



SHTS DRYER

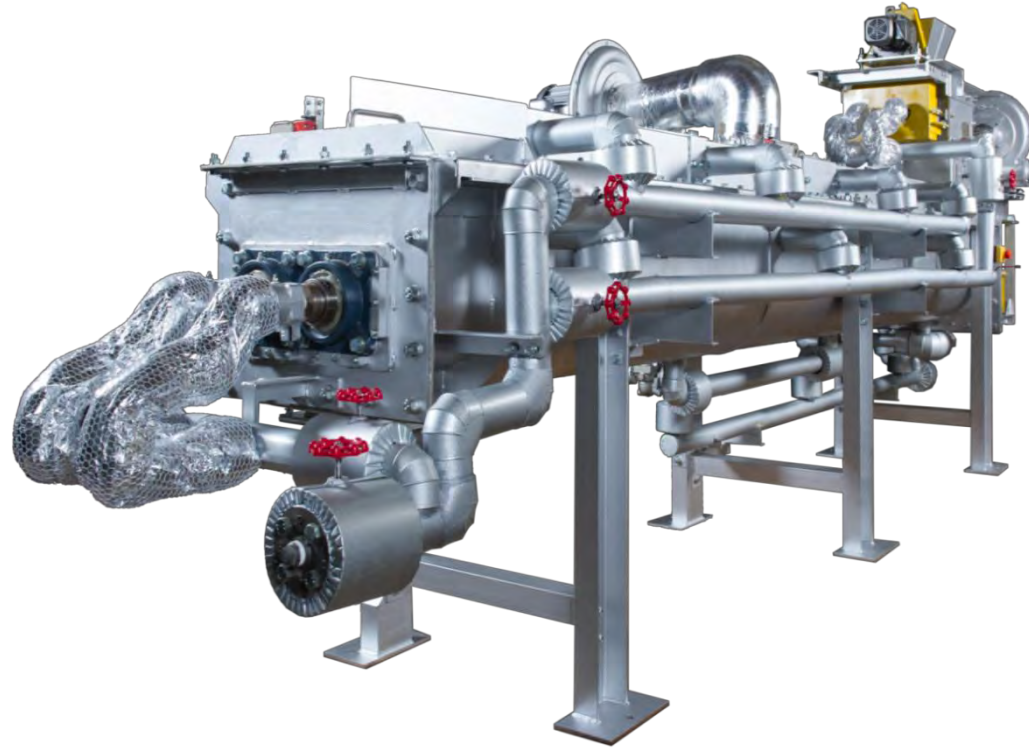
steam heated twin screw

Continuous Low Temperature Drying Equipment



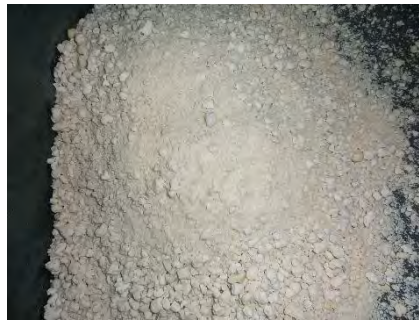
KENKI Corporation

Continuous Low Temperature Drying



Initial moisture rate 90%-85%
Output moisture rate 0%-30%

