L	L	H	H
207	M	H	H	L	H	L	H
208	M	H	H	L	H	H	H
209	M	H	H	M	L	L	H
210	M	H	H	M	L	H	H
211	M	H	H	M	H	L	H
212	M	H	H	M	H	H	H
213	M	H	H	H	L	L	M
214	M	H	H	H	L	H	M
215	M	H	H	H	H	L	M
216	M	H	H	H	H	H	M
217	H	L	L	L	L	L	L
218	H	L	L	L	L	H	L
219	H	L	L	L	H	L	L
220	H	L	L	L	H	H	L
221	H	L	L	M	L	L	L
222	H	L	L	M	L	H	L
223	H	L	L	M	H	L	L
224	H	L	L	M	H	H	L
225	H	L	L	H	L	L	L
226	H	L	L	H	L	H	L
227	H	L	L	H	H	L	L
228	H	L	L	H	H	H	L
229	H	L	M	L	L	L	M
230	H	L	M	L	L	H	M
231	H	L	M	L	H	L	M
232	H	L	M	L	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*L-box*
233	H	L	M	M	L	L	M
234	H	L	M	M	L	H	M
235	H	L	M	M	H	L	H
236	H	L	M	M	H	H	M
237	H	L	M	H	L	L	M
238	H	L	M	H	L	H	L
239	H	L	M	H	H	L	M
240	H	L	M	H	H	H	M
241	H	L	H	L	L	L	H
242	H	L	H	L	L	H	H
243	H	L	H	L	H	L	H
244	H	L	H	L	H	H	M
245	H	L	H	M	L	L	L
246	H	L	H	M	L	H	M
247	H	L	H	M	H	L	L
248	H	L	H	M	H	H	L
249	H	L	H	H	L	L	L
250	H	L	H	H	L	H	L
251	H	L	H	H	H	L	L
252	H	L	H	H	H	H	L
253	H	M	L	L	L	L	M
254	H	M	L	L	L	H	M
255	H	M	L	L	H	L	M
256	H	M	L	L	H	H	M
257	H	M	L	M	L	L	M
258	H	M	L	M	L	H	M
259	H	M	L	M	H	L	L
260	H	M	L	M	H	H	L
261	H	M	L	H	L	L	L
262	H	M	L	H	L	H	L
263	H	M	L	H	H	L	L
264	H	M	L	H	H	H	L
265	H	M	M	L	L	L	H
266	H	M	M	L	L	H	H
267	H	M	M	L	H	L	M
268	H	M	M	L	H	H	M
269	H	M	M	M	L	L	M
270	H	M	M	M	L	H	M
271	H	M	M	M	H	L	M
272	H	M	M	M	H	H	M
273	H	M	M	H	L	L	M
274	H	M	M	H	L	H	M
275	H	M	M	H	H	L	L
276	H	M	M	H	H	H	L
277	H	M	H	L	L	L	H
278	H	M	H	L	L	H	H
279	H	M	H	L	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*L-box*
280	H	M	H	L	H	H	M
281	H	M	H	M	L	L	M
282	H	M	H	M	L	H	M
283	H	M	H	M	H	L	M
284	H	M	H	M	H	H	M
285	H	M	H	H	L	L	M
286	H	M	H	H	L	H	M
287	H	M	H	H	H	L	M
288	H	M	H	H	H	H	M
289	H	H	L	L	L	L	M
290	H	H	L	L	L	H	M
291	H	H	L	L	H	L	M
292	H	H	L	L	H	H	M
293	H	H	L	M	L	L	M
294	H	H	L	M	L	H	M
295	H	H	L	M	H	L	L
296	H	H	L	M	H	H	L
297	H	H	L	H	L	L	L
298	H	H	L	H	L	H	L
299	H	H	L	H	H	L	L
300	H	H	L	H	H	H	L
301	H	H	M	L	L	L	M
302	H	H	M	L	L	H	M
303	H	H	M	L	H	L	M
304	H	H	M	L	H	H	M
305	H	H	M	M	L	L	M
306	H	H	M	M	L	H	M
