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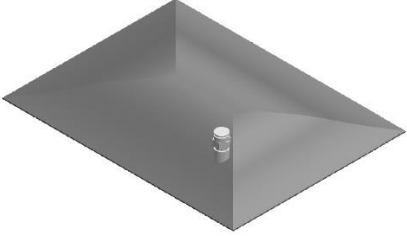

LAMPIRAN

A. PROSES PEMBUATAN BIOGAS

	
<p>Pengambilan kotoran sapi di peternakan</p>	<p>Proses pembuatan biogas dengan campuran air perbandingan 1:1</p>
	
<p>Kotoran sapi setelah di campur dengan air</p>	<p>Biogas setelah di fermentasi 1 minggu</p>

B. PERANCANGAN ALAT

No	Sketsa rancang bangun	Gambar asli
1.	 <p data-bbox="616 824 834 857">Rancang Bangun</p>	
2.	 <p data-bbox="675 1223 772 1256">Reaktor</p>	
3.	 <p data-bbox="628 1626 823 1659"><i>Housing Filter</i></p>	
4.	 <p data-bbox="647 1939 807 1973">Flow Meter</p>	

No	Sketsa Rancang Bangun	Gambar asli
5.	 <p data-bbox="662 707 790 741">Pengaduk</p>	
6.	 <p data-bbox="587 1010 863 1043">Pompa Vakum Angin</p>	
7.	 <p data-bbox="671 1435 782 1469"><i>Gas Bag</i></p>	

C. PROSES PEMBUATAN ALAT

	
<p>Pemotongan besi siku untuk kerangka alat</p>	<p>Pengelasan pada kerangka alat</p>
	
<p>Proses pengecatan alat</p>	<p>Proses perakitan per komponen</p>
	
<p>Pelubangan reaktor menggunakan boor untuk pemasangan pompa</p>	<p>Pemotongan besi siku untuk dudukan pompa dan flowmeter</p>
	
<p>Pengujian kebocoran alat</p>	<p>Pengujian pengadukan pada alat</p>

D. APLIKASI KARBON AKTIF

	
<p>Pembelian karbon aktif komersial</p>	<p>Penghalusan karbon aktif komersial menggunakan grinder</p>
	
<p>Pengayakan karbon aktif komersial 100 mesh</p>	<p>Kemudian di timbang seberat 65 gram dan di masukan ke <i>housing filter</i></p>

E. PENGAMBILAN DATA

	
<p><i>Probe</i> di dekatkan dengan sample gas</p>	<p>Dinyalakan pompa dan dibukak flowmeternya</p>
	
<p>Pengambilan sample inlet menggunakan <i>portable gas analyzer</i></p>	<p>Pengambilan sample pada <i>housing filter</i> tingkat 1,2 dan 3</p>

F. HASIL DATA PORTABLE GAS ANALYZER

Hasil Data Pengukuran Kadar CO₂ Pada Karbon Aktif Komersial Variasi Laju Alir 1 L/menit

<table> <tr><td>O₂</td><td>19.49</td><td>%</td></tr> <tr><td>CO</td><td>0</td><td>ppm</td></tr> <tr><td>NO</td><td>0</td><td>ppm</td></tr> <tr><td>NO_x</td><td>0</td><td>ppm</td></tr> <tr><td>SO₂</td><td>0</td><td>ppm</td></tr> <tr><td>CxHy</td><td>0</td><td>ppm</td></tr> <tr><td>CO₂</td><td>1.0</td><td>%</td></tr> <tr><td>Eff. (eta)</td><td>---</td><td>%</td></tr> <tr><td>T flue</td><td>---</td><td>°C</td></tr> <tr><td>T air</td><td>26.6</td><td>°C</td></tr> <tr><td>deltaT</td><td>---</td><td>°C</td></tr> <tr><td>Draft</td><td>0</td><td>Pa</td></tr> <tr><td>X Air</td><td>---</td><td>%</td></tr> <tr><td>Smoke</td><td>2</td><td></td></tr> </table> <p>Notes :</p>	O ₂	19.49	%	CO	0	ppm	NO	0	ppm	NO _x	0	ppm	SO ₂	0	ppm	CxHy	0	ppm	CO ₂	1.0	%	Eff. (eta)	---	%	T flue	---	°C	T air	26.6	°C	deltaT	---	°C	Draft	0	Pa	X Air	---	%	Smoke	2		<table> <tr><td>O₂</td><td>20.69</td><td>%</td></tr> <tr><td>CO</td><td>0</td><td>ppm</td></tr> <tr><td>NO</td><td>0</td><td>ppm</td></tr> <tr><td>NO_x</td><td>0</td><td>ppm</td></tr> <tr><td>SO₂</td><td>0</td><td>ppm</td></tr> <tr><td>CxHy</td><td>0</td><td>ppm</td></tr> <tr><td>CO₂</td><td>0.2</td><td>%</td></tr> <tr><td>Eff. (eta)</td><td>---</td><td>%</td></tr> <tr><td>T flue</td><td>---</td><td>°C</td></tr> <tr><td>T air</td><td>27.9</td><td>°C</td></tr> <tr><td>deltaT</td><td>---</td><td>°C</td></tr> <tr><td>Draft</td><td>-1</td><td>Pa</td></tr> <tr><td>X Air</td><td>---</td><td>%</td></tr> <tr><td>Smoke</td><td>2</td><td></td></tr> </table> <p>Notes :</p>	O ₂	20.69	%	CO	0	ppm	NO	0	ppm	NO _x	0	ppm	SO ₂	0	ppm	CxHy	0	ppm	CO ₂	0.2	%	Eff. (eta)	---	%	T flue	---	°C	T air	27.9	°C	deltaT	---	°C	Draft	-1	Pa	X Air	---	%	Smoke	2	
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Hasil Data Pengukuran Kadar CO₂ Pada Karbon Aktif Komersial Tingkat 1,2 dan 3

