

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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(Academic Year 2013-14)

A Project Report on

“Removal of phenol by electrochemical oxidation technique to avoid contamination in the environment”

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING

IN

CHEMICAL ENGINEERING

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ABSTRACT

The aim of this study was to determine the effect of electrochemical oxidation technology using iron electrodes on phenol removal in aqueous solutions. The experiments were carried out in both batch and continuous process. The removal of phenol was investigated in terms of various parameters, namely, current density, phenol and NaCl concentration, pH. The results showed that the removal efficiency of phenol increased with increasing the current density, pH and NaCl concentration, whereas it was inversely associated with initial concentration of phenol. The maximum percentage removal of phenol obtained at NaCl = 2.0g and Ph = 7.0 is 95%. According to the results, electrochemical oxidation technique is a promising process for treatment of wastewater containing high concentration of phenol.