

Dębowski, M., Zieliński, M., Krzemieniewski, M. Efficiency of Sewage Sludge Conditioning with the Fenton's Method. *Ochrona Środowiska* 2008, Vol. 30, No. 2, pp. 43–47.

Abstract: The applicability of Fenton's method to the process of sewage sludge conditioning in the course of the dewatering procedure was examined on a laboratory scale. Raw sewage sludge was made subject to conditioning with inorganic coagulants and by the peroxidation technique (Fe(II)/H₂O₂, Fe(III)/H₂O₂). Analyses were performed to determine the time of capillary suction, specific resistance of filtration, and water content upon vacuum filtration. The values of these parameters were found to depend on the quantity of the inorganic coagulants applied. The propensity of the sewage sludge for dewatering increased with the iron salt dosage. The application of the Fenton's method to the conditioning process upgraded the properties of the sludge. In some instances, however, Fenton's peroxidation reaction appeared to be a less efficient method of sludge conditioning as compared to the one involving Fe(II) and Fe(III).

Keywords: Wastewater sludge, conditioning, Fenton's method, iron salts, advanced oxidation.