

MEMORANDUM

Sewage sludge integrated in environmental thermic disarming process, and heat exploitation, green stream turnout, phosphorus compound winning

 **BIOFIVE® Zrt.** as individuals has developed and financed a burning-disarming system built in sewage sludge technology with energetic exploitation on the site HU-3300 Eger, Kölyuk út 9841 hrsz. with its unique positive energy balance in Europe and its emission value under the specification of the law. **The heat capacity of the mobile boiler burning dry, wet or fermented sewage sludge (or RDF chips) on the spot integrated in technology is 1,6-2,4 MW which is sufficient for about 60-150.000 people. The air quality permit was issued on 24 February 2014, the waste management licence for disarming sewage sludge with burning was issued on 27 February 2014.** (reference number: 912-4/2014 és 38-15/2014, KÜJ: 103 076 900, KTJ: 102 388 166) Extract form the explanatory memorandum of the permits: **'The permit application was accompanied by the emission measurement test reports made of 4 different operational circumstances into account on 23 and 24 November 2013 by accredited laboratory of point source air emission marked P1 sewage sludge burning chimney. Based on measurement results emissions from air pollution point source marked P1 under for each of the four operating conditions limit.**

Quote from the opinion of Budapest University of Technology and Economics (www.bme.hu) Energy Engineering and System Department prepared at the request of Ministry of National Development (24 February, 2014): **'The equipment gives a solution for a very actual problem in our country. Instead of putting the whole quantity of sewage sludge to landfill waste it disarms it by burning in addition to the heat generated by energy use.**

The volume of ash remaining after burning is a fraction of the initial quantity of material, thus the landfill costs are reduced to a fraction. This is in line with the waste disposal to suppress intended to EU directives also. In fact disarming by burning is preferable to biogas production based anaerobic extension since residue after extension is slightly less than feed material, that is disposal costs are reduced only slightly in case of biogas extension.'

BIOFIVE Waste Facility®



The smoke is not visible!



The interlock conditions are insured!



Perfect burning!



'This is the future!' – Herr Untersteller, Minister, Baden-Württemberg

Technical results:

1. The perfect disarming of sewage sludge is realized – without human touch – in a manner that any wastewater technology can be integrated, at the point where waste is produced.
2. Thermic disarming and the energy gained from it can be utilized directly on the spot.
3. Materials from combustion products (e.g, phosphorus) can be sold.

Scientific background



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Gábor Garamszegi dr.