Raw material



moisture content $> 0\%$

Sewage



Moisture content < 10%

Sewage

Reduce



Sewage

Fuel



Fertilizer



Cement



Target material



Polycarbonate



Paper



Pigment



Aluminum powder



Food sludge



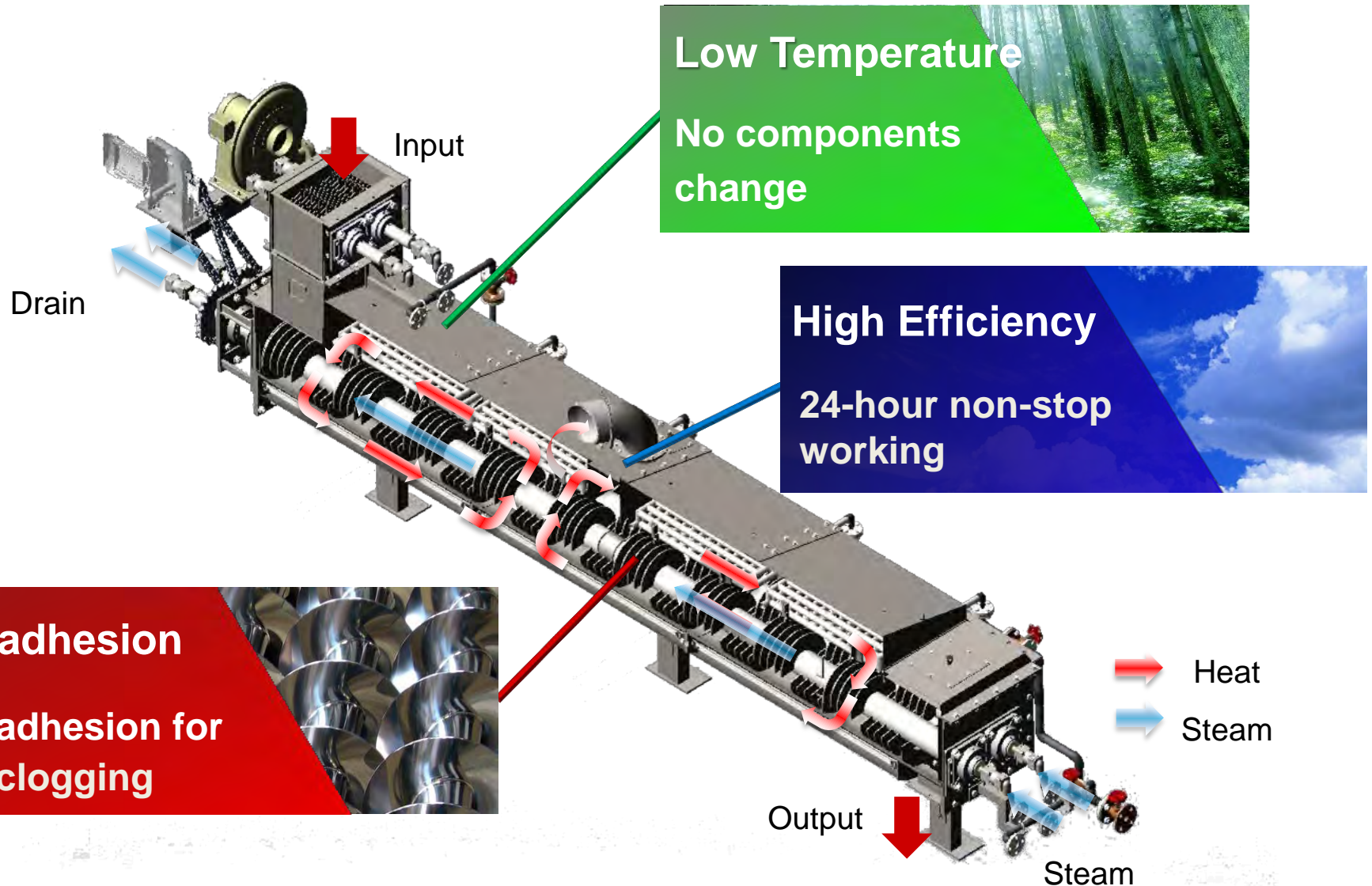
Food waste (Okara)



