

**P 6. DISPOSAL OF SEWAGE SLUDGE WASTES IN FLUIDIZED BED FURNACES: A
REVIEW**

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ABSTRACT: In this study, the disposal of the sewage sludge by fluidized bed combustor and the pollutant emissions in the combustion plants were evaluated. The content of the sludge, its disposal by combustion and properties of fluidized bed plants are discussed from an environmental matter of view. Combustion is a method of disposal that quite reduces the volume and mass of the sludges. Sludges are generally combusted together with domestic wastes, while they are used as combustible alone in indirect combustion or together with another combustible as raw materials. Nowadays, there are alternative technologies available for the disposal of sludge by combustion, and choosing the most suitable one requires an investigation. Also, the technology chosen must be environmentally friendly and economically feasible. Among these technologies, mono-combustion is the most rooted method and fluidized bed furnaces are more preferred. Because in fluidized bed furnaces both wet and semi-dried sludge can be combusted. The major apprehension the combustion of sludge is the release of gas and solid pollutants into the atmosphere. During high temperature combustion, the problems of ash removal and filtration of heavy metals can be solved or reduced, while the problem of heavy metals can supply strict emission limits using the latest combustion technologies. In addition, combustion of sludges in fluidized bed furnaces and producing electrical energy in this way can both solve the problem of sludge and contribute to the solution of problems such as the use of local resources in energy.

Keywords: *Sewage sludges, Combustion technologies, Fluidized bed combustion, Emissions.*