

Gasification System: Feeding System

Associated Procedures

- Gasification System
- Gasifier Reactor
- Gas Flow System
- Gasifier Control Unit
- Gasifier Process Flow

Description

The feeding system in the gasifier ensures the flow of feedstock prior to the gasification process with the assistance of the GCU. It contains one 50 gallon stainless steel hopper that holds up to 10 hours of fuel. Below the hopper there is a drying bucket that removes most of fuel moisture by heat exchange with the produced syn-gas.

The biomass feedstock in the drying bucket can be heated without consuming additional energy while the produced syn-gas can be simultaneously cool down. Inside the channel between the drying bucket and the reactor, there is a feeding auger that is controlled by a fuel level switch. The on/off status of the auger is monitored by the GCU while the fuel level switch is turned on/off by the push from the fuel piled up in the reactor as shown in Figure 1.

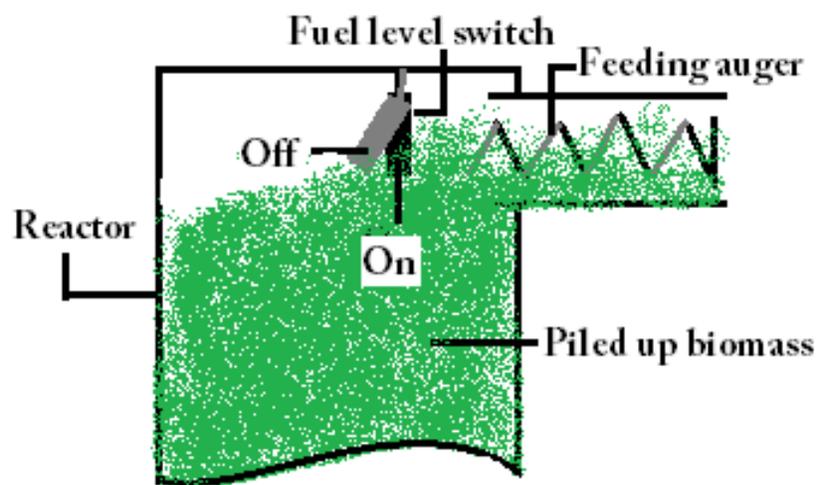


Figure 1: Working Principle of Fuel Level Switch