NOWOCOR Ltd
THERMAL TECHNOLOGIES

ENERGY CONVERSION PROCESS

NOWOCOR - ECP™
Energy **C**onversion **P**rocess

Thermally decomposes biomass in a reduced oxygen atmosphere.

Pyrolysis – the thermolytic gasification of biomass has been around for a long time. Most current process attempts use "Fast Pyrolysis" which sometimes leaves you with char, oils and tars. Most operate at temperatures requiring refractory type construction with the associated maintenance.

- Most incineration processes operate in excess of 2,000 ^{O}F.
- Gasification equipment being promoted today operates between 1500^{O}F - 1900^{O}F.

At these higher temperatures products of combustion such as NO_X result.

The NOWOCOR Advantage

The single biggest obstacle to efficient biomass conversion is containment of the process environment.
Most systems must either use a batch system or use expensive mechanical closures at the infeed and the output ends.

NOWOCOR has solved this!

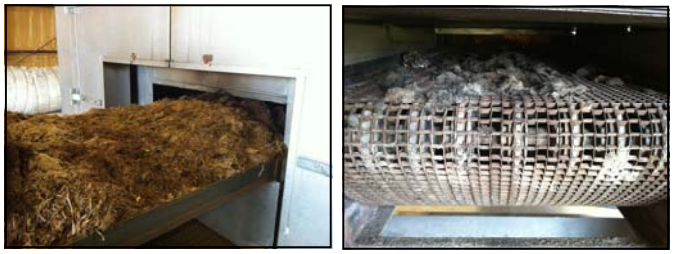
The technology is based on patented seal technology proven over some 20 years and multiple installations at major industrial facilities.

Curing Oven at 400^{O}F – Seal Technology prevents migration of hot oven air into the plant. - 2010

Controlling the oven environment allows operations at much lower temperatures, generally less than 1000^{O}F, depending on the application. Nowocor's containment technology allows for full environmental control.

One of the key benefits is the ability to run a continuous operation in horizontal equipment, considerably reducing the number of moving parts. This simplified construction reduces capital and operating costs, with lower maintenance requirements.

Using hog fuel (wood waste) as an example, Pyrolysis is more complete yielding mostly bottom ash in the 1.5 percent range, and at these temperatures **no** NO_X is generated.



Hog Fuel in >>> Ash Out

Process Description

To understand our process, picture feeding an organic mass onto a moving conveyor belt going thru a high temperature oven and simply watch the organic material disappear as gasification occurs.

This is a simple design capable of running 24-7 or as required on a shift basis as start up is quick. The process is very predictable and the equipment and process control very straight forward. This basic carbon gas stream converted to heat can be used to generate power using a Waste Heat Boiler and a Steam Turbine.

In the example below, undiverted MSW is reduce by 60% (by volume) - clean and sanitized ready for post sorting recyclables.

Curb-side garbage in >>>
Clean & sanitized residue out - ready for post-sorting

For more information, email us at:
USA: info.usa@nowocor.com
Canada: info.can@nowocor.com

BIOMASS PROCESSING
FACILITY - 2000
SOUTH CAROLINA
- - -
12 FT WIDE CONVEYOR
600 TPD

NOWOCOR Ltd
THERMAL
TECHNOLOGIES