<table> <tr><td>O₂</td><td>16.83</td><td>%</td></tr> <tr><td>CO</td><td>0</td><td>ppm</td></tr> <tr><td>NO</td><td>0</td><td>ppm</td></tr> <tr><td>NO_x</td><td>0</td><td>ppm</td></tr> <tr><td>SO₂</td><td>0</td><td>ppm</td></tr> <tr><td>C_xH_y</td><td>500</td><td>ppm</td></tr> <tr><td>CO₂</td><td>3.4</td><td>%</td></tr> <tr><td>Eff. (eta)</td><td>---</td><td>%</td></tr> <tr><td>T flue</td><td>---</td><td>°C</td></tr> <tr><td>T air</td><td>---</td><td></td></tr> <tr><td>deltaT</td><td>---</td><td></td></tr> <tr><td>Draft</td><td>---</td><td></td></tr> <tr><td>X Air</td><td>---</td><td></td></tr> <tr><td>Smoke</td><td>2</td><td></td></tr> </table>	O ₂	16.83	%	CO	0	ppm	NO	0	ppm	NO _x	0	ppm	SO ₂	0	ppm	C _x H _y	500	ppm	CO ₂	3.4	%	Eff. (eta)	---	%	T flue	---	°C	T air	---		deltaT	---		Draft	---		X Air	---		Smoke	2		<table> <tr><td>O₂</td><td>20.64</td><td>%</td></tr> <tr><td>CO</td><td>0</td><td>ppm</td></tr> <tr><td>NO</td><td>0</td><td>ppm</td></tr> <tr><td>NO_x</td><td>0</td><td>ppm</td></tr> <tr><td>SO₂</td><td>0</td><td>ppm</td></tr> <tr><td>C_xH_y</td><td>0</td><td>ppm</td></tr> <tr><td>CO₂</td><td>0.3</td><td>%</td></tr> <tr><td>Eff. (eta)</td><td>---</td><td>%</td></tr> <tr><td>T flue</td><td>---</td><td>°C</td></tr> <tr><td>T air</td><td>28.6</td><td>°C</td></tr> <tr><td>deltaT</td><td>---</td><td>°C</td></tr> <tr><td>Draft</td><td>0</td><td>Pa</td></tr> <tr><td>X Air</td><td>---</td><td>%</td></tr> <tr><td>Smoke</td><td>2</td><td></td></tr> </table>	O ₂	20.64	%	CO	0	ppm	NO	0	ppm	NO _x	0	ppm	SO ₂	0	ppm	C _x H _y	0	ppm	CO ₂	0.3	%	Eff. (eta)	---	%	T flue	---	°C	T air	28.6	°C	deltaT	---	°C	Draft	0	Pa	X Air	---	%	Smoke	2	
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<table> <tr><td>O₂</td><td>19.20</td><td>%</td></tr> <tr><td>CO</td><td>0</td><td>ppm</td></tr> <tr><td>NO</td><td>0</td><td>ppm</td></tr> <tr><td>NO_x</td><td>0</td><td>ppm</td></tr> <tr><td>SO₂</td><td>0</td><td>ppm</td></tr> <tr><td>C_xH_y</td><td>0</td><td>ppm</td></tr> <tr><td>CO₂</td><td>1.5</td><td>%</td></tr> <tr><td>Eff. (eta)</td><td>---</td><td>%</td></tr> <tr><td>T flue</td><td>---</td><td>°C</td></tr> <tr><td>T air</td><td>27.6</td><td>°C</td></tr> <tr><td>deltaT</td><td>---</td><td>°C</td></tr> <tr><td>Draft</td><td>-3</td><td>Pa</td></tr> <tr><td>X Air</td><td>---</td><td>%</td></tr> <tr><td>Smoke</td><td>2</td><td></td></tr> </table>	O ₂	19.20	%	CO	0	ppm	NO	0	ppm	NO _x	0	ppm	SO ₂	0	ppm	C _x H _y	0	ppm	CO ₂	1.5	%	Eff. (eta)	---	%	T flue	---	°C	T air	27.6	°C	deltaT	---	°C	Draft	-3	Pa	X Air	---	%	Smoke	2		