Continuously operating pilot-scale waste incinerator

System for thermal disposal of hazardous wastes

Catalyst testing unit in the Laboratory of air protection

Contact

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VSB TECHNICAL UNIVERSITY OF OSTRAVA | CENTRE FOR ENERGY AND ENVIRONMENTAL TECHNOLOGIES | INSTITUTE OF ENVIRONMENTAL TECHNOLOGY

... FROM FUNDAMENTAL TO APPLIED RESEARCH ...

IET history and present

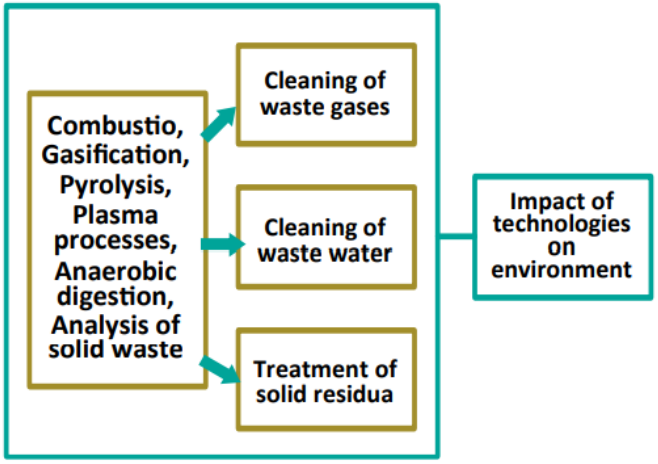
- **2004:** Establishment of the VŠB-TUO workplace called „Centre of Environmental Technology“.
- **Focus:** Basic and applied research in the field of energy recovery of waste in cooperation with industry; education of doctoral students.
- **2011–2013:** New research pavilion with financial support of project CZ.1.05/2.1.00/03.0100.

„Institute of Environmental Technology“,

Operational Program Research and Development for Innovation.

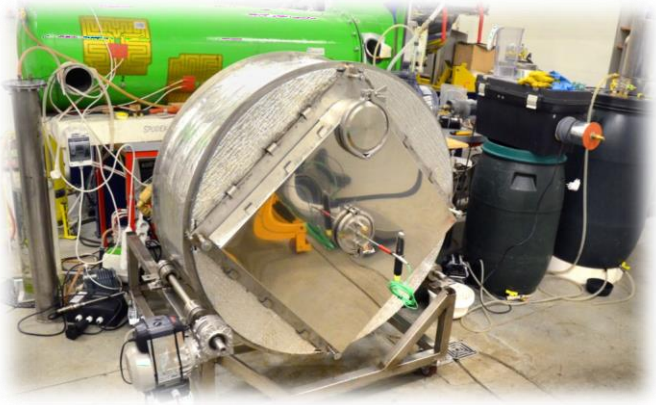
- **2014:** Obtaining of the status „University research center“ of the VŠB-TUO called „Institute of Environmental Technology“.
- **2020:** 82 employees, 5 of them are Ph.D. students, Specializations: Process Engineering, Thermal Engineering and Fuels, Environmental Protection, Analytical and Physical Chemistry, Organic Technology.

IET research topics



IET services

- **Energy recovery of waste** – pilot plant incinerator with continuous double-chamber combustion furnace with flue gas cleaning system and continuous flue gas monitoring; modular pyrolysis-plasma unit; pilot scale anaerobic reactors for wet and dry (co)fermentation.
- **Waste gases and air cleaning** - research devoted to the catalytic reduction of emissions e.g. N_2O, NOx, VOC, CO, NH_3 and VOC and other substances; adsorption; testing of various scale catalysts for gas phase reactions; photocatalytic purification of indoor and outdoor environments.
- **Waste water treatment**
- **Analytical services** – determination of physico-chemical properties of fuels and wastes; qualitative and quantitative analysis of gaseous and liquid mixtures and solids.
- **Mathematical modelling** – Modelling of pollutant spreading in the environment; emission-air pollution and noise modelling.
- **Environmental consulting (waste, air, energy).**
- **Chemical – engineering calculations, simulation and optimization of industrial processes, studies.**



Pilot-scale anaerobic bioreactor (fermenter)

Laboratories

Energy recovery of waste

- **Laboratory of waste incineration**
- **Laboratory of reduction and plasma processes**
- **Laboratory of anaerobic digestion**
- **Laboratory of waste and fuel analysis**

Laboratory of heterogeneous photocatalysis

Protection of air, water and the use of solid residues

- **Laboratory of air protection**
- **Laboratory of heterogeneous photocatalysis**
- **Laboratory of water**
- **Laboratory of nanostructured materials**
- **Laboratory of treatment of solid residua**