

## 有机固废处理

### ORGANIC SOLID WASTE TREATMENT

有机固废处理工艺是在密封、无氧、非燃烧、高温状态下进行的化学反应过程。对有机废弃物进行高温加热，在热分解的作用下，包括汽化、热解、脱氢、热缩合、碳化等反应，将废弃物中的水分蒸发，有机物转化为可燃气体和有机碳。

Organic solid waste treatment process is the chemical reaction process reacted in the state of sealed, oxygen free, non-combustion and high temperature. The organic waste is heated at high temperature and, under the thermal decomposition; reactions including vaporization, pyrolysis, dehydrogenation, thermal condensation, carbonation are processed, thus evaporates the moisture in the waste and converts the organic matter into combustible gases and organic carbon.

将加温的燃烧与废弃物的热解分别在两个独立的空间进行。通过气体燃烧室的阶段性升温，废弃物中的水分逐渐蒸发，有机物成分在热解处理过程中转化为可利用的冷凝水、可燃气体和生物有机炭，将热解产生的可燃气体进行回收利用，不仅避免了空气的污染，而且还节约能源。

The heating combustion and waste pyrolysis are carried out in two separate spaces. As the temperature of the gas combustion chamber rises, the moisture in the waste gradually evaporates, and the organic components are converted into useable condensate water, combustible gas and bioorganic carbon during the pyrolysis process. The combustible gas produced by pyrolysis is recycled to avoid the air pollution and save energy.

#### 技术特点 Technical Characteristics

- 1、整体逆流布置，高温排烟经换热器回收后预热燃烧空气及物料，实现热能回收，整体热效率高，运行成本低；
- 2、物料间接加热，排放的烟气仅为燃料（通常是天然气）燃烧产生的烟气，无二噁英排放；
- 3、污油泥经热解炭化后，其中的重金属都固化在固体残留物中，且重金属形态发生了显著改变，可交换态含量降低，浸出浓度都低于监测标准；
- 4、撬装设计，便于快速安装和运输，单元化设计，可根据项目需要配置多个热解单元实行积木式处理能力扩展；
- 5、自动化程度高。

1. Overall counter-current layout, the thermal energy of high temperature flue gas is recycled by heat exchangers to preheat the combustion air and the materials, thus enhances the overall thermal efficiency, and reduces operating cost;
2. Indirect heating of materials, the only emission is the flue gas created by fuel (usually natural gas) combustion, no dioxin emission;
3. The heavy metals in the sludge are solidified in the solid residue after the pyrolysis and carbonization. The morphology of the heavy metals is significantly changed and the exchangeable content is reduced, and the leaching concentration is lower than the monitoring standard;
4. Skid mounted design, easy to install and transport, modular design, treatment capacity can be expanded by setting multiple pyrolysis modules based on requirements of different projects;
5. High level of automation.

#### 应用范围 Application Range

- 1、农业固废：禽畜粪污、农作物秸秆、病死禽畜、废旧农膜及废弃农药包装物等；
- 2、工业固废：油气田产生的污油泥、落地污泥、炼化企业产生的“三泥”等。

1. Agricultural solid waste: livestock manure, crop stalks, dead animal bodies, waste plastic film and waste pesticide packaging, etc;
2. Industrial solid waste: sludge generated by oil production, ground sludge, the “Three Muds” generated by refining enterprises, etc.