<table> <tr><td>O₂</td><td>20.76</td><td>%</td></tr> <tr><td>CO</td><td>0</td><td>ppm</td></tr> <tr><td>NO</td><td>0</td><td>ppm</td></tr> <tr><td>NO_x</td><td>0</td><td>ppm</td></tr> <tr><td>SO₂</td><td>0</td><td>ppm</td></tr> <tr><td>C_xH_y</td><td>0</td><td>ppm</td></tr> <tr><td>CO₂</td><td>0.2</td><td>%</td></tr> <tr><td>Eff. (eta)</td><td>---</td><td>%</td></tr> <tr><td>T flue</td><td>---</td><td>°C</td></tr> <tr><td>T air</td><td>28.6</td><td>°C</td></tr> <tr><td>deltaT</td><td>---</td><td>°C</td></tr> <tr><td>Draft</td><td>0</td><td>Pa</td></tr> <tr><td>X Air</td><td>---</td><td>%</td></tr> <tr><td>Smoke</td><td>2</td><td></td></tr> </table>	O ₂	20.76	%	CO	0	ppm	NO	0	ppm	NO _x	0	ppm	SO ₂	0	ppm	C _x H _y	0	ppm	CO ₂	0.2	%	Eff. (eta)	---	%	T flue	---	°C	T air	28.6	°C	deltaT	---	°C	Draft	0	Pa	X Air	---	%	Smoke	2	
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<table> <tr><td>O₂</td><td>19.38</td><td>%</td></tr> <tr><td>CO</td><td>0</td><td>ppm</td></tr> <tr><td>NO</td><td>0</td><td>ppm</td></tr> <tr><td>NO_x</td><td>0</td><td>ppm</td></tr> <tr><td>SO₂</td><td>0</td><td>ppm</td></tr> <tr><td>C_xH_y</td><td>0</td><td>ppm</td></tr> <tr><td>CO₂</td><td>1.3</td><td>%</td></tr> <tr><td>Eff. (eta)</td><td>---</td><td>%</td></tr> <tr><td>T flue</td><td>---</td><td>°C</td></tr> <tr><td>T air</td><td>---</td><td></td></tr> <tr><td>deltaT</td><td>---</td><td></td></tr> <tr><td>Draft</td><td>---</td><td></td></tr> <tr><td>X Air</td><td>---</td><td></td></tr> <tr><td>Smoke</td><td>2</td><td></td></tr> </table>	O ₂	19.38	%	CO	0	ppm	NO	0	ppm	NO _x	0	ppm	SO ₂	0	ppm	C _x H _y	0	ppm	CO ₂	1.3	%	Eff. (eta)	---	%	T flue	---	°C	T air	---		deltaT	---		Draft	---		X Air	---		Smoke	2		<table> <tr><td>O₂</td><td>20.90</td><td>%</td></tr> <tr><td>CO</td><td>0</td><td>ppm</td></tr> <tr><td>NO</td><td>0</td><td>ppm</td></tr> <tr><td>NO_x</td><td>0</td><td>ppm</td></tr> <tr><td>SO₂</td><td>0</td><td>ppm</td></tr> <tr><td>C_xH_y</td><td>0</td><td>ppm</td></tr> <tr><td>CO₂</td><td>0.1</td><td>%</td></tr> <tr><td>Eff. (eta)</td><td>---</td><td>%</td></tr> <tr><td>T flue</td><td>---</td><td>°C</td></tr> <tr><td>T air</td><td>28.0</td><td>°C</td></tr> <tr><td>deltaT</td><td>---</td><td>°C</td></tr> <tr><td>Draft</td><td>0</td><td>Pa</td></tr> <tr><td>X Air</td><td>---</td><td>%</td></tr> <tr><td>Smoke</td><td>2</td><td></td></tr> </table> <p>Notes :</p>	O ₂	20.90	%	CO	0	ppm	NO	0	ppm	NO _x	0	ppm	SO ₂	0	ppm	C _x H _y	0	ppm	CO ₂	0.1	%	Eff. (eta)	---	%	T flue	---	°C	T air	28.0	°C	deltaT	---	°C	Draft	0	Pa	X Air	---	%	Smoke	2	
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G. PERHITUNGAN