307	H	H	M	M	H	L	M
308	H	H	M	M	H	H	M
309	H	H	M	H	L	L	L
310	H	H	M	H	L	H	L
311	H	H	M	H	H	L	L
312	H	H	M	H	H	H	L
313	H	H	H	L	L	L	H
314	H	H	H	L	L	H	H
315	H	H	H	L	H	L	H
316	H	H	H	L	H	H	H
317	H	H	H	M	L	L	M
318	H	H	H	M	L	H	M
319	H	H	H	M	H	L	M
320	H	H	H	M	H	H	M
321	H	H	H	H	L	L	M
322	H	H	H	H	L	H	M
323	H	H	H	H	H	L	M
324	H	H	H	H	H	H	M

Lampiran 9 Data sekunder pengujian *j-ring*

No	Jurnal	Penyusul	Tahun	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*J-ring* (mm)
1	Properties of self-compacting concrete containing class F fly ash	Siddique R	2011	465	85	910	590	227.7	10.73	2.3
2				440	110	910	590	228.3	11.01	6.7
3				415	135	910	590	233.3	9.91	3.7
4				385	165	910	590	234.4	9.91	3
5				355	195	910	590	241.6	9.91	7
6	Self-compacting concrete with different levels of pulverized fuel ash	Liu M	2010	539	0	743	924	178	5.93	11
7				437	80	743	924	176	4.65	16
8				333	162	743	924	173	3.71	15
9				225	247	743	924	170	3.21	20
10				115	336	743	924	167	2.93	23
11				0	439	743	924	158	1.98	22
12	Mechanical properties of high-volume fly ash self-compacting concrete mixtures	Dinakar P, Babu K. G., dan Santhanam M.	2008	82.5	467.5	624	794	225.5	11	0
13				165	385	656	834	187	11	3
14				225	525	487	620	247.5	15	0
15				275	275	691	880	187	13.75	5
16				325	325	611	777	221	13	0
17				385	165	732	931	170.5	13.75	10
18				350	150	707	901	180	8.75	9
19				495	55	756	962	159.5	16.5	15

Lampiran 10 *Rules* prediksi pengujian *j-ring*

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*J-ring* (mm)
1	L	L	L	L	L	L	L
2	L	L	L	L	L	H	L
3	L	L	L	L	H	L	L
4	L	L	L	L	H	H	L
5	L	L	L	M	L	L	L
6	L	L	L	M	L	H	L
7	L	L	L	M	H	L	L
8	L	L	L	M	H	H	L
9	L	L	L	H	L	L	L
10	L	L	L	H	L	H	L
11	L	L	L	H	H	L	L
12	L	L	L	H	H	H	L
13	L	L	M	L	L	L	L
14	L	L	M	L	L	H	L
15	L	L	M	L	H	L	L
16	L	L	M	L	H	H	L
17	L	L	M	M	L	L	M
18	L	L	M	M	L	H	M
19	L	L	M	M	H	L	M
20	L	L	M	M	H	H	M
21	L	L	M	H	L	L	L
22	L	L	M	H	L	H	L
23	L	L	M	H	H	L	L
24	L	L	M	H	H	H	L
25	L	L	H	L	L	L	M
