

工程与应用

啤酒发酵过程环境参数链系统控制

陈铁军, 侯改杰

郑州大学 电气工程学院, 郑州 450001

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摘要 通过对啤酒发酵过程中环境参数的分析, 为了提高最终产物的得率, 保证在整个操作进程中有一个适宜的生长代谢环境为目标, 引入链系统控制方法, 找到影响发酵温度和PH值等主要因素, 建立由温度和PH值两条主要因果链组成的互相关联的链系统模型。设计了啤酒发酵过程环境参数的链预估算法和链控制系统。仿真显示为啤酒发酵系统环境参数建立的链系统模型稳定性和抗干扰能力强, 容错性好, 控制效果良好。

关键词 [啤酒发酵](#) [环境参数](#) [链系统](#) [预估](#)

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Chain-control-system to environmental parameter of beer fermentive process

CHEN Tie-jun, HOU Gai-jie

School of Electric Engineering, Zhengzhou University, Zhengzhou 450001, China

Abstract

Through analyzing the environmental parameter in the fermented course of beer, improving final getting rate of the result, and guaranteeing that there is a suitable growth supersession environment in the whole process of operating, the chain system control method is proposed. The fermented temperature and hydrogen ion index are found, the systematic model of chain related each other is set up that is made up of temperature and hydrogen ion index main cause and effect chain. The chain estimated method and chain control system of environmental parameter in the beer fermented course are designed. Simulation result shows chain systematic model has strong stability and anti-interference ability. It has good fault tolerant, and has good control result.

Key words [the beer ferments](#) [environmental parameter](#) [chain system](#) [estimate in advance](#)

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通讯作者 陈铁军 fngfeier@163.com

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