

GREENTECH 2009

BIOGAS

PLANTS FOR HOTELS
AND
MANGALKARYALAYS

PRESENTATION BY

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BIOGAS GETS GENERATED WHEN

- Biodegradable substances
- containing carbon
- undergo decomposition
- In un-aerobic
- Dark
- Warm
- Alkaline conditions

BIOGAS PROCESS PRODUCES

- Methane CH_4 (BIOGAS)
- Carbon di oxide CO_2
- Vapor H_2O
- Heat- Temp upto 50° to 54° due to bacterial activity inside the digester
- Waste water containing a) 10 to 15 % undigested material b) un-aerobic bacteria

SOURCES OF BIOGAS

UNAEROBIC DECOMPOSITION OF

- HUMAN EXCRETA
- ANIMAL DUNG
- SUGAR
- STARCH
- CULLULOSE
- FARM WASTE

BIOGAS GOOD QUALITY ENERGY

- METHANE FROM BIOGAS IS FUEL
- It burns with blue flame
- It produces one CO_2 and four H_2O per molecule
- Other ingredients are inert.

BIOGAS IS A GREENHOUSE GAS

- BIOGAS IS A GREENHOUSE GAS
- IT ADDS TO GLOBAL WARMING
- METHANE IS CONSIDERED TO BE 20 TIMES MORE HARMFUL FOR GLOBAL WARMING AS COMPARED TO CO₂
- LETTING BIOGAS LOOSE IS HARMFUL TO ENVIROMENT

SEPTIC TANK and ROTTING FOOD PRODUCE BIOGAS

- Septic tank produces biogas
- It is left into atmosphere thru vent pipe
- Rotting food also produces biogas
- This mixes with atmosphere
- This is loss of valuable renewable energy
- It is also greenhouse gas let loose into atmosphere

BIOGAS

**MUST BE ARRESTED
TO AVOID
GLOBALWARMING
AND MUST
BE PUT TO
USE AS FUEL**

POSSIBILITIES OF BIOGAS AT HOTELS AND MANGALKARYALAYS

- Table waste
- Kitchen waste
- Sugar
- Starch
- Fruit
- Cellulose
- Green vegetable

POSSIBILITIES OF BIOGAS AT HOTELS AND MANGAL KARYALAYS

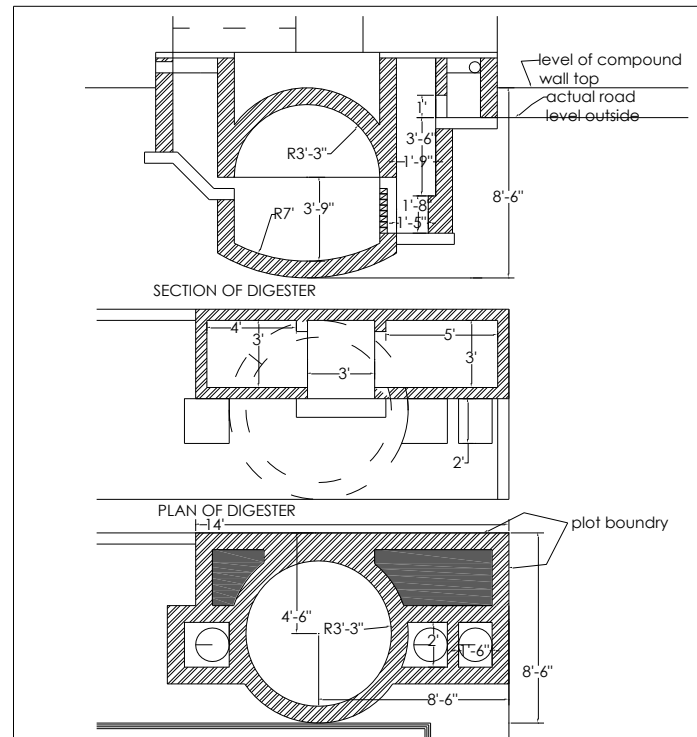
- Waste at hotels- Quantification
Waste available per seat of restaurant is 0.75Kg/seat/day of 4 sessions
Biogas available at 0.08 Cm per Kg
- Waste at Mangalkaryalay- Quantification
Average 10 kg /day (?) for 800 persons
Biogas available at 0.08 Cm per kg

