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LAMPIRAN

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FEMERIKSAAN KEAUSAN AGREGAT

DENGAN MESIN LOS ANGELES

Gradasi pemeriksaan saringan		Berat batu pecah (gram)	
Levat	tertahan	sebelum	sesudah
75,2 mm (3")	63,5 mm (2,5")	2500 2500	3221
63,5 mm (2,5")	50,8 mm (2")		
50,8 mm (2")	37,5 mm (1,5")		
37,5 mm (1,5")	25,4 mm (1")		
25,4 mm (1")	19,0 mm (3/4")		
19,0 mm (3/4")	12,5 mm (1/2")		
12,5 mm (1/2")	9,5 mm (3/8")		
9,5 mm (3/8")	6,3 mm (1/4")		
6,3 mm (1/4")	4,75 mm (#4)		
4,75 mm (#4)	2,36 mm (#6)		
Jumlah Berat		5000	
Berat tertahan saringan no. 12			3221

$$a = 5.000 \text{ gram}$$

$$b = 1.221 \text{ gram}$$

$$a - b = 3.779 \text{ gram}$$

$$\text{Kerusakan} = \frac{a - b}{a} \times 100 \% = 35,58 \%$$

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PEMERIKSAAN BERAT JENIS AGREGAT KASAR

Contoh	Batu pecah (gram)
Berat benda uji kering permukaan jenuh (BJ)	1.502
Berat benda uji kering oven (BK)	1.490
Berat benda uji dalam air (BA)	756

a. Berat Jenis (Bulk Specific Gravity)

$$\frac{BJ}{BJ - BA} = 2,72 \text{ gr/cc}$$

b. Berat Jenis Kering Permukaan Jenuh (SSD)

$$\frac{BJ}{BJ - BK} = 2,75 \text{ gr/cc}$$

c. Berat Jenis Semu Agregat

$$\frac{BK}{BK - F} = 2,79 \text{ gr/cc}$$

d. Penyerapan

$$\frac{BJ - BK}{BK} \times 100 \% = 0,805 \% < 3 \%$$

Agregat kasar yg telah diuji memenuhi persyaratan

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PEMERIKSAAN BERAT JENIS AGREGAT HALUS

Contoh	P a s i r (gram)
Berat benda uji kering permukaan jenuh (BJ)	500
Berat benda uji kering oven (BK)	496
Berat piknometer berisi air 25° C (B)	687
Berat piknometer + air + benda uji (BT)	1.002

a. Berat Jenis (Bulk Specific Gravity)

$$\frac{BK}{B + 500 - BT} = 2,68 \text{ gr/cc}$$

b. Berat Jenis Kering Permukaan Jenuh (SED)

$$\frac{BJ}{B + 500 - BT} = 2,70 \text{ gr/cc}$$

c. Berat Jenis Semu Agregat

$$\frac{BK}{B + 500 - B} = 2,74 \text{ gr/cc}$$

d. Penyerapan

$$\frac{500 - BK}{BK} \times 100 \% = 0,81 \% < 3 \%$$

Agregat halus ng telah diuji memenuhi persyaratan

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PEMERIKSAAN BERAT JENIS ASPAL

Berat dari	Berat (gram)
1. Piknometer kosong	27,715
2. Piknometer + air aquades	78,45
3. Air (2 - 1)	50,735
4. Piknometer + contoh aspal	29,685
5. Aspal (4 - 1)	1,975
6. Piknometer + aspal + air	80,425
7. Air (6 - 4)	48,865
8. Berat air hilang (3 - 7)	1,875
Berat jenis aspal (5/8)	1,05

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PEMERIKSAAN PENETRASI

Pengamatan ke	I	II
1	60,00	60,00
2	61,00	69,00
3	65,00	62,00
4	60,00	60,00
5	60,00	67,00
rata-rata	61,20	63,60
Rata-rata penetrasi	62,40	

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PEMERIKSAAN TITIK NYALA

Pengamatan ke	Suhu °C
1	338
2	338
Rata-rata	338

PEMERIKSAAN TITIK LEMBEK

Suhu yang diawasi °C	Waktu (detik)	
	I	II
10	60	60
15	45	45
20	42	42
25	60	60
30	60	60
35	50	50
40	54	54
45	56	56
50	60	60
Titik lembek	52° C	53° C
Suhu rata-rata	52,50° C	

