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Lampiran 1 Tabel Karakteristik Beberapa Bahan Tertentu

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APPENDIX 1

TABLE A-8

Properties of miscellaneous materials
(Values are at 300 K unless indicated otherwise)

Material	Density, ρ kg/m ³	Thermal Conductivity, k W/m · K	Specific Heat, c_p J/kg · K	Material	Density, ρ kg/m ³	Thermal Conductivity, k W/m · K	Specific Heat, c_p J/kg · K
Asphalt	2115	0.062	920	Ice			
Bakelite	1300	1.4	1465	273 K	920	1.88	2040
Brick, refractory				253 K	922	2.03	1945
Chrome brick				173 K	928	3.49	1460
473 K	3010	2.3	835	Leather, sole	998	0.159	—
823 K	—	2.5	—	Linoleum	535	0.081	—
1173 K	—	2.0	—		1180	0.186	—
Fire clay, burnt				Mica	2900	0.523	—
1600 K				Paper	930	0.180	1340
773 K	2050	1.0	960	Plastics			
1073 K	—	1.1	—	Plexiglass	1190	0.19	1465
1373 K	—	1.1	—	Teflon			
Fire clay, burnt				300 K	2200	0.35	1050
1725 K				400 K	—	0.45	—
773 K	2325	1.3	960	Lexan	1200	0.19	1260
1073 K	—	1.4	—	Nylon	1145	0.29	—
1373 K	—	1.4	—	Polypropylene	910	0.12	1925
Fire clay brick				Polyester	1395	0.15	1170
478 K	2645	1.0	960	PVC, vinyl	1470	0.1	840
922 K	—	1.5	—	Porcelain	2300	1.5	—
1478 K	—	1.8	—	Rubber, natural	1150	0.28	—
Magnesite				Rubber, vulcanized			
478 K	—	3.8	1130	Soft	1100	0.13	2010
922 K	—	2.8	—	Hard	1190	0.16	—
1478 K	—	1.9	—	Sand	1515	0.2–1.0	800
Chicken meat, white (74.4% water content)				Snow, fresh	100	0.60	—
198 K	—	1.60	—	Snow, 273 K	500	2.2	—
233 K	—	1.49	—	Soil, dry	1500	1.0	1900
253 K	—	1.35	—	Soil, wet	1900	2.0	2200
273 K	—	0.48	—	Sugar	1600	0.58	—
293 K	—	0.49	—	Tissue, human			
Clay, dry	1550	0.930	—	Skin	—	0.37	—
Clay, wet	1495	1.675	—	Fat layer	—	0.2	—
Coal, anthracite	1350	0.26	1260	Muscle	—	0.41	—
Concrete (stone mix)	2300	1.4	880	Vaseline	—	0.17	—
Cork	86	0.048	2030	Wood, cross-grain			
Cotton	80	0.06	1300	Balsa	140	0.055	—
Fat	—	0.17	—	Fir	415	0.11	2720
Glass				Oak	545	0.17	2385
Window	2800	0.7	750	White pine	435	0.11	—
Pyrex	2225	1–1.4	835	Yellow pine	640	0.15	2805
Crown	2500	1.05	—	Wood, radial			
Lead	3400	0.85	—	Oak	545	0.19	2385
				Fir	420	0.14	2720
				Wool, ship	145	0.05	—

Source: Compiled from various sources.

Lampiran 2 Tabel Karakteristik Bahan Isolasi

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APPENDIX 1

TABLE A-6

Properties of insulating materials
(at a mean temperature of 24°C)

Material	Thickness, <i>L</i> mm	Density, ρ kg/m ³	Thermal Conductivity, <i>k</i> W/m · K	Specific Heat, c_p kJ/kg · K	<i>R</i> -value (for listed thickness, <i>L</i> /K), K · m ² /W
Blanket and Batt					
Mineral fiber (fibrous form processed from rock, slag, or glass)	50 to 70 mm	4.8–32	—	0.71–0.96	1.23
	75 to 90 mm	4.8–32	—	0.71–0.96	1.94
	135 to 165 mm	4.8–32	—	0.71–0.96	3.32
Board and Slab					
Cellular glass		136	0.055	1.0	—
Glass fiber (organic bonded)		64–144	0.036	0.96	—
Expanded polystyrene (molded beads)		16	0.040	1.2	—
Expanded polyurethane (<i>R</i> -11 expanded)		24	0.023	1.6	—
Expanded perlite (organic bonded)		16	0.052	1.26	—
Expanded rubber (rigid)		72	0.032	1.68	—
Mineral fiber with resin binder		240	0.042	0.71	—
Cork		120	0.039	1.80	—
Sprayed or Formed in Place					
Polyurethane foam		24–40	0.023–0.026	—	—
Glass fiber		56–72	0.038–0.039	—	—
Urethane, two-part mixture (rigid foam)		70	0.026	1.045	—
Mineral wool granules with asbestos/ inorganic binders (sprayed)		190	0.046	—	—
Loose Fill					
Mineral fiber (rock, slag, or glass)	~75 to 125 mm	9.6–32	—	0.71	1.94
	~165 to 222 mm	9.6–32	—	0.71	3.35
	~191 to 254 mm	—	—	0.71	3.87
	~185 mm	—	—	0.71	5.28
Silica aerogel		122	0.025	—	—
Vermiculite (expanded)		122	0.068	—	—
Perlite, expanded		32–66	0.039–0.045	1.09	—
Sawdust or shavings		128–240	0.065	1.38	—
Cellulosic insulation (milled paper or wood pulp)		37–51	0.039–0.046	—	—
Roof Insulation					
Cellular glass	—	144	0.058	1.0	—
Preformed, for use above deck	13 mm	—	—	1.0	0.24
	25 mm	—	—	2.1	0.49
	50 mm	—	—	3.9	0.93
Reflective Insulation					
Silica powder (evacuated)		160	0.0017	—	—
Aluminum foil separating fluffy glass mats; 10–12 layers (evacuated); for cryogenic applications (150 K)		40	0.00016	—	—
Aluminum foil and glass paper laminate; 75–150 layers (evacuated); for cryogenic applications (150 K)		120	0.000017	—	—

Lampiran 3 Tabel Karakteristik Udara pada Tekanan 1 Atm.

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TABLE A-15

Properties of air at 1 atm pressure

Temp. $T, ^\circ\text{C}$	Density $\rho, \text{kg/m}^3$	Specific Heat $c_p, \text{J/kg} \cdot \text{K}$	Thermal Conductivity $k, \text{W/m} \cdot \text{K}$	Thermal Diffusivity $\alpha, \text{m}^2/\text{s}^2$	Dynamic Viscosity $\mu, \text{kg/m} \cdot \text{s}$	Kinematic Viscosity $\nu, \text{m}^2/\text{s}$	Prandtl Number Pr
-150	2.866	983	0.01171	4.158×10^{-6}	8.636×10^{-6}	3.013×10^{-6}	0.7246
-100	2.038	966	0.01582	8.036×10^{-6}	1.189×10^{-5}	5.837×10^{-6}	0.7263
-50	1.582	999	0.01979	1.252×10^{-5}	1.474×10^{-5}	9.319×10^{-6}	0.7440
-40	1.514	1002	0.02057	1.356×10^{-5}	1.527×10^{-5}	1.008×10^{-5}	0.7436
-30	1.451	1004	0.02134	1.465×10^{-5}	1.579×10^{-5}	1.087×10^{-5}	0.7425
-20	1.394	1005	0.02211	1.578×10^{-5}	1.630×10^{-5}	1.169×10^{-5}	0.7408
-10	1.341	1006	0.02288	1.696×10^{-5}	1.680×10^{-5}	1.252×10^{-5}	0.7387
0	1.292	1006	0.02364	1.818×10^{-5}	1.729×10^{-5}	1.338×10^{-5}	0.7362
5	1.269	1006	0.02401	1.880×10^{-5}	1.754×10^{-5}	1.382×10^{-5}	0.7350
10	1.246	1006	0.02439	1.944×10^{-5}	1.778×10^{-5}	1.426×10^{-5}	0.7336
15	1.225	1007	0.02476	2.009×10^{-5}	1.802×10^{-5}	1.470×10^{-5}	0.7323
20	1.204	1007	0.02514	2.074×10^{-5}	1.825×10^{-5}	1.516×10^{-5}	0.7309
25	1.184	1007	0.02551	2.141×10^{-5}	1.849×10^{-5}	1.562×10^{-5}	0.7296
30	1.164	1007	0.02588	2.208×10^{-5}	1.872×10^{-5}	1.608×10^{-5}	0.7282
35	1.145	1007	0.02625	2.277×10^{-5}	1.895×10^{-5}	1.655×10^{-5}	0.7268
40	1.127	1007	0.02662	2.346×10^{-5}	1.918×10^{-5}	1.702×10^{-5}	0.7255
45	1.109	1007	0.02699	2.416×10^{-5}	1.941×10^{-5}	1.750×10^{-5}	0.7241
50	1.092	1007	0.02735	2.487×10^{-5}	1.963×10^{-5}	1.798×10^{-5}	0.7228
60	1.059	1007	0.02808	2.632×10^{-5}	2.008×10^{-5}	1.896×10^{-5}	0.7202
70	1.028	1007	0.02881	2.780×10^{-5}	2.052×10^{-5}	1.995×10^{-5}	0.7177
80	0.9994	1008	0.02953	2.931×10^{-5}	2.096×10^{-5}	2.097×10^{-5}	0.7154
90	0.9718	1008	0.03024	3.086×10^{-5}	2.139×10^{-5}	2.201×10^{-5}	0.7132
100	0.9458	1009	0.03095	3.243×10^{-5}	2.181×10^{-5}	2.306×10^{-5}	0.7111
120	0.8977	1011	0.03235	3.565×10^{-5}	2.264×10^{-5}	2.522×10^{-5}	0.7073
140	0.8542	1013	0.03374	3.898×10^{-5}	2.345×10^{-5}	2.745×10^{-5}	0.7041
160	0.8148	1016	0.03511	4.241×10^{-5}	2.420×10^{-5}	2.975×10^{-5}	0.7014
180	0.7788	1019	0.03646	4.593×10^{-5}	2.504×10^{-5}	3.212×10^{-5}	0.6992
200	0.7459	1023	0.03779	4.954×10^{-5}	2.577×10^{-5}	3.455×10^{-5}	0.6974
250	0.6746	1033	0.04104	5.890×10^{-5}	2.760×10^{-5}	4.091×10^{-5}	0.6946
300	0.6158	1044	0.04418	6.871×10^{-5}	2.934×10^{-5}	4.765×10^{-5}	0.6935
350	0.5664	1056	0.04721	7.892×10^{-5}	3.101×10^{-5}	5.475×10^{-5}	0.6937
400	0.5243	1069	0.05015	8.951×10^{-5}	3.261×10^{-5}	6.219×10^{-5}	0.6948
450	0.4880	1081	0.05298	1.004×10^{-4}	3.415×10^{-5}	6.997×10^{-5}	0.6965
500	0.4565	1093	0.05572	1.117×10^{-4}	3.563×10^{-5}	7.806×10^{-5}	0.6986
600	0.4042	1115	0.06093	1.352×10^{-4}	3.846×10^{-5}	9.515×10^{-5}	0.7037
700	0.3627	1135	0.06581	1.598×10^{-4}	4.111×10^{-5}	1.133×10^{-4}	0.7092
800	0.3289	1153	0.07037	1.855×10^{-4}	4.362×10^{-5}	1.326×10^{-4}	0.7149
900	0.3008	1169	0.07465	2.122×10^{-4}	4.600×10^{-5}	1.529×10^{-4}	0.7206
1000	0.2772	1184	0.07868	2.398×10^{-4}	4.826×10^{-5}	1.741×10^{-4}	0.7260
1500	0.1990	1234	0.09599	3.908×10^{-4}	5.817×10^{-5}	2.922×10^{-4}	0.7478
2000	0.1553	1264	0.11113	5.664×10^{-4}	6.630×10^{-5}	4.270×10^{-4}	0.7539

Note: For ideal gases, the properties c_p , k , μ , and Pr are independent of pressure. The properties ρ , ν , and α at a pressure P (in atm) other than 1 atm are determined by multiplying the values of ρ at the given temperature by P and by dividing ν and α by P .

Source: Data generated from the EES software developed by S. A. Klein and F. L. Alvarado. Original sources: Keenan, Chao, Keyes, Gas Tables, Wiley, 198; and Thermophysical Properties of Matter, Vol. 3: Thermal Conductivity, Y. S. Touloukian, P. E. Liley, S. C. Saxena, Vol. 11: Viscosity, Y. S. Touloukian, S. C. Saxena, and P. Hestermans, IFI/Plenum, NY, 1970, ISBN 0-306067020-8.

Lampiran 4 Tabel Karakteristik Air Jenuh

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APPENDIX 1

TABLE A-9

Properties of saturated water

Temp. <i>T</i> , °C	Saturation Pressure <i>P</i> _{sat} , kPa	Density ρ , kg/m ³		Enthalpy of Vaporization <i>h</i> _g , kJ/kg	Specific Heat <i>c</i> _p , J/kg · K		Thermal Conductivity <i>k</i> , W/m · K		Dynamic Viscosity μ , kg/m · s		Prandtl Number Pr		Volume Expansion Coefficient β , 1/K
		Liquid	Vapor		Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	
0.01	0.6113	999.8	0.0048	2501	4217	1854	0.561	0.0171	1.792 × 10 ⁻³	0.922 × 10 ⁻³	13.5	1.00	-0.068 × 10 ⁻³
5	0.8721	999.9	0.0068	2490	4205	1857	0.571	0.0173	1.519 × 10 ⁻³	0.934 × 10 ⁻³	11.2	1.00	0.015 × 10 ⁻³
10	1.2276	999.7	0.0094	2478	4194	1862	0.580	0.0176	1.307 × 10 ⁻³	0.946 × 10 ⁻³	9.45	1.00	0.733 × 10 ⁻³
15	1.7051	999.1	0.0128	2466	4185	1863	0.589	0.0179	1.138 × 10 ⁻³	0.959 × 10 ⁻³	8.09	1.00	0.138 × 10 ⁻³
20	2.339	998.0	0.0173	2454	4182	1867	0.598	0.0182	1.002 × 10 ⁻³	0.973 × 10 ⁻³	7.01	1.00	0.195 × 10 ⁻³
25	3.169	997.0	0.0231	2442	4180	1870	0.607	0.0186	0.891 × 10 ⁻³	0.987 × 10 ⁻³	6.14	1.00	0.247 × 10 ⁻³
30	4.246	996.0	0.0304	2431	4178	1875	0.615	0.0189	0.798 × 10 ⁻³	1.001 × 10 ⁻³	5.42	1.00	0.294 × 10 ⁻³
35	5.628	994.0	0.0397	2419	4178	1880	0.623	0.0192	0.720 × 10 ⁻³	1.016 × 10 ⁻³	4.83	1.00	0.337 × 10 ⁻³
40	7.384	992.1	0.0512	2407	4179	1885	0.631	0.0196	0.653 × 10 ⁻³	1.031 × 10 ⁻³	4.32	1.00	0.377 × 10 ⁻³
45	9.593	990.1	0.0655	2395	4180	1892	0.637	0.0200	0.596 × 10 ⁻³	1.046 × 10 ⁻³	3.91	1.00	0.415 × 10 ⁻³
50	12.35	988.1	0.0831	2383	4181	1900	0.644	0.0204	0.547 × 10 ⁻³	1.062 × 10 ⁻³	3.55	1.00	0.451 × 10 ⁻³
55	15.76	985.2	0.1045	2371	4183	1908	0.649	0.0208	0.504 × 10 ⁻³	1.077 × 10 ⁻³	3.25	1.00	0.484 × 10 ⁻³
60	19.94	983.3	0.1304	2359	4185	1916	0.654	0.0212	0.467 × 10 ⁻³	1.093 × 10 ⁻³	2.99	1.00	0.517 × 10 ⁻³
65	25.03	980.4	0.1614	2346	4187	1926	0.659	0.0216	0.433 × 10 ⁻³	1.110 × 10 ⁻³	2.75	1.00	0.548 × 10 ⁻³
70	31.19	977.5	0.1983	2334	4190	1936	0.663	0.0221	0.404 × 10 ⁻³	1.126 × 10 ⁻³	2.55	1.00	0.578 × 10 ⁻³
75	38.58	974.7	0.2421	2321	4193	1948	0.667	0.0225	0.378 × 10 ⁻³	1.142 × 10 ⁻³	2.38	1.00	0.607 × 10 ⁻³
80	47.39	971.8	0.2935	2309	4197	1962	0.670	0.0230	0.355 × 10 ⁻³	1.159 × 10 ⁻³	2.22	1.00	0.653 × 10 ⁻³
85	57.83	968.1	0.3536	2296	4201	1977	0.673	0.0235	0.333 × 10 ⁻³	1.176 × 10 ⁻³	2.08	1.00	0.670 × 10 ⁻³
90	70.14	965.3	0.4235	2283	4206	1993	0.675	0.0240	0.315 × 10 ⁻³	1.193 × 10 ⁻³	1.96	1.00	0.702 × 10 ⁻³
95	84.55	961.5	0.5045	2270	4212	2010	0.677	0.0246	0.297 × 10 ⁻³	1.210 × 10 ⁻³	1.85	1.00	0.716 × 10 ⁻³
100	101.33	957.9	0.5978	2257	4217	2029	0.679	0.0251	0.282 × 10 ⁻³	1.227 × 10 ⁻³	1.75	1.00	0.750 × 10 ⁻³
110	143.27	950.6	0.8263	2230	4229	2071	0.682	0.0262	0.255 × 10 ⁻³	1.261 × 10 ⁻³	1.58	1.00	0.798 × 10 ⁻³
120	198.53	943.4	1.121	2203	4244	2120	0.683	0.0275	0.232 × 10 ⁻³	1.296 × 10 ⁻³	1.44	1.00	0.858 × 10 ⁻³
130	270.1	934.6	1.496	2174	4263	2177	0.684	0.0288	0.213 × 10 ⁻³	1.330 × 10 ⁻³	1.33	1.01	0.913 × 10 ⁻³
140	361.3	921.7	1.965	2145	4286	2244	0.683	0.0301	0.197 × 10 ⁻³	1.365 × 10 ⁻³	1.24	1.02	0.970 × 10 ⁻³
150	475.8	916.6	2.546	2114	4311	2314	0.682	0.0316	0.183 × 10 ⁻³	1.399 × 10 ⁻³	1.16	1.02	1.025 × 10 ⁻³
160	617.8	907.4	3.256	2083	4340	2420	0.680	0.0331	0.170 × 10 ⁻³	1.434 × 10 ⁻³	1.09	1.05	1.145 × 10 ⁻³
170	791.7	897.7	4.119	2050	4370	2490	0.677	0.0347	0.160 × 10 ⁻³	1.468 × 10 ⁻³	1.03	1.05	1.178 × 10 ⁻³
180	1,002.1	887.3	5.153	2015	4410	2590	0.673	0.0364	0.150 × 10 ⁻³	1.502 × 10 ⁻³	0.983	1.07	1.210 × 10 ⁻³
190	1,254.4	876.4	6.388	1979	4460	2710	0.669	0.0382	0.142 × 10 ⁻³	1.537 × 10 ⁻³	0.947	1.09	1.280 × 10 ⁻³
200	1,553.8	864.3	7.852	1941	4500	2840	0.663	0.0401	0.134 × 10 ⁻³	1.571 × 10 ⁻³	0.910	1.11	1.350 × 10 ⁻³
220	2,318	840.3	11.60	1859	4610	3110	0.650	0.0442	0.122 × 10 ⁻³	1.641 × 10 ⁻³	0.865	1.15	1.520 × 10 ⁻³
240	3,344	813.7	16.73	1767	4760	3520	0.632	0.0487	0.111 × 10 ⁻³	1.712 × 10 ⁻³	0.836	1.24	1.720 × 10 ⁻³
260	4,688	783.7	23.69	1663	4970	4070	0.609	0.0540	0.102 × 10 ⁻³	1.788 × 10 ⁻³	0.832	1.35	2.000 × 10 ⁻³
280	6,412	750.8	33.15	1544	5280	4835	0.581	0.0605	0.094 × 10 ⁻³	1.870 × 10 ⁻³	0.854	1.49	2.380 × 10 ⁻³
300	8,581	713.8	46.15	1405	5750	5980	0.548	0.0695	0.086 × 10 ⁻³	1.965 × 10 ⁻³	0.902	1.69	2.950 × 10 ⁻³
320	11,274	667.1	64.57	1239	6540	7900	0.509	0.0836	0.078 × 10 ⁻³	2.084 × 10 ⁻³	1.00	1.97	
340	14,586	610.5	92.62	1028	8240	11,870	0.469	0.110	0.070 × 10 ⁻³	2.255 × 10 ⁻³	1.23	2.43	
360	18,651	528.3	144.0	720	14,690	25,800	0.427	0.178	0.060 × 10 ⁻³	2.571 × 10 ⁻³	2.06	3.73	
374.14	22,090	317.0	317.0	0	—	—	—	—	0.043 × 10 ⁻³	4.313 × 10 ⁻³			

Note 1: Kinematic viscosity ν and thermal diffusivity α can be calculated from their definitions, $\nu = \mu/\rho$ and $\alpha = k/\rho c_p = \nu/Pr$. The temperatures 0.01°C, 100°C, and 374.14°C are the triple-, boiling-, and critical-point temperatures of water, respectively. The properties listed above (except the vapor density) can be used at any pressure with negligible error except at temperatures near the critical-point value.