a) Efektivitas penurunan kadar CO₂ dengan variasi laju alir 1 L/menit, 1,5 L/menit dan 2 L/menit dengan waktu kontak 1 menit

Efektivitas penurunan kadar CO₂ =

$$\frac{\text{input}-\text{output}}{\text{input}} \times 100\% \dots \dots \dots (3.1)$$

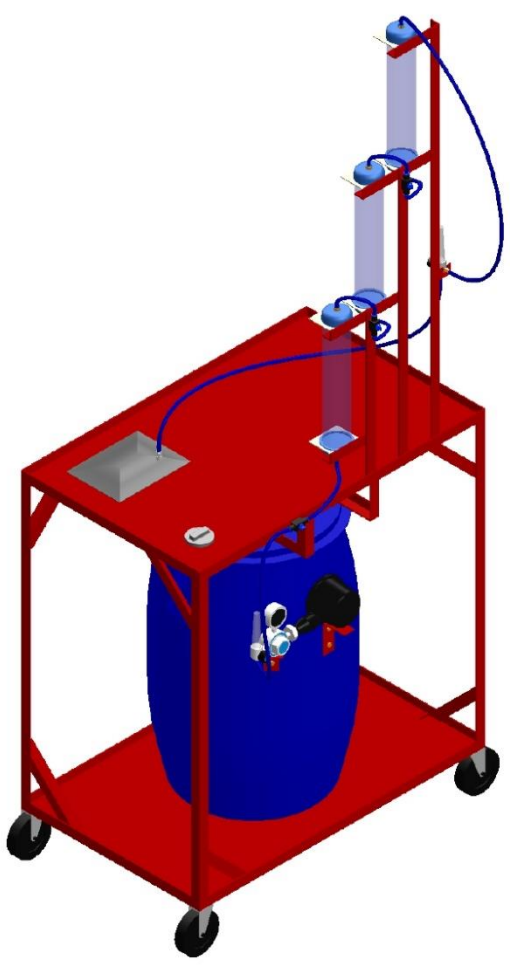

- 1) Laju Alir 1 L/menit kolom 1 waktu kontak 1 menit
 $\frac{1,0-0,2}{1,0} \times 100\% = 80\%$
- 2) Laju Alir 1 L/menit kolom 2 waktu kontak 1 menit
 $\frac{1,1-0,2}{1,1} \times 100\% = 81\%$
- 3) Laju Alir 1 L/menit kolom 3 waktu kontak 1 menit
 $\frac{1,1-0,1}{1,1} \times 100\% = 90\%$
- 4) Laju Alir 1,5 L/menit kolom 1 waktu kontak 1 menit
 $\frac{1,0-0,3}{1,0} \times 100\% = 70\%$
- 5) Laju Alir 1,5 L/menit kolom 2 waktu kontak 1 menit
 $\frac{1,1-0,2}{1,1} \times 100\% = 81\%$
- 6) Laju Alir 1,5 L/menit kolom 3 waktu kontak 1 menit
 $\frac{0,7-0,1}{0,7} \times 100\% = 85\%$
- 7) Laju Alir 2 L/menit kolom 1 waktu kontak 1 menit
 $\frac{0,6-0,1}{0,6} \times 100\% = 83\%$
- 8) Laju Alir 2 L/menit kolom 2 waktu kontak 1 menit
 $\frac{3,0-0,1}{3,0} \times 100\% = 96\%$
- 9) Laju Alir 2 L/menit kolom 3 waktu kontak 1 menit
 $\frac{0,9-0,1}{0,9} \times 100\% = 88\%$

b) Efektivitas penurunan kadar CO₂ dengan laju alir 1,5 L/menit pada kolom 1,2, dan 3

- 10) Laju Alir 1,5 L/menit kolom 1 waktu kontak 1 menit
 $\frac{3,4-0,3}{3,4} \times 100\% = 91\%$
- 11) Laju Alir 1,5 L/menit kolom 2 waktu kontak 1 menit
 $\frac{1,5-0,2}{1,5} \times 100\% = 86\%$
- 12) Laju Alir 1,5 L/menit waktu kontak 1 menit
 $\frac{1,3-0,1}{1,3} \times 100\% = 92\%$

LAMPIRAN

Lampiran 1. Desain Alat Rancang Bangun Pemurni Biogas

4		3			2		1				
No.	Perubahan	Tanggal	Nama	No.	Perubahan	Tanggal	Nama				
△				△							
F							F				
E							E				
D							D				
C							C				
B							B				
Jml		Nama Bagian				No Id	Bahan	Ukuran	Keterangan		
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<	6	30	120	400	1000	2000					
Tol	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2					
Nama: ASSEMBLY PROTOTIPE PEMURNIAN BIOGAS SISTEM BERTINGKAT DAN BERPENGADUK								Skala	Digambar	15-2-2023	Tarisa
No. Assy:  Politeknik Negeri Cilacap Program Studi D-IV Teknik Pengendalian Pencemaran Lingkungan Jl. Dr. Soetomo, No. 01, Sidakaya, Cilacap, 53212								1:10	Diperiksa		Theresia
Format A4								Disahkan		Rosita	
Satuan mm											
4		3			2		1				
PENGANTI DARI				DIGANTI DENGAN							

