

LAMPIRAN I

Tabel Data Hasil Perhitungan Pada Variasi 2 Pelat Netral

posisi lubang vertikal - 2 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	$\eta$ (%)	
	10	14.5	10	90	0.18	30.25	29.5	29.25	145	0.0177	79.35	
	20	14.5	10	180	0.35	30.25	29.5	29.25	145	0.0177	79.35	
	30	14.4	10	270	0.53	30.25	29.5	29.25	144	0.0177	79.90	
	40	14.5	10	370	0.73	30.25	29.5	29.5	145	0.0182	81.55	
	50	14.3	10	480	0.94	30.25	29.75	29.5	143	0.0189	85.82	
	60	14.4	10	580	1.14	30.25	29.75	29.5	144	0.0190	85.82	
	70	14.5	10	670	1.32	30.25	29.75	29.75	145	0.0188	84.38	
	80	14.5	10	770	1.51	30.5	30	30	145	0.0189	84.86	
	90					30.5	30.25	30				
	100											87 s
Rata-rata	14.45	10	426.25	0.84	30.31	29.72	29.56	144.5	0.0183	82.63	400 mL	
posisi lubang horizontal - 2 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	$\eta$ (%)	
	10	15.2	10	90	0.18	29.75	29.25	29	152	0.0177	75.69	
	20	14.8	10	175	0.34	29.75	29.25	29	148	0.0172	75.58	
	30	14.2	10	250	0.49	29.75	29.25	29.25	142	0.0164	75.02	
	40	14.4	10	330	0.65	29.75	29.25	29.25	144	0.0162	73.24	
	50	14.5	10	410	0.81	29.75	29.25	29.5	145	0.0161	72.29	
	60	14.6	10	510	1.00	29.75	29.25	29.5	146	0.0167	74.42	
	70	14.7	10	590	1.16	29.75	29.5	29.5	147	0.0166	73.30	
	80	14.8	10	670	1.32	30	29.5	29.75	148	0.0165	72.34	
	90	14.9	10	750	1.47	30	29.5	29.75	149	0.0164	71.50	
	100											97 s
Rata-rata	14.68	10	419.44	0.82	29.81	29.33	29.39	146.8	0.0166	73.71	600 mL	
posisi lubang zigzag - 2 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	$\eta$ (%)	
	10	15.1	10	90	0.18	29.25	28.75	28.75	151	0.0177	76.19	
	20	14.7	10	180	0.35	29.25	28.75	28.75	147	0.0177	78.27	
	30	15	10	260	0.51	29.5	28.75	29	150	0.0170	73.86	
	40	15.1	10	340	0.67	29.5	29	29.25	151	0.0167	71.96	
	50	15.2	10	430	0.84	29.5	29	29.5	152	0.0169	72.33	
	60	15.2	10	520	1.02	29.5	29	29.5	152	0.0170	72.89	
	70	15.3	10	620	1.22	29.75	29	29.75	153	0.0174	74.00	
	80	15.3	10	710	1.39	29.75	29	29.75	153	0.0174	74.15	
	90	15.4	10	780	1.53				154	0.0170	71.94	
	100				0.00							91 s
Rata-rata	15.14	10	436.67	0.77	29.5	28.91	29.28	151.4	0.0172	73.95	430 mL	

