

PRELIMINARY DATA

Optimising Anaerobic Digestion by ultrasonic disintegration of the biomass



DESCRIPTION OF THE PROJECT		
Customer		
Plant location		
Start according to the timeline planning		
Average wet solids per year by design		t WS/d or m ³ /d
Dimension by design		kW

FEEDSTOCK CHARACTERIZATION		
Feedstock 1		
Name		Maize, pig manure, ...
Daily wet solids load		t WS/d
Dry solids concentration		%
Daily dry solids load		t DS/d
Volatile solids (or organic matter) content as % of dry solids		%
Daily volatile solids load		t VS/d
Cost		£/t WS
Feedstock 2		
Name		Maize, pig manure, ...
Daily wet solids load		t WS/d
Dry solids concentration		%
Daily dry solids load		t DS/d
Volatile solids (or organic matter) content as % of dry solids		%
Daily volatile solids load		t VS/d
Cost		£/t WS
Feedstock 3		
Name		Maize, pig manure, ...
Daily wet solids load		t WS/d
Dry solids concentration		%
Daily dry solids load		t DS/d
Volatile solids (or organic matter) content as % of dry solids		%
Daily volatile solids load		t VS/d
Cost		£/t WS
Feedstock 4		
Name		Maize, pig manure, ...
Daily wet solids load		t WS/d
Dry solids concentration		%
Daily dry solids load		t DS/d
Volatile solids (or organic matter) content as % of dry solids		%
Daily volatile solids load		t VS/d
Cost		£/t WS
Feedstock 5		
Name		Maize, pig manure, ...
Daily wet solids load		t WS/d
Dry solids concentration		%
Daily dry solids load		t DS/d
Volatile solids (or organic matter) content as % of dry solids		%
Daily volatile solids load		t VS/d
Cost		£/t WS

TOTAL MIXED FEEDSTOCK TO BE DIGESTED		
Is water required to decrease the solids concentration?		Y/N
If yes, what is the added quantity?		m ³ /d
Daily wet solids load (including water addition)		t WS/d
Dry solids concentration (including water addition)		%
Daily dry solids load		t DS/d
Volatile solids (or organic matter) content as % of dry solids		%
Daily volatile solids load		t VS/d
Daily fixed solids load		t FS/d
Daily water load		m ³ H ₂ O/d
Average in particle size		mm

ANAEROBIC DIGESTION CONFIGURATION		
Description of the process		
Type of anaerobic technology		CSTR, Plug-Flow, etc.
Temperature range of working		Mesophilic, etc.
Primary tank/s		
Nº of digesters tanks		No.
Volume per digester tank		m ³
Total volume		m ³
Temperature		°C
HRT		d
Secondary tank/s (if any)		
Nº of digesters tanks		No.
Volume per digester tank		m ³
Total volume		m ³
Temperature		°C
HRT		d
Buffer tank/s (if any)		
Nº of tanks		No.
Volume per tank		m ³
Total volume		m ³
HRT		d
Pretank/s - receiving tank/s (if any)		
Nº of tanks		No.
Volume per tank		m ³
Total volume		m ³
HRT		d
<i>Note: for a different configuration, please provide further information.</i>		
ANAEROBIC DIGESTION EFFICIENCY		
Loading rates		
Organic loading rate (OLR)		kg VS/m ³ ·d
Dry solids loading rate		kg DS/m ³ ·d
Digestate		
Dry solids content		%
Daily dry solids load		t DS/d
Volatile solids (or organic matter) content as % of dry solids		%
Daily volatile solids load		t VS/d
Efficiencies		
Volatile solids reduction in percentage		%
Volatile solids reduction in loading		t VS/d
Biogas		
Daily biogas production		Nm ³ /d
Methane content		%
Daily methane production		Nm ³ /d
Biogas produced per volatile solids destroyed		Nm ³ /kg VS destroyed
Biogas produced per volatile solids fed		Nm ³ /kg VS fed
ENERGY & POWER		
Plant power consumption		kW
Power generation facility (CHP...)		Y/N
Capacity		kW
Electrical efficiency of the cogeneration		%
Purchased energy cost		£/kWh
Sold energy price		£/kWh
MIXER/S OR AGITATOR/S		
Number of mixers per digester		Mixers/digester
Total mixers installed		No.
Power consumption per mixer		kW
Runtime per mixer		h/d
<i>Note: if another currency different from £ is used (€, \$, etc.), please change it in the corresponding cells.</i>		