

# Sludge Microwave Dryer Machine



In recent years, the intensity of sewage treatment in China has been increasing year by year. Rapidly increasing sewage treatment requirements will produce a large number of biological sludge. How to deal with these sludge has become an urgent environmental problem in sewage treatment.

Sludge is a solid sediment produced in the process of sewage treatment. The pollutants contained in sludge generally have a high calorific value, but due to the large calorific value. The existence of moisture makes this part of calorific value unusable. If the sludge with high water content is incinerated, not only can it not get heat energy, but also need a large amount of fuel to complete combustion. After mechanical dewatering, the water content of sludge is about 80%, and its disposal is difficult and costly. Therefore, it is necessary to further dewatering sludge before incineration or landfill disposal. At present, sludge in developed countries is heated and dried.

It is becoming a more effective and environmentally friendly sludge treatment and disposal Method. The main ways of sludge drying are medium temperature zone, rotary disc and blade. The drying medium is hot air, steam or heat conducting oil, and the main heating mode is convection or conduction heating. New drying technologies and processes are emerging, such as pulsating combustion drying, superheated steam drying, microwave and radio frequency drying, impinging or jet drying and vacuum infrared drying. The characteristics of drying sludge

by oven combined with microwave were studied.



In environmental protection projects, the treatment of organic waste, such as kitchen or industrial wastewater, is usually carried out after some chemical treatment to neutralize, oxidize and reduce the chemical contaminants (such as detergents) contained therein. It is led to the sewage treatment tank, which uses the microorganisms in the pool to decompose the residual organic waste, removes the pollution, and leaves the decomposed sediment in the pool. These precipitates are generally referred to as sludge.



The existing sludge drying treatment method is to dry the air in a dryer by means of hot air blowing, as shown in Annex I . There are great defects in the way, and the defects in its use are explained as follows. First, this method can quickly dry the surface of the sludge, but the shape of the sludge is about the size of a baseball. The block body, so the water inside it is not easy to be excluded, therefore, the moisture content of the sludge can only be reduced from 90% to about 70% (500kg/hour). Some people have reduced the moisture content of the sludge by greatly extending the drying time, which not only increases the working time and space, but also increases the cost. Since the existing sludge dryer uses an oil machine to heat the air to achieve the effect of removing water, carbon dioxide (CO<sub>2</sub>), sulfur oxides (SOX), and nitrogen oxides (NOX) are generated during the heating process. ), suspended particles and other pollutants, resulting in secondary pollution to the environment.

[Microwave dryer machine](#) can reduce energy consumption, improve sludge drying efficiency, and improve the operating environment. The [sludge microwave dryer machine](#) effectively reduces the water content of the sludge, saves floor space and avoids secondary pollution.