LAMPIRAN II

Tabel Data Hasil Perhitungan Pada Variasi 4 Pelat Netral

posisi lubang vertikal - 4 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	$\eta$ (%)	
	10	18	10	110	0.22	31.25	31	30.5	180	0.0216	78.12	
	20	17.6	10	210	0.41	31.25	31	30.5	176	0.0206	76.27	
	30	17.4	10	300	0.59	31.25	31	30.75	174	0.0196	73.47	
	40	17.2	10	390	0.77	31.25	31	30.75	172	0.0192	72.46	
	50	17	10	490	0.96	31.25	31	30.75	170	0.0193	73.69	
	60	17	10	580	1.14	31.5	31	30.75	170	0.0190	72.69	
	70	16.9	10	670	1.32	31.5	31	30.75	169	0.0188	72.40	
	80	16.9	10	760	1.49	31.5	31	30.75	169	0.0187	71.86	
	90											
	100											86 s
Rata-rata	17.25	10	438.75	0.86	31.34	31.00	30.69	172.5	0.0196	73.87	450 mL	
posisi lubang horizontal - 4 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	$\eta$ (%)	
	10	22.7	10	110	0.22	30.75	30.25	30.25	227	0.0216	61.95	
	20	21.7	10	210	0.41	30.75	30.25	30.25	217	0.0206	61.86	
	30	21.2	10	310	0.61	30.75	30.25	30.25	212	0.0203	62.31	
	40	20.9	10	400	0.79	30.75	30.25	30.25	209	0.0196	61.17	
	50	20.5	10	500	0.98	30.75	30.5	30.5	205	0.0196	62.36	
	60	19.9	10	590	1.16	31	30.5	30.5	199	0.0193	63.17	
	70	19.5	10	680	1.34	31	30.5	30.5	195	0.0191	63.68	
	80	18.4	10	770	1.51	31	30.5	30.5	184	0.0189	66.87	
	90											
	100											82 s
Rata-rata	20.6	10	446.25	0.88	30.84	30.38	30.38	206.0	0.0199	62.92	520 mL	
posisi lubang zigzag - 4 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	$\eta$ (%)	
	10	23.3	10	110	0.22	29.5	29.25	29.5	233	0.0216	60.35	
	20	21.6	10	220	0.43	29.5	29.25	29.5	216	0.0216	65.10	
	30	20.5	10	320	0.63	29.5	29.25	29.5	205	0.0210	66.52	
	40	20.3	10	410	0.81	29.5	29.5	29.5	203	0.0201	64.55	
	50	20.1	10	500	0.98	29.75	29.5	29.5	201	0.0196	63.60	
	60	20	10	590	1.16	29.75	29.5	29.5	200	0.0193	62.85	
	70	20	10	690	1.36	30	29.75	29.5	200	0.0194	63.00	
	80	19.9	10	780	1.53	30	29.75	29.5	199	0.0192	62.63	
	90											
	100											77 s
Rata-rata	20.7125	10	452.5	0.89	29.69	29.47	29.50	207.1	0.0202	63.58	530 mL	

LAMPIRAN III

Tabel Data Hasil Perhitungan Pada Variasi 6 Pelat Netral

posisi lubang vertikal - 6 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	$\eta$ (%)	
	10	25.6	10	110	0.22	29.5	29.25	30.5	256	0.0216	54.93	
	20	25.3	10	210	0.41	29.5	29.25	30.5	253	0.0206	53.05	
	30	24.9	10	300	0.59	29.5	29.25	30.75	249	0.0196	51.34	
	40	24.9	10	400	0.79	29.5	29.5	31	249	0.0196	51.34	
	50	24.8	10	490	0.96	29.5	29.75	31.25	248	0.0193	50.52	
	60	24.5	10	580	1.14	29.5	29.75	31.25	245	0.0190	50.44	
	70	24.5	10	670	1.32	29.5	30	31.5	245	0.0188	49.94	
	80	24.2	10	770	1.51	29.5	30	31.5	242	0.0189	50.84	
	90											
	100											82 s
Rata-rata	24.8375	10	441.25	0.87	29.50	29.59	31.03	248.4	0.0197	51.55	470 mL	
posisi lubang horizontal - 6 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	$\eta$ (%)	
	10	35.3	10	120	0.24	28.75	29	29.75	353	0.0236	43.46	
	20	32.8	10	220	0.43	28.75	29	29.75	328	0.0216	42.87	
	30	31.7	10	310	0.61	29	29.25	30	317	0.0203	41.67	
	40	30.1	10	420	0.83	29	29.25	30.5	301	0.0206	44.59	
	50	29.5	10	530	1.04	29	29.25	30.75	295	0.0208	45.93	
	60	28.9	10	640	1.26	29	29.5	31	289	0.0210	47.18	
	70	28.7	10	750	1.47	29	29.5	31.25	287	0.0210	47.72	
	80											
	90											
	100											77 s
Rata-rata	31	10	427.1428571	0.84	28.93	29.25	30.43	310.0	0.0213	44.78	680 mL	
posisi lubang zigzag - 6 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	$\eta$ (%)	
	10	35.2	10	130	0.26	29	29	29.25	352	0.0255	47.21	
	20	34.6	10	250	0.49	29	29	29.25	346	0.0246	46.18	
	30	33.8	10	340	0.67	29	29	29.5	338	0.0223	42.86	
	40	32.6	10	440	0.86	29	29.25	29.75	326	0.0216	43.13	
	50	31.2	10	540	1.06	29.25	29.25	30	312	0.0212	44.25	
	60	28	10	650	1.28	29.25	29.25	30.5	280	0.0213	49.46	
	70	27.5	10	740	1.45	29.25	29.5	30.75	275	0.0208	49.14	
	80											
	90											
	100											78 s
Rata-rata	31.84285714	10	441.4285714	0.87	29.11	29.18	29.86	318.4	0.0225	46.04	410 mL	