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PEMERIKSAAN DAKTILITAS

Daktilitas pada suhu 25° C kecepatan 5 mm/menit	Pembacaan pada alat
I	163 cm
II	163 cm

PEMERIKSAAN KELEKATAN ASFAL TERHADAP BATUAN

Kelekatan 500 gram suhu 40° C	contoh % dari permukaan
I	98 %



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PEMERIKSAAN KELARUTAN DALAM CCl_4

Reaksi dari	Gamat (gram)
1. Fe (s) + CCl_4 (l)	20,00
2. Fe (s) + CCl_4 (l)	21,00
3. Al (s) + CCl_4 (l)	1,00
4. $\text{Pb}(\text{NO}_3)_2$ (s) + CCl_4 (l)	1,07
5. $\text{Mn}(\text{NO}_3)_2$ (s) + CCl_4 (l)	0,65
6. Etanol (l) + CCl_4 (l)	1,02

$$\text{Persentase kelarutan} = \frac{0,02}{100} \times 100\% = 1,00\%$$

$$\text{Yang larut} = 99\%$$

PEMERIKSAAN SAND EQUIVALENT

$$\text{Sand} = \frac{100}{100 + 10} = 90,9\%$$

$$\text{Fines} = \frac{10}{100 + 10} = 9,1\%$$

$$\text{Total} = \frac{100}{100 + 10} = 90,9\%$$

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SPEKIFIKASI GRADASI CAMPURAN ABREGAT "HRS B"
BERDASARKAN BINA MARGA 1988

Ukuran saringan	Spesifikasi B. Marga	Batas	
		% Batas Atas	% Batas Bawah
75 μ "	100	100	0
150 μ "	10 - 100	80	20
300 μ "	50 - 80	70	30
475 μ "	50 - 60	61	39
# No. 4	50 - 40	55	45
# No. 5	15 - 40	53	47
# No. 20	14 - 40	37	63
# No. 50	8 - 34	25	74
# No. 100	7 - 20	10	84
# No. 200	0 - 8	5	95
Pass	0	0	100

