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New biogas plant– Generation of methane gas as well as electricity simultaneously

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The concept of generation of biogas from organic matter was invented in 18th century. Biogas being a clean form of energy, it has attracted attention of people. The anaerobic digestion of house-hold organic waste material gives production of combustible gas (CH4) & organic manure in form of digested slurry. New Biogas Plant generates methane gas as well as electricity. This is first time that somebody has thought for generation of electricity as well as methane gas in biogas plant. Combining concept of fuel cell and anaerobic digestion of organic waste, the concept of New Biogas Plant is derived and also this concept is worked at lab scale. There are some modifications required in previous design of Biogas plant so that it can handle electricity generation and methane gas generation. At lab scale, very little amount of electricity was generated. But, at large scale sufficient amount of electricity and methane gas can be generated simultaneously. In some countries like India, where in the rural part electricity supply is shut down for nearly 7-8 hours almost every day. So we need to find direct conversion of energy. This new technology can be helpful to these countries where biogas plants are installed in large numbers.

Biography

Vinayak Walikar is a master's student of University of North Texas, USA. He did his undergraduate study in mechanical engineering from Shivaji University, India. During his undergraduate He won "Best paper Award" at international conference held in Chennai, India for his work in Computational Fluid Dynamics. His paper was presented at international conference on Microbial treatment of dairy waste water. He won 7 national level awards in paper presentation competitions in field of which FEA and FVM modeling, energy products, fuel cell etc. And all this work was done in his undergraduate studies.

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