Operation of MBR pilot plant–industrial wastewater treatment in Duslo Šaľa Inc.

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ABSTRACT

The aim of presented study is testing of pilot plant for industrial wastewater treatment by using of membrane bioreactor with submerged hollow fibre membranes. During the almost two years long operation the various operation statuses were studied and recorded. The chemical regeneration process was optimised and it was investigated, that important and integral part of chemical regeneration was acidous step. Presented tests pointed at significant quality improvement of treated wastewaters, above all values of organic compounds (chemical oxygen demand, biochemical oxygen demand) in compare with real WWTP in Duslo Šaľa a.s. After application of membrane separation also nitrogen removal was more effective, especially nitrification process.

Keywords: Industrial wastewater; Inhibition of nitrification; Membrane regeneration; Organic chemistry production; Permeability; Hollow-fibre membrane; Duslo a.s. Šaľa

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