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ANALISA SARINGAN AGREGAT KASAR DAN HALUS YANG IDEAL

Saringan	Bobot Aggregat	Jumlah Agregat Tertahan	% Tertahan	% Lolos
75µ	100	0	0	100
150µ	100	200	20	80
300µ	100	700	70	30
600µ	100	400	40	60
1.18mm	100	100	10	90
2.0mm	100	100	10	90
4.75mm	100	100	10	90
7.5mm	100	100	10	90
15mm	100	100	10	90
30mm	100	100	10	90
60mm	100	100	10	90
120mm	100	100	10	90
240mm	100	100	10	90
480mm	100	100	10	90
960mm	100	100	10	90
1920mm	100	100	10	90
3840mm	100	100	10	90
7680mm	100	100	10	90
15360mm	100	100	10	90
30720mm	100	100	10	90
61440mm	100	100	10	90
122880mm	100	100	10	90
245760mm	100	100	10	90
491520mm	100	100	10	90
983040mm	100	100	10	90
1966080mm	100	100	10	90
3932160mm	100	100	10	90
7864320mm	100	100	10	90
15728640mm	100	100	10	90
31457280mm	100	100	10	90
62914560mm	100	100	10	90
125829120mm	100	100	10	90
251658240mm	100	100	10	90
503316480mm	100	100	10	90
1006632960mm	100	100	10	90
2013265920mm	100	100	10	90
4026531840mm	100	100	10	90
8053063680mm	100	100	10	90
16106127360mm	100	100	10	90
32212254720mm	100	100	10	90
64424509440mm	100	100	10	90
128849018880mm	100	100	10	90
257698037760mm	100	100	10	90
515396075520mm	100	100	10	90
1030792151040mm	100	100	10	90
2061584302080mm	100	100	10	90
4123168604160mm	100	100	10	90
8246337208320mm	100	100	10	90
16492674416640mm	100	100	10	90
32985348833280mm	100	100	10	90
65970697666560mm	100	100	10	90
131941395333120mm	100	100	10	90
263882790666240mm	100	100	10	90
527765581332480mm	100	100	10	90
1055531162664960mm	100	100	10	90
2111062325329920mm	100	100	10	90
4222124650659840mm	100	100	10	90
8444249301319680mm	100	100	10	90
16888498602639360mm	100	100	10	90
33776997205278720mm	100	100	10	90
67553994410557440mm	100	100	10	90
135107988821114880mm	100	100	10	90
270215977642229760mm	100	100	10	90
540431955284459520mm	100	100	10	90
1080863910568919040mm	100	100	10	90
2161727821137838080mm	100	100	10	90
4323455642275676160mm	100	100	10	90
8646911284551352320mm	100	100	10	90
17293822569102704640mm	100	100	10	90
34587645138205409280mm	100	100	10	90
69175290276410818560mm	100	100	10	90
138350580552821637120mm	100	100	10	90
276701161105643274240mm	100	100	10	90
553402322211286548480mm	100	100	10	90
1106804644422573096960mm	100	100	10	90
2213609288845146193920mm	100	100	10	90
4427218577690292387840mm	100	100	10	90
8854437155380584775680mm	100	100	10	90
17708874310761169551360mm	100	100	10	90
35417748621522339102720mm	100	100	10	90
70835497243044678205440mm	100	100	10	90
141670994486089356410880mm	100	100	10	90
283341988972178712821760mm	100	100	10	90
566683977944357425643520mm	100	100	10	90
1133367955888714851287040mm	100	100	10	90
2266735911777429702574080mm	100	100	10	90
4533471823554859405148160mm	100	100	10	90
9066943647109718810296320mm	100	100	10	90
18133887294219437620592640mm	100	100	10	90
36267774588438875241185280mm	100	100	10	90
72535549176877750482370560mm	100	100	10	90
145071098353755500964741120mm	100	100	10	90
290142196707511001929482240mm	100	100	10	90
580284393415022003858964480mm	100	100	10	90
1160568786830044007717928960mm	100	100	10	90
2321137573660088015435857920mm	100	100	10	90
4642275147320176030871715840mm	100	100	10	90
9284550294640352061743431680mm	100	100	10	90
18569100589280704123486863360mm	100	100	10	90
37138201178561408246973726720mm	100	100	10	90
74276402357122816493947453440mm	100	100	10	90
148552804714245632987894906880mm	100	100	10	90
297105609428491265975789813760mm	100	100	10	90
594211218856982531951579627520mm	100	100	10	90
1188422437713965063903159255040mm	100	100	10	90
2376844875427930127806318510080mm	100	100	10	90
4753689750855860255612637020160mm	100	100	10	90
9507379501711720511225274040320mm	100	100	10	90
19014759003423441022450548080640mm	100	100	10	90
38029518006846882044901096161280mm	100	100	10	90
76059036013693764089802192322560mm	100	100	10	90
152118072027387528179604384645120mm	100	100	10	90
304236144054775056359208769290240mm	100	100	10	90
