# JANICKI BIOENERGY

Victoria, B.C. Feb-5, 2016

Peter Janicki *CEO, Janicki Bioenergy* 





Founded by Peter & Susan Janicki in 1993



- Locations in WA & UT
- 650 Employees
- 135 Engineers
- State-of-the-Art Facilities
- R&D Lab
- Project Management
- Engineering Design & Analysis
- Composite & Metal Mfg.
- Large Scale, High Precision

## Advanced Composite Parts & Tools

## **OMNI** PROCESSOR The future of waste processing.



### WHAT DOES THE OMNI PROCESSOR DO?





## **DISRUPTIVE TECHNOLOGY**

With the combination of this technology and modern manufacturing practices, the Janicki OP revolutionizes the treatment of fecal sludge and other waste products, providing revenue potential instead of a parasitic cost to society.



## **THERMODYNAMICS OF THE PROBLEM**



There is nearly twice the amount of energy within the dry solids of the sludge as there is energy required to boil the water out of the sludge.

## **BREAK-EVEN ANALYSIS ON SOLIDS CONTENT**

As the solids percentage of the sludge is reduced, the available energy is also reduced. Beyond the breakeven point, excess energy production is no longer possible and additional energy is required to continue processing the waste.



#### EMISSIONS **OVERVIEW**

Air emissions from the boiler meet all applicable US EPA clean air regulations.

#### CO

CONTROLLED BY GOOD COMBUSTION PRACTICES:

- ✓ Temperature
- ✓ Time

✓ Turbulence

#### NOX

✓ Fluidized bed combustors run too cold to make any thermal NOX

#### SOx

- Controlled by adding lime to the flue gas
  Fuel dependent

#### HCI

✓ Controlled by lime injection

#### **POLLUTANTS ARE CONTROLLED 3 WAYS:**

- 1. Thermal control
- 2. Dry Sorbent Injection
- 3. Baghouse







## **OMNI PROCESSOR** S200 STANDARD SPECIFICATIONS

	PROPERTY	S200 (V3) CAPACITY
	Max. Biosolids Processed	60 wet (12 dry) <i>tons/day</i>
	Max. Power Produced	300 <i>kW</i>
	Max. Water Produced	14,400 gal/day
	Footprint	100' x 40' (4,000 ft <sup>2</sup> )
	Parasitic Load	50 <i>kW</i>
	Fuel	Biosolids @ 20% solids
	Max. % Moisture of Fuel	80 %

## **OP CONFIGURATION**