Note 2: The unit kJ/kg · °C for specific heat is equivalent to kJ/kg · K, and the unit W/m · °C for thermal conductivity is equivalent to W/m · K.

Source: Viscosity and thermal conductivity data are from J. V. Sengers and J. T. R. Watson, *Journal of Physical and Chemical Reference Data* 15 (1986), pp. 1291–1322. Other data are obtained from various sources or calculated.

Lampiran 5 Tabel Hasil Pengambilan Data Kolektor Pipa Spiral Standar ke-1

Kolektor Pipa Spiral Standar ke-1								
t	IN (Tf)C	OUT (Tfo)C	Pelat Datar (TP1)C	Kaca Dalam (Tc-dalam)C	Kaca Luar (Tc-Luar)C	Tanki (T.Tangki)C	Ling (Ta)C	Ilum (I) Kw
0	26.714	27.048	26.70	27.00	27.10	26.400	27.625	1.050
1	26.879	28.678	32.40	33.40	47.10	26.500	27.619	1.063
2	26.946	28.678	34.70	42.60	57.50	26.500	27.632	1.070
3	26.977	28.678	36.20	47.90	63.20	26.500	27.673	1.075
4	27.001	28.678	37.70	50.30	69.20	26.500	27.587	1.071
5	27.040	28.678	39.00	52.80	71.70	26.600	27.621	1.071
6	27.087	28.678	40.40	55.10	74.90	26.700	27.673	1.074
7	27.129	28.678	41.20	57.00	77.60	26.700	27.607	1.075
8	27.194	28.678	42.20	58.70	80.20	26.700	27.678	1.075
9	27.211	29.551	42.50	58.00	79.80	26.800	27.721	1.085
10	27.259	29.551	43.80	66.30	77.70	26.900	27.792	1.092
11	27.335	29.551	44.60	69.50	79.50	26.900	27.983	1.098
12	27.419	29.551	45.10	71.50	76.90	26.900	28.123	1.094
13	27.524	29.551	46.10	70.40	79.30	27.000	28.225	1.096
14	27.634	29.551	46.30	72.60	81.00	27.000	28.372	1.098
15	27.759	30.659	44.90	72.70	72.90	27.200	28.507	1.084
16	27.821	30.659	46.20	71.40	74.10	27.200	28.614	1.058
17	27.921	30.659	46.90	71.20	75.50	27.200	28.621	1.060
18	27.979	30.659	47.10	70.90	75.40	27.300	28.569	1.062
19	28.020	30.659	47.40	71.80	76.10	27.300	28.695	1.060
20	28.062	30.659	47.70	72.50	76.40	27.400	28.894	1.059
21	28.127	30.659	47.90	70.30	77.20	27.400	29.024	1.064
22	28.185	30.659	48.60	73.10	78.00	27.500	29.006	1.063
23	28.224	30.659	49.30	73.80	77.60	27.500	28.908	1.065
24	28.220	31.271	49.10	73.70	78.00	27.700	28.787	1.063
25	28.199	31.271	49.40	74.40	78.30	27.700	28.730	1.063
26	28.176	31.271	49.80	74.70	78.10	27.700	28.683	1.062
27	28.173	31.271	49.10	74.00	77.20	27.800	28.807	1.063
28	28.217	31.271	49.20	72.40	82.40	27.700	28.936	1.062
29	28.302	33.233	50.60	73.70	83.00	27.800	29.033	1.059
30	28.390	33.233	51.20	74.30	83.20	28.000	28.965	1.058
31	28.462	33.233	51.00	74.60	83.00	27.900	28.892	1.062
32	28.456	33.233	51.10	75.00	85.10	28.100	29.000	1.060
33	28.522	33.233	51.40	75.30	84.00	28.100	29.223	1.061
34	28.586	33.233	51.40	75.50	84.80	28.200	29.354	1.065
35	28.696	33.233	51.80	75.80	85.50	28.000	29.310	1.052
36	28.741	33.233	51.80	76.10	85.00	28.300	29.161	1.049
37	28.762	33.233	51.80	76.20	85.10	28.300	29.184	1.044
38	28.778	33.233	51.80	76.30	85.20	28.400	29.308	1.046
39	28.833	33.233	52.10	76.00	85.80	28.400	29.532	1.045
40	28.892	33.233	52.30	76.20	85.80	28.500	29.599	1.041
41	28.936	33.866	52.40	76.30	85.80	28.500	29.465	1.040
42	28.954	33.866	52.90	76.40	85.30	28.600	29.346	1.039
43	28.951	33.866	52.30	76.40	85.80	28.800	29.352	1.041
44	28.944	33.866	53.40	76.40	85.60	28.700	29.494	1.040
45	28.976	34.117	53.60	76.40	84.80	28.800	29.688	1.041
46	29.036	34.117	52.60	76.30	82.80	29.000	29.720	1.037
47	29.098	34.117	53.10	72.10	81.80	29.000	29.574	1.035
48	29.124	34.117	52.60	73.30	83.10	29.200	29.456	1.037
49	29.086	34.117	53.40	74.00	84.10	29.200	29.370	1.039
50	29.079	34.117	53.40	74.40	85.20	29.400	29.555	1.042
51	29.106	34.117	53.70	74.70	86.20	29.200	29.696	1.037
52	29.155	34.117	53.40	75.00	87.10	29.300	29.810	1.036
53	29.237	34.117	53.80	75.20	86.50	29.400	29.680	1.030
54	29.253	34.117	54.10	75.30	85.80	29.300	29.545	1.031
55	29.237	34.117	54.40	75.40	85.20	29.600	29.535	1.033
56	29.230	34.428	54.30	75.40	86.50	29.600	29.680	1.035
57	29.260	34.428	54.20	75.50	86.10	29.700	29.858	1.040
58	29.274	34.428	53.50	75.50	85.30	29.600	29.912	1.041
59	29.327	34.428	54.20	75.50	85.50	29.800	29.851	1.042
60	29.360	34.428	54.00	75.50	86.00	29.800	29.657	1.037

61	29.346	34.428	53.70	75.50	87.00	29.800	29.508	1.031
62	29.291	34.428	54.10	75.70	85.80	30.000	29.521	1.031
63	29.327	34.428	54.50	75.50	86.70	30.000	29.677	1.031
64	29.346	34.428	54.30	75.20	85.20	30.000	29.788	1.030
65	29.407	34.662	54.10	75.20	86.90	29.900	29.859	1.031
66	29.512	34.662	54.30	75.40	85.80	30.100	29.741	1.035
67	29.558	34.662	54.50	75.50	85.50	30.100	29.596	1.038
68	29.566	34.914	54.50	75.50	86.10	30.200	29.478	1.032
69	29.555	35.013	55.10	75.50	86.80	30.400	29.491	1.028
70	29.566	35.013	54.30	75.40	85.20	30.300	29.656	1.026
71	29.622	35.015	54.90	75.40	86.70	30.400	29.762	1.024
72	29.706	35.054	54.90	75.20	86.40	30.400	29.846	1.028
73	29.732	35.090	54.60	75.40	87.90	30.400	29.738	1.031
74	29.736	35.155	54.90	75.40	86.00	30.600	29.619	1.057
75	29.735	35.184	54.80	75.60	87.80	30.500	29.539	1.059
76	29.734	35.184	54.50	75.60	86.10	30.800	29.554	1.054
77	29.736	35.212	54.60	75.50	86.40	30.600	29.714	1.054
78	29.739	35.212	54.60	75.30	86.40	30.600	29.870	1.055
79	29.790	35.223	54.70	75.40	86.50	30.700	29.911	1.054
80	29.840	35.223	54.70	74.40	79.50	30.900	29.749	1.053
81	29.836	35.205	54.90	74.00	80.50	30.900	29.669	1.053
82	29.831	35.251	55.20	74.00	81.70	30.900	29.679	1.050
83	29.827	35.251	55.10	74.00	82.00	30.800	29.792	1.053
84	29.825	35.251	55.20	73.60	82.20	30.900	29.985	1.054
85	29.851	35.257	54.50	73.10	83.70	30.800	30.102	1.055
86	29.908	35.257	54.80	72.70	79.20	30.900	29.881	1.054
87	29.929	35.257	53.90	72.90	78.40	31.000	29.731	1.053
88	29.897	35.257	54.60	71.60	76.30	31.000	29.579	1.055
89	29.873	35.257	54.70	70.20	75.40	31.000	29.427	1.054
90	29.840	35.177	54.80	71.50	75.80	31.000	29.498	1.053
91	29.859	35.271	54.80	72.00	76.10	31.000	29.683	1.051
92	29.921	35.299	54.60	72.40	76.20	31.000	29.779	1.051
93	29.992	35.243	54.40	72.80	78.10	31.000	29.821	1.052
94	30.048	35.282	54.60	71.70	77.60	31.100	29.689	1.052
95	30.080	35.329	54.30	72.30	77.60	31.100	29.613	1.051
96	30.054	35.280	54.60	72.80	77.70	31.100	29.521	1.050
97	30.044	35.210	54.70	73.00	78.30	31.300	29.408	1.052
98	30.044	35.166	54.40	73.10	78.40	31.300	29.417	1.053
99	30.081	35.199	54.60	72.90	77.70	31.300	29.622	1.050
100	30.128	35.049	54.30	72.40	77.00	31.400	29.755	1.055
101	30.212	35.044	54.30	70.70	73.20	31.300	29.794	1.050
102	30.284	35.143	54.50	71.00	73.20	31.300	29.689	1.047
103	30.330	35.377	54.50	70.90	68.60	31.400	29.674	1.047
104	30.338	35.535	54.70	71.50	68.90	31.400	29.555	1.047
105	30.332	35.596	54.90	72.00	68.90	31.500	29.460	1.058
106	30.352	35.591	54.10	72.00	63.70	31.400	29.367	1.063
107	30.354	35.486	54.60	71.20	73.20	31.500	29.463	1.057
108	30.414	35.574	54.80	69.80	79.30	31.500	29.618	1.056
109	30.492	35.633	54.60	70.70	79.20	31.500	29.682	1.055
110	30.533	35.755	54.60	71.50	81.20	31.600	29.714	1.055
111	30.558	35.839	55.10	72.00	81.40	31.600	29.605	1.052
112	30.581	35.902	54.80	72.20	81.10	31.600	29.506	1.050
113	30.597	35.928	55.10	72.60	80.90	31.800	29.387	1.052
114	30.607	35.978	54.90	72.70	80.60	31.800	29.454	1.061
115	30.648	35.984	55.10	72.80	80.70	31.700	29.646	1.070
116	30.715	35.993	55.10	72.80	81.70	31.800	29.824	1.065
117	30.798	36.054	55.10	73.10	82.00	31.800	29.801	1.065
118	30.847	36.153	55.20	73.30	80.40	31.800	29.712	1.066
119	30.873	36.254	55.50	73.30	81.50	31.800	29.661	1.064
120	30.872	36.297	55.40	73.30	82.40	31.900	29.551	1.062

121	30.881	36.255	54.70	73.10	73.90	32.100	29.479	1.062
122	30.863	36.149	55.40	72.60	82.30	32.000	29.655	1.060
123	30.873	36.110	55.20	71.80	77.00	32.000	29.852	1.059
124	30.912	36.224	55.10	68.10	81.70	31.900	29.955	1.059
125	30.967	36.318	55.00	71.70	82.90	32.100	29.865	1.062
126	31.021	36.386	55.40	72.60	82.60	32.100	29.745	1.064
127	31.042	36.385	55.20	72.60	81.50	32.200	29.668	1.067
128	31.061	36.445	55.50	72.70	83.70	32.300	29.551	1.065
129	31.041	36.528	55.50	73.20	83.20	32.300	29.486	1.065
130	31.017	36.474	55.20	73.20	84.00	32.400	29.554	1.063
131	31.070	36.299	55.90	73.50	84.10	32.300	29.717	1.065
132	31.089	36.252	55.50	72.90	77.50	32.300	29.827	1.071
133	31.156	36.356	55.50	73.70	77.40	32.300	29.869	1.073
134	31.210	36.451	55.40	74.00	76.60	32.300	29.757	1.065
135	31.201	36.529	55.50	74.00	77.00	32.400	29.722	1.064
136	31.220	36.571	55.70	74.20	76.70	32.600	29.751	1.067
137	31.239	36.601	55.90	74.10	77.70	32.600	29.883	1.067
138	31.294	36.661	55.40	74.30	77.70	32.600	30.046	1.075
139	31.301	36.678	55.50	74.40	78.40	32.600	29.972	1.076
140	31.299	36.711	55.70	74.60	78.30	32.700	29.847	1.075
141	31.299	36.758	56.00	74.50	77.90	32.700	29.736	1.076
142	31.294	36.731	56.10	74.70	77.60	32.800	29.693	1.081
143	31.286	36.765	55.90	74.70	77.10	32.800	29.762	1.078
144	31.283	36.751	55.60	74.70	78.40	32.900	29.865	1.072
145	31.300	36.726	56.10	74.70	78.10	32.800	30.025	1.070
146	31.317	36.750	56.40	74.70	78.30	32.900	30.046	1.071
147	31.363	36.785	55.90	74.60	78.00	32.800	29.904	1.072
148	31.366	36.879	55.60	74.90	77.00	33.000	29.829	1.069
149	31.352	36.935	55.60	74.90	77.40	33.000	29.953	1.066
150	31.369	36.966	56.10	74.40	78.40	33.100	30.126	1.066
151	31.436	36.962	56.40	74.70	78.60	33.100	30.292	1.068
152	31.491	36.948	56.20	73.20	75.60	33.100	30.142	1.073
153	31.501	37.073	55.80	72.60	81.10	33.100	30.062	1.070
154	31.488	37.204	56.30	73.50	82.50	33.200	29.962	1.066
155	31.431	37.182	56.10	73.90	82.70	33.200	29.838	1.066
156	31.401	37.123	56.60	74.30	83.00	33.200	29.772	1.065
157	31.362	37.033	56.20	74.60	83.80	33.300	29.734	1.066
158	31.329	36.865	56.40	74.60	77.40	33.400	29.639	1.066
159	31.316	36.801	56.40	73.90	82.40	33.400	29.616	1.066
160	31.320	36.851	56.00	73.80	81.40	33.400	29.775	1.065
161	31.375	36.921	55.60	74.10	82.80	33.500	29.876	1.067
162	31.434	37.006	55.70	74.10	81.70	33.400	29.911	1.070
163	31.479	37.061	55.80	74.40	80.70	33.400	29.833	1.067
164	31.493	37.193	56.00	74.50	80.60	33.600	29.766	1.065
165	31.480	37.204	56.00	74.70	80.90	33.500	29.819	1.067
166	31.497	37.210	56.10	74.60	81.80	33.500	29.984	1.067
167	31.531	37.243	55.60	74.90	82.10	33.600	30.085	1.067
168	31.593	37.289	56.40	74.80	82.30	33.600	30.083	1.066
169	31.627	37.306	56.30	74.90	81.80	33.700	30.015	1.066
170	31.619	37.348	56.40	75.10	81.20	33.700	29.909	1.065
171	31.603	37.394	56.60	75.10	82.30	33.700	29.796	1.069
172	31.534	37.405	56.00	75.10	81.50	33.800	29.721	1.067
173	31.519	37.336	56.10	74.60	81.00	33.800	29.811	1.065
174	31.571	37.332	56.40	74.70	82.60	33.700	29.973	1.065
175	31.648	37.358	56.50	75.00	82.40	33.800	30.081	1.066
176	31.729	37.397	56.60	74.90	82.90	33.700	30.066	1.065
177	31.785	37.485	55.70	75.50	82.70	33.800	29.970	1.064
178	31.814	37.566	56.70	75.50	81.90	33.900	29.920	1.066
179	31.801	37.880	56.70	75.40	81.90	33.900	29.814	1.067
180	31.791	38.166	60.17	76.47	84.37	33.900	29.762	0.040

181	31.6569	37.27539063	48.4	65.53	70.07	34.100	29.7876	0
182	31.53158	36.21826172	43.53333333	60.27	63.77	33.900	29.95931	0
183	31.45264	34.98860677	42.06666667	56.30	59.07	33.900	30.0179	0
184	31.38128	34.16768058	41.4	53.17	54.90	34.000	30.02369	0
185	31.31592	33.69954427	40.9	50.53	51.73	33.900	29.96175	0
186	31.29883	33.37727865	40.46666667	48.37	49.33	34.000	29.89746	0
187	31.2793	33.12093099	40.03333333	46.53	47.03	33.900	29.79167	0
188	31.22477	32.90120443	39.7	44.90	45.17	33.900	29.85758	0
189	31.20117	32.70833333	39.4	43.60	43.63	33.800	29.9349	0
190	31.17676	32.52604167	39.13333333	42.37	42.13	33.700	29.97884	0
191	31.18327	32.3844401	38.83333333	41.30	40.90	33.700	29.94303	0
192	31.16455	32.2249349	38.6	40.37	39.80	33.700	29.84945	0
193	31.16374	32.09228516	38.33333333	39.53	39.00	33.700	29.74691	0
194	31.15397	32.00113932	38.13333333	38.83	38.27	33.700	29.82585	0
195	31.18001	31.90836589	37.96666667	38.10	37.53	33.700	29.95443	0
196	31.18815	31.83268229	37.73333333	37.57	36.80	33.600	30.0415	0
197	31.18815	31.74153646	37.6	36.97	36.30	33.600	29.96012	0
198	31.17106	31.6805013	37.4	36.47	35.77	33.500	29.79899	0
199	31.15153	31.62434896	37.3	36.17	35.30	33.600	29.73633	0
200	31.11898	31.57145182	37.06666667	35.73	34.93	33.400	29.73633	0
201	31.10352	31.50960286	36.96666667	35.43	34.57	33.500	29.80876	0
202	31.09212	31.4453125	36.83333333	35.13	34.33	33.400	29.87712	0
203	31.08805	31.38834635	36.66666667	34.83	33.93	33.300	29.94385	0
204	31.08236	31.3273112	36.6	34.63	33.70	33.300	29.83805	0
205	31.0612	31.29801432	36.46666667	34.37	33.43	33.300	29.74284	0
206	31.03434	31.26302083	36.26666667	34.23	33.27	33.300	29.68831	0
207	30.98877	31.18815104	36.13333333	33.97	32.97	33.300	29.52148	0
208	31.00586	31.10351563	36.03333333	33.83	32.90	33.200	29.55485	0
209	31.01237	31.01074219	35.9	33.60	32.60	33.200	29.71924	0
210	31.01563	30.9383138	35.76666667	33.43	32.40	33.100	29.76318	0
211	31.06445	30.95052083	35.63333333	33.27	32.33	33.100	29.78109	0
212	31.09456	30.91552734	35.5	33.17	32.23	33.100	29.70785	0
213	31.09538	30.90983073	35.36666667	33.03	32.03	33.100	29.58333	0
214	31.06445	30.90901693	35.3	32.87	31.97	33.100	29.54753	0
215	31.0319	30.91064453	35.16666667	32.77	31.77	33.100	29.70947	0
216	31.0376	30.90820313	35.06666667	32.67	31.60	33.000	29.79329	0
217	31.05794	30.90250651	34.93333333	32.53	31.50	32.900	29.82666	0
218	31.0848	30.90169271	34.8	32.43	31.47	32.800	29.77702	0
219	31.0715	30.90219967	34.76666667	32.33	31.37	32.800	29.80157	0
220	31.04329	30.88785807	34.63333333	32.27	31.27	32.900	29.50765	0
221	30.96598	30.88053385	34.6	32.23	31.17	32.800	29.4043	0
222	30.91064	30.86263021	34.46666667	32.07	31.07	32.800	29.53206	0
223	30.90576	30.81136068	34.33333333	31.90	30.97	32.800	29.6403	0
224	30.90251	30.75032552	34.3	31.90	30.97	32.700	29.71924	0
225	30.90495	30.71451823	34.2	31.77	30.87	32.800	29.68262	0
226	30.90088	30.67220052	34.13333333	31.73	30.77	32.800	29.56055	0
227	30.88623	30.65104167	34.03333333	31.67	30.60	32.700	29.38151	0
228	30.83171	30.63639323	33.9	31.53	30.60	32.700	29.33919	0
229	30.79915	30.62255859	33.83333333	31.43	30.53	32.600	29.43766	0
230	30.78613	30.59814453	33.76666667	31.37	30.43	32.600	29.61426	0
231	30.79671	30.55419922	33.7	31.40	30.43	32.600	29.72249	0
232	30.8252	30.52164714	33.6	31.30	30.37	32.500	29.70459	0
233	30.83822	30.51757813	33.53333333	31.23	30.23	32.600	29.56868	0
234	30.81462	30.51920573	33.43333333	31.20	30.23	32.600	29.5109	0
235	30.76253	30.52408854	33.33333333	31.07	30.13	32.600	29.55973	0
236	30.74137	30.51757813	33.3	31.00	30.13	32.500	29.66715	0
237	30.76579	30.51757813	33.23333333	30.97	30.10	32.400	29.74447	0
238	30.77799	30.51757813	33.16666667	30.90	30.10	32.300	29.69727	0
239	30.77239	30.51919495	33.06666667	30.83	30.03	32.400	29.6356	0
240	34.16341	33.80533854	33	30.83	29.93	32.400	28.04362	0