608472288109550112718417538580480mm	100	100	10	90
1216944576219100225436835077160960mm	100	100	10	90
2433889152438200450873670154321920mm	100	100	10	90
4867778304876400901747340308643840mm	100	100	10	90
9735556609752801803494680617287680mm	100	100	10	90
19471113219505603606989361234575360mm	100	100	10	90
38942226439011207213978722469150720mm	100	100	10	90
77884452878022414427957444938301440mm	100	100	10	90
155768905756044828855914889876602880mm	100	100	10	90
311537811512089657711829779753205760mm	100	100	10	90
623075623024179315423659559506411520mm	100	100	10	90
1246151246048358630847319119012823040mm	100	100	10	90
2492302492096717261694638238025646080mm	100	100	10	90
4984604984193434523389276476051292160mm	100	100	10	90
9969209968386869046778552952102584320mm	100	100	10	90
19938419936773738093557105904205168640mm	100	100	10	90
39876839873547476187114211808410337280mm	100	100	10	90
79753679747094952374228423616820674560mm	100	100	10	90
159507359494189904748456847233641349120mm	100	100	10	90
319014718988379809496913694467282698240mm	100	100	10	90
638029437976759618993827388934565396480mm	100	100	10	90
1276058875953519237987654777869130792960mm	100	100	10	90
2552117751907038475975309555738261585920mm	100	100	10	90
5104235503814076951950619111476523171840mm	100	100	10	90
10208471007628153903901238222953046343680mm	100	100	10	90
20416942015256307807802476445906092687360mm	100	100	10	90
40833884030512615615604952891812185374720mm	100	100	10	90
81667768061025231231209905783624370749440mm	100	100	10	90
163335536122050462462419811567248741498880mm	100	100	10	90
326671072244100924924839623134497482997760mm	100	100	10	90
653342144488201849849679246268994965995520mm	100	100	10	90
1306684288976403699699358492537989931991040mm	100	100	10	90
2613368577952807399398716985075979863982080mm	100	100	10	90
5226737155905614798797433970151959727964160mm	100	100	10	90
10453474311811229597594867940303919455928320mm	100	100	10	90
20906948623622459195189735880607838911856640mm	100	100	10	90
41813897247244918390379471761215677823713280mm	100	100	10	90
83627794494489836780758943522431355647426560mm	100	100	10	90
167255588988979673561517887044862711294853120mm	100	100	10	90
334511177977959347123035774089725422589706240mm	100	100	10	90
669022355955918694246071548179450845179412480mm	100	100	10	90
1338044711911837388492143096358901690358824960mm	100	100	10	90
2676089423823674776984286192717803380717649920mm	100	100	10	90
5352178847647349553968572385435606761435299840mm	100	100	10	90
10704357695294699107937144770871213522870599680mm	100	100	10	90
21408715390589398215874289541742427045741199360mm	100	100	10	90
42817430781178796431748579083484854091482398720mm	100	100	10	90
85634861562357592863497158166969708182964797440mm	100	100	10	90
171269723124715185726994316333939416365929594880mm	100	100	10	90
342539446249430371453988632667878832731859189760mm	100	100	10	90
685078892498860742907977265335757665463718379520mm	100	100	10	90
1370157784997721485815954530671515330927436759040mm	100	100	10	90
2740315569995442971631909061343030661854873518080mm	100	100	10	90
5480631139990885943263818122686061323709747036160mm	100	100	10	90
10961262279981771886527636245372122647419494072320mm	100	100	10	90
21922524559963543773055272490744245294838988144640mm	100	100	10	90
43845049119927087546110544981488490589677976289280mm	100	100	10	90
87690098239854175092221089962976981179355952578560mm	100	100	10	90
175380196479708350184442179925953962358711905157120mm	100	100	10	90
350760392959416700368884359851907924717423810314240mm	100	100	10	90
701520785918833400737768719703815849434847620628480mm	100	100	10	90
1403041571837666801475537439407631698869695241256960mm	100	100	10	90
2806083143675333602951074878815263397739390482513920mm	100	100	10	90
5612166287350667205902149757630526795478780965027840mm	100	100	10	90
11224332574701334411804299515261053590957561930055680mm	100	100	10	90
22448665149402668823608599030522107181915123860111360mm	10			