26	L	L	H	L	L	H	M
27	L	L	H	L	H	L	M
28	L	L	H	L	H	H	M
29	L	L	H	M	L	L	M
30	L	L	H	M	L	H	M
31	L	L	H	M	H	L	M
32	L	L	H	M	H	H	M
33	L	L	H	H	L	L	M
34	L	L	H	H	L	H	M
35	L	L	H	H	H	L	M
36	L	L	H	H	H	H	M
37	L	M	L	L	L	L	M
38	L	M	L	L	L	H	M
39	L	M	L	L	H	L	M
40	L	M	L	L	H	H	M
41	L	M	L	M	L	L	M
42	L	M	L	M	L	H	M
43	L	M	L	M	H	L	M
44	L	M	L	M	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*J-ring* (mm)
45	L	M	L	H	L	L	L
46	L	M	L	H	L	H	L
47	L	M	L	H	H	L	L
48	L	M	L	H	H	H	L
49	L	M	M	L	L	L	M
50	L	M	M	L	L	H	M
51	L	M	M	L	H	L	M
52	L	M	M	L	H	H	M
53	L	M	M	M	L	L	L
54	L	M	M	M	L	H	L
55	L	M	M	M	H	L	M
56	L	M	M	M	H	H	M
57	L	M	M	H	L	L	H
58	L	M	M	H	L	H	L
59	L	M	M	H	H	L	L
60	L	M	M	H	H	H	L
61	L	M	H	L	L	L	H
62	L	M	H	L	L	H	H
63	L	M	H	L	H	L	H
64	L	M	H	L	H	H	H
65	L	M	H	M	L	L	M
66	L	M	H	M	L	H	M
67	L	M	H	M	H	L	M
68	L	M	H	M	H	H	M
69	L	M	H	H	L	L	M
70	L	M	H	H	L	H	M
71	L	M	H	H	H	L	M
72	L	M	H	H	H	H	M
73	L	H	L	L	L	L	M
74	L	H	L	L	L	H	M
75	L	H	L	L	H	L	L
76	L	H	L	L	H	H	L
77	L	H	L	M	L	L	M
78	L	H	L	M	L	H	M
79	L	H	L	M	H	L	L
80	L	H	L	M	H	H	L
81	L	H	L	H	L	L	L
82	L	H	L	H	L	H	L
83	L	H	L	H	H	L	L
84	L	H	L	H	H	H	L
85	L	H	M	L	L	L	M
86	L	H	M	L	L	H	M
87	L	H	M	L	H	L	M
88	L	H	M	L	H	H	M
89	L	H	M	M	L	L	L
90	L	H	M	M	L	H	L
91	L	H	M	M	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*J-ring* (mm)
92	L	H	M	M	H	H	L
93	L	H	M	H	L	L	H
94	L	H	M	H	L	H	M
95	L	H	M	H	H	L	M
96	L	H	M	H	H	H	M
97	L	H	H	L	L	L	H
98	L	H	H	L	L	H	H
99	L	H	H	L	H	L	H
100	L	H	H	L	H	H	H
101	L	H	H	M	L	L	M
102	L	H	H	M	L	H	M
103	L	H	H	M	H	L	M
104	L	H	H	M	H	H	M
105	L	H	H	H	L	L	M
106	L	H	H	H	L	H	M
107	L	H	H	H	H	L	M
108	L	H	H	H	H	H	M
109	M	L	L	L	L	L	M
110	M	L	L	L	L	H	M
111	M	L	L	L	H	L	M
112	M	L	L	L	H	H	M
113	M	L	L	M	L	L	M
114	M	L	L	M	L	H	M
115	M	L	L	M	H	L	M
116	M	L	L	M	H	H	M
117	M	L	L	H	L	L	L
118	M	L	L	H	L	H	L
119	M	L	L	H	H	L	L
120	M	L	L	H	H	H	L
121	M	L	M	L	L	L	M
122	M	L	M	L	L	H	M
123	M	L	M	L	H	L	MH
124	M	L	M	L	H	H	M
125	M	L	M	M	L	L	L
126	M	L	M	M	L	H	L
127	M	L	M	M	H	L	MH
128	M	L	M	M	H	H	M
