

3) 实际养殖废水中存在的有机物在电化学处理过程中会与阳极产生的自由氯发生反应生成卤代化合物生成 THMs。后续研究应该考虑结合其他工艺来解决这一问题。

4) 从能耗角度分析, 电化学技术去除实际养殖海水废水中的氨氮需要的能耗比很多污水处理过程中的能耗低。

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Ammonia Removal from Mariculture Wastewater by Electrochemical Oxidation and the Formation of Chlorine Residuals and Trihalomethanes

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Abstract: Taking the ammonia nitrogen in actual mariculture wastewater as the research object, electrochemical oxidation process was adopted for NH₄⁺-N removal. The effect of ammonia removal, the formation of chlorine residuals and trihalomethanes were analyzed, and energy consumption has also been evaluated. The results showed that ammonia nitrogen would turn into nitrogen and could be removed efficiently by electrochemical oxidation. The concentration of chlorine residuals increased with the increasing of current density and hydraulic residence time, but the formation of trihalomethanes would also increase which was not expected. Besides, the energy consumption during the electrochemical oxidation process of seawater was very low which indicated that this technology could be used in the treatment of mariculture wastewater.

Keywords: ammonia; mariculture; electrochemical oxidation; chlorine residuals; trihalomethanes

国际资讯

新加坡第五个水回用厂正式投运

新加坡第五个水回用厂 BEWG-UESH 于 2017 年 1 月 17 日正式投运。BEWG-UESH 水回用厂是在现有樟宜水回收厂基础上建设而成 耗资 1.7 亿美元 将为 PUB 供水 25 年 其日产水能力可达 22.6 万立方米。BEWG-UESH 水回用厂与分布在勿洛 (Bedok)、樟宜 (Changi)、克兰芝 (Kranji)、乌鲁班丹 (UluPadan) 四个城市的水回用厂共同满足了该国 40% 的城市用水需求。

(徐靖)