

MONITORING REPORT ON THE BIOGAS DIGESTER IN PUCANGANOM C, GUNUNGGKIDUL

November 5th, 2017

Based on my riset, the gas from the digester is already full, visible from the floating tank that is lifted upward and can not be shaken and there is also the sound of water evaporating inside, but the gas can not drain out, there seems to be an error in the pipeline connection to get out gas and pipe to get out water, residents pleaded for immediate repair.



November 18th, 2017

The pipeline connection has been repaired, the gas can drain out but the gas isn't methane gas, the exhaust gas is the residual gas of decomposition, so the stove still not working. Based on my riset, the gas produced is quite a lot, and for the solution of that is the gas from digester should be emptied every day in a week, so next week the gas will turn into methane gas.



November 26th, 2017

Based on my riset, the gas production become less than before, not as much as last week. The smell of gas is different because it has smell of methane gas. Stirrer has been made but not installed so the user still stirred it manually. The gas has been fullled at least in 2 days and the slurry still not produced then the stove still not working.



December 6th, 2017

Based on my riset, the pipeline connection between digester to the stove are clogged. After been repaired the stove already working and the gas is quite a lot and the slurry has come out. The digester temperature is 26°C and the ambient temperature is 27 °C. Slurry pH is 7 and the flow gas is 0,139 m³/second.



MONITORING REPORT ON THE BIOGAS DIGESTER IN PUCANGANOM C, GUNUNGKIDUL

December 21st, 2017

Based on my riset, the gas runs out quickly, if used to boil water, the water hasn't boiled yet, but the gas is empty and it takes 15 minutes to make the biogas tank fully charged. The liquid fertilizer from the slurry has come out, and then here are the data:

- Slurry pH = 7
- Digester Temperature = 26°C
- Gas flow = 0,154 m³/s
- TSS = 812 mg/l
- TDS = 849 mg/l
- TS = 1661 mg/l
- COD = 607 mg/l
- DISSOLVED COD = 513,25 mg/l



December 29th, 2017

- Slurry pH = 8
- Gas Flow = 0,1 m³/s
- Digester Temperature = 26°C



January 3rd, 2017

- Slurry pH = 8
- Digester Temperature = 27°C
- Gas flow = 0,053 m³/s
- TSS = 216 mg/l
- TDS = 1022 mg/l
- TS = 1238 mg/l
- COD = 702 mg/l
- DISSOLVED COD = 612 mg/l



MONITORING REPORT ON THE BIOGAS DIGESTER IN PUCANGANOM C, GUNUNGKIDUL

January 18th, 2017

- Slurry pH = 7

Gas Flow = 0,184 m³/s

Digester Temperature = 26°C



January 25th, 2018

Based on my riset, sludge drying bed was inundated by rain, due to heavy rain. in addition, the gas pipe out of the pipe terminal also releases water from the digester after removing the gas. Following data of monitoring result:

- Slurry pH = 7

- Digester Temperature = 27°C

- Gas flow = 0,38 m³/s

- Total C = 0,11 %

- Total N = 0,06 %

- Total P = 77,41 ppm

- C/N ratio = 1,83

- TS = 1321 mg/l
- COD = 482 mg/l
- DISSOLVED COD = 459,5 mg/l



Substrat concentration before dilution:

Komposisi	Kadar/Konsentrasi
Kadar Air (%)	81,99
Total C (%)	56,27
Total N (%)	2,19
Rasio C/N	25,69
Total Solid (%)	30
COD (mg/kg)	169.750
Dissolved COD (mg/kg)	97.875