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SOLAR and HYBRID SEWAGE SLUDGE DRYERS



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SOLAR and HYBRID SEWAGE SLUDGE DRYERS



The Ekotop Roman Sobczyk company offers solar and hybrid drying an ecological technology processing sewage sludge from waste water treatment plants.

Unlike the traditional dryers, it is possible to dry sludge using low-cost hybrid alternative energy sources such as heat from biogas combustion, waste heat utilization from treated sewage and also waste heat from cogenerator cooling and solar energy. This allows for drying of the sludge regardless of weather conditions.

Solar and hybrid sewage sludge drying installations consist of drying halls similar to green houses covered with polycarbonate or glass plates.

The main principles of drying operation is the solar effect and heating floor exploitation to water evaporation from sewage sludge.

Inside the drying hall sludge is transported, aerated, granulated and moved to the end of drying hall by turning sludge device.

The automatic ventilation system ensures and improves water evaporation and humidity removal outside the drying hall.

The drying technology causes wet sewage sludge to granulate during processing. After the solar and hybrid drying process the mass of sludge is significantly reduced.

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dr inż. Roman Sobczyk

This technology is one of the cheapest solutions for water evaporation. The evaporation of 1 tonne of water uses only 20-30 kWh electrical energy.

The final product – dried sludge takes the form of a granulate and could be agriculturally or energetically used. The calorific value is similar to brown coal 12 MJ / kg.

THE ADVANTAGES OF TECHNOLOGY

- ecological technology allows for drying of the sludge regardless of weather conditions and traditional sources of energy - fossil fuel
- the dryer could be an independent installation without providing conventional sources of energy
- cheap running costs
- full process automation, which does not require constant service
- over fourfold mass and volume reduction of dried sludge
- simplification of further dried sludge management
- biological and odour stabilization of dried sludge
- possibility of agricultural and energetic using of dried sludge

