

Eco-deinking of ONP by Using "Csrmp" Spent Liquor

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ABSTRACT

With the fibrous raw materials becoming scarce day by day there is increased ecological concern and conservation of raw materials through recycle, reutilization and reduction of industrial waste and end products are important. Recycling of waste paper and old news paper (ONP) not only save trees and minimize pollution, but also reduce the bio mass waste reduction. The De-inking process (DIP) saves 75% water, 60-70% energy, and reduce the pollution by 75% per tonne of pulp production. The de-inking of waste paper is normally carried out at alkaline conditions using surfactant, bleaching, de-inking and chelating agents.

In this work, attempt is made to utilize the spent liquor of CSRMP (cold soda refined mechanical pulp) which is a waste liquor containing residual alkali and was used for the de-inking of waste news paper. The de-inked pulp is then compared with de-inked pulp prepared using caustic soda, sodium silicate and other bleaching chemicals. It is observed that both de-inked attain similar mechanical and optical properties. The DIP effluent has however high BOD and COD, which is improving the potential of further bio-methanation in UASB (Up-flow anaerobic sludge blanket) reactor.