

Development of biomass gasification power generation technology

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Abstract:

Biomass energy is one of the most important renewable energy in China. The estimated biomass energy potential in 2050 will be 1 billion TCE.

Biomass gasification technology has been developed in China for tens of years. Gasification based central fuel-gas supply technology was commercialized more than 20 years ago. Biomass gasification-power generation(BGPG) technology came to the stage since 1980's. However, the early developed systems were all small ones, less than 200kW for each unit. In 1999, 1MW scale BGPG system was built in China. During the 10th Five-Year Plan of China, 5.5 MW BGPG system was established and the power generation efficiency was also increased to more than 25%.

The development of BGPG technology was summarized in the presentation. And finally, the advantages and disadvantages of BGPG and direct combustion power generation were analyzed.

Keywords:

Biomass; Gasification; Power generation