DIBARANG MENGUNDIKAN, MENYALIN, MEMINDAHKANKAN GAMBAR INI TANPA IZIN TERULIS DARI POLITEKNIK NEGERI CILACAP

Lampiran 2. Gambar Detail Rancang Bangun Pemurni Biogas

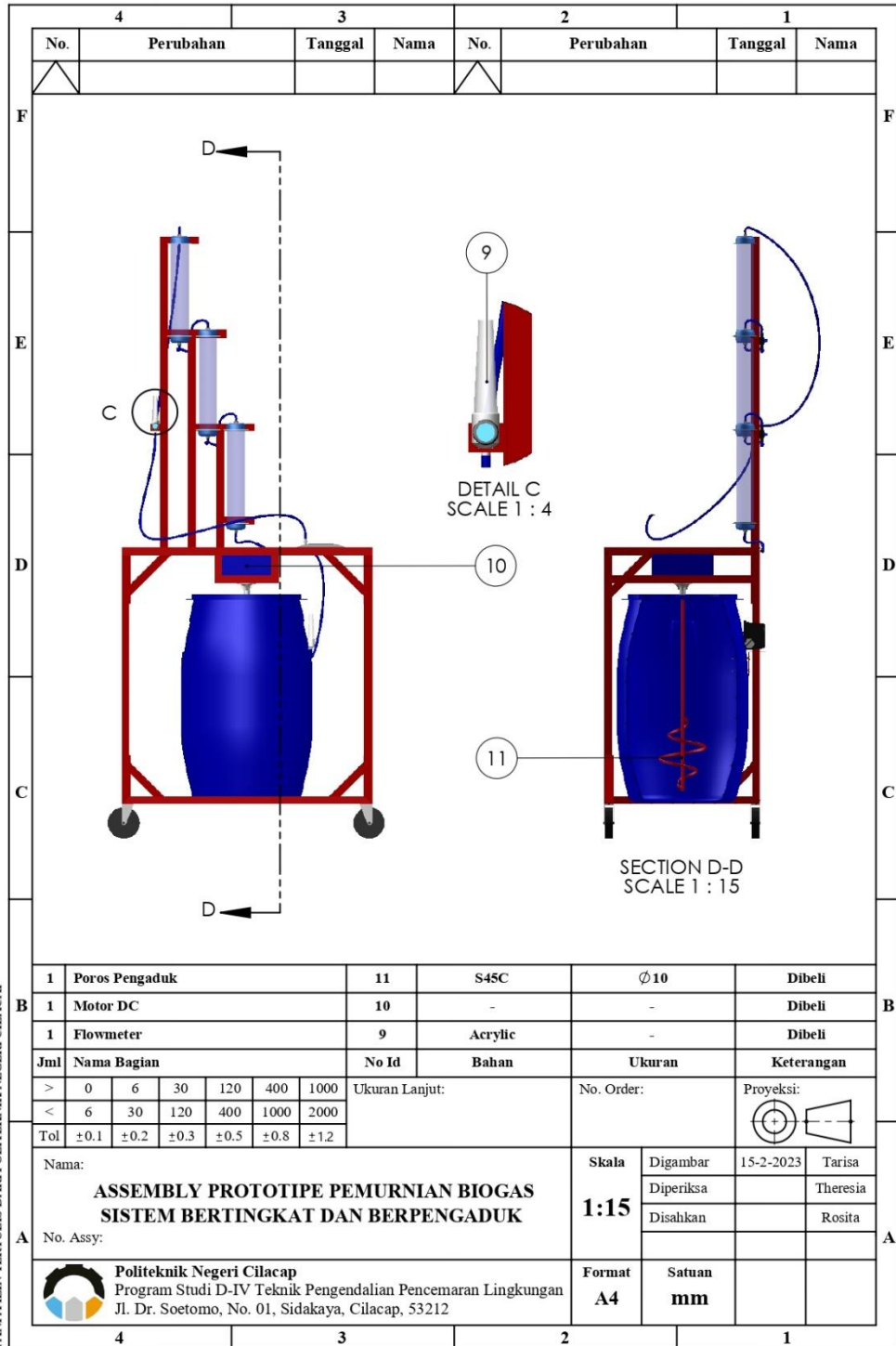
4		3			2		1		
No.	Perubahan	Tanggal	Nama	No.	Perubahan	Tanggal	Nama		
1	Gas Bag	8	Granulare Graphite	-	Dibeli				
3	Tabung Karbon Aktif	7	Semi Glass	-	Dibeli				
3	Fitting Pneumatic Hand Valve	6	Polypropylene	Ø 8	Dibeli				
8	Selang Pneumatic	5	Polyerethane	Ø 8	Dibeli				
1	Regulator Argon	4	Acrylic	-	Dibeli				
1	Pompa Hisap Udara	3	-	-	Dibeli				
1	Tabung Reaktor	2	Plastic	60 Liter	Dibeli				
1	Kerangka	1	Galvanis	800x500x1800	Dibuat				
Jml	Nama Bagian		No Id	Bahan	Ukuran	Keterangan			
>	0	6	30	120	400	1000	Ukuran Lanjut:		
<	6	30	120	400	1000	2000	No. Order:		
Tol	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	Proyeksi:		
Nama:				ASSEMBLY PROTOTYPE PEMURNIAN BIOGAS SISTEM BERTINGKAT DAN BERPENGADUK		Skala 1:15	Digambar	15-2-2023	Tarisa
No. Assy:							Diperiksa		Theresia
							Disahkan		Rosita
Politeknik Negeri Cilacap Program Studi D-IV Teknik Pengendalian Pencemaran Lingkungan Jl. Dr. Soetomo, No. 01, Sidakaya, Cilacap, 53212				Format		Satuan			
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DILARANG MENGGANDAKAN, MENYALIN, MEMODIFIKASIKAN GAMBAR INI TANPA IZIN TERTULIS DARI POLITEKNIK NEGERI CILACAP

PENGGANTI DARI:

DIGANTI DENGAN:

