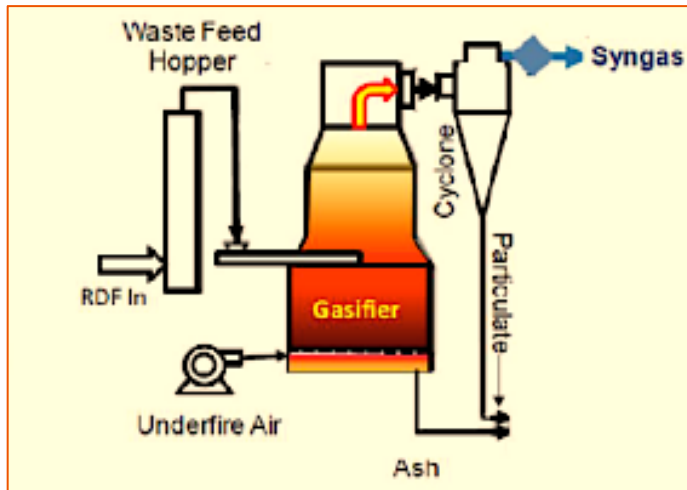


PRME® Gasification Technology



The PRME® gasification technology is a fixed grate, up-draft, sub-stoichiometric and multi-zoned gasification system that is available in a range of sizes to gasify 20 – 2 000 tons per day. Several installations for processing mainly various biomasses, wood wastes and agricultural residues are available for industrial application since 1982. The gasifier system includes a fuel metering bin, fuel feed control, multi-zoned gasification air, the KC gasifier, water cooled ash discharge conveyors, utility piping and instrumentation/electronic controls to provide automated operation. A complete system also includes syngas cleaning process or staged combustion chamber. The gas can then be used as fuel gas or be in an ICE to generate power.

The fuel is metered to the reactor from the metering bin. This bin is equipped with an infeed levelling conveyor, level switches and a variable outfeed conveyor. The speed of the outfeed conveyor is automatically adjusted by the control system to maintain a predetermined temperature in the reactor. Metered biomass feed is transported into the reactor by a water-cooled screw conveyor, discharging into the lower portion of the gasifier reactor. The gasifier operates under a slightly negative pressure, eliminating fugitive emission of hot gases. The reactor is a vertical, cylindrical steel vessel that is lined with castable refractory. The proprietary shape of the reactor produces negligible entrained particulate matter and promotes mixing of volatilized combustibles, thus giving a means to control the residence time of the fuel within the reactor. Sub-stoichiometric air is admitted into the reactor via one or more zones and is controlled to volatilize the biomass while partially combusting the solids. Ash exiting the reactor is discharged by a series of water-jacketed screw conveyors.