Lampiran 6 Tabel Hasil Pengambilan Data Kolektor Pipa Spiral Standar ke-2

Kolektor Pipa Spiral Standar ke-2								
t	IN (Tf)C	OUT (Tfo)C	Pelat Datar (TPI)C	Kaca Dalam (Tc-dalam)C	Kaca Luar (Tc-Luar)C	Tanki (T.Tangki)C	Ling (Ta)C	Ilum (I) Kw
0	26.665	26.748	26.70	27.00	27.10	26.400	27.109	1.050
1	26.840	28.183	32.40	33.40	47.10	26.500	27.090	1.063
2	26.965	28.837	34.70	42.60	57.50	26.500	26.922	1.070
3	26.979	28.837	36.20	47.90	63.20	26.500	26.842	1.075
4	27.014	28.837	37.70	50.30	69.20	26.500	27.019	1.071
5	27.097	28.837	39.00	52.80	71.70	26.600	27.161	1.071
6	27.175	28.837	40.40	55.10	74.90	26.700	27.167	1.074
7	27.197	28.837	41.20	57.00	77.60	26.700	27.000	1.075
8	27.213	28.837	42.20	58.70	80.20	26.700	26.966	1.075
9	27.273	29.750	42.50	58.00	79.80	26.800	27.142	1.085
10	27.348	29.750	43.80	66.30	77.70	26.900	27.240	1.092
11	27.389	29.950	44.60	69.50	79.50	26.900	27.253	1.098
12	27.407	30.042	45.10	71.50	76.90	26.900	27.057	1.094
13	27.439	30.042	46.10	70.40	79.30	27.000	26.982	1.096
14	27.492	30.202	46.30	72.60	81.00	27.000	27.154	1.098
15	27.542	30.369	44.90	72.70	72.90	27.200	27.272	1.084
16	27.662	30.369	46.20	71.40	74.10	27.200	27.338	1.058
17	27.689	30.585	46.90	71.20	75.50	27.200	27.201	1.060
18	27.705	30.704	47.10	70.90	75.40	27.300	27.084	1.062
19	27.760	30.819	47.40	71.80	76.10	27.300	27.238	1.060
20	27.797	30.929	47.70	72.50	76.40	27.400	27.306	1.059
21	27.873	31.040	47.90	70.30	77.20	27.400	27.397	1.064
22	27.956	31.140	48.60	73.10	78.00	27.500	27.490	1.063
23	28.003	31.286	49.30	73.80	77.60	27.500	27.535	1.065
24	28.066	31.309	49.10	73.70	78.00	27.700	27.658	1.063
25	28.110	31.334	49.40	74.40	78.30	27.700	27.730	1.063
26	28.152	31.408	49.80	74.70	78.10	27.700	27.796	1.062
27	28.173	31.457	49.10	74.00	77.20	27.800	27.874	1.063
28	28.193	31.492	49.20	72.40	82.40	27.700	27.808	1.062
29	28.193	31.513	50.60	73.70	83.00	27.800	27.733	1.059
30	28.176	31.578	51.20	74.30	83.20	28.000	27.705	1.058
31	28.211	31.519	51.00	74.60	83.00	27.900	27.786	1.062
32	28.279	31.575	51.10	75.00	85.10	28.100	27.861	1.060
33	28.350	31.641	51.40	75.30	84.00	28.100	27.972	1.061
34	28.401	31.684	51.40	75.50	84.80	28.200	28.037	1.065
35	28.452	31.765	51.80	75.80	85.50	28.000	27.874	1.052
36	28.445	30.557	51.80	76.10	85.00	28.300	27.805	1.049
37	28.453	32.319	51.80	76.20	85.10	28.300	27.978	1.044
38	28.501	32.633	51.80	76.30	85.20	28.400	28.064	1.046
39	28.557	32.812	52.10	76.00	85.80	28.400	28.056	1.045
40	28.561	32.869	52.30	76.20	85.80	28.500	27.918	1.041
41	28.540	32.935	52.40	76.30	85.80	28.500	27.863	1.040
42	28.522	32.938	52.90	76.40	85.30	28.600	27.984	1.039
43	28.555	32.893	52.30	76.40	85.80	28.800	28.092	1.041
44	28.607	32.893	53.40	76.40	85.60	28.700	28.158	1.040
45	28.651	32.953	53.60	76.40	84.80	28.800	28.265	1.041
46	28.700	33.062	52.60	76.30	82.80	29.000	28.340	1.037
47	28.767	33.234	53.10	72.10	81.80	29.000	28.435	1.035
48	28.826	33.529	52.60	73.30	83.10	29.200	28.517	1.037
49	28.856	33.766	53.40	74.00	84.10	29.200	28.590	1.039
50	28.922	33.940	53.40	74.40	85.20	29.400	28.671	1.042
51	28.952	34.014	53.70	74.70	86.20	29.200	28.747	1.037
52	28.980	34.040	53.40	75.00	87.10	29.300	28.859	1.036
53	29.022	34.094	53.80	75.20	86.50	29.400	28.875	1.030
54	29.016	34.161	54.10	75.30	85.80	29.300	28.676	1.031
55	28.962	34.183	54.40	75.40	85.20	29.600	28.541	1.033
56	28.950	34.224	54.30	75.40	86.50	29.600	28.591	1.035
57	28.953	34.219	54.20	75.50	86.10	29.700	28.660	1.040
58	28.952	34.213	53.50	75.50	85.30	29.600	28.667	1.041
59	28.969	34.208	54.20	75.50	85.50	29.800	28.704	1.042
60	29.045	34.286	54.00	75.50	86.00	29.800	28.813	1.037

61	29.105	34.414	53.70	75.50	87.00	29.800	28.876	1.031
62	29.150	34.488	54.10	75.70	85.80	30.000	28.899	1.031
63	29.140	34.535	54.50	75.50	86.70	30.000	28.752	1.031
64	29.138	34.586	54.30	75.20	85.20	30.000	28.616	1.030
65	29.109	34.582	54.10	75.20	86.90	29.900	28.699	1.031
66	29.115	34.556	54.30	75.40	85.80	30.100	28.762	1.035
67	29.136	34.541	54.50	75.50	85.50	30.100	28.764	1.038
68	29.172	34.569	54.50	75.50	86.10	30.200	28.822	1.032
69	29.225	34.625	55.10	75.50	86.80	30.400	28.891	1.028
70	29.254	34.703	54.30	75.40	85.20	30.300	28.962	1.026
71	29.324	34.818	54.90	75.40	86.70	30.400	29.024	1.024
72	29.349	34.945	54.90	75.20	86.40	30.400	28.991	1.028
73	29.346	34.931	54.60	75.40	87.90	30.400	28.866	1.031
74	29.322	34.857	54.90	75.40	86.00	30.600	28.820	1.057
75	29.310	34.806	54.80	75.60	87.80	30.500	28.914	1.059
76	29.332	34.874	54.50	75.60	86.10	30.800	28.962	1.054
77	29.346	35.066	54.60	75.50	86.40	30.600	29.003	1.054
78	29.350	35.205	54.60	75.30	86.40	30.600	29.058	1.055
79	29.382	35.342	54.70	75.40	86.50	30.700	29.123	1.054
80	29.428	35.380	54.70	74.40	79.50	30.900	29.198	1.053
81	29.478	35.379	54.90	74.00	80.50	30.900	29.228	1.053
82	29.470	35.393	55.20	74.00	81.70	30.900	29.014	1.050
83	29.440	35.439	55.10	74.00	82.00	30.800	28.878	1.053
84	29.421	35.470	55.20	73.60	82.20	30.900	28.994	1.054
85	29.430	35.456	54.50	73.10	83.70	30.800	29.041	1.055
86	29.455	35.447	54.80	72.70	79.20	30.900	29.015	1.054
87	29.460	35.386	53.90	72.90	78.40	31.000	29.062	1.053
88	29.470	35.234	54.60	71.60	76.30	31.000	29.131	1.055
89	29.529	35.211	54.70	70.20	75.40	31.000	29.205	1.054
90	29.563	35.400	54.80	71.50	75.80	31.000	29.229	1.053
91	29.569	35.632	54.80	72.00	76.10	31.000	28.975	1.051
92	29.548	35.785	54.60	72.40	76.20	31.000	28.896	1.051
93	29.527	35.787	54.40	72.80	78.10	31.000	29.013	1.052
94	29.530	35.591	54.60	71.70	77.60	31.100	29.045	1.052
95	29.541	35.344	54.30	72.30	77.60	31.100	29.051	1.051
96	29.575	35.341	54.60	72.80	77.70	31.100	29.088	1.050
97	29.618	35.458	54.70	73.00	78.30	31.300	29.144	1.052
98	29.657	35.623	54.40	73.10	78.40	31.300	29.195	1.053
99	29.697	35.802	54.60	72.90	77.70	31.300	29.282	1.050
100	29.726	35.927	54.30	72.40	77.00	31.400	29.249	1.055
101	29.694	35.942	54.30	70.70	73.20	31.300	28.988	1.050
102	29.674	35.974	54.50	71.00	73.20	31.300	28.971	1.047
103	29.648	35.940	54.50	70.90	68.60	31.400	29.089	1.047
104	29.693	35.907	54.70	71.50	68.90	31.400	29.137	1.047
105	29.722	35.945	54.90	72.00	68.90	31.500	29.191	1.058
106	29.735	35.994	54.10	72.00	63.70	31.400	29.291	1.063
107	29.736	36.042	54.60	71.20	73.20	31.500	29.290	1.057
108	29.733	36.027	54.80	69.80	79.30	31.500	29.006	1.056
109	29.723	36.048	54.60	70.70	79.20	31.500	28.914	1.055
110	29.704	36.043	54.60	71.50	81.20	31.600	29.119	1.055
111	29.704	36.056	55.10	72.00	81.40	31.600	29.223	1.052
112	29.720	36.050	54.80	72.20	81.10	31.600	29.294	1.050
113	29.736	36.011	55.10	72.60	80.90	31.800	29.337	1.052
114	29.736	36.001	54.90	72.70	80.60	31.800	29.368	1.061
115	29.738	36.029	55.10	72.80	80.70	31.700	29.373	1.070
116	29.770	36.052	55.10	72.80	81.70	31.800	29.450	1.065
117	29.762	36.059	55.10	73.10	82.00	31.800	29.203	1.065
118	29.744	36.075	55.20	73.30	80.40	31.800	28.978	1.066
119	29.736	36.065	55.50	73.30	81.50	31.800	29.064	1.064
120	29.736	36.067	55.40	73.30	82.40	31.900	29.141	1.062

121	29.739	36.143	54.70	73.10	73.90	32.100	29.164	1.062
122	29.741	36.165	55.40	72.60	82.30	32.000	29.257	1.060
123	29.775	36.143	55.20	71.80	77.00	32.000	29.324	1.059
124	29.826	36.093	55.10	68.10	81.70	31.900	29.398	1.059
125	29.841	36.078	55.00	71.70	82.90	32.100	29.472	1.062
126	29.880	36.105	55.40	72.60	82.60	32.100	29.518	1.064
127	29.894	36.166	55.20	72.60	81.50	32.200	29.202	1.067
128	29.864	36.200	55.50	72.70	83.70	32.300	28.997	1.065
129	29.850	36.203	55.50	73.20	83.20	32.300	29.159	1.065
130	29.839	36.207	55.20	73.20	84.00	32.400	29.202	1.063
131	29.836	36.202	55.90	73.50	84.10	32.300	29.303	1.065
132	29.845	36.144	55.50	72.90	77.50	32.300	29.345	1.071
133	29.912	36.233	55.50	73.70	77.40	32.300	29.398	1.073
134	29.958	36.379	55.40	74.00	76.60	32.300	29.462	1.065
135	30.024	36.558	55.50	74.00	77.00	32.400	29.535	1.064
136	30.039	36.687	55.70	74.20	76.70	32.600	29.343	1.067
137	30.027	36.759	55.90	74.10	77.70	32.600	29.144	1.067
138	30.003	36.842	55.40	74.30	77.70	32.600	29.159	1.075
139	30.009	36.878	55.50	74.40	78.40	32.600	29.214	1.076
140	29.993	36.753	55.70	74.60	78.30	32.700	29.285	1.075
141	30.013	36.660	56.00	74.50	77.90	32.700	29.318	1.076
142	30.032	36.578	56.10	74.70	77.60	32.800	29.358	1.081
143	30.076	36.580	55.90	74.70	77.10	32.800	29.361	1.078
144	30.086	36.600	55.60	74.70	78.40	32.900	29.188	1.072
145	30.074	36.643	56.10	74.70	78.10	32.800	29.021	1.070
146	30.042	36.702	56.40	74.70	78.30	32.900	28.918	1.071
147	30.027	36.717	55.90	74.60	78.00	32.800	29.058	1.072
148	30.031	36.706	55.60	74.90	77.00	33.000	29.191	1.069
149	30.031	36.700	55.60	74.90	77.40	33.000	29.242	1.066
150	30.032	36.709	56.10	74.40	78.40	33.100	29.070	1.066
151	30.019	36.694	56.40	74.70	78.60	33.100	28.930	1.068
152	30.005	36.683	56.20	73.20	75.60	33.100	28.903	1.073
153	30.014	36.703	55.80	72.60	81.10	33.100	29.039	1.070
154	30.049	36.677	56.30	73.50	82.50	33.200	29.159	1.066
155	30.075	36.657	56.10	73.90	82.70	33.200	29.222	1.066
156	30.118	36.724	56.60	74.30	83.00	33.200	29.302	1.065
157	30.145	36.752	56.20	74.60	83.80	33.300	29.346	1.066
158	30.216	36.777	56.40	74.60	77.40	33.400	29.375	1.066
159	30.260	36.793	56.40	73.90	82.40	33.400	29.452	1.066
160	30.292	36.841	56.00	73.80	81.40	33.400	29.527	1.065
161	30.331	36.924	55.60	74.10	82.80	33.500	29.580	1.067
162	30.375	36.982	55.70	74.10	81.70	33.400	29.666	1.070
163	30.428	37.022	55.80	74.40	80.70	33.400	29.719	1.067
164	30.475	37.061	56.00	74.50	80.60	33.600	29.724	1.065
165	30.475	37.083	56.00	74.70	80.90	33.500	29.487	1.067
166	30.435	37.100	56.10	74.60	81.80	33.500	29.403	1.067
167	30.433	37.138	55.60	74.90	82.10	33.600	29.517	1.067
168	30.441	37.154	56.40	74.80	82.30	33.600	29.543	1.066
169	30.445	37.157	56.30	74.90	81.80	33.700	29.451	1.066
170	30.444	37.157	56.40	75.10	81.20	33.700	29.302	1.065
171	30.393	37.047	56.60	75.10	82.30	33.700	29.277	1.069
172	30.388	36.904	56.00	75.10	81.50	33.800	29.374	1.067
173	30.417	36.834	56.10	74.60	81.00	33.800	29.427	1.065
174	30.451	36.944	56.40	74.70	82.60	33.700	29.410	1.065
175	30.458	37.104	56.50	75.00	82.40	33.800	29.339	1.066
176	30.444	37.183	56.60	74.90	82.90	33.700	29.286	1.065
177	30.433	37.157	55.70	75.50	82.70	33.800	29.336	1.064
178	30.471	37.076	56.70	75.50	81.90	33.900	29.412	1.066
179	30.504	36.977	56.70	75.40	81.90	33.900	29.491	1.067
180	30.506	36.434	60.17	76.47	84.37	33.900	29.543	0.040

181	30.37435	34.94466146	48.4	65.53	70.07	34.100	29.63949	0
182	30.24577	33.42773438	43.53333333	60.27	63.77	33.900	29.71842	0
183	30.16276	32.44466146	42.06666667	56.30	59.07	33.900	29.73551	0
184	30.12615	32.00803663	41.4	53.17	54.90	34.000	29.67229	0
185	30.05127	31.68701172	40.9	50.53	51.73	33.900	29.42952	0
186	30.00081	31.45751953	40.46666667	48.37	49.33	34.000	29.3929	0
187	29.94303	31.29394531	40.03333333	46.53	47.03	33.900	29.52311	0
188	29.93001	31.13525391	39.7	44.90	45.17	33.900	29.60124	0
189	29.90316	30.95377604	39.4	43.60	43.63	33.800	29.54915	0
190	29.85433	30.84472656	39.13333333	42.37	42.13	33.700	29.34408	0
191	29.8348	30.72265625	38.83333333	41.30	40.90	33.700	29.32617	0
192	29.82422	30.61767578	38.6	40.37	39.80	33.700	29.38314	0
193	29.83236	30.52490234	38.33333333	39.53	39.00	33.700	29.42383	0
194	29.82096	30.48014323	38.13333333	38.83	38.27	33.700	29.3986	0
195	29.79329	30.38574219	37.96666667	38.10	37.53	33.700	29.26595	0
196	29.75586	30.32307943	37.73333333	37.57	36.80	33.600	29.24398	0
197	29.74284	30.25227865	37.6	36.97	36.30	33.600	29.33105	0
198	29.74528	30.18147786	37.4	36.47	35.77	33.500	29.34326	0
199	29.75505	30.12288411	37.3	36.17	35.30	33.600	29.35221	0
200	29.74202	30.05940755	37.06666667	35.73	34.93	33.400	29.18294	0
201	29.73551	30.02766927	36.96666667	35.43	34.57	33.500	29.18376	0
202	29.73714	29.99755859	36.83333333	35.13	34.33	33.400	29.31722	0
203	29.73633	29.95279948	36.66666667	34.83	33.93	33.300	29.30908	0
204	29.73551	29.9210612	36.6	34.63	33.70	33.300	29.34326	0
205	29.74447	29.86328125	36.46666667	34.37	33.43	33.300	29.34977	0
206	29.75586	29.82910156	36.26666667	34.23	33.27	33.300	29.28711	0
207	29.75179	29.81201172	36.13333333	33.97	32.97	33.300	29.23584	0
208	29.73633	29.80224609	36.03333333	33.83	32.90	33.200	29.27327	0
209	29.73633	29.76806641	35.9	33.60	32.60	33.200	29.26758	0
210	29.7347	29.73632813	35.76666667	33.43	32.40	33.100	29.29525	0
211	29.73551	29.73632813	35.63333333	33.27	32.33	33.100	29.34082	0
212	29.7347	29.73632813	35.5	33.17	32.23	33.100	29.34408	0
213	29.74447	29.7257487	35.36666667	33.03	32.03	33.100	29.36117	0
214	29.75423	29.7265625	35.3	32.87	31.97	33.100	29.31315	0
215	29.74284	29.71191406	35.16666667	32.77	31.77	33.100	29.15771	0
216	29.73633	29.70214844	35.06666667	32.67	31.60	33.000	29.16504	0
217	29.73551	29.6891276	34.93333333	32.53	31.50	32.900	29.19596	0
218	29.73226	29.67122396	34.8	32.43	31.47	32.800	29.24154	0
219	29.73393	29.68029585	34.76666667	32.33	31.37	32.800	29.21883	0
220	29.73551	29.58496094	34.63333333	32.27	31.27	32.900	29.29525	0
221	29.73714	29.55729167	34.6	32.23	31.17	32.800	29.31641	0
222	29.73877	29.54508464	34.46666667	32.07	31.07	32.800	29.08122	0
223	29.73877	29.54996745	34.33333333	31.90	30.97	32.800	28.96647	0
224	29.73958	29.55078125	34.3	31.90	30.97	32.700	29.09342	0
225	29.73714	29.54589844	34.2	31.77	30.87	32.800	29.12272	0
226	29.75179	29.54101563	34.13333333	31.73	30.77	32.800	29.17236	0
227	29.79248	29.54101563	34.03333333	31.67	30.60	32.700	29.13493	0
228	29.78353	29.53938802	33.9	31.53	30.60	32.700	28.91683	0
229	29.78516	29.54752604	33.83333333	31.43	30.53	32.600	28.89486	0
230	29.77295	29.54508464	33.76666667	31.37	30.43	32.600	29.00879	0
231	29.78678	29.54671224	33.7	31.40	30.43	32.600	29.04297	0
232	29.81283	29.54345703	33.6	31.30	30.37	32.500	29.12028	0
233	29.83317	29.54427083	33.53333333	31.23	30.23	32.600	29.14795	0
234	29.85514	29.54915365	33.43333333	31.20	30.23	32.600	29.19027	0
235	29.85107	29.54996745	33.33333333	31.07	30.13	32.600	29.03076	0
236	29.8641	29.59065755	33.3	31.00	30.13	32.500	28.96729	0
237	29.83724	29.60367839	33.23333333	30.97	30.10	32.400	28.99984	0
238	29.83073	29.59554036	33.16666667	30.90	30.10	32.300	29.07471	0
239	29.84757	29.57771756	33.06666667	30.83	30.03	32.400	29.05306	0
240	34.16341	33.80533854	33	30.83	29.93	32.400	28.04362	0

