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## Treatment of coke oven effluent by coagulation process

Rajkishore Chaudhary and Parmesh Kumar Chaudhari\*

Department of Chemical Engineering, National Institute of Technology, Raipur, India

**Abstract:** Coke oven effluent (COE) has been found to one of the highly polluted effluent. It contains high phenol, cyanide and chemical oxygen demand (COD). The effluent was treated by coagulation process using  $\text{FeCl}_3$ . Effect of pH and coagulant doze was studies on removal of COD. With  $\text{FeCl}_3$  coagulant 47.71%, 48.25%, 49.1%, 52.41%, 50.06%, and 50.08% COD reduction obtained at pH 4, 6, 8, 9, 10, 10.5 and 11, respectively. At optimum pH 9 and coagulant dosages 1.2, 2.4, 3.6 and 4.8  $\text{g/dm}^3$ , respectively, COD reductions were 36.21%, 52.14%, 56.37 and 52.41. Settling studies show good settability of solid residues.

**Keywords:** Coke oven effluent, coagulation, settling, chemical oxygen demand.

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