129	M	L	M	H	L	L	MHH
130	M	L	M	H	L	H	H
131	M	L	M	H	H	L	M
132	M	L	M	H	H	H	M
133	M	L	H	L	L	L	M
134	M	L	H	L	L	H	H
135	M	L	H	L	H	L	M
136	M	L	H	L	H	H	M
137	M	L	H	M	L	L	H
138	M	L	H	M	L	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*J-ring* (mm)
139	M	L	H	M	H	L	L
140	M	L	H	M	H	H	M
141	M	L	H	H	L	L	M
142	M	L	H	H	L	H	M
143	M	L	H	H	H	L	M
144	M	L	H	H	H	H	M
145	M	M	L	L	L	L	L
146	M	M	L	L	L	H	L
147	M	M	L	L	H	L	L
148	M	M	L	L	H	H	L
149	M	M	L	M	L	L	L
150	M	M	L	M	L	H	L
151	M	M	L	M	H	L	M
152	M	M	L	M	H	H	L
153	M	M	L	H	L	L	L
154	M	M	L	H	L	H	L
155	M	M	L	H	H	L	M
156	M	M	L	H	H	H	M
157	M	M	M	L	L	L	M
158	M	M	M	L	L	H	H
159	M	M	M	L	H	L	M
160	M	M	M	L	H	H	M
161	M	M	M	M	L	L	L
162	M	M	M	M	L	H	L
163	M	M	M	M	H	L	M
164	M	M	M	M	H	H	L
165	M	M	M	H	L	L	H
166	M	M	M	H	L	H	M
167	M	M	M	H	H	L	M
168	M	M	M	H	H	H	M
169	M	M	H	L	L	L	M
170	M	M	H	L	L	H	M
171	M	M	H	L	H	L	L
172	M	M	H	L	H	H	L
173	M	M	H	M	L	L	H
174	M	M	H	M	L	H	M
175	M	M	H	M	H	L	M
176	M	M	H	M	H	H	L
177	M	M	H	H	L	L	L
178	M	M	H	H	L	H	L
179	M	M	H	H	H	L	L
180	M	M	H	H	H	H	L
181	M	H	L	L	L	L	M
182	M	H	L	L	L	H	M
183	M	H	L	L	H	L	M
184	M	H	L	L	H	H	L
185	M	H	L	M	L	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*J-ring* (mm)
186	M	H	L	M	L	H	M
187	M	H	L	M	H	L	M
188	M	H	L	M	H	H	M
189	M	H	L	H	L	L	L
190	M	H	L	H	L	H	L
191	M	H	L	H	H	L	L
192	M	H	L	H	H	H	L
193	M	H	M	L	L	L	M
194	M	H	M	L	L	H	M
195	M	H	M	L	H	L	L
196	M	H	M	L	H	H	L
197	M	H	M	M	L	L	L
198	M	H	M	M	L	H	L
199	M	H	M	M	H	L	M
200	M	H	M	M	H	H	M
201	M	H	M	H	L	L	M
202	M	H	M	H	L	H	M
203	M	H	M	H	H	L	M
204	M	H	M	H	H	H	M
205	M	H	H	L	L	L	H
206	M	H	H	L	L	H	H
207	M	H	H	L	H	L	H
208	M	H	H	L	H	H	H
209	M	H	H	M	L	L	H
210	M	H	H	M	L	H	H
211	M	H	H	M	H	L	H
212	M	H	H	M	H	H	H
213	M	H	H	H	L	L	M
214	M	H	H	H	L	H	M
215	M	H	H	H	H	L	M
216	M	H	H	H	H	H	M
217	H	L	L	L	L	L	L
218	H	L	L	L	L	H	L
219	H	L	L	L	H	L	L
220	H	L	L	L	H	H	L
221	H	L	L	M	L	L	L
222	H	L	L	M	L	H	L
223	H	L	L	M	H	L	L
224	H	L	L	M	H	H	L
225	H	L	L	H	L	L	L
226	H	L	L	H	L	H	L
227	H	L	L	H	H	L	L
228	H	L	L	H	H	H	L
