Treatment of phenol using anolyte solution generated from the stel system.

ABSTRACT

Anolyte solution generated from the STEL System has been used to treat an aqueous solution of phenol. It noticeably improved oxidation of phenol with a powerful oxidant such as ozone or hydrogen peroxide. Based on the result of the decreasing concentration of phenol and the increasing concentration of carbon dioxide, it was shown that the effect of the anolyte solution obtained. Parameters of study were phenol initial concentration, amount of anolyte, reaction time and pH. Original pH condition of the samples has indicated slightly effect to quantity and quality of the treatment. Up to 43% of phenol removal efficiency could be obtained for 6 hours of reaction time using 6 ml of the anolyte solution. Further addition of anolyte solution and extension of the reaction time, only gave a little decreasing effect to the concentration of phenol.

Keyword: Anolyte; Phenol; Degradation; Oxidation; STEL