Lampiran 3. Gambar Detail Rancang Bangun Pemurni Biogas

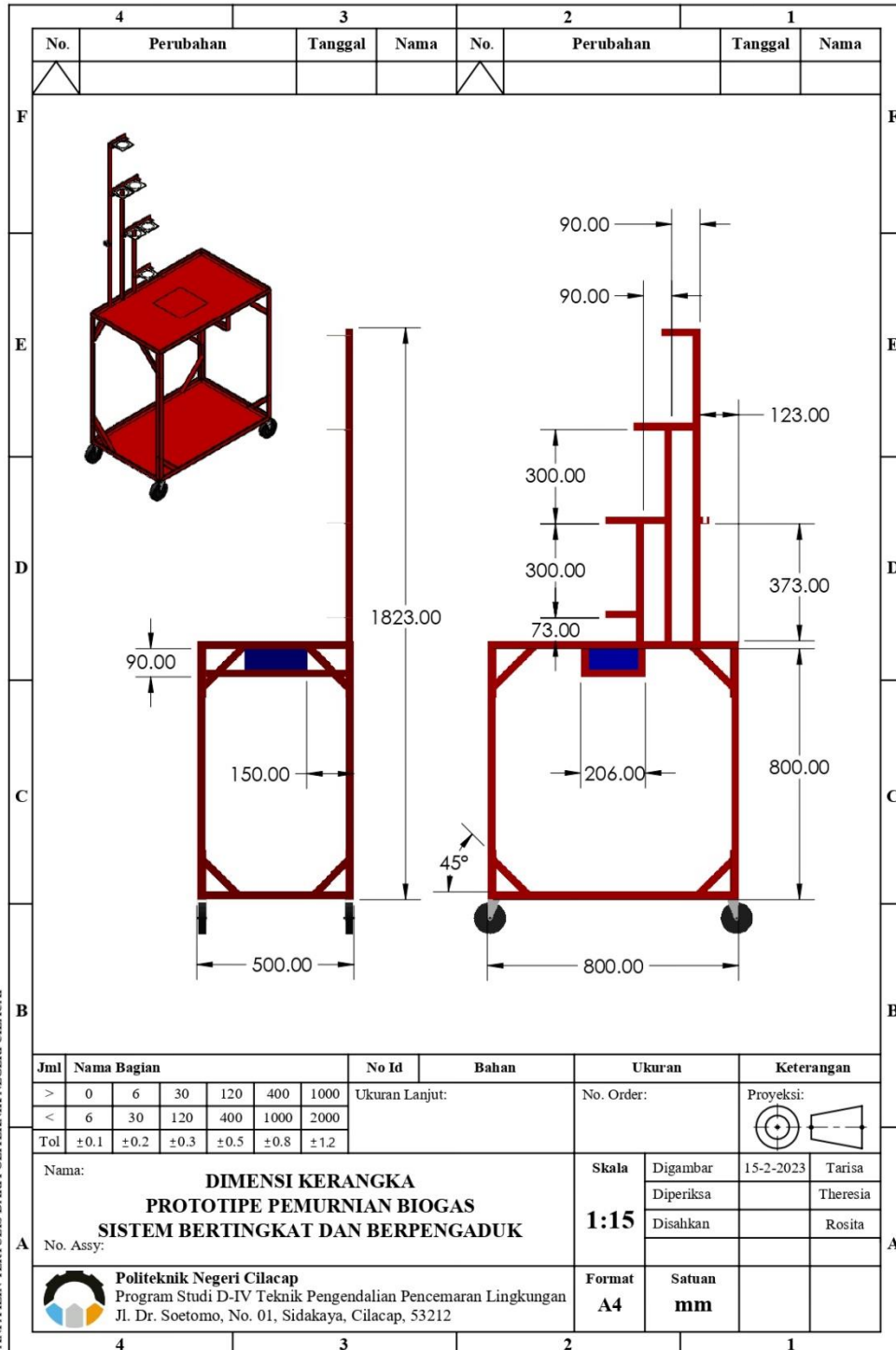


DILARANG MENGGANDAKAN, MENYALIN, MEMODIFIKASIKAN GAMBAR INI TANPA IZIN TERTULIS DARI POLITEKNIK NEGERI CILACAP

PENGGANTI DARI:

DIGANTI DENGAN:

Lampiran 4. Desain Kerangka Alat

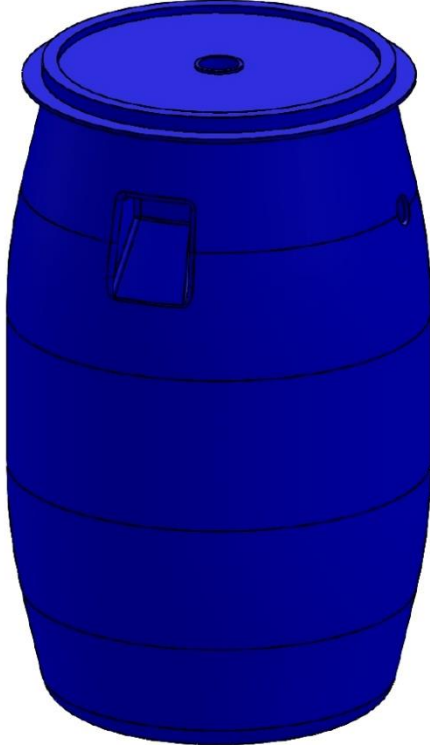



DILARANG MENGGANDAKAN, MENYALIN, MEMODIFIKASIKAN GAMBAR INI TANPA IZIN TERTULIS DARI POLITEKNIK NEGERI CILACAP

PENGGANTI DARI:

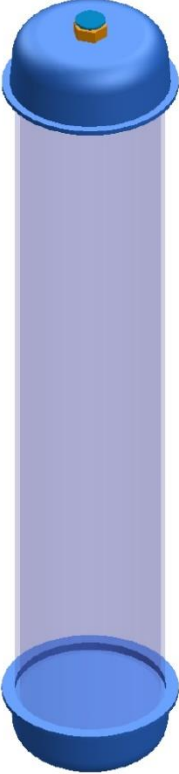
DIGANTI DENGAN:

Lampiran 5. Desain Tabung Reaktor

4		3			2		1			
No.	Perubahan	Tanggal	Nama	No.	Perubahan	Tanggal	Nama			
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D							D			
C							C			
B							B			
Jml	Nama Bagian					No Id	Bahan	Ukuran	Keterangan	
>	0	6	30	120	400	1000	Ukuran Lanjut:	No. Order:	Proyeksi:	
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Tol	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2				
A	Nama: TABUNG REAKTOR 60 Liter No. Assy:						Skala	Digambar	15-2-2023	Tarisa
							1:5	Diperiksa		Theresia
								Disahkan		Rosita
	 Politeknik Negeri Cilacap Program Studi D-IV Teknik Pengendalian Pencemaran Lingkungan Jl. Dr. Soetomo, No. 01, Sidakaya, Cilacap, 53212						Format	Satuan		
							A4	mm		
4		3			2		1			
PENGANTI DARI:				DIGANTI DENGAN:						

