



焦化废水生物处理工艺段 GCMS 分析及粉末活性炭吸附实验研究

任 源*, 张小璇, 肖俊霞, 韦朝海

华南理工大学环境科学与工程学院, 510641, 广州

E-mail: ceyren@scut.edu.cn

焦化废水是煤高温干馏、煤气净化、副产品回收与精制过程中产生的工业有机废水, 废水排放量大, 水质成分极其复杂。本研究采用气质联用仪检测了焦化废水 A/O/O 工艺各工段的主要成分, 分析了成分变化对生物处理过程的影响。针对调试过程中 COD 未达到一级标准及剩余污染物难以生物降解的现状, 进行了粉末活性炭吸附生物滤池出水实验, 酸性条件下 TOC 去除率可达到 66.7%。

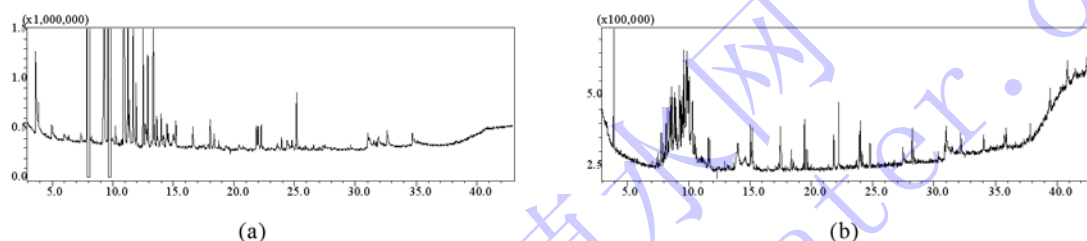


Fig.1 GCMS chromatogram of coking wastewater: (a) inflow; (b) outflow

关键词: 焦化废水; GCMS; 活性炭; 吸附。

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GCMS Analysis of Coking Wastewater and Adsorption of TOC by Powdered Activated Carbon

*Yuan Ren, Xiao-Xuan Zhang, Jun-Xia, Xiao, Chao-Hai Wei

College of Environmental Science and Engineering, South China University of Technology, 510641, Guangzhou

Coking wastewater is a complex organic wastewater generated in the coal coking, coal gas purification byproduct recovery and refinery processes of coke plants. The main compounds of anaerobic/aerobic/aerobic processes were analyzed by GCMS, many mono- and poly-cyclic nitrogen-containing aromatics, oxygen-containing heterocyclics and polynuclear aromatic hydrocarbons (PAHs) in the outflow were detected though the COD was lower than 200mg/L, these organic compounds are hardly biodegraded and an advanced treatment is needed. Powdered activated carbon was used to adsorb the residual PAHs. The TOC removal ratio is 66.7% when the pH was 3.85.

KEY WORDS: coking wastewater; GCMS; activated carbon; adsorption