HASIL TEST MARSHALL KADAR ASPHAL 5 %
ASPHAL AC 60 - 70

Kode	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	S
I. R1	6,54	5	1210	1214	710	509	2,391	2,506	11,386	84,028	4,58	15,972	71,285	4,589	221	784	704,79	3,302	213,44
R2	6,46	5	1210	1214	710	509	2,400	2,506	11,428	84,350	4,22	15,650	73,022	4,230	218	788	743,58	2,032	365,93
Rata-rata			1210,5	1217,5	711	506,5	2,395	2,506	11,401	84,175	4,42	15,625	72,063	4,429	219,5	792	724,20	2,667	289,68
II. R1	6,50	5	1240	1233	730	516	2,403	2,504	11,442	84,520	4,04	15,480	73,914	4,033	337	1205	1123,94	2,480	442,50
R2	6,41	5	1224	1233	730	513	2,386	2,504	11,362	83,32	4,71	15,039	70,660	4,712	320	1146	1097,03	2,520	431,90
Rata-rata	6,45	5	1232	1233,5	735	514,5	2,394	2,504	11,402	84,302	4,39	15,798	72,142	4,393	328	1174	1110,49	2,540	437,20
III. R1	6,46	5	1266	1279	762	517	2,443	2,502	11,557	86,165	2,178	13,835	84,257	2,158	255	918	866,25	3,048	384,21
R2	6,37	5	1246	1251	742	509	2,448	2,502	11,557	85,165	2,178	13,835	84,257	2,158	223	1156	1137,60	4,818	263,43
Rata-rata	6,42	5	1256	1260	747	513	2,448	2,502	11,557	86,165	2,178	13,835	84,257	2,158	269	1037	1002,00	3,688	273,62
IV. R1	6,49	5	1235	1238	727	511	2,417	2,500	11,509	85,137	3,354	14,853	72,437	3,320	324	800	756	4,064	186,02
R2	6,83	5	1237	1243	730	513	2,411	2,500	11,481	84,925	3,505	15,075	76,159	3,560	261	1009	903	3,61	237,00
Rata-rata	6,56	5	1236	1240,5	728,5	512	2,414	2,500	11,495	85,03	3,473	14,969	76,792	3,440	282	907	829,5	3,937	211,51
V. R1	6,56	5	1234	1239	720	503	2,404	2,499	11,447	84,742	3,810	15,239	75,023	3,820	217	786	716,91	2,286	313,55
R2	6,59	5	1233	1232	727	505	2,422	2,499	11,533	85,376	3,040	14,624	78,863	3,08	172	627	570,37	4,04	140,40
Rata-rata	6,585	5	1233,5	1236,5	723,5	507	2,413	2,499	11,490	85,059	3,451	14,941	76,902	3,45	195	707	643,44	3,175	226,87

Keterangan :
a = tinggi benda uji
b = 2 aspal terhadap batuan
c = berat (gram) sebelum ditindan
d = berat dalam keadaan jenuh (gram)
e = berat dalam air (gram)
f = isi (ml) = d - e
g = berat isi benda uji
h = berat jenis maksimum (teoritis)

100
2 agregat 2 aspal
BJ agregat BJ aspal

Suhu pencampuran = 160° C
Suhu pendatan = 140° C
Suhu percobaan = 60° C
BJ Aspal = 1.05

k = jumlah kandungan rongga (2) - 100 - i - j
l = 2 rongga terhadap agregat = 100 - j
m = 2 rongga terisi aspal = 100 m (i/l)
n = rongga terhadap campuran = 100 - 100 (g/h)
o = perbedaan arloji stabilitas
p = stabilitas (kalibrasi alat)
q = stabilitas (p.w koreksi benda uji)
r = kelelahan (0.01 mm)
S = 6M

i = $\frac{b \cdot m \cdot g}{B \cdot J \cdot aspal}$
j = $\frac{(100 - b) \cdot g}{B \cdot J \cdot agregat}$