SHTS KENKI DRYERS - Continuous dryers for sludge and pasty product



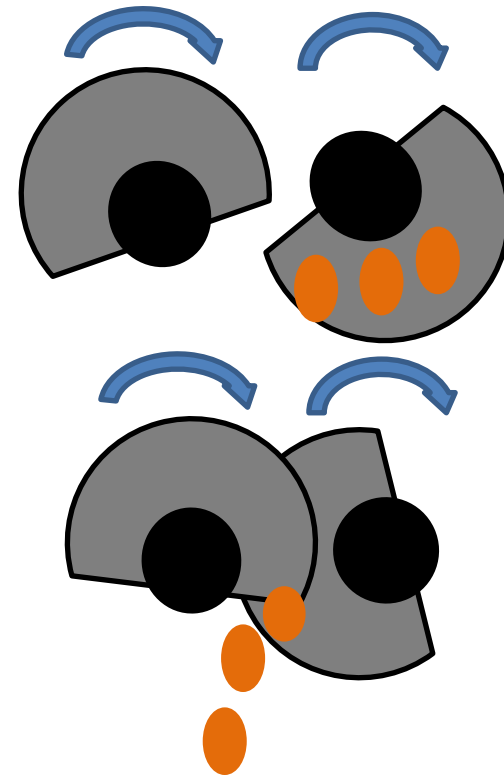
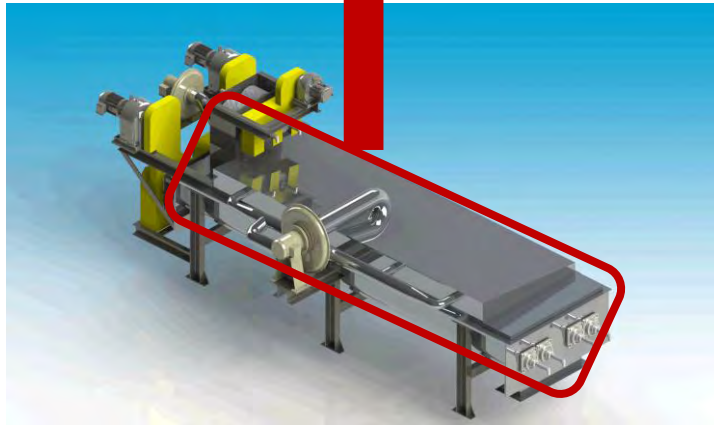
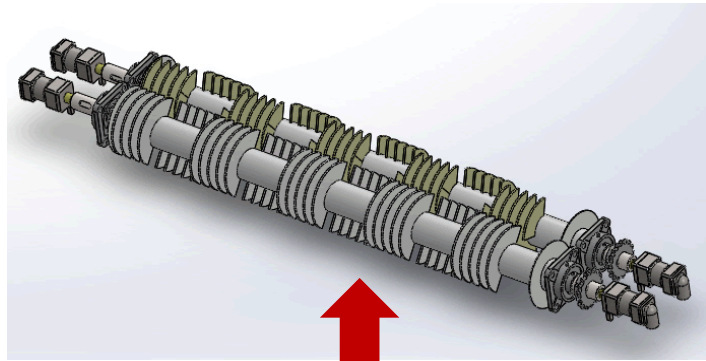
SHTS Structure



