



Thermal sewage sludge utilization in Poland in the context of circular economy

Jurand D. Bień*, Beata Bień

*Czestochowa University of Technology, Faculty of Infrastructure and Environment, PL 42-200 Czestochowa, Poland,
emails: jurand.bien@pcz.pl (J.D. Bień), beata.bien@pcz.pl (B. Bień)*

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ABSTRACT

Adopting the idea of the circular economy, European Commission on 4 March 2019, delivered 54 actions in a form of a comprehensive report on the implementation of the Circular Economy Action Plan. These actions would lead to resource-efficient and environmentally friendly outcomes. In general, biological materials should be returned to the natural metabolic cycles after necessary pre-treatment while waste that cannot be prevented or recycled is to be used for energy recovery. Sewage sludge is a large-tonnage waste produced at wastewater treatment plants (WWTPs). Its utilization causes some problems. Among many different ways of sludge utilization, its thermal treatment has to be taken into account. During thermal treatment some hazardous substances in sewage sludge can be destroyed or removed, energy can be recovered and some nutrients can be obtained from ash or other by-products. According to the information from the Polish Central Statistical Office (GUS), in 2017 in Poland, 584.5 thousand tonnes of sewage sludge dry mass was produced at municipal WWTPs. More than 100 thousand tonnes of was subject to thermal processing. The paper presents the situation within Polish wastewater treatment plants in which thermal treatment has been activated in terms of preparation for the implementation of the rules resulting from the Circular Economy Action Plan.

Keywords: Sewage sludge; Thermal utilization; Circular economy; Poland

* Corresponding author.

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