

▶ Gasification by WoodRoll

Verification tests of gasification process May 2009

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Tests of gasification of charcoal powder was carried out as part of the verification of Wood Roll. The technique has worked well, and effects up to 150 kW Energy gas has been produced in an indirect heated reactor. Produced gas is composed primarily of hydrogen and carbon monoxide.

Results

Mass flows show high mobility of char / charcoal to Energy gas (syngas). Gas analysis shows more than half of the product content is hydrogen. Carbon monoxide is lower. Carbon dioxide and methane are present at lower partial pressures (which is not necessarily the case in a full facility that operated at higher operating temperature). Combustion of Energy gas produced in an oxygen atmosphere shows low emissions.

The results are not only promising but now shows that the process in full scale can be expected to give the calculated exchange rates which is very positive for all prospective clients, Cortus AB and partners.

The picture on the front shows the reactor at operating temperature.

Background

Gasification of biomass is the most effective way to bring process industries large amounts of renewable energy. The WoodRoll gasification process can be both efficient and flexible.

Cortus AB sells cost-efficient and CO₂ neutral Energy gas with high energy content to the process industries for long-term supply contracts. Customer demands for Energy gas to high temperature combustion and their limitation in CO₂ emissions are fulfilled with the patented gasification technology WoodRoll®.

Test

Cortus has in co-operations with two of its partners built up a test facility for indirectly heated gasification.

The purpose of the facility is to verify performance for the WoodRoll process. The experience and the achieved performance will be part of the knowledge structure for a future demonstration facility.

Test facility's capacity is one twentieth of the demonstration plant.

Continued work

Continued work with the process involves several different kinds of fuels and will be implemented over the coming months.

All testing equipment has not yet had 100% availability and modifications to this will be implemented in the coming weeks.