HASIL TEST MARSHALL KADAR ASPAL 6 %
ASPAL RC 60 - 70

Kode	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
I. B1	6,74	6	1236	1239	728	511	2,419	2,469	13,530	84,12	2,06	15,83	87,06	2,025	296	1062	831,24	3,56	261,53
B2	6,52	6	1238	1240	731	509	2,432	2,469	13,89	84,57	1,54	15,43	90,00	1,498	285	1023	848,83	3,50	287,52
rata-rata	6,63	6	1237	1239,5	729,5	510	2,425	2,469	13,85	84,94	1,80	15,63	88,50	1,782	290	1041	840,00	3,43	274,55
II. B1	6,48	6	1244	1248	733	515	2,415	2,468	13,90	84,346	2,154	15,954	86,52	2,147	287	1030	866,32	3,56	271,43
B2	6,54	6	1243	1247	735	512	2,427	2,468	13,869	84,464	1,668	15,536	89,26	1,662	270	970	894,82	3,61	234,86
rata-rata	6,51	6	1243,5	1247,5	734	513,5	2,422	2,468	13,834	84,285	1,911	15,745	87,90	1,864	279	1002	890,57	3,68	253,14
III. B1	6,48	6	1239	1242	730	512	2,410	2,466	13,917	84,213	1,970	15,787	87,52	1,946	302	1104	1035,75	3,81	217,85
B2	6,46	6	1232	1232	730	502	2,442	2,466	13,954	85,040	0,996	14,95	93,34	0,973	306	1097	1002,26	3,56	281,53
rata-rata	6,47	6	1232	1237	730	507	2,430	2,466	13,935	84,631	1,463	15,369	90,43	1,453	307	1100	1013,03	3,63	276,7
