To Develop a proper system of using Human waste & other waste in Railway Coaches as useful Energy Resource in a well sanitized way.

Hon'ble Sir,

1. To Develop a proper system of using Human excreta & other wastes in Train coaches for useful Energy Resource in a well sanitized way, which creates a nuisance at present on Railway tracks, specially near to railway stations & causing a lot of diseases to human beings as well as deterioration of environment. The human waste & other biodegradable waste in train car & at railway station may be utilized as valuable energy resource for producing biogas to meet out not only to meet out the electricity demand of Railway Station Significantly, but bottling plants may also be setup for filling the biogas cylinders after purification as per availability of waste material.

The concept of Generating of biogas from biodegradable is well known & tested. My idea is to use this concept in Train car to get rid of human excreta lying between the tracks. The big size biogas plants close to railway station may be setup & also good public toilets for nearby habitats as well as passengers. A special box may be developed to collect the entire human waste in it during the journey. When the train leaves a particular Station & after crossing the station, there will be a special mechanism (like mechanical lever systems / or some electronic device), so that the box in the train will open & entire waste will come down to a pit, lying between tracks & connected to biogas plants. The plant will generate the gas, which will utilize to run the generator set of respective capacity. The electricity will be utilized to illuminate the Station. The public toilets will be utilized by nearby habitats as well as passengers. The biodegradable waste material from pantry car / railway station will also be utilized as a raw material for the plant. The plant will also generate the good quality organic manure after producing the gas, so revenue will be added to railway income & also will lessen the burden on electricity bills used by railway & will provide the facility of toilets to nearby habitats.
The implementation of idea will give a wide social impact. There will be more cleanness on stations, which is unbearable now. The nearby people will get a facility of using toilets, as we can see that a lot of people sits near to railway tracks for open defalcation, causing not only insanitary conditions, but sometimes fatal accidents also.

Presently, before implementing the idea, a preliminary data regarding amount of excreta available at a particular station/junction, train passing thru that station, area availability for biogas plant, Total Power generation, feasibility of project at that place etc. will be collected. Such type of projects may be setup only on big junctions, where maximum no. of trains passes, so that financial feasibility will be there.

1. A prototype model of complete system will be developed to connect it with every toilet of train compartment to collect in a box, which will be opened thru a lever based mechanism available on railway track at particular location.

2. A biogas plant will be constructed on that particular station/junction along with public toilets. The collection mechanism will be developed between tracks, which will be connected to plant.

3. The power generation system will be connected to Plant.

4. The other parts of the unit like manure production etc. will be developed.

The generation of bio gas from waste material like dung, human waste etc & running of 100% biogas based Genset is a proven technology. The only important thing is to develop the collection mechanism & management of waste material in a systematic way.

I hope that you will give a kind consideration on the concept & let me know about the same. I may elaborate the concept in more details, if an opportunity is given to me.

With Thanks kind regards

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