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BIOTECHNOLOGY & BIOENGINEERING

SBR好氧污泥颗粒的脱氮性能研究

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摘要 The sequencing batch reactor（SBR）was started up by seeding the anaerobic granular sludge and the aerobic granular sludge was successfully cultivated. The performance characteristic of the aerobic granules for nitrogen removal was investigated in detail. The experimental results demonstrated the relationship between operational parameters [dissolved oxygen（DO）and pH] and variation of chemical oxygen demand（COD）, ammonium（NH4^+-N）and total nitrogen（TN）. In continuous flow pattern, COD was too low in the reactor at the later stage of a cycle, which restrained denitrification and decreased the removal of nitrogen, while in discontinuous flow pattern, the carbon source could be supplemented in time, which improved denitrification and increased the removal of TN from 66% to 81%.

关键词 污泥处理、好氧污泥颗粒、脱氮性能、SBR、即时碳源反应器、

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Performance Characteristics for Nitrogen Removal in SBR by Aerobic Granules

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Abstract The sequencing batch reactor（SBR） was started up by seeding the anaerobic granular sludge and the aerobic granular sludge was successfully cultivated. The performance characteristic of the aerobic granules for nitrogen removal was investigated in detail. The experimental results demonstrated the relationship between operational parameters [dissolved oxygen（DO） and pH] and variation of chemical oxygen demand（COD）, ammonium（NH4^+-N） and total nitrogen（TN）. In continuous flow pattern, COD was too low in the reactor at the later stage of a cycle, which restrained denitrification and decreased the removal of nitrogen, while in discontinuous flow pattern, the carbon source could be supplemented in time, which improved denitrification and increased the removal of TN from 66% to 81%.

Key words granulation of sludge; aerobic granular; denitrification; SBR;

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