

Industrial Wastewater Sludge Treatment in Chongqing, China

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Abstract : Sludge originates from the process of treatment of wastewater. It is the byproduct of wastewater treatment containing concentrated heavy metals and poorly biodegradable trace organic compounds, as well as potentially pathogenic organisms (viruses, bacteria, etc.) which are usually difficult to treat or dispose of. China, like other countries, is no stranger to the challenges posed by an increase of wastewater. Treatment and disposal of sludge have been a problem for most cities in China. However, this problem has been exacerbated by other issues such as lack of technology, funding, and other factors. Suitable methods for such climatic conditions are still unavailable for modern cities in China. Against this background, this paper seeks to describe the methods used for treatment and disposal of sludge from industries and suggest a suitable method for treatment and disposal in Chongqing/China. From the research conducted, it was discovered that the highest treatment rate of sludge in Chongqing was 10.08%. The industrial waste piping system is not separated from the domestic system. Considering the proliferation of industry and urbanization, there is a likelihood that the production of sludge in Chongqing will increase. If the sludge produced is not properly managed, this may lead to adverse health and environmental effects. Disposal costs and methods for Chongqing were also included in this paper's analysis. Research showed that incineration is the most expensive method of sludge disposal in China/Chongqing. Subsequent research, therefore, considered optional alternatives such as composting. Composting represents a relatively cheap waste disposal method considering the vast population, current technology and economic conditions of Chongqing, as well as China at large.

Keywords : Chongqing/China, disposal, industrial, sludge, treatment

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