CASE STUDY OF OPTIMIZING THE PROCESS OF ZERO LIQUID DISCHARGE IN DISTILLERY INDUSTRY AT SATPUDA PLANT

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Abstract

Distillery spent-wash refers to the effluent generate from alcohol distilleries. On an average 8–15 L of effluent is generated for every litre of alcohol produced. The fermentation lasts about 80 h and the resultant product contains 6–8% alcohol. The technologies employed globally for its treatment and its alternative use in various biotechnological sectors. Followed by RO process and after These issues include membrane fouling studies and control techniques, membrane characterization methods as well as applications to different water types and constituents present in the feed water. A summary of the most important advances in RO performance and mechanism modelling is also presented and available transport models are introduced. Fertigation is an rising field for agricultural purpose because it applies water and fertilizer simultaneously. This paper shows a case study of Satpuda Sakhar Karkhana distillery industry a Nandurbar, Shahada, a complete distillery effluent plant study has been done with all major machines as CSTR-Continuous Stirred Tank Reactor, Reverse Osmosis Process plant with bi-composting unit. In this content industry is achieving zero liquid discharge and following the norms of pollution control board.

Keywords: CSTR, Reverse Osmosis Process, Bio-Composting