Lampiran 7 Tabel Hasil Pengambilan Data Kolektor Pipa Spiral Standar ke-3

Kolektor Pipa Spiral Standar ke-3								
t	IN (Tf)C	OUT (Tfo)C	Pelat Datar (TPI)C	Kaca Dalam (Tc-dalam)C	Kaca Luar (Tc-Luar)C	Tanki (T.Tangki)C	Ling (Ta)C	Ilum (I) Kw
0	26.565	26.801	26.70	27.00	27.10	26.400	27.089	1.050
1	26.586	28.054	32.40	33.40	47.10	26.500	26.964	1.063
2	26.640	29.439	34.70	42.60	57.50	26.500	27.025	1.070
3	26.755	29.948	36.20	47.90	63.20	26.500	27.216	1.075
4	26.891	30.143	37.70	50.30	69.20	26.500	27.342	1.071
5	26.999	30.143	39.00	52.80	71.70	26.600	27.393	1.071
6	27.094	30.143	40.40	55.10	74.90	26.700	27.394	1.074
7	27.180	30.143	41.20	57.00	77.60	26.700	27.455	1.075
8	27.242	30.143	42.20	58.70	80.20	26.700	27.526	1.075
9	27.333	30.143	42.50	58.00	79.80	26.800	27.640	1.085
10	27.388	30.143	43.80	66.30	77.70	26.900	27.685	1.092
11	27.417	30.143	44.60	69.50	79.50	26.900	27.704	1.098
12	27.461	30.143	45.10	71.50	76.90	26.900	27.772	1.094
13	27.507	30.143	46.10	70.40	79.30	27.000	27.782	1.096
14	27.581	31.586	46.30	72.60	81.00	27.000	27.823	1.098
15	27.641	31.586	44.90	72.70	72.90	27.200	27.911	1.084
16	27.702	31.586	46.20	71.40	74.10	27.200	27.966	1.058
17	27.753	31.586	46.90	71.20	75.50	27.200	27.987	1.060
18	27.786	31.586	47.10	70.90	75.40	27.300	28.057	1.062
19	27.822	31.586	47.40	71.80	76.10	27.300	28.139	1.060
20	27.893	31.586	47.70	72.50	76.40	27.400	28.174	1.059
21	27.952	31.586	47.90	70.30	77.20	27.400	28.180	1.064
22	28.003	31.586	48.60	73.10	78.00	27.500	28.256	1.063
23	28.064	32.478	49.30	73.80	77.60	27.500	28.349	1.065
24	28.123	32.478	49.10	73.70	78.00	27.700	28.376	1.063
25	28.167	32.478	49.40	74.40	78.30	27.700	28.427	1.063
26	28.199	32.478	49.80	74.70	78.10	27.700	28.460	1.062
27	28.255	32.478	49.10	74.00	77.20	27.800	28.511	1.063
28	28.313	32.478	49.20	72.40	82.40	27.700	28.561	1.062
29	28.396	32.976	50.60	73.70	83.00	27.800	28.615	1.059
30	28.455	32.976	51.20	74.30	83.20	28.000	28.665	1.058
31	28.499	32.976	51.00	74.60	83.00	27.900	28.726	1.062
32	28.552	32.976	51.10	75.00	85.10	28.100	28.759	1.060
33	28.626	32.976	51.40	75.30	84.00	28.100	28.774	1.061
34	28.713	32.976	51.40	75.50	84.80	28.200	28.831	1.065
35	28.766	33.392	51.80	75.80	85.50	28.000	28.882	1.052
36	28.793	33.392	51.80	76.10	85.00	28.300	28.944	1.049
37	28.854	33.562	51.80	76.20	85.10	28.300	28.964	1.044
38	28.906	33.583	51.80	76.30	85.20	28.400	29.038	1.046
39	28.960	33.627	52.10	76.00	85.80	28.400	29.027	1.045
40	28.969	33.686	52.30	76.20	85.80	28.500	28.779	1.041
41	28.976	33.753	52.40	76.30	85.80	28.500	28.642	1.040
42	28.954	33.763	52.90	76.40	85.30	28.600	28.718	1.039
43	28.970	33.763	52.30	76.40	85.80	28.800	28.729	1.041
44	29.010	33.744	53.40	76.40	85.60	28.700	28.713	1.040
45	29.047	33.771	53.60	76.40	84.80	28.800	28.731	1.041
46	29.071	33.784	52.60	76.30	82.80	29.000	28.772	1.037
47	29.093	33.857	53.10	72.10	81.80	29.000	28.753	1.035
48	29.108	33.919	52.60	73.30	83.10	29.200	28.565	1.037
49	29.093	33.940	53.40	74.00	84.10	29.200	28.496	1.039
50	29.084	33.899	53.40	74.40	85.20	29.400	28.598	1.042
51	29.109	33.851	53.70	74.70	86.20	29.200	28.639	1.037
52	29.174	33.920	53.40	75.00	87.10	29.300	28.708	1.036
53	29.243	33.993	53.80	75.20	86.50	29.400	28.755	1.030
54	29.285	34.026	54.10	75.30	85.80	29.300	28.757	1.031
55	29.314	34.074	54.40	75.40	85.20	29.600	28.774	1.033
56	29.342	34.169	54.30	75.40	86.50	29.600	28.859	1.035
57	29.364	34.181	54.20	75.50	86.10	29.700	28.897	1.040
58	29.379	34.216	53.50	75.50	85.30	29.600	28.920	1.041
59	29.433	34.255	54.20	75.50	85.50	29.800	28.955	1.042
60	29.518	34.351	54.00	75.50	86.00	29.800	29.014	1.037

61	29.564	34.404	53.70	75.50	87.00	29.800	29.041	1.031
62	29.653	34.423	54.10	75.70	85.80	30.000	29.081	1.031
63	29.688	34.447	54.50	75.50	86.70	30.000	29.167	1.031
64	29.724	34.508	54.30	75.20	85.20	30.000	29.242	1.030
65	29.751	34.583	54.10	75.20	86.90	29.900	29.294	1.031
66	29.792	34.604	54.30	75.40	85.80	30.100	29.327	1.035
67	29.828	34.640	54.50	75.50	85.50	30.100	29.346	1.038
68	29.868	34.660	54.50	75.50	86.10	30.200	29.373	1.032
69	29.915	34.716	55.10	75.50	86.80	30.400	29.431	1.028
70	29.946	34.751	54.30	75.40	85.20	30.300	29.482	1.026
71	30.002	34.823	54.90	75.40	86.70	30.400	29.517	1.024
72	30.037	34.859	54.90	75.20	86.40	30.400	29.556	1.028
73	30.065	34.884	54.60	75.40	87.90	30.400	29.631	1.031
74	30.113	35.028	54.90	75.40	86.00	30.600	29.720	1.057
75	30.129	35.164	54.80	75.60	87.80	30.500	29.721	1.059
76	30.168	35.261	54.50	75.60	86.10	30.800	29.731	1.054
77	30.202	35.312	54.60	75.50	86.40	30.600	29.746	1.054
78	30.243	35.357	54.60	75.30	86.40	30.600	29.766	1.055
79	30.273	35.382	54.70	75.40	86.50	30.700	29.800	1.054
80	30.308	35.421	54.70	74.40	79.50	30.900	29.833	1.053
81	30.326	35.418	54.90	74.00	80.50	30.900	29.847	1.053
82	30.348	35.448	55.20	74.00	81.70	30.900	29.941	1.050
83	30.364	35.492	55.10	74.00	82.00	30.800	29.958	1.053
84	30.397	35.518	55.20	73.60	82.20	30.900	29.931	1.054
85	30.417	35.556	54.50	73.10	83.70	30.800	29.679	1.055
86	30.368	35.575	54.80	72.70	79.20	30.900	29.504	1.054
87	30.324	35.571	53.90	72.90	78.40	31.000	29.533	1.053
88	30.308	35.507	54.60	71.60	76.30	31.000	29.523	1.055
89	30.315	35.458	54.70	70.20	75.40	31.000	29.469	1.054
90	30.326	35.434	54.80	71.50	75.80	31.000	29.430	1.053
91	30.339	35.465	54.80	72.00	76.10	31.000	29.395	1.051
92	30.352	35.496	54.60	72.40	76.20	31.000	29.427	1.051
93	30.380	35.504	54.40	72.80	78.10	31.000	29.519	1.052
94	30.396	35.535	54.60	71.70	77.60	31.100	29.536	1.052
95	30.441	35.564	54.30	72.30	77.60	31.100	29.539	1.051
96	30.474	35.584	54.60	72.80	77.70	31.100	29.552	1.050
97	30.505	35.605	54.70	73.00	78.30	31.300	29.670	1.052
98	30.518	35.634	54.40	73.10	78.40	31.300	29.722	1.053
99	30.540	35.675	54.60	72.90	77.70	31.300	29.738	1.050
100	30.549	35.655	54.30	72.40	77.00	31.400	29.775	1.055
101	30.586	35.716	54.30	70.70	73.20	31.300	29.837	1.050
102	30.597	35.768	54.50	71.00	73.20	31.300	29.685	1.047
103	30.563	35.767	54.50	70.90	68.60	31.400	29.443	1.047
104	30.523	35.748	54.70	71.50	68.90	31.400	29.435	1.047
105	30.509	35.723	54.90	72.00	68.90	31.500	29.502	1.058
106	30.518	35.668	54.10	72.00	63.70	31.400	29.451	1.063
107	30.519	35.646	54.60	71.20	73.20	31.500	29.460	1.057
108	30.518	35.662	54.80	69.80	79.30	31.500	29.481	1.056
109	30.533	35.654	54.60	70.70	79.20	31.500	29.466	1.055
110	30.549	35.752	54.60	71.50	81.20	31.600	29.533	1.055
111	30.579	35.907	55.10	72.00	81.40	31.600	29.586	1.052
112	30.597	35.968	54.80	72.20	81.10	31.600	29.618	1.050
113	30.660	35.990	55.10	72.60	80.90	31.800	29.691	1.052
114	30.667	36.000	54.90	72.70	80.60	31.800	29.731	1.061
115	30.690	36.016	55.10	72.80	80.70	31.700	29.736	1.070
116	30.706	35.986	55.10	72.80	81.70	31.800	29.818	1.065
117	30.741	35.937	55.10	73.10	82.00	31.800	29.840	1.065
118	30.785	35.961	55.20	73.30	80.40	31.800	29.840	1.066
119	30.766	36.038	55.50	73.30	81.50	31.800	29.668	1.064
120	30.711	36.127	55.40	73.30	82.40	31.900	29.505	1.062

121	30.680	36.134	54.70	73.10	73.90	32.100	29.578	1.062
122	30.678	36.081	55.40	72.60	82.30	32.000	29.595	1.060
123	30.675	36.021	55.20	71.80	77.00	32.000	29.583	1.059
124	30.694	36.048	55.10	68.10	81.70	31.900	29.604	1.059
125	30.701	36.161	55.00	71.70	82.90	32.100	29.593	1.062
126	30.710	36.286	55.40	72.60	82.60	32.100	29.578	1.064
127	30.728	36.322	55.20	72.60	81.50	32.200	29.699	1.067
128	30.745	36.348	55.50	72.70	83.70	32.300	29.731	1.065
129	30.802	36.371	55.50	73.20	83.20	32.300	29.753	1.065
130	30.824	36.367	55.20	73.20	84.00	32.400	29.820	1.063
131	30.854	36.388	55.90	73.50	84.10	32.300	29.836	1.065
132	30.886	36.411	55.50	72.90	77.50	32.300	29.915	1.071
133	30.898	36.434	55.50	73.70	77.40	32.300	29.787	1.073
134	30.872	36.461	55.40	74.00	76.60	32.300	29.527	1.065
135	30.819	36.506	55.50	74.00	77.00	32.400	29.507	1.064
136	30.801	36.466	55.70	74.20	76.70	32.600	29.587	1.067
137	30.796	36.404	55.90	74.10	77.70	32.600	29.622	1.067
138	30.806	36.403	55.40	74.30	77.70	32.600	29.561	1.075
139	30.811	36.392	55.50	74.40	78.40	32.600	29.587	1.076
140	30.843	36.421	55.70	74.60	78.30	32.700	29.625	1.075
141	30.846	36.414	56.00	74.50	77.90	32.700	29.661	1.076
142	30.863	36.428	56.10	74.70	77.60	32.800	29.718	1.081
143	30.893	36.466	55.90	74.70	77.10	32.800	29.751	1.078
144	30.920	36.503	55.60	74.70	78.40	32.900	29.789	1.072
145	30.944	36.545	56.10	74.70	78.10	32.800	29.888	1.070
146	30.966	36.574	56.40	74.70	78.30	32.900	29.928	1.071
147	31.016	36.609	55.90	74.60	78.00	32.800	29.988	1.072
148	31.021	36.635	55.60	74.90	77.00	33.000	29.862	1.069
149	30.976	36.611	55.60	74.90	77.40	33.000	29.604	1.066
150	30.929	36.606	56.10	74.40	78.40	33.100	29.590	1.066
151	30.907	36.592	56.40	74.70	78.60	33.100	29.644	1.068
152	30.917	36.561	56.20	73.20	75.60	33.100	29.619	1.073
153	30.933	36.525	55.80	72.60	81.10	33.100	29.613	1.070
154	30.950	36.524	56.30	73.50	82.50	33.200	29.658	1.066
155	30.960	36.534	56.10	73.90	82.70	33.200	29.731	1.066
156	30.962	36.555	56.60	74.30	83.00	33.200	29.814	1.065
157	31.012	36.650	56.20	74.60	83.80	33.300	29.923	1.066
158	31.060	36.784	56.40	74.60	77.40	33.400	29.946	1.066
159	31.078	36.905	56.40	73.90	82.40	33.400	29.973	1.066
160	31.095	36.965	56.00	73.80	81.40	33.400	30.025	1.065
161	31.126	36.992	55.60	74.10	82.80	33.500	30.050	1.067
162	31.151	37.035	55.70	74.10	81.70	33.400	30.034	1.070
163	31.139	37.158	55.80	74.40	80.70	33.400	29.757	1.067
164	31.096	37.282	56.00	74.50	80.60	33.600	29.630	1.065
165	31.038	37.280	56.00	74.70	80.90	33.500	29.736	1.067
166	31.043	37.149	56.10	74.60	81.80	33.500	29.775	1.067
167	31.065	37.123	55.60	74.90	82.10	33.600	29.734	1.067
168	31.086	37.192	56.40	74.80	82.30	33.600	29.731	1.066
169	31.095	37.291	56.30	74.90	81.80	33.700	29.731	1.066
170	31.102	37.336	56.40	75.10	81.20	33.700	29.752	1.065
171	31.110	37.345	56.60	75.10	82.30	33.700	29.820	1.069
172	31.156	37.359	56.00	75.10	81.50	33.800	29.900	1.067
173	31.191	37.116	56.10	74.60	81.00	33.800	29.932	1.065
174	31.191	37.101	56.40	74.70	82.60	33.700	29.954	1.065
175	31.191	37.086	56.50	75.00	82.40	33.800	30.002	1.066
176	31.191	37.069	56.60	74.90	82.90	33.700	29.897	1.065
177	31.191	37.052	55.70	75.50	82.70	33.800	29.648	1.064
178	31.192	37.035	56.70	75.50	81.90	33.900	29.590	1.066
179	31.192	31.771	56.70	75.40	81.90	33.900	29.695	1.067
180	30.537	31.768	60.17	76.47	84.37	33.900	29.704	0.040