SHTS: Steam Heated Twin Screw Technology

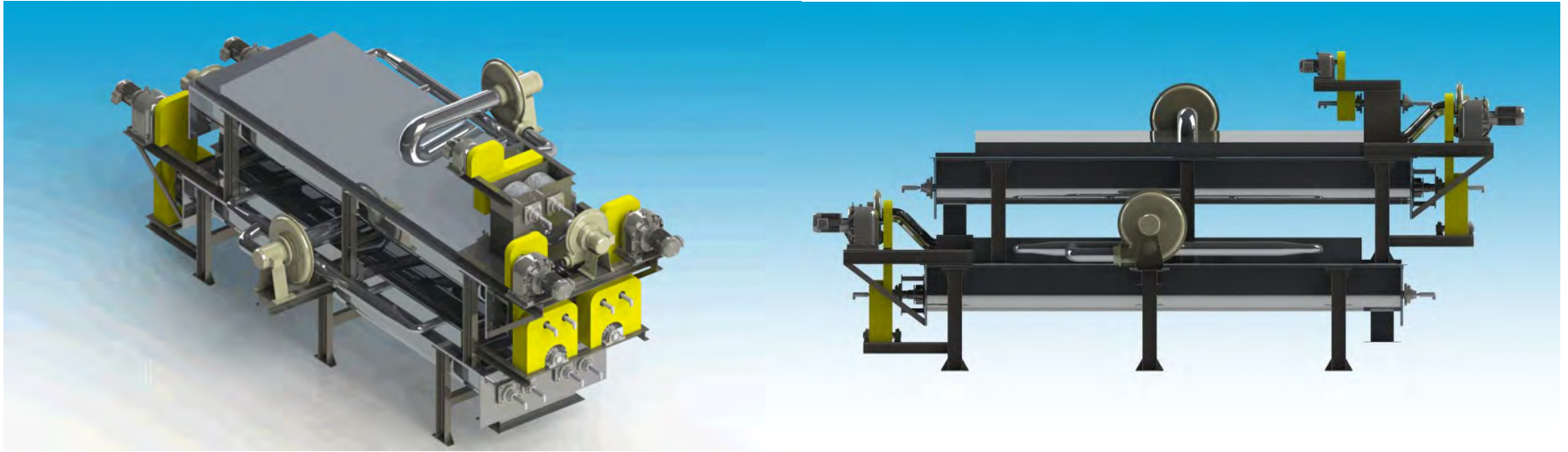
Mechanism of anti-adhesion (SHTS technology)

Twin screw with scraping blade



SHTS* was patented in Japan, France and U.S.

Capability



Drying capability is 50kg~2000kg / hr

TS series Specifications

Model	Input	Steam amount	Electricity	Dimension	Weight
	kg/hr	Kg/hr	kW/hr	mm	ton
TS-2L-0.5	50	60	3.4	1300(W) × 5300(L) × 1500(H)	2.5
TS-2L-1	100	120	5.7	1800(W) × 5300(L) × 1800(H)	4
TS-2L-5	500	600	12.4	2800(W) × 6300(L) × 2500(H)	11
TS-2L-10	1,000	1,200	24.2	2800(W) × 12300(L) × 2500(H)	22
TS-2L-20	2,000	2,400	TBD	TBD(developing)	TDB

On following condition
Initial moisture rate 80% Output moisture rate 20% (Steam pressure : 0.5bars)
Materials : SUS304 or SUS316L

Trial run



Sewage

Water content : From 80% To 20%

KENKI DRYER Distributor & Agent

France : ETIA (EU)

South Korea : ECONET CO.,LTD



ETIA (Partner in France)



E T I A



Innovation - Engineering - Processes

Innovative and sustainable solutions for industry



Ozosteril®

Ozone treatment of
dried product

[Visit Ozosteril >](#)

Biogreen®

Thermochemical conversion of
biomass and waste

[Visit Biogreen >](#)

PROCESS

Equipments

[Visit Process >](#)

Safesteril®

Steam sterilization of
food product

[Visit Safesteril >](#)

SPIRAJOULE®

Electrical heating
screw conveyor

[Visit Spirajoule >](#)