229	H	L	M	L	L	L	M
230	H	L	M	L	L	H	M
231	H	L	M	L	H	L	MH
232	H	L	M	L	H	H	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*J-ring* (mm)
233	H	L	M	M	L	L	M
234	H	L	M	M	L	H	MH
235	H	L	M	M	H	L	H
236	H	L	M	M	H	H	MH
237	H	L	M	H	L	L	MH
238	H	L	M	H	L	H	MHH
239	H	L	M	H	H	L	M
240	H	L	M	H	H	H	M
241	H	L	H	L	L	L	L
242	H	L	H	L	L	H	M
243	H	L	H	L	H	L	M
244	H	L	H	L	H	H	L
245	H	L	H	M	L	L	M
246	H	L	H	M	L	H	MH
247	H	L	H	M	H	L	L
248	H	L	H	M	H	H	MH
249	H	L	H	H	L	L	L
250	H	L	H	H	L	H	L
251	H	L	H	H	H	L	L
252	H	L	H	H	H	H	L
253	H	M	L	L	L	L	M
254	H	M	L	L	L	H	M
255	H	M	L	L	H	L	M
256	H	M	L	L	H	H	M
257	H	M	L	M	L	L	M
258	H	M	L	M	L	H	M
259	H	M	L	M	H	L	L
260	H	M	L	M	H	H	L
261	H	M	L	H	L	L	L
262	H	M	L	H	L	H	L
263	H	M	L	H	H	L	L
264	H	M	L	H	H	H	L
265	H	M	M	L	L	L	H
266	H	M	M	L	L	H	H
267	H	M	M	L	H	L	M
268	H	M	M	L	H	H	M
269	H	M	M	M	L	L	M
270	H	M	M	M	L	H	M
271	H	M	M	M	H	L	M
272	H	M	M	M	H	H	M
273	H	M	M	H	L	L	M
274	H	M	M	H	L	H	M
275	H	M	M	H	H	L	L
276	H	M	M	H	H	H	L
277	H	M	H	L	L	L	H
278	H	M	H	L	L	H	H
279	H	M	H	L	H	L	M

No	Semen (kg/m^3)	*Fly ash* (kg/m^3)	Pasir (kg/m^3)	Kerikil (kg/m^3)	Air (kg/m^3)	SP (kg/m^3)	*J-ring* (mm)
280	H	M	H	L	H	H	M
281	H	M	H	M	L	L	M
282	H	M	H	M	L	H	M
283	H	M	H	M	H	L	M
284	H	M	H	M	H	H	M
285	H	M	H	H	L	L	M
286	H	M	H	H	L	H	M
287	H	M	H	H	H	L	M
288	H	M	H	H	H	H	M
289	H	H	L	L	L	L	M
290	H	H	L	L	L	H	M
291	H	H	L	L	H	L	M
292	H	H	L	L	H	H	M
293	H	H	L	M	L	L	M
294	H	H	L	M	L	H	M
295	H	H	L	M	H	L	L
296	H	H	L	M	H	H	L
297	H	H	L	H	L	L	L
298	H	H	L	H	L	H	L
299	H	H	L	H	H	L	L
300	H	H	L	H	H	H	L
301	H	H	M	L	L	L	M
302	H	H	M	L	L	H	M
303	H	H	M	L	H	L	M
304	H	H	M	L	H	H	M
305	H	H	M	M	L	L	M
306	H	H	M	M	L	H	M
307	H	H	M	M	H	L	M
308	H	H	M	M	H	H	M
309	H	H	M	H	L	L	L
310	H	H	M	H	L	H	L
311	H	H	M	H	H	L	L
312	H	H	M	H	H	H	L
313	H	H	H	L	L	L	H
314	H	H	H	L	L	H	H
315	H	H	H	L	H	L	H
316	H	H	H	L	H	H	H
317	H	H	H	M	L	L	M
318	H	H	H	M	L	H	M
319	H	H	H	M	H	L	M
320	H	H	H	M	H	H	M
321	H	H	H	H	L	L	M
322	H	H	H	H	L	H	M
323	H	H	H	H	H	L	M
324	H	H	H	H	H	H	M