181	30.51921	31.56819661	48.4	65.53	70.07	34.100	29.60449	0
182	30.50212	31.38590495	43.53333333	60.27	63.77	33.900	29.40755	0
183	30.43538	31.2882487	42.06666667	56.30	59.07	33.900	29.27816	0
184	30.3807	31.17715804	41.4	53.17	54.90	34.000	29.3321	0
185	30.33854	31.02783203	40.9	50.53	51.73	33.900	29.34326	0
186	30.34912	30.91552734	40.46666667	48.37	49.33	34.000	29.33024	0
187	30.33773	30.83902995	40.03333333	46.53	47.03	33.900	29.32536	0
188	30.34993	30.75113932	39.7	44.90	45.17	33.900	29.33431	0
189	30.37354	30.69173177	39.4	43.60	43.63	33.800	29.34326	0
190	30.39632	30.64046224	39.13333333	42.37	42.13	33.700	29.33838	0
191	30.4305	30.60465495	38.83333333	41.30	40.90	33.700	29.34652	0
192	30.48503	30.57128906	38.6	40.37	39.80	33.700	29.34163	0
193	30.51839	30.55175781	38.33333333	39.53	39.00	33.700	29.33919	0
194	30.5249	30.51839193	38.13333333	38.83	38.27	33.700	29.19434	0
195	30.54362	30.52164714	37.96666667	38.10	37.53	33.700	29.06901	0
196	30.59489	30.52408854	37.73333333	37.57	36.80	33.600	29.1333	0
197	30.63477	30.51595052	37.6	36.97	36.30	33.600	29.11621	0
198	30.69987	30.51757813	37.4	36.47	35.77	33.500	29.06494	0
199	30.71696	30.53385417	37.3	36.17	35.30	33.600	29.06982	0
200	30.73812	30.56803385	37.06666667	35.73	34.93	33.400	29.07878	0
201	30.74056	30.57128906	36.96666667	35.43	34.57	33.500	29.07633	0
202	30.75195	30.57128906	36.83333333	35.13	34.33	33.400	29.10319	0
203	30.74382	30.56396484	36.66666667	34.83	33.93	33.300	29.15283	0
204	30.76742	30.56396484	36.6	34.63	33.70	33.300	29.21224	0
205	30.75521	30.53873698	36.46666667	34.37	33.43	33.300	29.22852	0
206	30.77067	30.52734375	36.26666667	34.23	33.27	33.300	29.2863	0
207	30.75846	30.51595052	36.13333333	33.97	32.97	33.300	29.19352	0
208	30.71289	30.51757813	36.03333333	33.83	32.90	33.200	29.03971	0
209	30.65511	30.51106771	35.9	33.60	32.60	33.200	28.97949	0
210	30.59733	30.50211589	35.76666667	33.43	32.40	33.100	29.04134	0
211	30.56396	30.44514974	35.63333333	33.27	32.33	33.100	29.03809	0
212	30.53955	30.3898112	35.5	33.17	32.23	33.100	29.03239	0
213	30.51921	30.33610026	35.36666667	33.03	32.03	33.100	29.01123	0
214	30.51432	30.30598958	35.3	32.87	31.97	33.100	28.98031	0
215	30.50212	30.2726237	35.16666667	32.77	31.77	33.100	29.03727	0
216	30.50537	30.25065104	35.06666667	32.67	31.60	33.000	29.03727	0
217	30.48258	30.21565755	34.93333333	32.53	31.50	32.900	29.04704	0
218	30.50049	30.19205729	34.8	32.43	31.47	32.800	29.06413	0
219	30.49116	30.20339716	34.76666667	32.33	31.37	32.800	29.05514	0
220	30.50212	30.16682943	34.63333333	32.27	31.27	32.900	29.09993	0
221	30.49072	30.14160156	34.6	32.23	31.17	32.800	29.00391	0
222	30.44922	30.13346354	34.46666667	32.07	31.07	32.800	28.8387	0
223	30.3776	30.12776693	34.33333333	31.90	30.97	32.800	28.85986	0
224	30.31738	30.11474609	34.3	31.90	30.97	32.700	28.93066	0
225	30.26937	30.06347656	34.2	31.77	30.87	32.800	28.95264	0
226	30.2474	30.02278646	34.13333333	31.73	30.77	32.800	28.94368	0
227	30.2181	29.9625651	34.03333333	31.67	30.60	32.700	28.93555	0
228	30.21566	29.9226888	33.9	31.53	30.60	32.700	28.92497	0
229	30.1945	29.90804036	33.83333333	31.43	30.53	32.600	28.88184	0
230	30.17741	29.89095052	33.76666667	31.37	30.43	32.600	28.90381	0
231	30.17334	29.8836263	33.7	31.40	30.43	32.600	28.94531	0
232	30.16439	29.85595703	33.6	31.30	30.37	32.500	28.97786	0
233	30.17415	29.84781901	33.53333333	31.23	30.23	32.600	29.03727	0
234	30.17822	29.85839844	33.43333333	31.20	30.23	32.600	29.11947	0
235	30.19938	29.86409505	33.33333333	31.07	30.13	32.600	29.12842	0
236	30.1652	29.86490885	33.3	31.00	30.13	32.500	28.92171	0
237	30.13672	29.8819987	33.23333333	30.97	30.10	32.400	28.71419	0
238	30.0944	29.86002604	33.16666667	30.90	30.10	32.300	28.72396	0
239	30.15444	29.86583583	33.06666667	30.83	30.03	32.400	28.92161	0
240	34.16341	33.80533854	33	30.83	29.93	32.400	28.04362	0

Lampiran 8 Tabel Hasil Pengambilan Data Kolektor Pipa Spiral Absorber Kerucut ke-1

Kolektor Pipa Spiral Absorber Kerucut ke-1									
t	IN (T _i)C	OUT (T _o)C	Pelat Datar (T _{PI})C	Pelat kerucut	Kaca Dalam (T _{c-dalam})C	Kaca Luar (T _{c-Luar})C	Tanki (T _{Tangki})C	Ling (T _a)C	Ilum (I) Kw
0	26.48	26.50	26.90	26.30	27.60	27.70	26.30	27.26	1.040
1	26.60	28.06	29.10	31.90	30.80	49.10	26.40	27.50	1.063
2	26.79	29.57	30.30	34.00	38.10	57.10	26.40	27.66	1.070
3	26.95	30.35	31.30	35.70	44.30	63.10	26.40	27.77	1.075
4	27.12	31.01	32.20	36.50	49.00	67.70	26.40	27.91	1.071
5	27.26	31.74	33.10	37.50	52.90	71.30	26.50	28.02	1.071
6	27.33	32.02	34.00	38.60	56.00	74.30	26.60	28.15	1.074
7	27.36	31.40	34.80	39.60	58.70	76.20	26.60	28.25	1.075
8	27.40	31.29	35.60	40.60	60.60	79.20	26.80	28.38	1.075
9	27.48	31.69	36.30	41.60	62.00	75.80	26.70	28.50	1.085
10	27.58	32.16	37.20	41.50	63.20	80.20	26.80	28.58	1.092
11	27.67	32.46	37.90	42.90	64.70	81.50	26.70	28.73	1.098
12	27.76	32.63	38.50	43.50	65.90	83.20	27.00	28.83	1.094
13	27.85	32.77	39.20	43.80	66.60	79.70	26.90	28.95	1.096
14	27.95	32.94	39.90	44.50	66.80	83.70	27.00	29.06	1.098
15	28.00	33.08	40.50	45.20	67.70	84.70	27.00	29.06	1.084
16	28.04	33.17	41.00	45.80	68.00	74.00	27.20	28.89	1.058
17	28.01	33.20	41.70	46.40	67.60	84.00	27.40	28.91	1.060
18	28.05	33.16	42.10	46.90	68.30	85.50	27.20	28.96	1.062
19	28.11	33.14	42.60	47.40	68.90	85.80	27.40	29.00	1.060
20	28.16	33.20	43.10	47.80	69.40	86.80	27.40	29.12	1.059
21	28.18	33.26	43.40	48.20	69.50	86.60	27.50	29.24	1.064
22	28.22	33.33	43.80	48.60	70.00	86.60	27.50	29.11	1.063
23	28.25	33.41	44.20	49.00	69.80	87.20	27.60	28.97	1.065
24	28.29	33.38	44.40	49.20	68.90	78.90	27.70	29.08	1.063
25	28.36	33.45	44.70	49.60	68.20	84.90	27.70	29.22	1.063
26	28.46	33.61	hvu	49.90	68.80	86.10	27.80	29.34	1.062
27	28.55	33.87	45.20	50.20	69.50	86.70	27.80	29.23	1.063
28	28.58	34.04	45.50	50.30	69.40	63.40	28.00	29.09	1.062
29	28.62	34.16	45.70	50.60	69.50	61.40	27.90	29.23	1.059
30	28.66	34.23	45.80	50.90	68.00	82.20	28.00	29.33	1.058
31	28.74	34.35	46.10	51.10	68.40	86.10	28.00	29.48	1.062
32	28.80	34.43	46.20	51.40	69.20	86.90	28.10	29.37	1.060
33	28.85	34.52	46.50	51.50	69.40	87.40	28.20	29.25	1.061
34	28.87	34.66	46.50	51.70	69.30	87.20	28.30	29.34	1.065
35	28.90	34.66	46.70	52.00	69.20	87.80	28.30	29.42	1.052
36	28.95	34.80	46.90	52.10	69.20	88.20	28.30	29.58	1.049
37	28.99	34.80	47.10	52.30	69.40	87.70	28.50	29.45	1.044
38	29.04	34.90	47.20	52.40	69.50	88.50	28.50	29.34	1.046
39	29.06	34.90	47.30	52.60	69.50	88.60	28.50	29.44	1.045
40	29.07	34.90	47.30	52.60	69.50	87.20	28.70	29.53	1.041
41	29.15	34.90	47.40	52.90	69.10	88.80	28.60	29.71	1.040
42	29.22	34.90	47.40	53.00	69.40	88.10	28.70	29.60	1.039
43	29.24	34.92	47.50	53.10	69.20	88.30	28.80	29.50	1.041
44	29.25	34.92	47.60	53.20	69.10	86.90	28.80	29.54	1.040
45	29.28	34.94	47.70	53.40	68.90	87.40	29.00	29.61	1.041
46	29.34	34.91	47.70	53.40	68.60	87.50	28.90	29.73	1.037
47	29.37	34.86	47.70	53.50	68.80	87.20	29.00	29.67	1.035
48	29.41	34.90	47.80	53.60	68.10	85.10	29.00	29.52	1.037
49	29.42	34.97	47.80	53.70	68.40	85.80	29.10	29.59	1.039
50	29.45	34.99	47.90	53.80	68.50	85.30	29.20	29.71	1.042
51	29.52	35.03	47.90	53.90	68.30	86.60	29.20	29.81	1.037
52	29.58	35.10	48.00	53.90	68.70	86.60	29.30	29.74	1.036
53	29.64	35.18	48.10	54.00	68.50	86.60	29.30	29.62	1.030
54	29.65	35.23	48.10	54.00	68.80	86.70	29.30	29.70	1.031
55	29.67	35.30	48.10	54.10	68.80	86.00	29.40	29.75	1.033
56	29.72	35.33	48.10	54.20	68.60	86.00	29.50	29.86	1.035
57	29.74	35.35	48.10	54.30	68.40	86.40	29.50	29.76	1.040
58	29.75	35.35	48.30	54.30	68.60	87.00	29.60	29.74	1.041
59	29.75	35.42	48.30	54.30	68.40	86.40	29.70	29.72	1.042
60	29.75	35.51	48.30	54.50	68.40	85.40	29.70	29.80	1.037

61	29.80	35.53	48.20	54.50	68.30	87.20	29.80	29.92	1.031
62	29.85	35.53	48.30	54.60	68.40	87.00	29.80	29.87	1.031
63	29.88	35.50	48.10	54.60	68.40	71.20	29.90	29.74	1.031
64	29.85	35.50	48.30	54.70	66.60	82.70	30.00	29.77	1.030
65	29.86	35.52	48.30	54.70	67.30	84.30	30.00	29.86	1.031
66	29.91	35.62	48.30	54.60	67.80	85.30	30.10	30.01	1.035
67	29.98	36.01	48.50	54.70	68.40	86.90	30.10	29.92	1.038
68	29.96	36.34	48.50	54.70	68.60	88.00	30.20	29.83	1.032
69	29.95	36.50	48.50	54.80	68.70	87.50	30.20	29.90	1.028
70	29.96	36.62	48.60	54.90	68.90	86.90	30.40	29.94	1.026
71	30.01	36.69	48.50	54.80	68.90	86.90	30.50	30.05	1.024
72	30.03	36.69	48.60	55.00	69.20	88.00	30.50	29.97	1.028
73	30.04	36.69	48.70	54.90	69.40	88.30	30.60	29.83	1.031
74	30.03	36.71	48.80	54.90	69.50	87.00	30.70	29.87	1.057
75	30.05	36.71	48.80	55.00	69.40	86.40	30.60	29.97	1.059
76	30.09	36.71	48.80	55.10	69.40	87.80	30.60	30.10	1.054
77	30.13	36.81	48.80	55.00	69.40	88.80	30.80	30.02	1.054
78	30.13	36.81	48.80	55.10	69.40	89.50	30.80	29.92	1.055
79	30.14	36.77	48.80	55.20	69.40	87.80	30.80	29.95	1.054
80	30.15	36.81	48.90	55.20	69.40	88.00	30.90	30.05	1.053
81	30.17	36.89	48.90	55.00	69.40	87.20	31.00	30.16	1.053
82	30.22	36.97	48.90	55.10	69.40	89.00	31.10	30.08	1.050
83	30.22	36.92	48.90	55.20	69.40	89.30	31.10	29.95	1.053
84	30.23	36.91	49.00	55.30	69.50	87.50	31.10	30.00	1.054
85	30.25	36.92	49.00	55.20	69.40	87.40	31.10	30.11	1.055
86	30.30	36.87	48.90	55.30	67.50	82.60	31.10	30.24	1.054
87	30.32	36.81	48.90	55.40	68.00	87.60	31.30	30.15	1.053
88	30.32	36.78	48.90	55.40	68.40	88.00	31.30	30.03	1.055
89	30.34	36.83	48.90	55.50	68.60	88.30	31.30	30.04	1.054
90	30.35	36.89	49.00	55.50	68.70	87.50	31.30	30.12	1.053
91	30.38	36.87	49.10	55.40	68.60	75.70	31.40	30.22	1.051
92	30.42	36.88	49.00	55.30	67.50	84.60	31.40	30.10	1.051
93	30.45	36.94	49.10	55.40	68.70	84.50	31.60	29.97	1.052
94	30.46	36.99	49.10	55.40	69.10	84.90	31.60	30.00	1.052
95	30.48	37.01	49.10	55.50	69.20	85.50	31.60	30.09	1.051
96	30.50	37.06	49.10	55.50	69.50	85.90	31.60	30.19	1.050
97	30.52	37.15	49.10	55.50	69.60	86.30	31.60	30.14	1.052
98	30.52	37.17	49.10	55.50	70.00	86.00	31.60	30.04	1.053
99	30.53	37.19	49.10	55.60	70.20	86.30	31.70	30.04	1.050
100	30.56	37.18	49.20	55.70	70.00	87.00	31.80	30.07	1.055
101	30.60	37.23	49.20	55.60	69.90	85.80	31.80	30.14	1.050
102	30.64	37.36	49.20	55.70	70.00	85.80	31.90	30.07	1.047
103	30.64	37.42	49.20	55.50	70.00	85.80	31.90	29.96	1.047
104	30.65	37.45	49.20	55.50	70.00	86.00	31.90	30.05	1.047
105	30.67	37.47	49.20	55.40	69.70	86.50	31.90	30.18	1.058
106	30.72	37.54	49.20	55.40	69.90	87.30	31.90	30.32	1.063
107	30.78	37.56	49.20	55.40	70.10	87.50	32.00	30.25	1.057
108	30.78	37.55	49.30	55.40	70.10	87.20	32.10	30.10	1.056
109	30.80	37.56	49.30	55.40	70.10	86.30	32.10	30.13	1.055
110	30.83	37.55	49.30	55.40	70.10	86.60	32.10	30.18	1.055
111	30.88	37.60	49.40	55.40	70.00	86.60	32.20	30.29	1.052
112	30.90	37.73	49.40	55.40	70.00	86.90	32.10	30.20	1.050
113	30.91	37.81	49.40	55.40	70.10	86.10	32.30	30.05	1.052
114	30.91	37.80	49.40	55.40	70.10	86.40	32.30	30.07	1.061
115	30.91	37.70	49.40	55.50	70.00	85.30	32.30	30.13	1.070
116	30.93	37.62	49.30	55.40	69.50	84.80	32.30	30.20	1.065
117	30.99	37.65	49.30	55.40	69.40	85.40	32.50	30.14	1.065
118	30.99	37.66	49.30	55.40	68.90	84.70	32.50	30.02	1.066
119	31.00	37.68	49.40	55.50	68.90	85.20	32.40	30.07	1.064
120	31.03	37.67	49.20	55.50	68.70	74.90	32.40	30.15	1.062

121	31.07	37.68	49.10	55.60	67.40	83.70	32.50	30.25	1.062
122	31.10	37.81	49.20	55.50	67.80	86.90	32.50	30.16	1.060
123	31.10	37.88	49.20	55.50	68.00	86.50	32.60	30.07	1.059
124	31.11	37.96	49.20	55.60	68.20	87.20	32.80	30.10	1.059
125	31.11	38.01	49.20	55.60	68.30	87.40	32.60	30.19	1.062
126	31.14	38.08	49.30	55.70	68.60	87.80	32.80	30.27	1.064
127	31.18	38.09	49.20	55.50	68.90	88.70	32.80	30.21	1.067
128	31.19	38.04	49.30	55.60	69.30	87.80	32.80	30.07	1.065
129	31.22	38.06	49.30	55.70	69.10	88.20	32.90	30.07	1.065
130	31.25	38.13	49.20	55.70	69.20	87.80	32.90	30.13	1.063
131	31.25	38.15	49.30	55.80	68.20	78.30	32.90	30.23	1.065
132	31.30	38.16	49.30	55.70	67.40	85.90	32.90	30.24	1.071
133	31.30	38.16	49.30	55.80	67.80	86.70	32.90	30.08	1.073
134	31.30	38.21	49.40	55.80	68.30	87.30	33.10	30.02	1.065
135	31.30	38.22	49.30	55.80	68.50	88.40	33.10	30.10	1.064
136	31.30	38.27	49.40	55.80	68.40	87.40	33.10	30.17	1.067
137	31.31	38.32	49.40	55.80	68.60	87.80	33.10	30.19	1.067
138	31.32	38.35	49.40	55.80	68.40	88.10	33.10	30.07	1.075
139	31.32	38.38	49.40	55.80	68.60	88.40	33.20	30.03	1.076
140	31.33	38.38	49.40	55.90	68.30	88.40	33.20	30.11	1.075
141	31.36	38.35	49.40	55.80	68.60	87.80	33.20	30.21	1.076
142	31.39	38.41	49.40	55.80	68.50	89.80	33.30	30.22	1.081
143	31.40	38.50	49.40	56.00	68.60	88.30	33.30	30.09	1.078
144	31.39	38.50	49.40	56.00	68.30	88.30	33.30	30.04	1.072
145	31.40	38.43	49.40	56.00	68.30	88.70	33.40	30.12	1.070
146	31.43	38.36	49.40	56.00	68.30	88.70	33.30	30.21	1.071
147	31.49	38.42	49.40	56.10	68.30	89.40	33.40	30.31	1.072
148	31.52	38.48	49.50	56.20	68.60	89.20	33.40	30.15	1.069
149	31.51	38.45	49.50	56.10	68.60	89.00	33.60	30.08	1.066
150	31.53	38.46	49.50	56.10	68.60	88.70	33.60	30.13	1.066
151	31.55	38.50	49.50	56.30	68.40	89.30	33.50	30.21	1.068
152	31.58	38.51	49.50	56.30	68.40	89.70	33.60	30.31	1.073
153	31.59	38.47	49.50	56.40	68.50	89.90	33.70	30.19	1.070
154	31.59	38.48	49.50	56.40	68.40	88.60	33.70	30.07	1.066
155	31.60	38.42	49.50	56.40	68.30	88.60	33.70	30.12	1.066
156	31.63	38.40	49.50	56.50	68.30	89.00	33.60	30.19	1.065
157	31.67	38.40	49.40	56.40	68.20	75.50	33.70	30.34	1.066
158	31.69	38.49	49.50	56.60	67.80	86.40	33.70	30.15	1.066
159	31.68	38.45	49.50	56.60	68.30	87.80	33.90	30.03	1.066
160	31.69	38.44	49.50	56.80	68.60	86.90	33.80	30.11	1.065
161	31.70	38.45	49.50	56.70	68.50	88.70	33.90	30.18	1.067
162	31.73	38.48	49.50	56.80	68.50	88.90	33.70	30.31	1.070
163	31.76	38.47	49.50	56.90	68.60	89.00	33.90	30.16	1.067
164	31.73	38.51	49.60	56.90	68.60	88.10	33.90	30.07	1.065
165	31.73	38.55	49.60	56.90	68.60	88.60	34.00	30.11	1.067
166	31.76	38.59	49.60	56.80	68.40	89.30	33.90	30.17	1.067
167	31.79	38.62	49.60	57.00	68.70	90.10	34.00	30.26	1.067
168	31.81	38.70	49.70	57.00	68.70	89.30	34.00	30.14	1.066
169	31.79	38.72	49.70	57.10	68.60	88.40	34.10	30.01	1.066
170	31.80	38.78	49.50	57.00	68.60	88.30	34.00	30.09	1.065
171	31.82	38.85	49.60	57.10	68.30	88.50	34.10	30.17	1.069
172	31.85	38.90	49.60	57.20	68.10	90.50	34.10	30.29	1.067
173	31.86	38.94	49.70	57.20	68.40	88.40	34.10	30.10	1.065
174	31.87	39.02	49.80	57.20	68.30	88.40	34.10	30.00	1.065
175	31.85	38.96	49.70	57.40	68.30	88.70	34.20	30.06	1.066
176	31.87	38.96	49.70	57.30	68.20	88.00	34.20	30.18	1.065
177	31.90	39.03	49.80	57.40	68.20	89.50	34.10	30.30	1.064
178	31.92	39.06	49.70	57.40	68.00	89.10	34.20	30.17	1.066
179	31.91	39.07	49.80	57.50	68.00	89.70	34.30	30.10	1.067
180	31.91	38.39	48.60	57.60	67.90	75.50	34.40	30.13	0.040