BIOGREEN

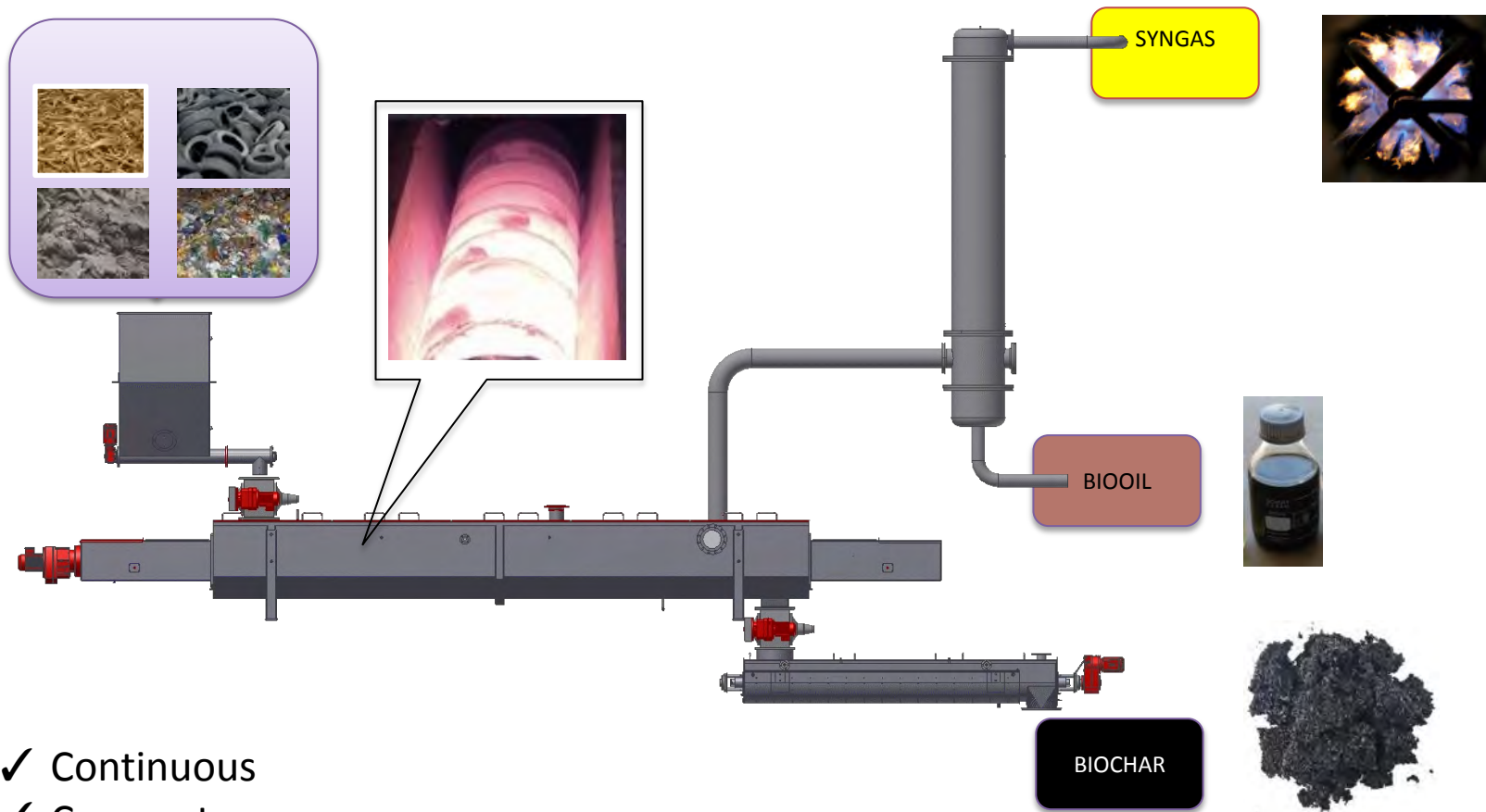
ENVIRONMENT & ENERGY-RELATED TECHNOLOGIES



