

## LAMPIRAN



Struktur burner dan burner yang sudah di rakit



Proses Pembacaan data termokopel di (ardiuono chanel) dan amplifier



Proses pengambilan bentuk badan api melalui camera



## Tugas Akhir

V.Bb = 0,330 m/detik, P.Bb = 0.50 Bar, V.Udara = 10,616 m/detik, P.Udara = 6 Bar

H (mm)	r <sub>0</sub>	r <sub>1</sub>	S	AS	T <sub>s</sub>	T <sub>∞</sub>	Q
	Mm				°K		Watt
130 – 140	3,3	6,9	10,628	340,402	684	300	4,068
120 – 130	6,9	9,15	10,25	516,569	842	300	14,485
110 – 120	9,15	10,3	10,066	614,755	909	300	23,516
100 – 110	10,3	11,4	10,06	685,49	774	300	13,634
90 – 100	11,4	11,8	10,008	729,063	1040	300	48,025
80 – 90	11,8	12,05	10,003	749,124	1119	300	66,253
70 – 80	12,05	12,05	10	756,74	1151	300	74,959
60 – 70	12,05	11,65	10,008	744,775	983	300	39,088
50 – 60	11,65	11,1	10,015	715,43	1160	300	73,12
40 – 50	11,1	10,6	10,012	682,231	1123	300	61,209
30 – 40	10,6	9,8	10,032	642,607	940	300	28,152
20 – 30	9,8	9,25	10,015	599,074	827	300	15,613
10 – 20	9,25	9,65	10,008	593,935	757	300	10,786
0 – 10	9,65	15	11,341	877,819	575	300	5,038
<b>Temperatur total</b>							<b>477,946</b>



## Tugas Akhir

V.Bb = 0,330 m/detik, P.Bb = 0.50 Bar, V.Udara = 14,862 m/detik, P.Udara = 6 Bar

H (mm)	r <sub>0</sub>	r <sub>1</sub>	S	AS	T <sub>s</sub>	T <sub>∞</sub>	Q
	Mm				°K		Watt
110 – 120	5,15	7,15	10,198	393,869	973	300	19,836
100 – 110	7,15	8,35	10,072	490,192	1059	300	34,732
90 – 100	8,35	9,2	10,036	553,057	1103	300	46,161
80 – 90	9,2	10	10,032	604,806	1173	300	64,644
70 – 80	10	10,15	10,001	632,781	799	300	14,332
60 – 70	10,15	10,15	10,002	637,42	868	300	20,223
50 – 60	10,15	9,85	10,004	628,283	1035	300	40,59
40 – 50	9,85	9,85	10,001	618,58	1109	300	52,768
30 – 40	9,85	9,05	10,032	595,356	1080	300	45,652
20 – 30	9,05	8,65	10,008	556,224	805	300	12,988
10 – 20	8,65	7,7	10,045	515,701	709	300	7,152
0 – 10	7,7	15	12,381	882,495	531	300	3,573
<b>Temperatur total</b>							<b>362,651</b>



## Tugas Akhir

V.Bb = 0,462 m/detik, P.Bb = 0.75 Bar, V.Udara = 10,616 m/detik, P.Udara = 8 Bar

H	r <sub>0</sub>	r <sub>1</sub>	S	AS	T <sub>s</sub>	T <sub>∞</sub>	Q
(mm)	Mm				°K		Watt
170 – 180	5,55	7,7	10,229	425,557	798	300	9,589
160 – 170	7,7	9,8	10,218	561,486	841	300	15,668
150 – 160	9,8	11,1	10,084	661,782	729	300	10,294
140 – 150	11,1	12,15	10,055	734,063	852	300	21,595
130 – 140	12,15	12,9	10,028	788,779	794	300	17,413
120 -130	12,9	13,15	10,003	818,226	844	300	23,165
110 -120	13,15	13,7	10,015	844,364	1005	300	48,452
100 -110	13,7	14,05	10,006	871,884	841	300	24,33
90 – 100	14,05	14,05	10,001	882,34	808	300	20,919
80 – 90	14,05	13,35	10,024	862,465	750	300	15,077
70 – 80	13,35	12,7	10,021	819,696	798	300	18,471
60 – 70	12,7	11,9	10,032	774,908	700	300	10,193
50 – 60	11,9	11,1	10,032	724,507	819	300	18,15
40 – 50	11,1	10,45	10,021	678,098	865	300	21,213
30 – 40	10,45	9,8	10,021	637,192	807	300	15,03
20 – 30	9,8	8,85	10,045	588,247	498	300	1,781
10 – 20	8,85	8,2	10,021	536,5	410	300	0,613
0 – 10	8,2	15	12,093	880,949	374	300	0,573
<b>Temperatur total</b>							<b>292,526</b>



## Tugas Akhir

V.Bb = 0,462 m/detik, P.Bb = 0.75 Bar, V.Udara = 14,862 m/detik, P.Udara = 8 Bar

H (mm)	r <sub>0</sub>	r <sub>1</sub>	S	AS	T <sub>s</sub>	T <sub>∞</sub>	Q
	Mm				°K		Watt
170 – 180	7,95	9,55	10,127	556,489	1241	300	74,583
160 – 170	9,55	10,85	10,084	645,95	1217	300	80,046
150 – 160	10,85	11,9	10,055	718,277	1240	300	95,956
140 – 150	11,9	12,45	10,015	765,746	881	300	25,804
130 – 140	12,45	12,85	10,008	795,055	877	300	26,302
120 – 130	12,85	12,85	10,002	806,98	1024	300	49,938
110 – 120	12,85	13,1	10,003	815,085	913	300	31,738
100 -110	13,1	12,85	10,003	815,085	916	300	32,162
90 – 100	12,85	12,55	10,004	797,919	797	300	17,888
80 – 90	12,55	12,15	10,008	776,2	1161	300	79,606
70 – 80	12,15	11,5	10,021	744,177	852	300	21,892
60 – 70	11,5	11	10,012	707,383	1172	300	75,349
50 – 60	11	10,2	10,032	667,807	1124	300	60,13
40 – 50	10,2	9,65	10,015	624,232	1063	300	44,905
30 – 40	9,65	9	10,021	586,846	1004	300	33,54
20 – 30	9	8,45	10,015	548,758	806	300	12,879
10 – 20	8,45	8,45	10,001	530,66	433	300	0,814
0 – 10	8,45	15	11,954	880,222	390	300	0,75
<b>Temperatur total</b>							<b>764,282</b>