BIONIK
Filtersysteme GmbH

BIOFILTER EXHAUST AIR TREATMENT

Bioenergie und Rohstoffproduktions GmbH – St.Veit/Glan, Austria

Biogas Industry

www.abluftreinigung.at

Biofilter exhaust air treatment, Biogas Industry

In St.Veit/Glan, Carinthia, a self-contained biofilter system for one of Europe's largest biogas plants was erected. The plant is operated by NAWAROS Bioenergie und Rohstoffproduktions GmbH. 18.000 tons of renewable raw materials (silo corn) is processed annually in this biogas plant generating 8.000.000 kWh of electricity. This corresponds to the electricity consumption of approx. 4.000 4-person households. To eliminate odoriferous exhaust air, a container biofilter system has been installed. This exhaust air cleaning system frees up to 7.600 m³ of exhaust air from its odorants every hour. At the key emission points, for instance the acceptance point, the fermented residuals hall or the point of ammonia stripping, the untreated gas is removed by suction and conducted to a single-stage air scrubber – the exhaust air is moistened, brought to the required temperature and any soluble pollutants, such as ammonia, are pre-separated. In the actual biofilter, the pollutants are converted enzymatically by the micro-organisms contained in the biomass to non-odorous substances, such as carbon dioxide, water, oxygen, and nitrogen.

EXHAUST AIR DATA	
Controllable exhaust air amount	7.600 m³/h
Exhaust air temperature at exhaust points	+10 °C to +45 °C
Number of exhaust points (waste water hall and mush container)	10
BIOFILTER	
Number of biofilter containers	1 unit
Design	self-contained, pressure-tight
Extras	moisturing regulation
Degree of efficiency	90 %
MACHINERY	
Technical container	soundproofed, heat insulated
Exhaust air ventilator	infinitely variable via FU
Single-stage vapour scrubber	for conditioning of exhaust air

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