

## TYPES AND VALORIZATION OF SLUDGE GENERATED IN WATER TREATMENT PROCESSES

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### Abstract

**This paper is a study on the problem of sludge formation in water treatment processes. Various physical and chemical processes used in technological systems of water treatment were described and those which are the source of sludge were indicated. The chemical composition of the sludge was presented, with particular emphasis on hazardous organic and inorganic pollutants. An essential part of the work was to consider the possibilities and ways of valorizing sludge. It was determined that the type of generated sludge depends on the applied process and its pollution degree depends on the type and quality of the water taken. Most of the sludge is formed during the coagulation process of surface waters, which may be contaminated with various heavy metals. Among the possibilities and methods of sludge valorization, an interesting way to use it is in construction, as an admixture to various building materials. It is also possible to use sludge as an unconventional adsorbent or reaction catalyst in the oxidation of organic pollutants present in wastewater.**

**Keywords:** Water treatment, Sludge.