**Innovative & Sustainable solutions for
Industry**



CONTINUOUS PYROLYSIS PROCESS

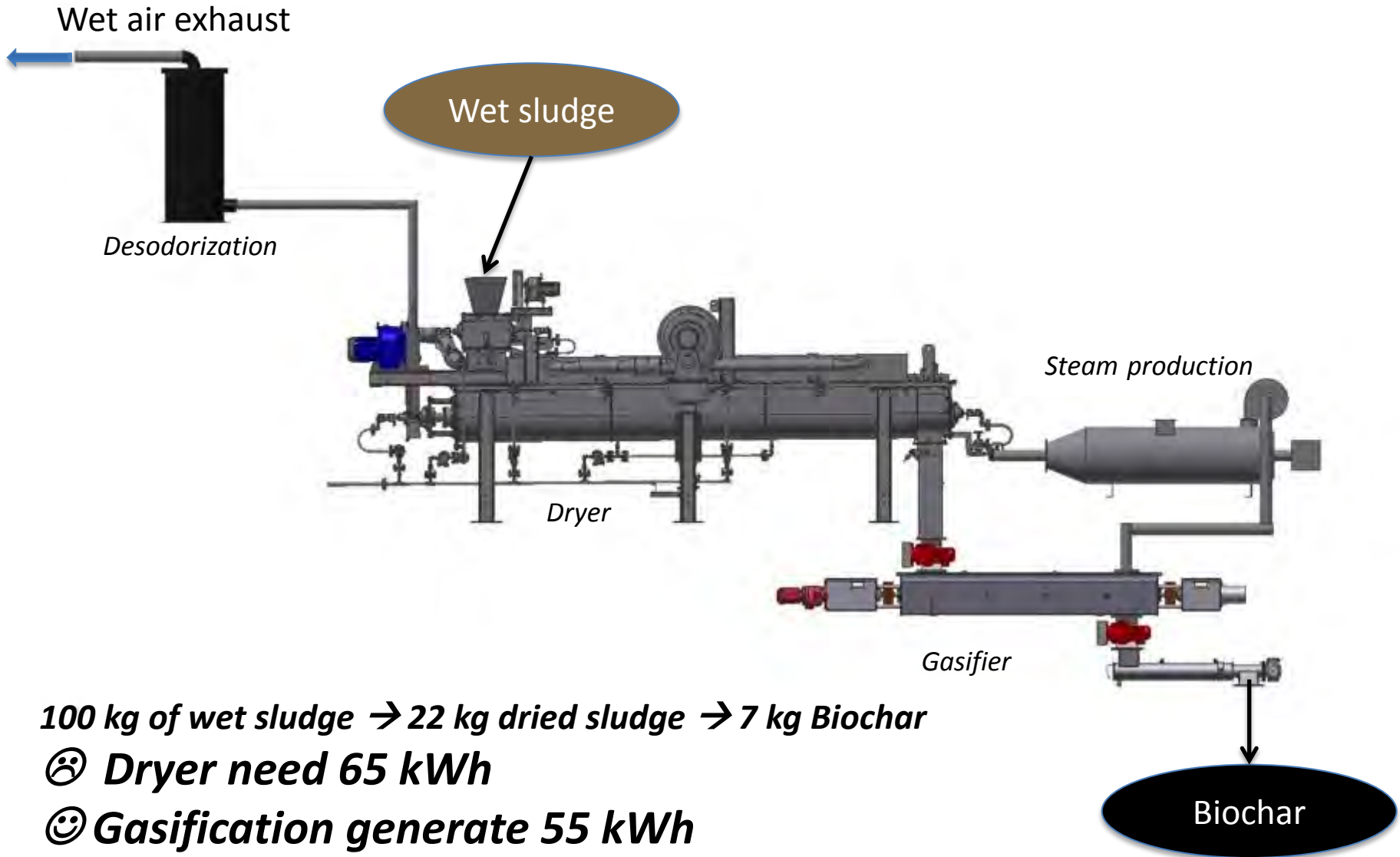


- ✓ Continuous
- ✓ Compact
- ✓ Can treat all shapes
- ✓ High heat transfer coefficient → Short dwell time → Low volume → Safe system
- ✓ Easy monitoring
- ✓ Low maintenance
- ✓ Spirajoule technology: industrial proven technology – 87 units installed
- ✓ Up to 5 m³/h per module



MUNICIPAL SEWAGE SLUDGE BIOGREEN APPLICATION

HIGH TEMPERATURE PYROLYSIS (850°C)