DILARANG MENGGANDAKAN, MENYALIN, MEMODIFIKASIKAN GAMBAR INI TANPA IZIN TERTULIS DARI POLITEKNIK NEGERI CILACAP

Lampiran 6. Tabung Karbon Aktif

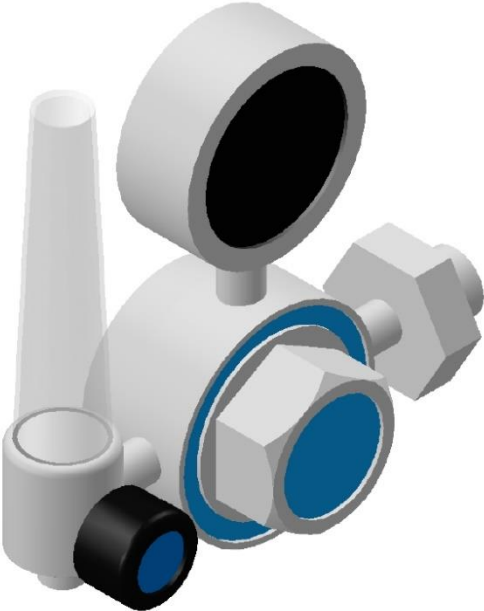
4		3				2		1		
No.	Perubahan	Tanggal	Nama	No.	Perubahan	Tanggal	Nama			
△				△						
F							F			
E							E			
D							D			
C							C			
B							B			
Jml	Nama Bagian						No Id	Bahan	Ukuran	Keterangan
>	0	6	30	120	400	1000	Ukuran Lanjut:	No. Order:	Proyeksi:	
<	6	30	120	400	1000	2000				
Tol	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2				
A	Nama: TABUNG KARBON AKTIF No. Assy:						Skala	Digambar	15-2-2023	Tarisa
							1:2	Diperiksa		Theresia
								Disahkan		Rosita
							Format	Satuan		
							A4	mm		
4		3				2		1		

DILARANG MENGGANDAKAN, MENYALIN, MEMODIFIKASI, MENYIMPAN, MENYEBARKAN GAMBAR INI TANPA IZIN TERTULIS DARI POLITEKNIK NEGERI CILACAP

PENGGANTI DARI:

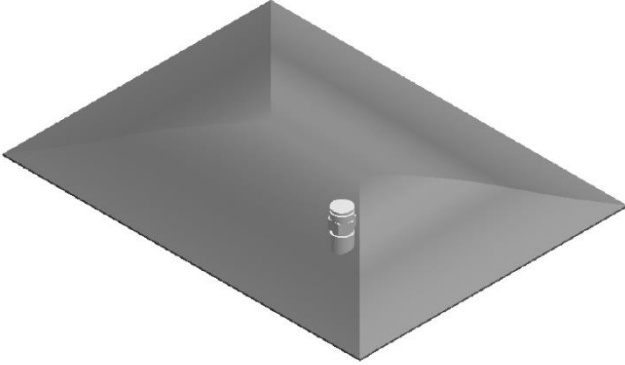

DIGANTI DENGAN:

Lampiran 7. Desain Regulator Argon

4		3			2		1				
No.	Perubahan	Tanggal	Nama	No.	Perubahan	Tanggal	Nama				
△				△							
F								F			
E								E			
D								D			
C								C			
B								B			
Jml	Nama Bagian						No Id	Bahan	Ukuran	Keterangan	
>	0	6	30	120	400	1000	Ukuran Lanjut:	No. Order:	Proyeksi:		
<	6	30	120	400	1000	2000					
Tol	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2					
A	Nama: REGULATOR ARGON No. Assy:							Skala	Digambar	15-2-2023	Tarisa
								1:1	Diperiksa		Theresia
									Disahkan		Rosita
								Format	Satuan		
								A4	mm		
4		3			2		1				
PENGANTI DARI:				DIGANTI DENGAN:							




DIBARANG MENGGANDAKAN, MENYALIN, MEMINDAHKAN GAMBAR INI TANPA IZIN TERULIS DARI POLITEKNIK NEGERI CILACAP

Lampiran 8. Desain Gas Bag

4		3			2		1			
No.	Perubahan	Tanggal	Nama	No.	Perubahan	Tanggal	Nama			
△				△						
F								F		
E								E		
D								D		
C								C		
B								B		
Jml	Nama Bagian						No Id	Bahan	Ukuran	Keterangan
>	0	6	30	120	400	1000	Ukuran Lanjut:	No. Order:	Proyeksi:	
<	6	30	120	400	1000	2000				
Tol	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2				
A	Nama: <b style="font-size: 1.2em;">GAS BAG No. Assy:							Skala <b style="font-size: 1.2em;">1:2	Digambar 15-2-2023 Diperiksa Disahkan	Tarisa Theresia Rosita
 Politeknik Negeri Cilacap Program Studi D-IV Teknik Pengendalian Pencemaran Lingkungan Jl. Dr. Soetomo, No. 01, Sidakaya, Cilacap, 53212								Format <b style="font-size: 1.2em;">A4	Satuan <b style="font-size: 1.2em;">mm	
4		3			2		1			
PENGANTI DARI:				DIGANTI DENGAN:						

