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

Fuel

Fertilizer

Cement
Target material

- Polycarbonate
- Pigment
- Paper
- Aluminum powder
- Food sludge
- Food waste (Okara)
SHTS Structure

- Low Temperature: No components change
- High Efficiency: 24-hour non-stop working
- No adhesion
- No adhesion for No clogging

SHTS: Steam Heated Twin Screw Technology
Mechanism of anti-adhesion (SHTS technology)

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

Twin screw with scraping blade
 Capability

Drying capability is 50kg~2000kg / hr
<table>
<thead>
<tr>
<th>Model</th>
<th>Input Steam amount</th>
<th>Electricity</th>
<th>Dimension</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kg/hr</td>
<td>Kg/hr</td>
<td>kW/hr</td>
<td>Dimension</td>
</tr>
<tr>
<td>TS-2L-0.5</td>
<td>50</td>
<td>60</td>
<td>3.4</td>
<td>1300(W)×5300(L)×1500(H)</td>
</tr>
<tr>
<td>TS-2L-1</td>
<td>100</td>
<td>120</td>
<td>5.7</td>
<td>1800(W)×5300(L)×1800(H)</td>
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<tr>
<td>TS-2L-5</td>
<td>500</td>
<td>600</td>
<td>12.4</td>
<td>2800(W)×6300(L)×2500(H)</td>
</tr>
<tr>
<td>TS-2L-10</td>
<td>1,000</td>
<td>1,200</td>
<td>24.2</td>
<td>2800(W)×12300(L)×2500(H)</td>
</tr>
<tr>
<td>TS-2L-20</td>
<td>2,000</td>
<td>2,400</td>
<td>TBD</td>
<td>TBD(developing)</td>
</tr>
</tbody>
</table>

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%
France: ETIA (EU)
South Korea: ECONET CO., LTD
ETIA (Partner in France)

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Low maintenance
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Up to 5 m³/h per module
MUNICIPAL SEWAGE SLUDGE BIOGREEN APPLICATION

HIGH TEMPERATURE PYROLYSIS (850°C)

Wet air exhaust

Desodorization

Wet sludge

Dryer

Steam production

Gasifier

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

خدام 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, 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) aims to foster the development of chemical technology, to create a platform for the exchange of knowledge and ideas, and to encourage collaborative research and innovation in the field of chemical industry and environment.