IV. B1	6,50	6	1233	1239	731	508	2,427	2,465	13,968	84,249	1,543	15,417	90,00	1,541	244	879	819,36	3,05	268,3
B2	6,40	6	1223	1228	733	495	2,439	2,465	13,937	85,00	1,055	15,00	92,51	1,054	251	904	867,81	4,06	213,75
rata-rata	6,45	6	1228	1233,5	732	501,5	2,443	2,465	13,902	84,794	1,309	15,206	91,45	1,297	248	893	845,85	3,56	241,27
V. B1	6,7	6	1257	1266	747	519	2,422	2,463	13,84	84,478	1,632	15,522	89,16	1,664	263	946	836,62	4,06	206,10
B2	6,55	6	1244	1250	750	500	2,438	2,463	13,931	85,035	1,035	14,945	93,1	1,015	303	1086	949,12	4,32	231,28
rata-rata	6,62	6	1250,5	1258	748,5	509,5	2,454	2,463	13,885	84,756	1,357	15,243	91,13	1,333	283	1016	917,37	4,19	218,70

Keterangan :

- a = tinggi benda uji
- b = 2 aspal terhadap batuan
- c = berat (gram) sebelum direndam
- d = berat dalam keadaan jenuh (gram)
- e = berat dalam air (gram)
- f = isi (ml) = d - e
- g = berat isi benda uji
- h = berat jenis maksimum (teoritis)

100
2 agregat 2 aspal
BJ agregat BJ aspal

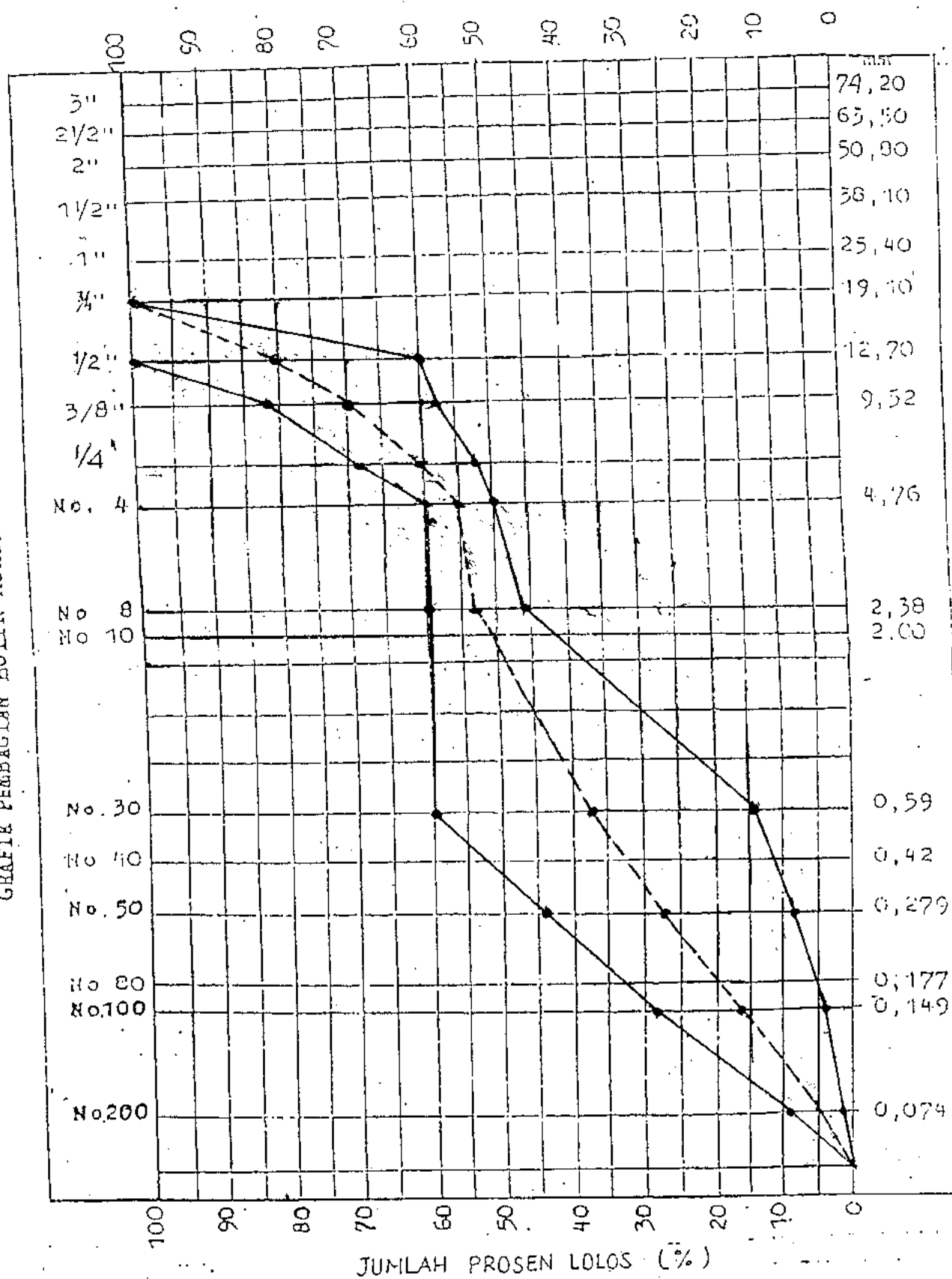
i = b m g
BJ aspal
j = < 100 - b > 9
BJ agregat