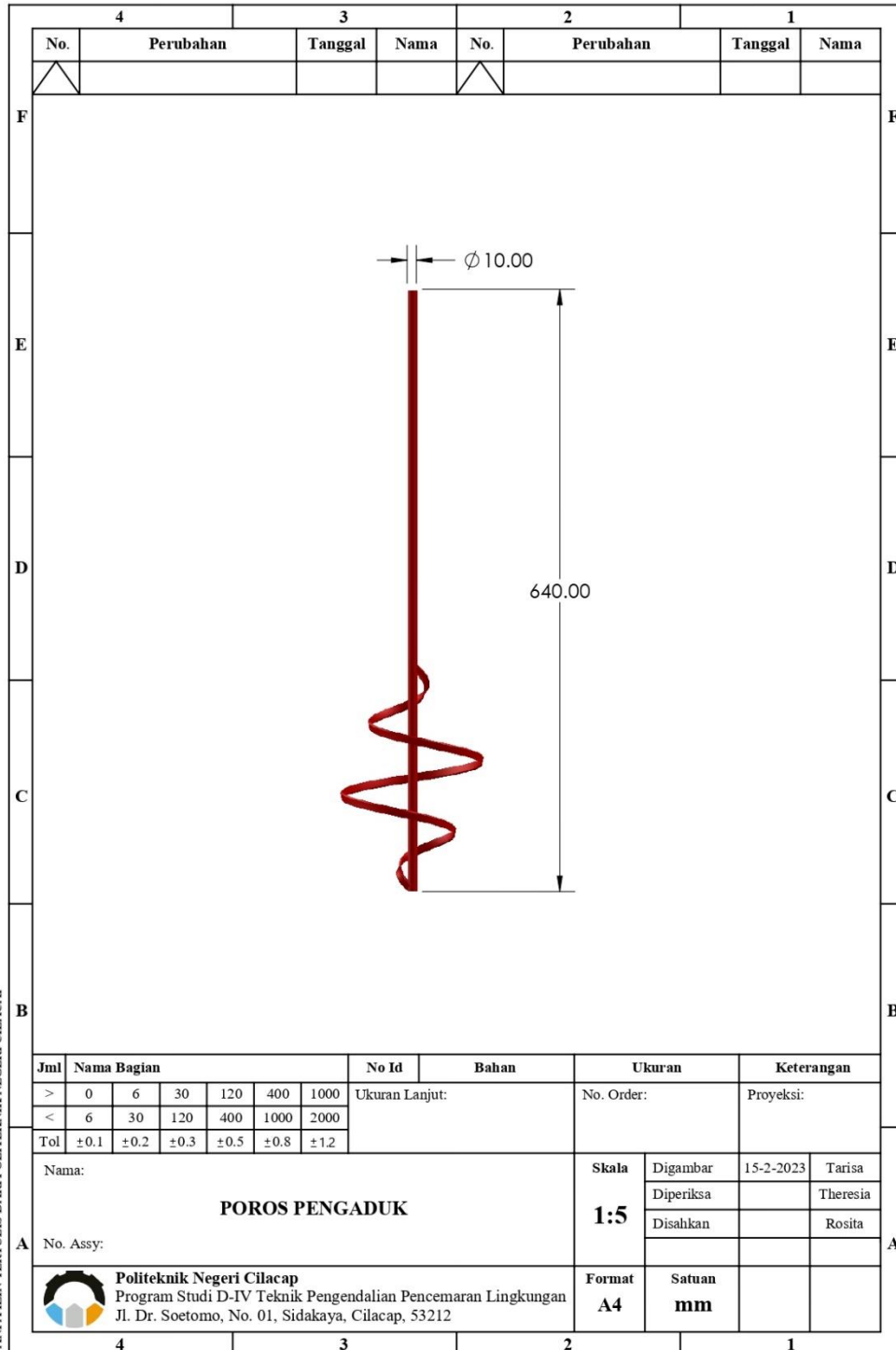
DIBARANG MEGGANDAKAN, MENYALIN, MEMINDAHKAN GAMBAR INI TANPA IZIN TERULIS DARI POLITEKNIK NEGERI CILACAP

Lampiran 9. Desain Pompa Hisap Udara

4		3				2		1			
No.	Perubahan	Tanggal	Nama	No.	Perubahan	Tanggal	Nama				
△				△							
F									F		
E									E		
D									D		
C									C		
B									B		
A									A		
Jml	Nama Bagian						No Id	Bahan	Ukuran	Keterangan	
>	0	6	30	120	400	1000	Ukuran Lanjut:	No. Order:	Proyeksi:		
<	6	30	120	400	1000	2000					
Tol	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2					
Nama: POMPA HISAP UDARA								Skala 1:1	Digambar	15-2-2023	Tarisa
No. Assy:									Diperiksa		Theresia
 Politeknik Negeri Cilacap Program Studi D-IV Teknik Pengendalian Pencemaran Lingkungan Jl. Dr. Soetomo, No. 01, Sidakaya, Cilacap, 53212									Disahkan		Rosita
 Politeknik Negeri Cilacap Program Studi D-IV Teknik Pengendalian Pencemaran Lingkungan Jl. Dr. Soetomo, No. 01, Sidakaya, Cilacap, 53212								Format	Satuan		
4								3	2	1	
PENGANTI DARI:								DIGANTI DENGAN:			

DILARANG MENGGANDAKAN, MENYALIN, MEMODIFIKASIKAN GAMBAR INI TANPA IZIN TERTULIS DARI POLITEKNIK NEGERI CILACAP

Lampiran 10. Desain Poros Pengaduk



DILARANG MENGGANDAKAN, MENYALIN, MEMODIFIKASIKAN GAMBAR INI TANPA IZIN TERTULIS DARI POLITEKNIK NEGERI CILACAP

Jml	Nama Bagian						No Id	Bahan	Ukuran		Keterangan	
>	0	6	30	120	400	1000	Ukuran Lanjut:	No. Order:	Proyeksi:			
<	6	30	120	400	1000	2000						
Tol	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2						
Nama: <p style="text-align: center;">POROS PENGADUK</p> No. Assy:								Skala <p style="text-align: center;">1:5</p>	Digambar	15-2-2023	Tarisa	
									Diperiksa		Theresia	
									Disahkan		Rosita	
Politeknik Negeri Cilacap Program Studi D-IV Teknik Pengendalian Pencemaran Lingkungan Jl. Dr. Soetomo, No. 01, Sidakaya, Cilacap, 53212								Format	Satuan			
								A4	mm			

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[jrh] Pernyataan Naskah

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Sel, 15 Agu 2023 pukul 11.41

Tarisa Tarisa Dwi Aryani:

Terima kasih untuk menyerahkan manuskrip, "Rancang Bangun Prototipe Pemurni Biogas Dengan Sistem Bertingkat 3" untuk ReKayasa Hijau : Jurnal Teknologi Ramah Lingkungan. Dengan sistem manajemen jurnal online yang kami gunakan, Anda akan bisa melacak kemajuan naskah dalam proses editorial dengan login ke web site jurnal:

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