LAMPIRAN IV

Tabel Data Hasil Perhitungan Pada Variasi 8 Pelat Netral

posisi lubang vertikal - 8 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	η (%)	
	10	28.8	10	130	0.26	29.5	30.25	31.75	288	0.0255	57.70	
	20	28.7	10	240	0.47	29.5	30.25	31.75	287	0.0236	53.45	
	30	28.5	10	340	0.67	29.5	30.5	32.25	285	0.0223	50.83	
	40	28.4	10	450	0.88	29.5	30.5	32.25	284	0.0221	50.64	
	50	28.2	10	560	1.10	29.5	30.75	32.5	282	0.0220	50.77	
	60	28	10	660	1.30	29.75	31	32.75	280	0.0216	50.22	
	70	27.9	10	770	1.51	29.75	31	32.75	279	0.0216	50.40	
	80											
	90											
	100											
Rata-rata	28.35714286	10	450	0.88	29.57	30.61	32.29	283.6	0.0227	52.00	73 s 400 mL	
posisi lubang horizontal - 8 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	η (%)	
	10	35.6	10	130	0.26	31	29.5	30.25	356	0.0255	46.68	
	20	33.5	10	250	0.49	31	29.5	30.5	335	0.0246	47.70	
	30	32.3	10	380	0.75	31	29.75	30.5	323	0.0249	50.13	
	40	32	10	510	1.00	31.25	29.75	30.75	320	0.0250	50.93	
	50	31.5	10	640	1.26	31.25	29.75	31	315	0.0251	51.95	
	60	31.3	10	770	1.51	31.25	29.75	31.25	313	0.0252	52.41	
	70											
	80											
	90											
	100											
Rata-rata	32.7	10	446.6666667	0.88	31.13	29.67	30.71	327	0.0251	49.97	62 s 480 mL	
posisi lubang zigzag - 8 pelat netral	t (sekon)	Tegangan (V)	Arus (A)	Kenaikan (mm)	Volume (liter)	T1 (C)	T2 (C)	T3 (C)	Daya (W)	Q (l/s)	η (%)	
	10	35.9	10	130	0.26	28.5	29.75	29.5	359	0.0255	46.29	
	20	34	10	260	0.51	28.5	29.75	29.5	340	0.0255	48.88	
	30	33.5	10	380	0.75	28.75	30.25	30	335	0.0249	48.34	
	40	33	10	500	0.98	28.75	30.25	30.25	330	0.0246	48.42	
	50	32.8	10	620	1.22	28.75	30.5	30.5	328	0.0244	48.33	
	60	32.5	10	750	1.47	28.75	30.75	31.25	325	0.0246	49.17	
	70											
	80											
	90											
	100											
Rata-rata	33.61666667	10	440	0.86	28.67	30.21	30.17	336.2	0.0249	48.24	65 s 550 mL	