

Review on Energy Generation From Sewage

Vishnu Kumar¹, Yuvraj Singh², D.P. Lamba³, Harish Khokar⁴

¹4thYear, Dept. of Civil Engineering, Vivekananda Institute of Technology-East, Jaipur, Rajasthan, India

^{2,3,4}Assistant Professor, Dept. of Civil Engineering, Vivekananda Institute of Technology-East, Jaipur, Rajasthan, India

Abstract: Earlier civil engineering was practiced only for certain construction i.e. place of worships, fort, palaces etc. However much the modern house may differ from the earliest dwelling place, since both were destined to serve the needs of human beings, we may assume that the earlier, as the later form, has been intended to meet some primal human need. Man today needs shelter from the summer's heat and the winter's cold, protection from the wind and the storm, defense from wild beasts; so it seems most probable that his brother man in the earlier ages of the world had these same human needs. But as the civilization improves, men required different types of building for his activities. Residences are required for living. Industrial buildings are required for the production of various items. Various commercial building in form of shop, sale offices, go downs are require to store and to market these product.

Keywords: *Sludge, Biomass Crops, fermentation, Bacteria, inhabitants, modernization*

I. INTRODUCTION

The ancient man used to live in natural shelters like caves and dens. Slowly he learnt to make shelters using bamboos, stones, bricks, mortar and the latest one R.C.C.

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Thus various building is requiring for rapid development, comfort and luxurious living. Due to modernization the importance of civil engineering is increasing day by day. For this I had conducted my training at Sewage Treatment Plant, Dehlawas, Pratap Nagar, and Jaipur in VATECH WABAG Ltd under J.M.C. Govt. of Rajasthan which is under construction. It is one of the finer Bio-Gas Plant of Jaipur. I hope this report will be guidance to my success and enrich the knowledge of the challenging construction process of building.

Even today, most of the developing countries discharge their industrial or domestic waste through water without any treatment. There are

only few countries that discharge the waste water after giving primary treatment. But this treatment is not sufficient for environments and its inhabitants. Around the world, water is responsible of about 80% of diseases. Thus, treating water is very important so as to save environment from water bore diseases such as typhoid, cholera, jaundice and more. For the said purpose sewage treatment plant are designed, mainly to treat the sewage water and remove the most of contaminants from the waste water and sewage water. This treatment includes physical, biological and chemical processing to remove Contaminant. In short, sewage treatment plants act as aid for treating water and giving back clean water to environment.

II. ADVANTAGES OF ENERGY GENERATION FROM SEWAGE

1. Conversion of sludge to oil and gas – Under carefully controlled conditions and extreme temperatures (450 – 1000 degree Celsius), sludge may undergo chemical reactions to produce fuels that may be used for energy production.
2. Biomass Crops – In some of the European countries, sewage sludge is applied as fertilizer to willow plantations. The trees are periodically coppiced and the wood used for fuel. Research into applying partially-treated, liquid sewage to biomass crops is also underway
3. Hydrogen from Sewage – There is much interest in hydrogen as a fuel, because it can be produced from a wide range of materials and provides power with minimal air pollution. Bacteria use organic matter to produce hydrogen by fermentation. However, applications for hydrogen, such as fuel cells, are not yet in widespread use.
4. Biogas and Energy Efficiency- the Budd Inlet project is a cut above the run-of-the-mill biogas retrofit because it also incorporates a significant energy efficiency upgrade. Methane biogas is generated from the natural processes in which

microorganisms digest organic matter. To make the process operate more quickly and efficiently, sewage treatment plants use aerating equipment to pump more oxygen into the wastewater.

5. Old Energy- New Energy-The utility company that provided the grant for the system is Puget Sound Energy, which is the oldest energy utility in Washington State. Old age hasn't stopped the utility from plunging ahead with new sustainable energy technology for the future.

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