POSSIBILITIES OF BIOGAS AT HOTELS AND MANGAL KARYALAYS

- Floating population of workers at restaurants @ 0.04 cubic meter per person
- Floating population of Residential Guests at Mangalkaryalay @ 0.04 cubic meter per guest

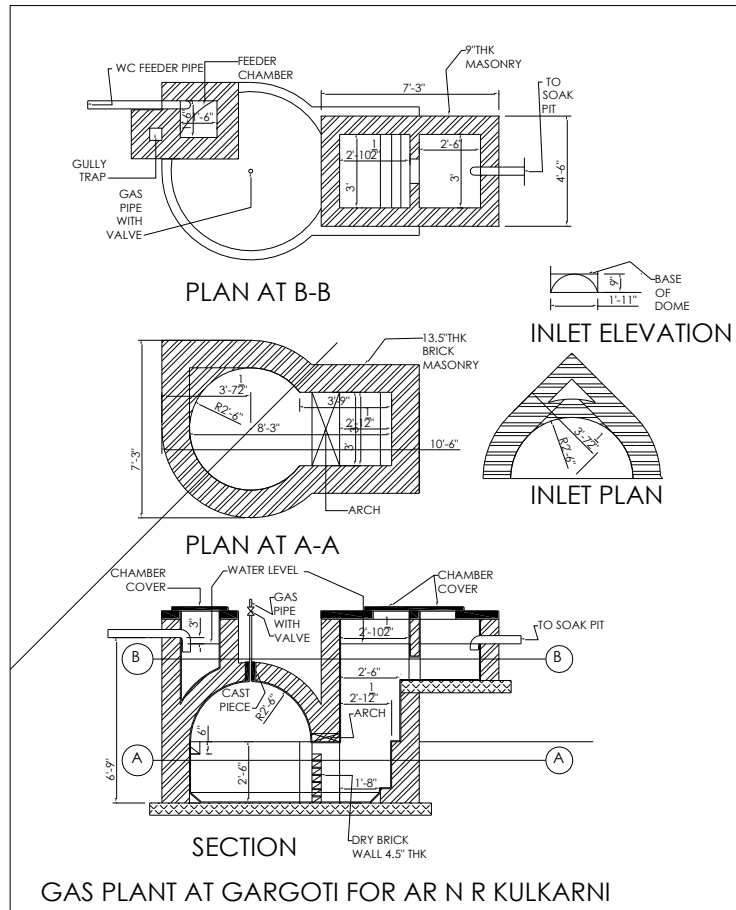
BIOGAS PLANT DESIGN

HTL RASOI R K NAGAR



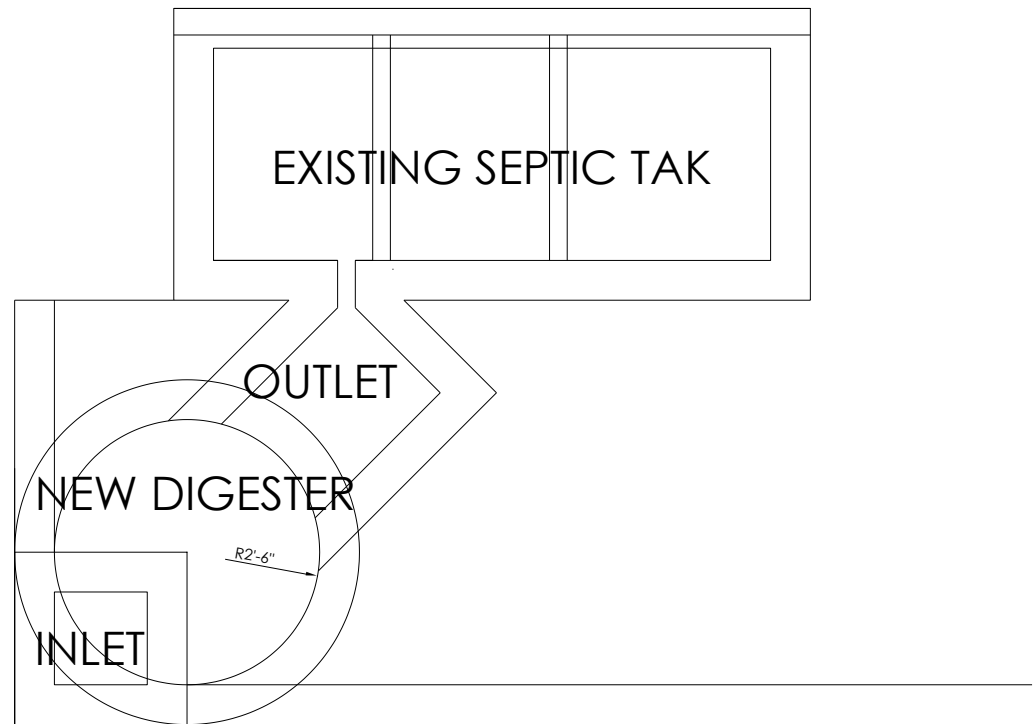
BIOGAS PLANT DESIGN

SHRI PATKAR- GARGOTI

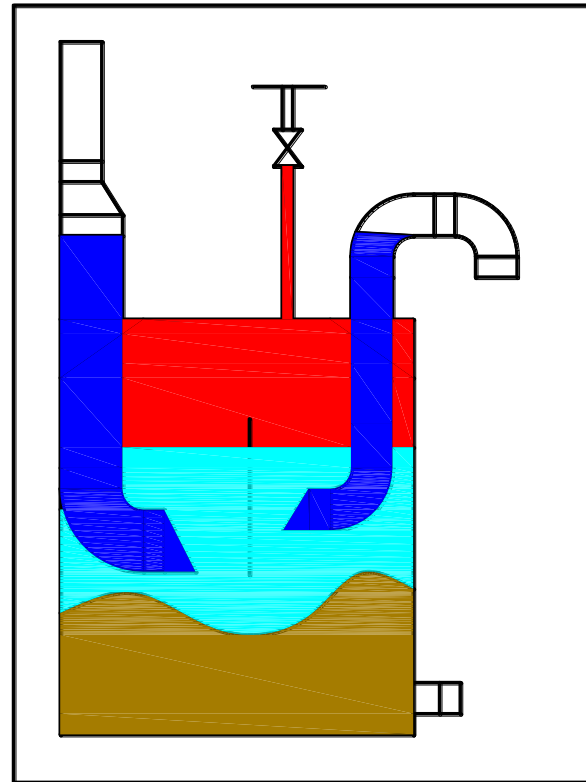


BIOGAS PLANT DESIGN-

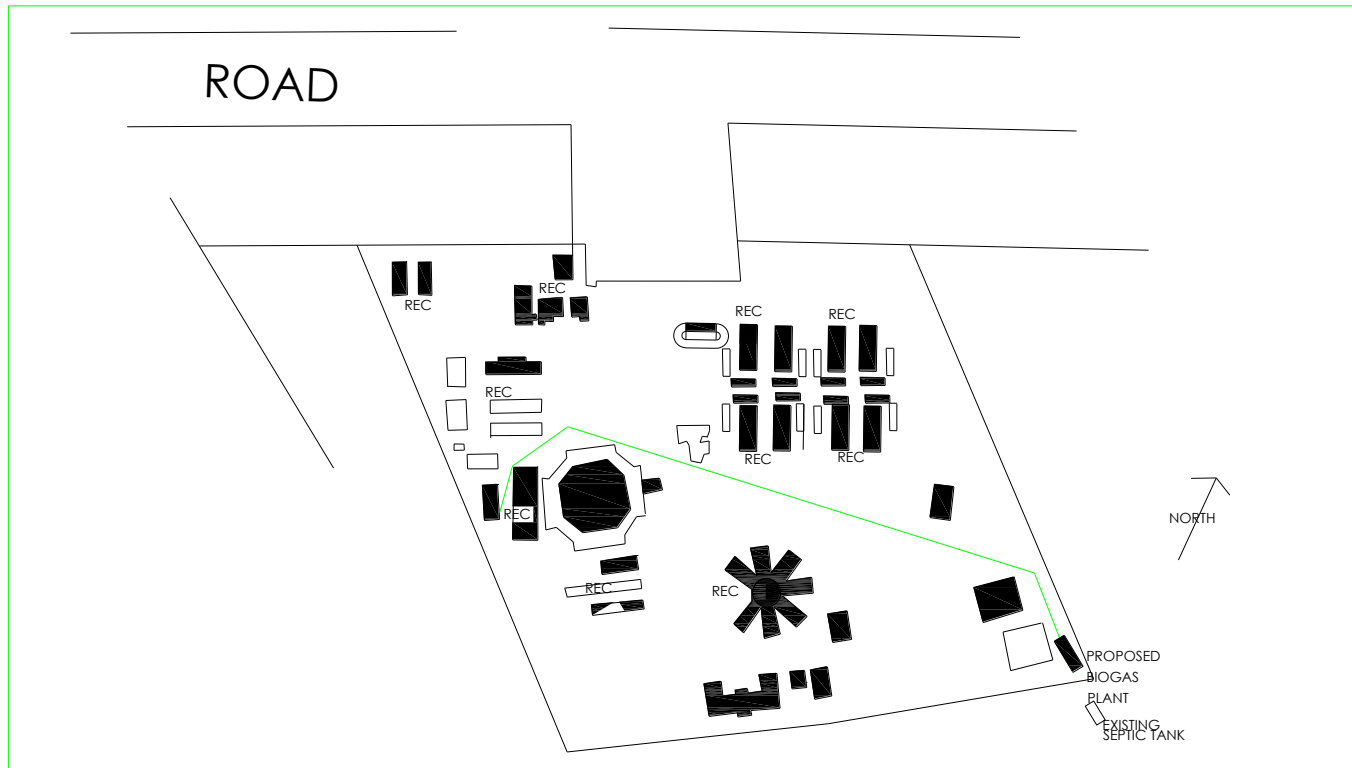
