



LABORATORIUM JALAN RAYA
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
 Jl. Kaliurang Km.14.4 Telp. 95330 Yogyakarta 55584

lampiran 17

Batu Kapur : Batu Pecah = 0% : 100% Pekerjaan Test Marshall
 Dikerjakan Oleh : 1. Irwan Sugiarto
 2. Sandhi Nugroho
 Tanggal 24 Februari 2000 Diperiksa Oleh :

PERHITUNGAN TEST MARSHALL

No	t	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
1	6.97	4.71	4.5	1170	1177	669.00	508	2.30315	2.455605	9.94	83.85467	6.21	16.14533	61.54649	6.208447	449	1539.037	1302.03	4.064
2	6.86	4.71	4.5	1167	1170	668.00	502	2.324701	2.455605	10.03	84.63933	5.33	15.36067	65.29579	5.330798	491	1683.001	1433.92	3.81
3	6.87	4.71	4.5	1131	1135	656.00	479	2.361169	2.455605	10.19	85.96708	3.85	14.03292	72.59509	3.84571	445	1525.327	1305.68	3.81
4	6.31	5.26	5	1142	1149	658.00	491	2.325866	2.438315	11.15	84.23836	4.61	15.76164	70.74065	4.611753	428	1467.056	1480.26	4.318
5	6.45	5.26	5	1183	1188	680.00	508	2.32874	2.438315	11.16	84.34248	4.49	15.65752	71.29903	4.493861	485	1662.435	1572.66	4.318
6	6.4	5.26	5	1185	1187	681.00	506	2.341897	2.438315	11.23	84.819	3.95	15.181	73.95255	3.954263	507	1737.844	1668.33	4.572
7	6.92	5.82	5.5	1131	1139	655.00	484	2.336777	2.421266	12.32	84.18811	3.49	15.81189	77.93129	3.489481	468	1604.164	1358.73	4.572
8	6.87	5.82	5.5	1142	1150	658.00	492	2.321138	2.421266	12.24	83.62469	4.14	16.37531	74.74632	4.135368	492	1686.428	1443.58	4.318
9	6.86	5.82	5.5	1177	1182	681.00	501	2.349301	2.421266	12.39	84.63934	2.97	15.36066	80.65052	2.972208	599	2053.192	1748.95	4.318
10	6.74	6.38	6	1154	1160	663.00	497	2.321932	2.404455	13.36	83.21066	3.43	16.78934	79.55781	3.432108	428	1467.056	1286.46	4.318
11	6.89	6.38	6	1151	1158	660.00	498	2.311245	2.404455	13.30	82.82769	3.88	17.17231	77.42553	3.876559	467	1600.736	1350.41	4.064
12	6.79	6.38	6	1139	1150	663.00	487	2.338809	2.404455	13.45	83.8155	2.73	16.1845	83.13087	2.730184	510	1748.127	1516.48	4.572
13	6.68	6.95	6.5	1172	1176	670.00	506	2.316206	2.387876	14.43	82.56394	3.00	17.43606	82.78617	3.001413	458	1569.887	1394.27	4.826
14	6.64	6.95	6.5	1175	1185	675.00	510	2.303922	2.387876	14.36	82.12606	3.52	17.87394	80.32977	3.515843	430	1473.911	1322.82	4.318
15	6.53	6.95	6.5	1173	1183	674.00	509	2.304519	2.387876	14.36	82.14735	3.49	17.85265	80.44639	3.490838	469	1607.591	1487.03	4.318

t = tebal benda uji
 a = % aspal terhadap batuan
 b = % aspal terhadap campuran
 c = berat kering/sblm direndam
 d = berat dlm keadaan SSI
 e = berat didalam air (gr)
 f = Vol (isi) = d - e
 g = berat isi sampel = $\frac{c}{f}$

h = B.J maksimum (teoritis)

$$i = 100 \cdot \left(\frac{\% \text{aggr}}{B.J \text{ Aggr}} + \frac{\% \text{aspal}}{B.J \text{ Aspal}} \right)$$

$$j = \frac{B.J \text{ aspal}}{(100 - b) \cdot g}$$

$$k = (100 - i - j) \text{ jumlah kandungan rongga}$$

$$l = (100 - j) \text{ rongga terhadap agregat}$$

$$m = \left(100 \cdot x^i \right) \text{ rongga yang terisi aspal (VFWA)}$$

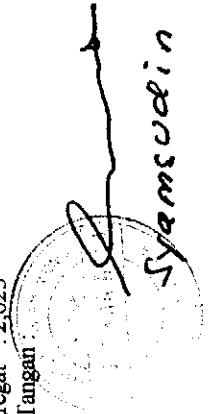
$$n = \text{rongga yang terisi campuran } 100 - \left(100 \cdot x^i \cdot \frac{g}{h} \right)$$

$$o = \text{pembacaan arloji (stabilitas)}$$

$$p = o \cdot x \text{ kalibrasi proving ring}$$

$$q = p \cdot x \text{ koreksi tebal sampel (STABILITAS)}$$

r = FLOW (kelelahan plastis)
 Suhu Pencampuran : ±160°C
 Suhu Pemadatan : ±140°C
 Suhu Water Bath : 60°C
 B.J. Aspal : 1.043
 B.J. Agregat : 2.623
 Tanda Tangan


 Syamsudin