

A²/O+硫磺填料柱组合工艺脱氮除磷的效果

Denitrification and dephosphorization efficiencies of an A²/O+sulfur-packed column combined process

投稿时间: 2011-02-24 最后修改时间: 2011-05-23

DOI:

中文关键词: [脱氮](#) [除磷](#) [A²/O](#) [硫磺填料反应柱](#)

英文关键词: [denitrification](#) [dephosphorization](#) [A²/O](#) [sulfur-packed column](#)

基金项目: 国家自然科学基金资助项目(40102027, 50578151); 北京市自然科学基金资助项目(8052017, 8092025); 北京市教委产学研项目(51900265005); 国家水体污染控制与治理科技重大专项(2009ZX07207-008-4-2)

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中文摘要:

以某城市污水厂进水为研究对象, 采用A²/O+硫磺填料反应柱组合工艺, 考察其对COD、总氮、总磷以及溶解性磷处理效果的改善。组合工艺出水水质稳定后, 连续运行55 d, 并对工艺的出水进行常规指标分析。结果表明: 组合工艺的脱氮除磷效果较单个A²/O工艺都得到了较大的改善, 而COD去除效果变化不大。A²/O系统对COD有良好的去除效果, 出水的COD平均去除率能达到94%; TN和TP去除效果相对较差, 出水平均去除率分别为60%和57.4%。经硫磺填料反应柱的脱氮除磷作用, 系统出水TN去除率提高到84%, TP去除率提高到69.8%, COD去除率变化不大, 升高到95.3%。

英文摘要:

An integrated process, in which a sulfur-packed column for TN & TP further treatment was installed after an A²/O process and influent of a municipal sewage treatment plant was used, was applied to improve the incompetent denitrification and dephosphorization efficiencies. With effluent conventionally and periodically analyzed, the process ran continuously for 55 days after the quality of effluent had become stable. The results show that denitrification efficiency was largely improved by a sulfur-packed column, while COD removal efficiency practically staying the same. Mean COD removal efficiency of the effluent from improved A²/O process was 94%, with TN and TP removal efficiencies of 60%, 57.4%, respectively. Further processed by a sulfur-packed column, mean concentration of TN could be decreased with removal efficiency enhancing to 84%. Similarly, mean concentration of TP was decreased with removal efficiency enhancing to 69.8%. However, COD removal efficiency was scarcely enhanced to 95.3%.

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技术支持：北京勤云科技发展有限公司