MRS. I.P DIGHE



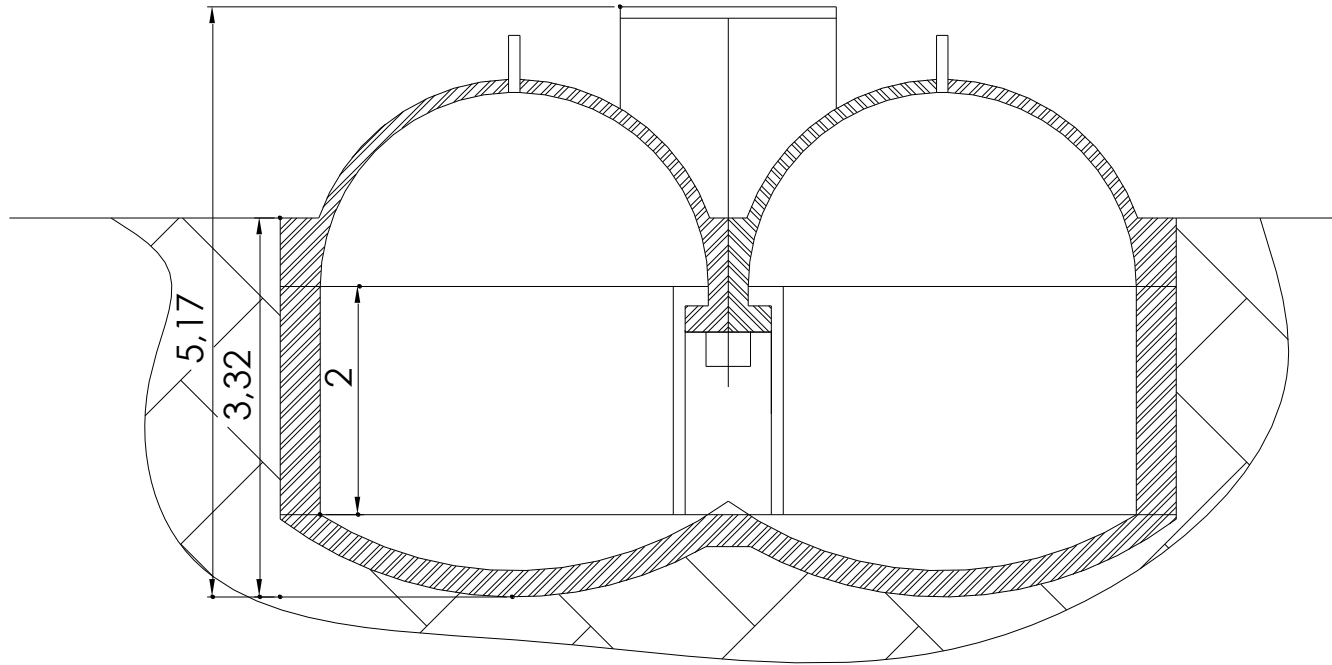
BIOGAS PLANT DESIGN- PVC DIGESTER FOR APARTMENTS



BIOGAS PLANT-4 DIGESTERS CAPACITY 1500 PERSONS



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SECTION

THANKS

