

# THE PROBLEM OF UTILIZATION OF MUNICIPAL SEWAGE SLUDGE AND NEW ALTERNATIVE COMPLEX BIO- AND HEATTECHNOLOGY

**Kremnov Vyacheslav Olegovich, Belyaev G.V., Belyaeva I.P., Korbut N.S.**

*Institute of Engineering Thermophysics, NAS of Ukraine*

*тел. (044) 424 3285, e-mail: [kremnev@ukr.net](mailto:kremnev@ukr.net)*

**Purpose.** Creation of scientific and technological bases for the utilization of annual sludge formation of excess active sludge and unrefined crude sediment.

## **Results of exploration.**

In all, without exception, treatment facilities are practiced a systemic violation of the organization of the technological process - sewage sludge is not removed for several decades.

Silt platforms from technological structures of periodic action gradually turned into original burial grounds - man-made deposits.

This long-standing practice has led to a very tense situation.

On a project, after achievement of humidity sediment  $75 \div 85\%$ , he was taken from a Silt platforms in quality of fertilizer.

A few decades ago it was discovered that active sludge accumulated in its composition of heavy metals, which in the permitted concentrations are useful, and in surpluses have a negative impact. In developed countries, massively began to abandon silt platforms and resort to the practice of mechanical dehydration, drying and burning.

On all postradyanskomu space resorted to the simplest output – began to accumulate sludge on silt platforms, gradually converting them into the grave-diggers of ramshackle sludge.

In recent years, the world has begun a gradual return to the use of sludge as a component of organic fertilizers.

Gradually it became clear that the content of heavy metals is very variable and may vary in different settlements.

## **Conclusions.**

We propose the following alternative technical solutions.

1. Scenario 1 – is aimed at minimizing primary capital expenditures, namely biological fermentation (composting of sediments in the field, in conjunction with fillers, which represent local waste products - fallen leaves, wood chips, etc.) with application of introduction of liquid specialized bacterial preparations of domestic production.

2. Scenario 2 – is designed to utilize sludge by producing granular solid biofuels on their basis.