100 kg of wet sludge → 22 kg dried sludge → 7 kg Biochar

☹ Dryer need 65 kWh

☺ Gasification generate 55 kWh

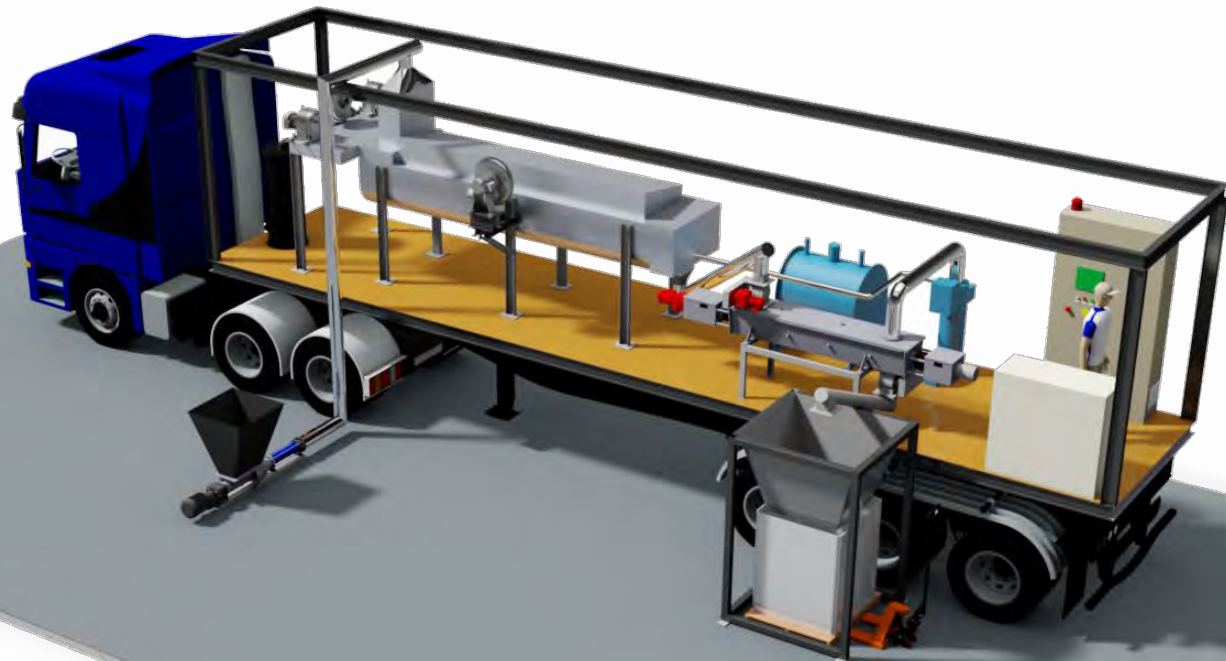


MUNICIPAL SEWAGE SLUDGE BIOGREEN APPLICATION

HIGH TEMPERATURE PYROLYSIS (850°C)



PYROTRUCK CONCEPT 10 000 PE – 100 kg/h of wet sludge



EMChIE 2015 Tarragona

7th European Meeting on Chemical Industry and Environment

Tarragona, 10 - 12 June 2015

Home

Topics

Venue

Important Dates

Abstract Submission

Author Instructions

Publising

Program

Committees

Student Awards

Home

Share

EMChIE-2015, the 7th European Meeting on Chemical Industry and Environment, will take place at the [Universitat Rovira i Virgili](#), in Tarragona, Spain, during 10-12 June 2015.

The rising concern of the society about the impact of its activity at planetary scale is forcing the application of increasingly stringent environmental regulations, which constitutes a challenge for the chemical industry of the 21st century as it is a significant contributor in the generation of carbon dioxide, energy consumption, depletion of raw matter and environmental pollution.

However, in the pursuit of a sustainable development for an industrialized society, chemical industry must continue playing a critical role by supplying new products designed under green chemistry and engineering criteria, more efficient and cleaner processes, with improved use of matter and energy, more respectful for the environment, and with lower generation of wastes and wastewater.

The European Meeting of Chemical Industry and Environment (EMChIE)



EMChIE, 10-12 June
2015

Universitat Rovira i Virgili

Campus Catalunya