

高产低耗畜禽粪厌氧处理新工艺研究及应用

A New High Output and Low Energy Consumption Biogas Fermentation Technology

稿件编号: 19930528

中文关键词: 沼气池; 畜禽粪; 厌氧处理新工艺

英文关键词: Biogas digester New technology of biogas fermentation Forced sludge drain type Sludge and raw material mixture with stirrer type High concentrated solid raw material type

基金项目:

作者	单位
李长生	中国农业工程研究设计院

摘要点击次数: 4

全文下载次数: 15

中文摘要:

高产、低耗是沼气发酵装置追求的主要目标。针对我国多数畜禽场以人工为主、水冲为辅的清粪方式,将常用的塞流、全混合(搅拌)和高浓度三种沼气发酵工艺有机结合,取长补短研制成一种新工艺。经应用于卧式机械搅拌加温沼气池取得成功,达到池容产气率高、自身耗能省、结构简单、投资低、操作方便等目标。该项新工艺及其装置具有较强竞争力和推广前景。

英文摘要:

The main goal of the design of a good biogas digester is the high productive output per unit volume of the fermentation chamber with low energy consumption In order to reach the goal, in the author's mind, the most important thing is what kind of fermentation technology used. In this paper, the author wishes to present a new design of biogas fermentation technology which has been used in some digesters in Beijing and Shanghai Municipalities in China. Each one of them got successful results. The new design is to fit the features of most animal farms in China that they mainly use the manpower to clean the animal excrements which are used as the raw materials for biogas production. Surely, some farms may use the water to wash down all the excrements too. In the customary design, there are three types of fermentation technology to be used in the biogas digesters. They are as follows: the first type is the forced sludge drain type equipped with certain device inside the fermentation chamber; the second one is to mix the sludge and newly feeding raw materials together by a stirrer; the third one is that the digester is feeded with the high concentrated solid raw materials. Each one of them has its own merits and demerits. Now, the author has adopted some of the merits of these three types and added authors' some new idea to make a new design of fermentation technology on the horizontal, mechanically stirred, and heat added digester. All these digesters reached the goals of high gas productive rate based on the volume of the fermentation chamber, less energy consumption by the digester itself, simple structure, less investment and easy to operate. Besides the new fermentation technology, the paper also presents the structure of the digester, the facilities to be equipped and the testing data of the experimental digesters.

[查看全文](#)

[关闭](#)

[下载PDF阅读器](#)

您是第607236位访问者

主办单位: 中国农业工程学会 单位地址: 北京朝阳区麦子店街41号

服务热线: 010-65929451 传真: 010-65929451 邮编: 100026 Email: tcsae@tcsae.org

本系统由北京勤云科技发展有限公司设计