k = jumlah kandungan rongga G20 = 100 - i - j
l = 2 rongga terhadap agregat = 100 - j
m = 2 rongga terisi aspal = 100 m (1/1)
n = rongga terhadap campuran = 100 - 100 (g/h)
o = pembacaan arloji stabilitas
p = stabilitas < kalibrasi alat
q = stabilitas < p m koraksi benda uji
r = kelulusan < 0.01 mm
S = BM

Suhu pencampuran = 150° C
Suhu pemadatan = 140° C
Suhu percobaan = 60° C
BJ Aspal = 1.05

JUMLAH PROSEN LOLOS (%)

GRAFIK PEMBAGIAN BUTIR AGREGAT



KETERANGAN : — BATAS SPESIFIKASI GRADASI AGREGAT

SOILTEST INC., EVANSTON, ILLINOIS

Lampiran 16

PROVING RING PR-60

SERIAL NO. 21929

CAPACITY 2721.09 KILOGRAMS

CALIBRATION DATE 24 JUN 1966

 $X \text{ (KILOGRAMS)} = 3.5069642507 * Y \text{ (DIVISIONS)} + 23.051$

CORRELATION COEFFICIENT = .9999049667

VALUE IN KILOGRAMS

DIVISIONS	0	1	2	3	4	5	6	7	8
70 *	269	273	276	280	283	287	290	294	297
80 *	304	308	311	315	318	322	325	329	332
90 *	339	343	346	350	353	357	360	364	367
100 *	374	378	381	385	388	392	395	399	402
110 *	409	413	416	420	423	427	430	434	437
120 *	444	448	451	455	458	462	465	469	472
130 *	479	483	486	490	493	497	500	504	508
140 *	515	518	522	525	529	532	535	539	543
150 *	550	553	557	560	564	567	571	574	578
160 *	581	583	592	595	599	602	605	609	613
170 *	617	620	627	630	634	637	641	644	648
180 *	655	658	662	665	669	672	676	679	683
190 *	690	693	697	700	704	707	711	714	718
200 *	725	728	732	735	739	742	746	749	753
210 *	760	764	767	771	774	778	781	785	788
220 *	793	799	802	806	809	813	815	820	823
230 *	830	834	837	841	844	848	851	855	858
240 *	865	869	872	876	879	883	885	890	893
250 *	900	904	907	911	914	918	921	925	928
260 *	935	939	942	946	949	953	955	960	963
270 *	970	974	977	981	984	988	991	995	998
280 *	1006	1009	1013	1016	1020	1023	1027	1030	1034
290 *	1041	1044	1048	1051	1055	1058	1062	1065	1069
300 *	1076	1079	1083	1086	1090	1093	1097	1100	1104
310 *	1111	1114	1118	1121	1125	1128	1132	1135	1139
320 *	1146	1149	1153	1156	1160	1163	1167	1170	1174
330 *	1181	1184	1188	1191	1195	1198	1202	1205	1209
340 *	1216	1219	1223	1226	1230	1233	1237	1240	1244
350 *	1251	1254	1258	1262	1265	1269	1272	1276	1279
360 *	1286	1290	1293	1297	1300	1304	1307	1311	1314
370 *	1321	1325	1328	1332	1335	1339	1342	1346	1349
380 *	1356	1360	1363	1367	1370	1374	1377	1381	1384
390 *	1391	1395	1398	1402	1405	1409	1412	1416	1419
400 *	1426	1430	1433	1437	1440	1444	1447	1451	1454
410 *	1461	1465	1468	1472	1475	1479	1482	1485	1489
420 *	1496	1500	1503	1507	1511	1514	1518	1521	1525
430 *	1532	1535	1539	1542	1546	1549	1553	1556	1560
440 *	1567	1570	1574	1577	1581	1584	1588	1591	1595
450 *	1602	1605	1609	1612	1616	1619	1623	1626	1630
460 *	1637	1640	1644	1647	1651	1654	1658	1661	1665
470 *	1672	1675	1679	1682	1686	1689	1693	1696	1700
480 *	1707	1710	1714	1717	1721	1724	1728	1731	1735
490 *	1742	1745	1749	1752	1756	1759	1763	1767	1770
500 *	1777	1781	1784	1788	1791	1795	1798	1802	1805

VALUE IN KILOGRAMS

ISIONS	0	1	2	3	4	5	6	7	8	9
10 *	1812	1816	1819	1823	1826	1830	1833	1837	1840	1844
20 *	1847	1851	1854	1858	1861	1865	1868	1872	1875	1879
30 *	1882	1886	1889	1893	1896	1900	1903	1907	1910	1914
40 *	1917	1921	1924	1928	1931	1935	1938	1942	1945	1949
50 *	1952	1956	1959	1963	1966	1970	1973	1977	1980	1984
60 *	1987	1991	1994	1998	2001	2005	2008	2012	2016	2019
70 *	2023	2026	2030	2033	2037	2040	2044	2047	2051	2054
80 *	2058	2061	2065	2068	2072	2075	2079	2082	2086	2089
90 *	2093	2096	2100	2103	2107	2110	2114	2117	2121	2124
00 *	2128	2131	2135	2138	2142	2145	2149	2152	2156	2159
10 *	2163	2166	2170	2173	2177	2180	2184	2187	2191	2194
20 *	2198	2201	2205	2208	2212	2215	2219	2222	2226	2229
30 *	2233	2236	2240	2243	2247	2250	2254	2257	2261	2264
40 *	2268	2272	2275	2279	2282	2286	2289	2293	2296	2300
50 *	2303	2307	2310	2314	2317	2321	2324	2328	2331	2335
60 *	2338	2342	2345	2349	2352	2356	2359	2363	2366	2370
70 *	2373	2377	2380	2384	2387	2391	2394	2398	2401	2405
80 *	2408	2412	2415	2419	2422	2426	2429	2433	2436	2440
90 *	2443	2447	2450	2454	2457	2461	2464	2468	2471	2475
00 *	2478	2482	2485	2489	2492	2496	2499	2503	2506	2510
10 *	2513	2517	2521	2524	2528	2531	2535	2538	2542	2545
20 *	2549	2552	2556	2559	2563	2566	2570	2573	2577	2580
30 *	2584	2587	2591	2594	2598	2601	2605	2608	2612	2615
40 *	2619	2622	2626	2629	2633	2636	2640	2643	2647	2650
50 *	2654	2657	2661	2664	2668	2671	2675	2678	2682	2685
60 *	2689	2692	2696	2699	2703	2706	2710	2713	2717	2720
70 *	2724	2727	2731	2734	2738	2741	2745	2748	2752	2755
80 *	2759	2762	2766	2770	2773	2777	2780	2784	2787	2790