

Decentralized organic waste recycling system in the form of container

ABSTRACT

The utility model provides a decentralized organic waste recycling system in the form of a container, which comprises a pre-treatment unit, an environmentally friendly feed production unit and a methane generation and utilization unit, which are connected in sequence; the pre-treatment unit comprises an automatic organic waste sorting machine; the environmentally friendly feed production unit comprises a slurry storage device, an ultrasonic treatment machine, an integrated bioreactor, a sludge heating cylinder, a sludge dryer and a pelletizer; and the methane generation and utilization unit comprises a methane production bioreactor, a bag filter, a hydraulic sealing device, a gas purifier, a biogas tank and a biogas generator. The system pre-treats kitchen waste at the sites where the kitchen waste is produced, thereby shortening the exposure time and reducing the chance of odor generation. It also reduces the occupied area by arranging the containers in an upward direction. It also increases the amount of kitchen waste to be treated, increases methane production and achieves zero emissions. The system has a high resource recovery rate, and can extract high protein sludge from kitchen waste, which is subsequently processed to produce an environmentally friendly feed.

(Fig.5)