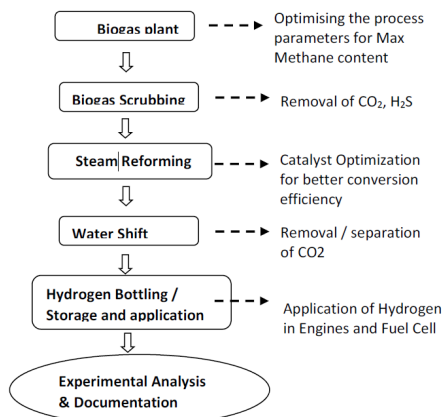


Application of Hydrogen derived from Bio-Gas using BSR in Fuel Cell Vehicles

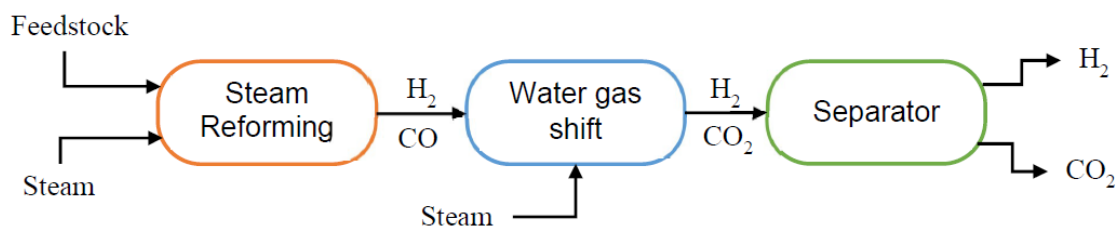
Graphical Abstract/ Lavout



Project Description

Transportation sector is one of the largest energy consuming sectors. The combustion of fossil fuels in conventional engine-powered vehicles is increasing pollution levels. Clean renewable energy such as Hydrogen is the need of time. Biogas is proposed as a source for hydrogen and biogas steam reforming is the proposed method for production of hydrogen. After the removal of carbon dioxide from biogas, this gas becomes homogeneous fuel containing up to 90% of methane. The work will also concentrate on the improving the methane yield in biogas by adjusting the biogas parameters and feed stock. An online monitoring system enables the parameters such as temperature, ph, and RH to be adjusted for maximum methane yield in the biogas. The steam reforming process involves the reaction of steam and methane derived from biogas over a catalyst at high temperature and pressure. In this study, Ni/Al with nano boron as a catalyst is proposed for steam reforming.

Products/ Instruments/ Results/ Outreach Activities



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Sanctioned Amount (in Rupees)

Rs. 20,72,000

Duration of the Project (years)

3

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