181	31.84326	36.652	46.90	53.40	63.70	60.80	34.40	30.18	0
182	31.78792	35.0065	45.70	51.30	58.30	56.80	34.20	30.31	0
183	31.72363	34.0275	44.80	49.70	54.00	51.80	34.40	30.19	0
184	31.66864	33.4913	43.90	48.40	50.50	48.40	34.40	30.03	0
185	31.60563	33.0859	43.10	47.20	47.50	45.40	34.20	30.09	0
186	31.5861	32.7791	42.30	46.10	45.10	43.40	34.20	30.11	0
187	31.55924	32.4992	41.60	45.10	43.20	41.70	34.20	30.16	0
188	31.56901	32.2998	40.80	44.10	41.40	40.10	34.10	30.18	0
189	31.54297	32.124	40.10	43.30	40.10	38.90	34.10	30.00	0
190	31.50391	31.9995	39.40	42.50	38.80	37.70	34.00	29.98	0
191	31.48356	31.8807	38.80	41.70	37.80	36.80	34.00	30.03	0
192	31.48031	31.7464	38.00	40.90	36.90	36.60	33.90	30.11	0
193	31.4917	31.6715	37.50	40.30	36.20	35.80	33.90	30.12	0
194	31.47542	31.5885	37.00	39.60	35.50	35.10	33.90	29.98	0
195	31.43717	31.5259	36.50	38.90	35.00	34.50	33.80	29.84	0
196	31.41846	31.4697	36.00	38.40	34.50	34.30	33.70	29.94	0
197	31.41439	31.3989	35.60	37.90	34.10	33.80	33.70	29.97	0
198	31.41927	31.3574	35.20	37.40	33.80	33.50	33.60	30.07	0
199	31.45345	31.3102	34.80	36.90	33.40	33.20	33.60	30.09	0
200	31.42822	31.2988	34.60	36.50	33.20	32.90	33.60	29.88	0
201	31.40299	31.298	34.20	36.00	33.00	32.80	33.60	29.87	0
202	31.39486	31.2956	33.90	35.70	32.80	32.40	33.60	29.92	0
203	31.37533	31.259	33.60	35.40	32.40	32.20	33.50	29.94	0
204	31.37288	31.2256	33.30	35.10	32.30	32.00	33.40	30.03	0
205	31.38184	31.1792	33.10	34.70	32.00	31.80	33.40	29.96	0
206	31.35742	31.1442	32.90	34.40	31.90	31.70	33.40	29.77	0
207	31.33464	31.1279	32.60	34.10	31.70	31.40	33.40	29.80	0
208	31.31022	31.106	32.40	33.90	31.50	31.40	33.30	29.91	0
209	31.29883	31.084	32.30	33.70	31.40	31.30	33.20	29.95	0
210	31.30697	31.0563	31.90	33.40	31.30	31.20	33.20	30.02	0
211	31.30208	31.027	31.80	33.30	31.30	31.10	33.20	29.87	0
212	31.29883	31.005	31.80	33.10	31.20	31.00	33.20	29.74	0
213	31.29801	31.0002	31.60	32.80	31.10	31.00	33.20	29.81	0
214	31.29395	30.9684	31.40	32.70	31.00	30.80	33.10	29.86	0
215	31.27686	30.9416	31.30	32.50	30.90	30.70	33.10	29.96	0
216	31.2972	30.9106	31.10	32.30	30.80	30.80	33.00	30.07	0
217	31.29883	30.9082	31.10	32.20	30.80	30.60	33.10	29.86	0
218	31.28418	30.9082	31.00	32.00	30.60	30.50	33.00	29.74	0
219	31.29122	30.9082	30.90	31.90	30.60	30.60	33.00	29.80	0
220	31.23698	30.9066	30.70	31.70	30.60	30.50	33.10	29.87	0
221	31.23128	30.9025	30.60	31.60	30.60	30.50	32.90	29.96	0
222	31.23128	30.8773	30.50	31.50	30.50	30.40	32.90	29.90	0
223	31.20687	30.8577	30.50	31.40	30.50	30.30	32.90	29.73	0
224	31.17269	30.8553	30.50	31.40	30.40	30.20	32.90	29.80	0
225	31.13525	30.8325	30.30	31.10	30.30	30.50	32.90	29.90	0
226	31.11654	30.8138	30.20	31.10	30.60	30.50	32.80	29.90	0
227	31.13281	30.8089	30.10	31.00	30.50	30.40	32.80	29.95	0
228	31.14827	30.7918	30.10	30.90	30.40	30.30	32.80	29.91	0
229	31.11572	30.7731	30.10	30.90	30.30	30.20	32.80	29.74	0
230	31.09131	30.7813	30.00	30.80	30.10	30.00	32.70	29.74	0
231	31.07829	30.7617	29.90	30.70	30.10	30.00	32.60	29.83	0
232	31.02214	30.7275	29.80	30.70	30.10	30.00	32.60	29.86	0
233	31.02051	30.7129	29.80	30.60	30.10	30.00	32.50	29.92	0
234	31.01725	30.6901	29.70	30.50	30.10	30.00	32.50	29.88	0
235	30.97493	30.6535	29.80	30.50	30.10	29.90	32.60	29.69	0
236	30.93669	30.6405	29.70	30.50	30.00	29.80	32.50	29.69	0
237	30.9082	30.6177	29.60	30.40	30.00	29.80	32.40	29.74	0
238	30.9082	30.6022	29.60	30.30	30.00	29.80	32.40	29.80	0
239	30.94911	30.6408	29.60	30.30	30.00	30.10	32.40	29.76	0
240	30.55	30.361	30.97	30.30	29.27	29.47	33.76	27.25	0

Lampiran 9 Tabel Hasil Pengambilan Data Kolektor Pipa Spiral Absorber Kerucut ke-2

Kolektor Pipa Spiral Absorber Kerucut ke-2									
t	IN (Tf)C	OUT (Tfo)C	Pelat Datar (TP1)C	Pelat kerucut	Kaca Dalam (Tc-dalam)C	Kaca Luar (Tc-Luar)C	Tanki (T.Tangki)C	Ling (Ta)C	Ilum (I) Kw
0	26.42	26.48	26.90	26.30	27.60	27.70	26.30	26.50	1.040
1	26.53	27.94	29.10	31.90	30.80	49.10	26.40	26.40	1.063
2	26.65	29.03	30.30	34.00	38.10	57.10	26.40	26.40	1.070
3	26.77	29.57	31.30	35.70	44.30	63.10	26.40	26.50	1.075
4	26.87	30.05	32.20	36.50	49.00	67.70	26.40	26.50	1.071
5	26.93	30.45	33.10	37.50	52.90	71.30	26.50	26.70	1.071
6	26.99	30.72	34.00	38.60	56.00	74.30	26.60	26.60	1.074
7	27.03	30.91	34.80	39.60	58.70	76.20	26.60	26.60	1.075
8	27.13	31.11	35.60	40.60	60.60	79.20	26.80	26.70	1.075
9	27.21	31.30	36.30	41.60	62.00	75.80	26.70	26.70	1.085
10	27.29	31.61	37.20	41.50	63.20	80.20	26.80	26.90	1.092
11	27.36	31.94	37.90	42.90	64.70	81.50	26.70	27.10	1.098
12	27.39	32.08	38.50	43.50	65.90	83.20	27.00	26.90	1.094
13	27.41	32.15	39.20	43.80	66.60	79.70	26.90	27.00	1.096
14	27.48	32.36	39.90	44.50	66.80	83.70	27.00	27.10	1.098
15	27.54	32.54	40.50	45.20	67.70	84.70	27.00	27.40	1.084
16	27.58	32.63	41.00	45.80	68.00	74.00	27.20	27.40	1.058
17	27.63	32.72	41.70	46.40	67.60	84.00	27.40	27.40	1.060
18	27.67	32.82	42.10	46.90	68.30	85.50	27.20	27.50	1.062
19	27.72	32.89	42.60	47.40	68.90	85.80	27.40	27.70	1.060
20	27.75	32.96	43.10	47.80	69.40	86.80	27.40	27.70	1.059
21	27.78	33.02	43.40	48.20	69.50	86.60	27.50	27.90	1.064
22	27.79	33.19	43.80	48.60	70.00	86.60	27.50	27.80	1.063
23	27.85	33.35	44.20	49.00	69.80	87.20	27.60	28.00	1.065
24	27.87	33.47	44.40	49.20	68.90	78.90	27.70	28.10	1.063
25	27.90	33.50	44.70	49.60	68.20	84.90	27.70	28.30	1.063
26	27.97	33.59	hvu	49.90	68.80	86.10	27.80	28.30	1.062
27	28.00	33.60	45.20	50.20	69.50	86.70	27.80	28.40	1.063
28	28.04	33.64	45.50	50.30	69.40	63.40	28.00	28.50	1.062
29	28.05	33.66	45.70	50.60	69.50	61.40	27.90	28.70	1.059
30	28.08	33.71	45.80	50.90	68.00	82.20	28.00	28.70	1.058
31	28.13	33.77	46.10	51.10	68.40	86.10	28.00	28.80	1.062
32	28.16	33.83	46.20	51.40	69.20	86.90	28.10	29.00	1.060
33	28.17	33.87	46.50	51.50	69.40	87.40	28.20	29.00	1.061
34	28.17	33.91	46.50	51.70	69.30	87.20	28.30	29.10	1.065
35	28.17	33.92	46.70	52.00	69.20	87.80	28.30	29.50	1.052
36	28.17	33.92	46.90	52.10	69.20	88.20	28.30	29.30	1.049
37	28.17	33.92	47.10	52.30	69.40	87.70	28.50	29.50	1.044
38	28.18	34.05	47.20	52.40	69.50	88.50	28.50	29.50	1.046
39	28.22	34.11	47.30	52.60	69.50	88.60	28.50	29.60	1.045
40	28.26	34.15	47.30	52.60	69.50	87.20	28.70	29.70	1.041
41	28.31	34.16	47.40	52.90	69.10	88.80	28.60	29.80	1.040
42	28.34	34.20	47.40	53.00	69.40	88.10	28.70	29.80	1.039
43	28.39	34.25	47.50	53.10	69.20	88.30	28.80	30.00	1.041
44	28.45	34.30	47.60	53.20	69.10	86.90	28.80	30.00	1.040
45	28.45	34.73	47.70	53.40	68.90	87.40	29.00	30.30	1.041
46	28.40	34.73	47.70	53.40	68.60	87.50	28.90	30.30	1.037
47	28.38	34.73	47.70	53.50	68.80	87.20	29.00	30.30	1.035
48	28.39	34.73	47.80	53.60	68.10	85.10	29.00	30.30	1.037
49	28.43	34.73	47.80	53.70	68.40	85.80	29.10	30.40	1.039
50	28.44	34.73	47.90	53.80	68.50	85.30	29.20	30.30	1.042
51	28.43	34.73	47.90	53.90	68.30	86.60	29.20	30.40	1.037
52	28.45	34.73	48.00	53.90	68.70	86.60	29.30	30.50	1.036
53	28.48	34.73	48.10	54.00	68.50	86.60	29.30	30.50	1.030
54	28.50	34.73	48.10	54.00	68.80	86.70	29.30	30.60	1.031
55	28.54	34.73	48.10	54.10	68.80	86.00	29.40	30.60	1.033
56	28.57	34.73	48.10	54.20	68.60	86.00	29.50	30.70	1.035
57	28.61	34.87	48.10	54.30	68.40	86.40	29.50	30.70	1.040
58	28.61	34.89	48.30	54.30	68.60	87.00	29.60	30.80	1.041
59	28.65	34.97	48.30	54.30	68.40	86.40	29.70	30.90	1.042
60	28.74	35.02	48.30	54.50	68.40	85.40	29.70	30.90	1.037

61	28.76	34.95	48.20	54.50	68.30	87.20	29.80	31.00	1.031
62	28.78	34.85	48.30	54.60	68.40	87.00	29.80	31.00	1.031
63	28.80	34.89	48.10	54.60	68.40	71.20	29.90	31.10	1.031
64	28.85	35.04	48.30	54.70	66.60	82.70	30.00	31.10	1.030
65	28.86	35.16	48.30	54.70	67.30	84.30	30.00	31.20	1.031
66	28.85	35.20	48.30	54.60	67.80	85.30	30.10	31.30	1.035
67	28.85	35.22	48.50	54.70	68.40	86.90	30.10	31.40	1.038
68	28.87	35.25	48.50	54.70	68.60	88.00	30.20	31.50	1.032
69	28.89	35.36	48.50	54.80	68.70	87.50	30.20	31.60	1.028
70	28.93	35.36	48.60	54.90	68.90	86.90	30.40	31.60	1.026
71	28.95	35.36	48.50	54.80	68.90	86.90	30.50	31.80	1.024
72	28.96	35.36	48.60	55.00	69.20	88.00	30.50	31.80	1.028
73	29.02	35.36	48.70	54.90	69.40	88.30	30.60	32.00	1.031
74	29.06	35.75	48.80	54.90	69.50	87.00	30.70	31.90	1.057
75	29.11	35.75	48.80	55.00	69.40	86.40	30.60	31.90	1.059
76	29.13	35.75	48.80	55.10	69.40	87.80	30.60	32.10	1.054
77	29.13	35.75	48.80	55.00	69.40	88.80	30.80	32.10	1.054
78	29.13	35.77	48.80	55.10	69.40	89.50	30.80	32.20	1.055
79	29.16	35.84	48.80	55.20	69.40	87.80	30.80	32.30	1.054
80	29.20	35.83	48.90	55.20	69.40	88.00	30.90	32.20	1.053
81	29.24	35.83	48.90	55.00	69.40	87.20	31.00	32.40	1.053
82	29.26	35.83	48.90	55.10	69.40	89.00	31.10	32.40	1.050
83	29.31	35.83	48.90	55.20	69.40	89.30	31.10	32.40	1.053
84	29.34	35.95	49.00	55.30	69.50	87.50	31.10	32.40	1.054
85	29.37	35.95	49.00	55.20	69.40	87.40	31.10	32.60	1.055
86	29.37	35.95	48.90	55.30	67.50	82.60	31.10	32.60	1.054
87	29.35	35.98	48.90	55.40	68.00	87.60	31.30	32.80	1.053
88	29.35	35.99	48.90	55.40	68.40	88.00	31.30	32.80	1.055
89	29.38	35.99	48.90	55.50	68.60	88.30	31.30	32.80	1.054
90	29.43	36.00	49.00	55.50	68.70	87.50	31.30	32.80	1.053
91	29.48	36.00	49.10	55.40	68.60	75.70	31.40	32.90	1.051
92	29.51	36.00	49.00	55.30	67.50	84.60	31.40	32.90	1.051
93	29.55	36.00	49.10	55.40	68.70	84.50	31.60	32.90	1.052
94	29.59	36.00	49.10	55.40	69.10	84.90	31.60	33.00	1.052
95	29.64	36.00	49.10	55.50	69.20	85.50	31.60	33.10	1.051
96	29.63	36.01	49.10	55.50	69.50	85.90	31.60	33.20	1.050
97	29.62	36.13	49.10	55.50	69.60	86.30	31.60	33.20	1.052
98	29.65	36.30	49.10	55.50	70.00	86.00	31.60	33.30	1.053
99	29.68	36.37	49.10	55.60	70.20	86.30	31.70	33.30	1.050
100	29.72	36.37	49.20	55.70	70.00	87.00	31.80	33.40	1.055
101	29.73	36.41	49.20	55.60	69.90	85.80	31.80	33.40	1.050
102	29.74	36.50	49.20	55.70	70.00	85.80	31.90	33.40	1.047
103	29.78	36.55	49.20	55.50	70.00	85.80	31.90	33.40	1.047
104	29.83	36.56	49.20	55.50	70.00	86.00	31.90	33.40	1.047
105	29.85	36.56	49.20	55.40	69.70	86.50	31.90	33.40	1.058
106	29.85	36.57	49.20	55.40	69.90	87.30	31.90	33.20	1.063
107	29.83	36.64	49.20	55.40	70.10	87.50	32.00	33.40	1.057
108	29.84	36.70	49.30	55.40	70.10	87.20	32.10	33.40	1.056
109	29.87	36.68	49.30	55.40	70.10	86.30	32.10	33.40	1.055
110	29.89	36.64	49.30	55.40	70.10	86.60	32.10	33.40	1.055
111	29.93	36.63	49.40	55.40	70.00	86.60	32.20	33.30	1.052
112	29.95	36.60	49.40	55.40	70.00	86.90	32.10	33.30	1.050
113	29.99	36.63	49.40	55.40	70.10	86.10	32.30	33.40	1.052
114	30.03	36.72	49.40	55.40	70.10	86.40	32.30	33.40	1.061
115	30.04	36.77	49.40	55.50	70.00	85.30	32.30	33.40	1.070
116	30.03	36.78	49.30	55.40	69.50	84.80	32.30	33.40	1.065
117	30.03	36.83	49.30	55.40	69.40	85.40	32.50	33.50	1.065
118	30.03	36.95	49.30	55.40	68.90	84.70	32.50	33.40	1.066
119	30.08	37.07	49.40	55.50	68.90	85.20	32.40	33.50	1.064
120	30.12	37.16	49.20	55.50	68.70	74.90	32.40	33.50	1.062

121	30.13	37.18	49.10	55.60	67.40	83.70	32.50	33.40	1.062
122	30.16	37.19	49.20	55.50	67.80	86.90	32.50	33.50	1.060
123	30.21	37.27	49.20	55.50	68.00	86.50	32.60	33.50	1.059
124	30.26	37.32	49.20	55.60	68.20	87.20	32.80	33.60	1.059
125	30.28	37.36	49.20	55.60	68.30	87.40	32.60	33.60	1.062
126	30.26	37.40	49.30	55.70	68.60	87.80	32.80	33.60	1.064
127	30.25	37.42	49.20	55.50	68.90	88.70	32.80	33.70	1.067
128	30.30	37.43	49.30	55.60	69.30	87.80	32.80	33.70	1.065
129	30.32	37.42	49.30	55.70	69.10	88.20	32.90	33.60	1.065
130	30.35	37.39	49.20	55.70	69.20	87.80	32.90	33.70	1.063
131	30.39	37.38	49.30	55.80	68.20	78.30	32.90	33.70	1.065
132	30.44	37.43	49.30	55.70	67.40	85.90	32.90	33.90	1.071
133	30.49	37.53	49.30	55.80	67.80	86.70	32.90	33.80	1.073
134	30.52	37.55	49.40	55.80	68.30	87.30	33.10	33.90	1.065
135	30.50	37.56	49.30	55.80	68.50	88.40	33.10	34.00	1.064
136	30.49	37.58	49.40	55.80	68.40	87.40	33.10	34.00	1.067
137	30.51	37.58	49.40	55.80	68.60	87.80	33.10	33.90	1.067
138	30.52	37.56	49.40	55.80	68.40	88.10	33.10	34.10	1.075
139	30.53	37.51	49.40	55.80	68.60	88.40	33.20	34.00	1.076
140	30.57	37.37	49.40	55.90	68.30	88.40	33.20	33.90	1.075
141	30.61	37.48	49.40	55.80	68.60	87.80	33.20	34.10	1.076
142	30.68	37.71	49.40	55.80	68.50	89.80	33.30	34.00	1.081
143	30.71	37.92	49.40	56.00	68.60	88.30	33.30	34.10	1.078
144	30.70	38.02	49.40	56.00	68.30	88.30	33.30	34.00	1.072
145	30.69	38.04	49.40	56.00	68.30	88.70	33.40	34.10	1.070
146	30.70	37.90	49.40	56.00	68.30	88.70	33.30	34.20	1.071
147	30.74	37.79	49.40	56.10	68.30	89.40	33.40	34.20	1.072
148	30.78	37.82	49.50	56.20	68.60	89.20	33.40	34.20	1.069
149	30.80	37.93	49.50	56.10	68.60	89.00	33.60	34.20	1.066
150	30.83	38.07	49.50	56.10	68.60	88.70	33.60	34.20	1.066
151	30.88	38.13	49.50	56.30	68.40	89.30	33.50	34.30	1.068
152	30.91	38.23	49.50	56.30	68.40	89.70	33.60	34.30	1.073
153	30.93	38.27	49.50	56.40	68.50	89.90	33.70	34.40	1.070
154	30.91	38.28	49.50	56.40	68.40	88.60	33.70	34.40	1.066
155	30.91	38.32	49.50	56.40	68.30	88.60	33.70	34.50	1.066
156	30.92	38.33	49.50	56.50	68.30	89.00	33.60	34.40	1.065
157	31.00	38.34	49.40	56.40	68.20	75.50	33.70	34.50	1.066
158	31.04	38.35	49.50	56.60	67.80	86.40	33.70	34.50	1.066
159	31.07	38.37	49.50	56.60	68.30	87.80	33.90	34.50	1.066
160	31.10	38.42	49.50	56.80	68.60	86.90	33.80	34.50	1.065
161	31.13	38.49	49.50	56.70	68.50	88.70	33.90	34.60	1.067
162	31.20	38.51	49.50	56.80	68.50	88.90	33.70	34.60	1.070
163	31.18	38.55	49.50	56.90	68.60	89.00	33.90	34.50	1.067
164	31.17	38.59	49.60	56.90	68.60	88.10	33.90	34.60	1.065
165	31.17	38.58	49.60	56.90	68.60	88.60	34.00	34.70	1.067
166	31.24	38.56	49.60	56.80	68.40	89.30	33.90	34.70	1.067
167	31.28	38.55	49.60	57.00	68.70	90.10	34.00	34.70	1.067
168	31.30	38.56	49.70	57.00	68.70	89.30	34.00	34.90	1.066
169	31.31	38.66	49.70	57.10	68.60	88.40	34.10	34.80	1.066
170	31.35	38.67	49.50	57.00	68.60	88.30	34.00	34.80	1.065
171	31.35	38.71	49.60	57.10	68.30	88.50	34.10	34.90	1.069
172	31.35	38.70	49.60	57.20	68.10	90.50	34.10	34.90	1.067
173	31.35	38.71	49.70	57.20	68.40	88.40	34.10	34.90	1.065
174	31.35	38.73	49.80	57.20	68.30	88.40	34.10	35.00	1.065
175	31.35	38.71	49.70	57.40	68.30	88.70	34.20	34.90	1.066
176	31.35	38.67	49.70	57.30	68.20	88.00	34.20	35.00	1.065
177	31.35	38.66	49.80	57.40	68.20	89.50	34.10	35.00	1.064
178	31.35	38.69	49.70	57.40	68.00	89.10	34.20	34.90	1.066
179	31.35	38.73	49.80	57.50	68.00	89.70	34.30	34.90	1.067
180	30.72	38.36	48.60	57.60	67.90	75.50	34.40	35.00	0.040

181	30.73812	36.9645	46.90	53.40	63.70	60.80	34.40	34.90	0
182	30.74056	35.3076	45.70	51.30	58.30	56.80	34.20	35.00	0
183	30.75195	34.0422	44.80	49.70	54.00	51.80	34.40	35.00	0
184	30.74382	33.3112	43.90	48.40	50.50	48.40	34.40	34.90	0
185	30.76742	32.7726	43.10	47.20	47.50	45.40	34.20	34.80	0
186	30.75521	32.4162	42.30	46.10	45.10	43.40	34.20	34.90	0
187	30.77067	32.4162	41.60	45.10	43.20	41.70	34.20	34.70	0
188	30.75846	32.4162	40.80	44.10	41.40	40.10	34.10	34.70	0
189	30.71289	32.4162	40.10	43.30	40.10	38.90	34.10	34.60	0
190	30.65511	32.4162	39.40	42.50	38.80	37.70	34.00	34.60	0
191	30.59733	31.1035	38.80	41.70	37.80	36.80	34.00	34.50	0
192	30.56396	31.1035	38.00	40.90	36.90	36.60	33.90	34.40	0
193	30.53955	31.1035	37.50	40.30	36.20	35.80	33.90	34.30	0
194	30.51921	31.1035	37.00	39.60	35.50	35.10	33.90	34.30	0
195	30.51432	31.1035	36.50	38.90	35.00	34.50	33.80	34.20	0
196	30.50212	31.1035	36.00	38.40	34.50	34.30	33.70	34.10	0
197	30.50537	31.1035	35.60	37.90	34.10	33.80	33.70	34.10	0
198	30.48258	31.1035	35.20	37.40	33.80	33.50	33.60	34.10	0
199	30.50049	31.1035	34.80	36.90	33.40	33.20	33.60	34.00	0
200	30.49116	31.1035	34.60	36.50	33.20	32.90	33.60	33.90	0
201	30.50212	31.1035	34.20	36.00	33.00	32.80	33.60	33.80	0
202	30.49072	31.1035	33.90	35.70	32.80	32.40	33.60	33.90	0
203	30.44922	31.1035	33.60	35.40	32.40	32.20	33.50	33.90	0
204	30.3776	31.1035	33.30	35.10	32.30	32.00	33.40	33.80	0
205	30.31738	31.1035	33.10	34.70	32.00	31.80	33.40	33.70	0
206	30.26937	31.1035	32.90	34.40	31.90	31.70	33.40	33.70	0
207	30.2474	31.1035	32.60	34.10	31.70	31.40	33.40	33.70	0
208	30.2181	31.1035	32.40	33.90	31.50	31.40	33.30	33.60	0
209	30.21566	31.1035	32.30	33.70	31.40	31.30	33.20	33.60	0
210	30.1945	31.1035	31.90	33.40	31.30	31.20	33.20	33.60	0
211	30.17741	31.1035	31.80	33.30	31.30	31.10	33.20	33.50	0
212	30.17334	31.1035	31.80	33.10	31.20	31.00	33.20	33.50	0
213	30.16439	31.1035	31.60	32.80	31.10	31.00	33.20	33.50	0
214	30.17415	31.1035	31.40	32.70	31.00	30.80	33.10	33.60	0
215	30.17822	31.1035	31.30	32.50	30.90	30.70	33.10	33.40	0
216	30.19938	31.1035	31.10	32.30	30.80	30.80	33.00	33.40	0
217	30.1652	31.1035	31.10	32.20	30.80	30.60	33.10	33.40	0
218	30.13672	31.1035	31.00	32.00	30.60	30.50	33.00	33.30	0
219	30.0944	31.1035	30.90	31.90	30.60	30.60	33.00	33.40	0
220	30.15444	31.1035	30.70	31.70	30.60	30.50	33.10	33.40	0
221	30.05387	31.1035	30.60	31.60	30.60	30.50	32.90	33.30	0
222	30.03527	31.1035	30.50	31.50	30.50	30.40	32.90	33.20	0
223	30.01667	31.1035	30.50	31.40	30.50	30.30	32.90	33.20	0
224	30.01667	31.1035	30.50	31.40	30.40	30.20	32.90	33.30	0
225	30.01667	31.1035	30.30	31.10	30.30	30.50	32.90	33.10	0
226	30.01667	31.1035	30.20	31.10	30.60	30.50	32.80	33.10	0
227	30.01667	31.1035	30.10	31.00	30.50	30.40	32.80	33.10	0
228	30.01667	31.1035	30.10	30.90	30.40	30.30	32.80	33.10	0
229	30.01667	31.1035	30.10	30.90	30.30	30.20	32.80	33.10	0
230	30.01667	31.1035	30.00	30.80	30.10	30.00	32.70	33.00	0
231	30.01667	31.1035	29.90	30.70	30.10	30.00	32.60	33.00	0
232	29.90504	31.1035	29.80	30.70	30.10	30.00	32.60	32.90	0
233	29.90504	31.1035	29.80	30.60	30.10	30.00	32.50	33.00	0
234	29.90504	31.1035	29.70	30.50	30.10	30.00	32.50	32.90	0
235	29.90504	31.1035	29.80	30.50	30.10	29.90	32.60	32.90	0
236	29.90504	31.1035	29.70	30.50	30.00	29.80	32.50	32.90	0
237	29.90504	31.1035	29.60	30.40	30.00	29.80	32.40	32.80	0
238	29.90504	31.1035	29.60	30.30	30.00	29.80	32.40	32.80	0
239	29.90504	31.1035	29.60	30.30	30.00	30.10	32.40	32.80	0
240	30.55	30.361	30.97	30.30	29.27	29.47	33.76	27.25	0

Lampiran 10 Tabel Hasil Pengambilan Data Kolektor Pipa Spiral Absorber Kerucut ke-3

Kolektor Pipa Spiral Absorber Kerucut ke-3									
t	IN (Tf)C	OUT (Tfo)C	Pelat Datar (TPI)C	Pelat kerucut	Kaca Dalam (Te-dalam)C	Kaca Luar (Te-Luar)C	Tanki (T.Tangki)C	Ling (Ta)C	Ium (I) Kw
0	25.93	25.87	26.90	26.30	27.60	27.70	26.30	27.42	1.040
1	26.13	27.23	29.10	31.90	30.80	49.10	26.40	27.48	1.063
2	26.32	28.84	30.30	34.00	38.10	57.10	26.40	27.54	1.070
3	26.50	29.84	31.30	35.70	44.30	63.10	26.40	27.58	1.075
4	26.62	30.44	32.20	36.50	49.00	67.70	26.40	27.63	1.071
5	26.72	30.95	33.10	37.50	52.90	71.30	26.50	27.68	1.071
6	26.81	31.38	34.00	38.60	56.00	74.30	26.60	27.71	1.074
7	26.87	31.62	34.80	39.60	58.70	76.20	26.60	27.78	1.075
8	26.91	31.67	35.60	40.60	60.60	79.20	26.80	27.78	1.075
9	26.96	31.73	36.30	41.60	62.00	75.80	26.70	27.86	1.085
10	27.00	31.87	37.20	41.50	63.20	80.20	26.80	27.95	1.092
11	27.01	32.01	37.90	42.90	64.70	81.50	26.70	27.96	1.098
12	27.08	32.11	38.50	43.50	65.90	83.20	27.00	28.01	1.094
13	27.13	32.19	39.20	43.80	66.60	79.70	26.90	28.01	1.096
14	27.19	32.33	39.90	44.50	66.80	83.70	27.00	28.08	1.098
15	27.22	32.43	40.50	45.20	67.70	84.70	27.00	28.11	1.084
16	27.30	32.59	41.00	45.80	68.00	74.00	27.20	28.17	1.058
17	27.36	32.75	41.70	46.40	67.60	84.00	27.40	28.17	1.060
18	27.40	32.88	42.10	46.90	68.30	85.50	27.20	28.16	1.062
19	27.45	32.97	42.60	47.40	68.90	85.80	27.40	28.18	1.060
20	27.52	33.07	43.10	47.80	69.40	86.80	27.40	28.22	1.059
21	27.58	33.17	43.40	48.20	69.50	86.60	27.50	28.32	1.064
22	27.64	33.20	43.80	48.60	70.00	86.60	27.50	28.36	1.063
23	27.69	33.21	44.20	49.00	69.80	87.20	27.60	28.30	1.065
24	27.71	33.27	44.40	49.20	68.90	78.90	27.70	28.03	1.063
25	27.72	33.32	44.70	49.60	68.20	84.90	27.70	27.91	1.063
26	27.73	33.40	hvu	49.90	68.80	86.10	27.80	27.97	1.062
27	27.76	33.40	45.20	50.20	69.50	86.70	27.80	27.98	1.063
28	27.79	33.42	45.50	50.30	69.40	63.40	28.00	28.02	1.062
29	27.84	33.45	45.70	50.60	69.50	61.40	27.90	28.10	1.059
30	27.92	33.50	45.80	50.90	68.00	82.20	28.00	28.17	1.058
31	27.97	33.56	46.10	51.10	68.40	86.10	28.00	28.22	1.062
32	28.02	33.63	46.20	51.40	69.20	86.90	28.10	28.28	1.060
33	28.08	33.69	46.50	51.50	69.40	87.40	28.20	28.43	1.061
34	28.14	33.78	46.50	51.70	69.30	87.20	28.30	28.51	1.065
35	28.17	33.84	46.70	52.00	69.20	87.80	28.30	28.59	1.052
36	28.22	33.94	46.90	52.10	69.20	88.20	28.30	28.61	1.049
37	28.23	33.94	47.10	52.30	69.40	87.70	28.50	28.32	1.044
38	28.22	33.94	47.20	52.40	69.50	88.50	28.50	28.18	1.046
39	28.21	33.97	47.30	52.60	69.50	88.60	28.50	28.24	1.045
40	28.22	34.03	47.30	52.60	69.50	87.20	28.70	28.26	1.041
41	28.25	34.03	47.40	52.90	69.10	88.80	28.60	28.33	1.040
42	28.30	34.03	47.40	53.00	69.40	88.10	28.70	28.37	1.039
43	28.36	34.18	47.50	53.10	69.20	88.30	28.80	28.45	1.041
44	28.40	34.22	47.60	53.20	69.10	86.90	28.80	28.57	1.040
45	28.46	34.21	47.70	53.40	68.90	87.40	29.00	28.69	1.041
46	28.48	34.21	47.70	53.40	68.60	87.50	28.90	28.59	1.037
47	28.47	34.21	47.70	53.50	68.80	87.20	29.00	28.32	1.035
48	28.46	34.41	47.80	53.60	68.10	85.10	29.00	28.31	1.037
49	28.50	34.41	47.80	53.70	68.40	85.80	29.10	28.37	1.039
50	28.53	34.41	47.90	53.80	68.50	85.30	29.20	28.38	1.042
51	28.54	34.67	47.90	53.90	68.30	86.60	29.20	28.44	1.037
52	28.55	34.67	48.00	53.90	68.70	86.60	29.30	28.49	1.036
53	28.62	34.67	48.10	54.00	68.50	86.60	29.30	28.57	1.030
54	28.71	34.67	48.10	54.00	68.80	86.70	29.30	28.68	1.031
55	28.75	34.67	48.10	54.10	68.80	86.00	29.40	28.74	1.033
56	28.77	34.67	48.10	54.20	68.60	86.00	29.50	28.49	1.035
57	28.75	34.72	48.10	54.30	68.40	86.40	29.50	28.35	1.040
58	28.74	34.72	48.30	54.30	68.60	87.00	29.60	28.34	1.041
59	28.75	34.73	48.30	54.30	68.40	86.40	29.70	28.41	1.042
60	28.77	34.81	48.30	54.50	68.40	85.40	29.70	28.39	1.037

61	28.79	34.81	48.20	54.50	68.30	87.20	29.80	28.43	1.031
62	28.82	34.81	48.30	54.60	68.40	87.00	29.80	28.50	1.031
63	28.85	34.98	48.10	54.60	68.40	71.20	29.90	28.57	1.031
64	28.92	34.98	48.30	54.70	66.60	82.70	30.00	28.74	1.030
65	28.96	34.98	48.30	54.70	67.30	84.30	30.00	28.75	1.031
66	28.97	35.13	48.30	54.60	67.80	85.30	30.10	28.49	1.035
67	28.97	35.22	48.50	54.70	68.40	86.90	30.10	28.38	1.038
68	28.97	35.22	48.50	54.70	68.60	88.00	30.20	28.50	1.032
69	28.98	35.22	48.50	54.80	68.70	87.50	30.20	28.56	1.028
70	28.99	35.22	48.60	54.90	68.90	86.90	30.40	28.59	1.026
71	29.02	35.34	48.50	54.80	68.90	86.90	30.50	28.64	1.024
72	29.05	35.34	48.60	55.00	69.20	88.00	30.50	28.73	1.028
73	29.12	35.34	48.70	54.90	69.40	88.30	30.60	28.83	1.031
74	29.16	35.34	48.80	54.90	69.50	87.00	30.70	28.85	1.057
75	29.23	35.34	48.80	55.00	69.40	86.40	30.60	28.93	1.059
76	29.29	35.34	48.80	55.10	69.40	87.80	30.60	28.96	1.054
77	29.33	35.42	48.80	55.00	69.40	88.80	30.80	28.96	1.054
78	29.36	35.49	48.80	55.10	69.40	89.50	30.80	29.03	1.055
79	29.41	35.57	48.80	55.20	69.40	87.80	30.80	29.05	1.054
80	29.45	35.59	48.90	55.20	69.40	88.00	30.90	29.13	1.053
81	29.52	35.60	48.90	55.00	69.40	87.20	31.00	29.18	1.053
82	29.53	35.69	48.90	55.10	69.40	89.00	31.10	29.23	1.050
83	29.57	35.75	48.90	55.20	69.40	89.30	31.10	29.27	1.053
84	29.62	35.79	49.00	55.30	69.50	87.50	31.10	29.33	1.054
85	29.67	35.86	49.00	55.20	69.40	87.40	31.10	29.35	1.055
86	29.68	35.82	48.90	55.30	67.50	82.60	31.10	29.37	1.054
87	29.73	35.86	48.90	55.40	68.00	87.60	31.30	29.36	1.053
88	29.73	35.89	48.90	55.40	68.40	88.00	31.30	29.37	1.055
89	29.75	35.93	48.90	55.50	68.60	88.30	31.30	29.42	1.054
90	29.78	35.98	49.00	55.50	68.70	87.50	31.30	29.48	1.053
91	29.82	36.02	49.10	55.40	68.60	75.70	31.40	29.54	1.051
92	29.84	36.05	49.00	55.30	67.50	84.60	31.40	29.53	1.051
93	29.87	36.05	49.10	55.40	68.70	84.50	31.60	29.56	1.052
94	29.90	36.06	49.10	55.40	69.10	84.90	31.60	29.56	1.052
95	29.93	36.13	49.10	55.50	69.20	85.50	31.60	29.62	1.051
96	29.98	36.16	49.10	55.50	69.50	85.90	31.60	29.66	1.050
97	30.01	36.19	49.10	55.50	69.60	86.30	31.60	29.66	1.052
98	30.02	36.21	49.10	55.50	70.00	86.00	31.60	29.70	1.053
99	30.06	36.25	49.10	55.60	70.20	86.30	31.70	29.73	1.050
100	30.10	36.39	49.20	55.70	70.00	87.00	31.80	29.72	1.055
101	30.10	36.54	49.20	55.60	69.90	85.80	31.80	29.74	1.050
102	30.12	36.61	49.20	55.70	70.00	85.80	31.90	29.74	1.047
103	30.16	36.66	49.20	55.50	70.00	85.80	31.90	29.75	1.047
104	30.18	36.69	49.20	55.50	70.00	86.00	31.90	29.81	1.047
105	30.22	36.73	49.20	55.40	69.70	86.50	31.90	29.87	1.058
106	30.26	36.74	49.20	55.40	69.90	87.30	31.90	29.87	1.063
107	30.29	36.76	49.20	55.40	70.10	87.50	32.00	29.92	1.057
108	30.30	36.79	49.30	55.40	70.10	87.20	32.10	29.94	1.056
109	30.31	36.83	49.30	55.40	70.10	86.30	32.10	29.93	1.055
110	30.32	36.80	49.30	55.40	70.10	86.60	32.10	29.92	1.055
111	30.36	36.81	49.40	55.40	70.00	86.60	32.20	29.92	1.052
112	30.38	36.82	49.40	55.40	70.00	86.90	32.10	29.95	1.050
113	30.43	36.88	49.40	55.40	70.10	86.10	32.30	29.94	1.052
114	30.45	36.91	49.40	55.40	70.10	86.40	32.30	29.97	1.061
115	30.48	36.95	49.40	55.50	70.00	85.30	32.30	30.04	1.070
116	30.50	36.95	49.30	55.40	69.50	84.80	32.30	30.05	1.065
117	30.51	36.99	49.30	55.40	69.40	85.40	32.50	29.68	1.065
118	30.43	36.96	49.30	55.40	68.90	84.70	32.50	29.43	1.066
119	30.41	36.96	49.40	55.50	68.90	85.20	32.40	29.44	1.064
120	30.39	36.93	49.20	55.50	68.70	74.90	32.40	29.41	1.062

121	30.39	36.91	49.10	55.60	67.40	83.70	32.50	29.50	1.062
122	30.41	36.92	49.20	55.50	67.80	86.90	32.50	29.59	1.060
123	30.43	36.87	49.20	55.50	68.00	86.50	32.60	29.68	1.059
124	30.48	36.85	49.20	55.60	68.20	87.20	32.80	29.74	1.059
125	30.51	36.99	49.20	55.60	68.30	87.40	32.60	29.78	1.062
126	30.56	37.23	49.30	55.70	68.60	87.80	32.80	29.87	1.064
127	30.60	37.49	49.20	55.50	68.90	88.70	32.80	29.95	1.067
128	30.62	37.64	49.30	55.60	69.30	87.80	32.80	30.00	1.065
129	30.67	37.78	49.30	55.70	69.10	88.20	32.90	30.00	1.065
130	30.72	37.86	49.20	55.70	69.20	87.80	32.90	30.03	1.063
131	30.75	37.89	49.30	55.80	68.20	78.30	32.90	30.11	1.065
132	30.80	37.92	49.30	55.70	67.40	85.90	32.90	30.10	1.071
133	30.82	37.94	49.30	55.80	67.80	86.70	32.90	30.07	1.073
134	30.81	37.95	49.40	55.80	68.30	87.30	33.10	29.79	1.065
135	30.77	37.99	49.30	55.80	68.50	88.40	33.10	29.64	1.064
136	30.75	37.99	49.40	55.80	68.40	87.40	33.10	29.72	1.067
137	30.75	37.96	49.40	55.80	68.60	87.80	33.10	29.73	1.067
138	30.74	37.93	49.40	55.80	68.40	88.10	33.10	29.73	1.075
139	30.73	37.91	49.40	55.80	68.60	88.40	33.20	29.75	1.076
140	30.77	37.93	49.40	55.90	68.30	88.40	33.20	29.81	1.075
141	30.81	37.95	49.40	55.80	68.60	87.80	33.20	29.92	1.076
142	30.85	37.88	49.40	55.80	68.50	89.80	33.30	29.92	1.081
143	30.90	38.00	49.40	56.00	68.60	88.30	33.30	29.97	1.078
144	30.93	38.31	49.40	56.00	68.30	88.30	33.30	30.04	1.072
145	30.95	38.48	49.40	56.00	68.30	88.70	33.40	30.06	1.070
146	30.98	38.42	49.40	56.00	68.30	88.70	33.30	30.06	1.071
147	30.97	38.16	49.40	56.10	68.30	89.40	33.40	29.77	1.072
148	30.93	37.90	49.50	56.20	68.60	89.20	33.40	29.53	1.069
149	30.92	37.85	49.50	56.10	68.60	89.00	33.60	29.59	1.066
150	30.93	37.87	49.50	56.10	68.60	88.70	33.60	29.58	1.066
151	30.92	37.96	49.50	56.30	68.40	89.30	33.50	29.57	1.068
152	30.92	38.17	49.50	56.30	68.40	89.70	33.60	29.61	1.073
153	30.91	38.41	49.50	56.40	68.50	89.90	33.70	29.69	1.070
154	30.94	38.60	49.50	56.40	68.40	88.60	33.70	29.79	1.066
155	30.97	38.62	49.50	56.40	68.30	88.60	33.70	29.98	1.066
156	31.00	38.51	49.50	56.50	68.30	89.00	33.60	30.04	1.065
157	31.06	38.42	49.40	56.40	68.20	75.50	33.70	30.11	1.066
158	31.11	38.42	49.50	56.60	67.80	86.40	33.70	30.17	1.066
159	31.18	38.45	49.50	56.60	68.30	87.80	33.90	30.26	1.066
160	31.23	38.52	49.50	56.80	68.60	86.90	33.80	30.07	1.065
161	31.20	38.54	49.50	56.70	68.50	88.70	33.90	29.79	1.067
162	31.15	38.57	49.50	56.80	68.50	88.90	33.70	29.76	1.070
163	31.16	38.57	49.50	56.90	68.60	89.00	33.90	29.80	1.067
164	31.15	38.56	49.60	56.90	68.60	88.10	33.90	29.79	1.065
165	31.18	38.65	49.60	56.90	68.60	88.60	34.00	29.87	1.067
166	31.21	38.85	49.60	56.80	68.40	89.30	33.90	29.93	1.067
167	31.26	38.90	49.60	57.00	68.70	90.10	34.00	30.03	1.067
168	31.30	38.87	49.70	57.00	68.70	89.30	34.00	30.09	1.066
169	31.32	38.88	49.70	57.10	68.60	88.40	34.10	30.19	1.066
170	31.36	39.05	49.50	57.00	68.60	88.30	34.00	30.21	1.065
171	31.37	39.14	49.60	57.10	68.30	88.50	34.10	29.87	1.069
172	31.37	39.09	49.60	57.20	68.10	90.50	34.10	29.73	1.067
173	31.40	38.84	49.70	57.20	68.40	88.40	34.10	29.78	1.065
174	31.46	38.76	49.80	57.20	68.30	88.40	34.10	29.83	1.065
175	31.52	38.94	49.70	57.40	68.30	88.70	34.20	29.95	1.066
176	31.56	39.14	49.70	57.30	68.20	88.00	34.20	30.00	1.065
177	31.58	39.14	49.80	57.40	68.20	89.50	34.10	30.10	1.064
178	31.64	39.02	49.70	57.40	68.00	89.10	34.20	30.20	1.066
179	31.70	38.83	49.80	57.50	68.00	89.70	34.30	30.28	1.067
180	31.75	38.32	48.60	57.60	67.90	75.50	34.40	30.07	0.040

181	31.59749	36.9596	46.90	53.40	63.70	60.80	34.40	29.83	0
182	31.42334	35.4191	45.70	51.30	58.30	56.80	34.20	29.82	0
183	31.33057	34.1659	44.80	49.70	54.00	51.80	34.40	29.79	0
184	31.29643	33.408	43.90	48.40	50.50	48.40	34.40	29.74	0
185	31.25326	32.88	43.10	47.20	47.50	45.40	34.20	29.75	0
186	31.15723	32.4959	42.30	46.10	45.10	43.40	34.20	29.80	0
187	31.12793	32.1916	41.60	45.10	43.20	41.70	34.20	29.88	0
188	31.12467	31.936	40.80	44.10	41.40	40.10	34.10	30.00	0
189	31.2085	31.7065	40.10	43.30	40.10	38.90	34.10	30.06	0
190	31.26139	31.5568	39.40	42.50	38.80	37.70	34.00	30.13	0
191	31.29639	31.4648	38.80	41.70	37.80	36.80	34.00	30.20	0
192	31.34521	31.394	38.00	40.90	36.90	36.60	33.90	30.18	0
193	31.36149	31.3607	37.50	40.30	36.20	35.80	33.90	29.88	0
194	31.33952	31.355	37.00	39.60	35.50	35.10	33.90	29.72	0
195	31.30452	31.3306	36.50	38.90	35.00	34.50	33.80	29.73	0
196	31.29883	31.2988	36.00	38.40	34.50	34.30	33.70	29.70	0
197	31.29883	31.2834	35.60	37.90	34.10	33.80	33.70	29.67	0
198	31.29639	31.2467	35.20	37.40	33.80	33.50	33.60	29.72	0
199	31.29883	31.1825	34.80	36.90	33.40	33.20	33.60	29.75	0
200	31.29557	31.119	34.60	36.50	33.20	32.90	33.60	29.79	0
201	31.29883	31.1027	34.20	36.00	33.00	32.80	33.60	29.95	0
202	31.29883	31.0775	33.90	35.70	32.80	32.40	33.60	30.03	0
203	31.29964	31.0718	33.60	35.40	32.40	32.20	33.50	30.04	0
204	31.32731	31.0653	33.30	35.10	32.30	32.00	33.40	30.11	0
205	31.33382	31.0628	33.10	34.70	32.00	31.80	33.40	30.12	0
206	31.32894	31.0758	32.90	34.40	31.90	31.70	33.40	30.12	0
207	31.32406	31.0596	32.60	34.10	31.70	31.40	33.40	30.03	0
208	31.29883	31.0588	32.40	33.90	31.50	31.40	33.30	29.71	0
209	31.28581	31.0368	32.30	33.70	31.40	31.30	33.20	29.65	0
210	31.24837	31.001	31.90	33.40	31.30	31.20	33.20	29.69	0
211	31.15316	30.9237	31.80	33.30	31.30	31.10	33.20	29.70	0
212	31.10433	30.9033	31.80	33.10	31.20	31.00	33.20	29.70	0
213	31.08236	30.8521	31.60	32.80	31.10	31.00	33.20	29.73	0
214	31.09375	30.8089	31.40	32.70	31.00	30.80	33.10	29.70	0
215	31.07503	30.7617	31.30	32.50	30.90	30.70	33.10	29.73	0
216	31.08154	30.7406	31.10	32.30	30.80	30.80	33.00	29.82	0
217	31.08317	30.7251	31.10	32.20	30.80	30.60	33.10	29.93	0
218	31.0734	30.7145	31.00	32.00	30.60	30.50	33.00	30.01	0
219	31.0783	30.7197	30.90	31.90	30.60	30.60	33.00	29.97	0
220	31.08968	30.7178	30.70	31.70	30.60	30.50	33.10	30.07	0
221	31.09619	30.7243	30.60	31.60	30.60	30.50	32.90	30.13	0
222	31.09294	30.7332	30.50	31.50	30.50	30.40	32.90	30.14	0
223	31.09456	30.7397	30.50	31.40	30.50	30.30	32.90	30.14	0
224	31.05469	30.7332	30.50	31.40	30.40	30.20	32.90	29.89	0
225	30.99772	30.717	30.30	31.10	30.30	30.50	32.90	29.73	0
226	30.92204	30.6974	30.20	31.10	30.60	30.50	32.80	29.70	0
227	30.89111	30.6494	30.10	31.00	30.50	30.40	32.80	29.59	0
228	30.86507	30.6022	30.10	30.90	30.40	30.30	32.80	29.58	0
229	30.81624	30.5477	30.10	30.90	30.30	30.20	32.80	29.54	0
230	30.77555	30.5143	30.00	30.80	30.10	30.00	32.70	29.54	0
231	30.74544	30.4834	29.90	30.70	30.10	30.00	32.60	29.62	0
232	30.7373	30.4704	29.80	30.70	30.10	30.00	32.60	29.69	0
233	30.73893	30.437	29.80	30.60	30.10	30.00	32.50	29.74	0
234	30.74544	30.4167	29.70	30.50	30.10	30.00	32.50	29.78	0
235	30.77067	30.4045	29.80	30.50	30.10	29.90	32.60	29.84	0
236	30.77474	30.4004	29.70	30.50	30.00	29.80	32.50	29.90	0
237	30.77881	30.4142	29.60	30.40	30.00	29.80	32.40	29.95	0
238	30.77718	30.415	29.60	30.30	30.00	29.80	32.40	30.00	0
239	30.76932	30.4104	29.60	30.30	30.00	30.10	32.40	29.89	0
240	30.55	30.361	30.97	30.30	29.27	29.47	33.76	27.25	0

Lampiran 11 Tabel Hasil Perhitungan Kolektor Pipa Spiral Standar 1, 2, dan 3

Spiral Standar 1				Spiral Standar 2				Spiral Standar 3			
t	V (m ³ /s)	Qu (Watt)	η (%)	t	V (m ³ /s)	Qu (Watt)	η (%)	t	V (m ³ /s)	Qu (Watt)	η (%)
0	0	0	0%	0	0	0	0%	0	0	0	0%
5	2.33E-06	0.030731	38%	5	2.33E-06	0.030732	38%	5	2.33E-06	0.027323	34%
10	2.33E-06	0.038838	48%	10	2.33E-06	0.038837	48%	10	2.33E-06	0.035392	44%
15	2.33E-06	0.040047	49%	15	2.33E-06	0.040043	49%	15	2.33E-06	0.038376	47%
20	2.33E-06	0.042618	54%	20	2.33E-06	0.042611	54%	20	2.33E-06	0.041954	53%
25	2.33E-06	0.045473	56%	25	2.33E-06	0.045463	57%	25	2.33E-06	0.04324	54%
30	2.33E-06	0.046139	56%	30	2.33E-06	0.046128	58%	30	2.33E-06	0.044566	56%
35	2.33E-06	0.045128	58%	35	2.33E-06	0.045118	57%	35	2.33E-06	0.044461	56%
40	2.33E-06	0.049686	63%	40	2.33E-06	0.04967	63%	40	2.33E-06	0.045574	58%
45	2.33E-06	0.049563	63%	45	2.33E-06	0.049547	63%	45	2.33E-06	0.046281	59%
50	2.33E-06	0.050586	64%	50	2.33E-06	0.050566	63%	50	2.33E-06	0.046485	60%
55	2.33E-06	0.05124	64%	55	2.33E-06	0.051218	63%	55	2.33E-06	0.046104	59%
60	2.33E-06	0.052476	64%	60	2.33E-06	0.052455	64%	60	2.33E-06	0.046834	60%
65	2.33E-06	0.049024	64%	65	2.33E-06	0.049005	64%	65	2.33E-06	0.046538	60%
70	2.33E-06	0.052022	65%	70	2.33E-06	0.052004	65%	70	2.33E-06	0.046597	60%
75	2.33E-06	0.052344	67%	75	2.33E-06	0.052326	65%	75	2.33E-06	0.047359	61%
80	2.33E-06	0.052788	67%	80	2.33E-06	0.052769	65%	80	2.33E-06	0.049565	63%
85	2.33E-06	0.051793	66%	85	2.33E-06	0.051776	65%	85	2.33E-06	0.049631	63%
90	2.33E-06	0.048997	66%	90	2.33E-06	0.048984	65%	90	2.33E-06	0.050257	64%
95	2.33E-06	0.051473	66%	95	2.33E-06	0.051459	65%	95	2.33E-06	0.049784	63%
100	2.33E-06	0.049574	66%	100	2.33E-06	0.049563	65%	100	2.33E-06	0.049592	63%
105	2.33E-06	0.048896	66%	105	2.33E-06	0.048884	65%	105	2.33E-06	0.050294	64%
110	2.33E-06	0.050259	66%	110	2.33E-06	0.05025	65%	110	2.33E-06	0.049942	63%
115	2.33E-06	0.051702	66%	115	2.33E-06	0.051696	66%	115	2.33E-06	0.051752	65%
120	2.33E-06	0.051709	66%	120	2.33E-06	0.051705	66%	120	2.33E-06	0.051082	64%
125	2.33E-06	0.051529	66%	125	2.33E-06	0.051527	66%	125	2.33E-06	0.052409	66%
130	2.33E-06	0.052418	66%	130	2.33E-06	0.052443	66%	130	2.33E-06	0.054095	68%
135	2.33E-06	0.050708	67%	135	2.33E-06	0.050728	66%	135	2.33E-06	0.054061	67%
140	2.33E-06	0.052132	67%	140	2.33E-06	0.05215	66%	140	2.33E-06	0.054349	68%
145	2.33E-06	0.052881	67%	145	2.33E-06	0.052903	66%	145	2.33E-06	0.054109	67%
150	2.33E-06	0.05338	67%	150	2.33E-06	0.053404	67%	150	2.33E-06	0.054566	68%
155	2.33E-06	0.054362	68%	155	2.33E-06	0.054386	68%	155	2.33E-06	0.054443	68%
160	2.33E-06	0.05417	68%	160	2.33E-06	0.054196	68%	160	2.33E-06	0.055569	69%
165	2.33E-06	0.054504	68%	165	2.33E-06	0.054525	68%	165	2.33E-06	0.058563	69%
170	2.33E-06	0.0553	69%	170	2.33E-06	0.055323	69%	170	2.33E-06	0.059466	70%
175	2.33E-06	0.05612	69%	175	2.33E-06	0.056145	69%	175	2.33E-06	0.060137	70%
180	2.33E-06	0.057315	70%	180	2.33E-06	0.057341	70%	180	2.33E-06	0.041208	70%

Lampiran 12 Tabel Hasil Perhitungan Kolektor Pipa Spiral Absorber Kerucut 1,2, dan 3

Spiral Absorber 1				Spiral Absorber 2				Spiral Absorber 3			
t	V (m ³ /s)	Qu (Watt)	η (%)	t	V (m ³ /s)	Qu (Watt)	η (%)	t	V (m ³ /s)	Qu (Watt)	η (%)
0	0	0	0%	0	0	0	0%	0	0	0	0%
5	2.33E-06	0.03107	34%	5	2.33E-06	0.025779	28%	5	2.33E-06	0.029083	32%
10	2.33E-06	0.041633	45%	10	2.33E-06	0.038808	42%	10	2.33E-06	0.046063	50%
15	2.33E-06	0.047908	52%	15	2.33E-06	0.04637	50%	15	2.33E-06	0.049401	53%
20	2.33E-06	0.049585	55%	20	2.33E-06	0.049859	55%	20	2.33E-06	0.052892	59%
25	2.33E-06	0.04963	55%	25	2.33E-06	0.053092	59%	25	2.33E-06	0.053991	60%
30	2.33E-06	0.052493	58%	30	2.33E-06	0.054484	60%	30	2.33E-06	0.054598	61%
35	2.33E-06	0.055179	61%	35	2.33E-06	0.055339	61%	35	2.33E-06	0.054575	61%
40	2.33E-06	0.056415	64%	40	2.33E-06	0.056617	64%	40	2.33E-06	0.055302	62%
45	2.33E-06	0.055212	62%	45	2.33E-06	0.05693	64%	45	2.33E-06	0.055916	63%
50	2.33E-06	0.053699	61%	50	2.33E-06	0.057353	65%	50	2.33E-06	0.054166	61%
55	2.33E-06	0.053932	61%	55	2.33E-06	0.058718	67%	55	2.33E-06	0.05597	64%
60	2.33E-06	0.054866	62%	60	2.33E-06	0.060728	69%	60	2.33E-06	0.057832	65%
65	2.33E-06	0.055011	63%	65	2.33E-06	0.059867	68%	65	2.33E-06	0.057524	66%
70	2.33E-06	0.060771	68%	70	2.33E-06	0.06161	70%	70	2.33E-06	0.060199	69%
75	2.33E-06	0.064982	70%	75	2.33E-06	0.061905	70%	75	2.33E-06	0.059178	67%
80	2.33E-06	0.064647	72%	80	2.33E-06	0.064044	71%	80	2.33E-06	0.059301	66%
85	2.33E-06	0.065065	72%	85	2.33E-06	0.063422	71%	85	2.33E-06	0.059722	67%
90	2.33E-06	0.063193	72%	90	2.33E-06	0.064075	72%	90	2.33E-06	0.059771	67%
95	2.33E-06	0.063137	72%	95	2.33E-06	0.062512	70%	95	2.33E-06	0.060033	67%
100	2.33E-06	0.064296	72%	100	2.33E-06	0.063792	71%	100	2.33E-06	0.060202	67%
105	2.33E-06	0.065384	73%	105	2.33E-06	0.06526	73%	105	2.33E-06	0.062967	71%
110	2.33E-06	0.065661	73%	110	2.33E-06	0.065865	73%	110	2.33E-06	0.062946	70%
115	2.33E-06	0.066233	74%	115	2.33E-06	0.064801	72%	115	2.33E-06	0.062556	70%
120	2.33E-06	0.064703	74%	120	2.33E-06	0.066908	74%	120	2.33E-06	0.063125	70%
125	2.33E-06	0.065658	74%	125	2.33E-06	0.068413	76%	125	2.33E-06	0.062694	70%
130	2.33E-06	0.066764	74%	130	2.33E-06	0.068997	76%	130	2.33E-06	0.067517	75%
135	2.33E-06	0.066812	74%	135	2.33E-06	0.068049	76%	135	2.33E-06	0.069288	76%
140	2.33E-06	0.068058	75%	140	2.33E-06	0.067887	76%	140	2.33E-06	0.069752	77%
145	2.33E-06	0.06831	75%	145	2.33E-06	0.06934	76%	145	2.33E-06	0.070156	76%
150	2.33E-06	0.067267	76%	150	2.33E-06	0.069171	77%	150	2.33E-06	0.068796	76%
155	2.33E-06	0.06682	76%	155	2.33E-06	0.07115	77%	155	2.33E-06	0.07194	77%
160	2.33E-06	0.065595	76%	160	2.33E-06	0.071104	78%	160	2.33E-06	0.071242	77%
165	2.33E-06	0.065492	76%	165	2.33E-06	0.071502	78%	165	2.33E-06	0.071812	78%
170	2.33E-06	0.066805	76%	170	2.33E-06	0.070755	78%	170	2.33E-06	0.073804	78%
175	2.33E-06	0.06867	76%	175	2.33E-06	0.070712	78%	175	2.33E-06	0.072998	78%
180	2.33E-06	0.067867	76%	180	2.33E-06	0.068132	78%	180	2.33E-06	0.070229	78%

Lampiran 13 Dokumentasi

Pembuatan Alat



Pengambilan Data

