ODOUR REMOVAL &
AIR EMISSION TREATMENT

dekonta

Services & technologies
for a better environment

Have your neighbours complained about unpleasant odours emitted from your factory? Does your company discharge volatile organic compounds (VOCs) or inorganic compounds like ammonia (NH_3) and hydrogen sulphide (H_2S)? Does your plant comply with your national or European emission regulations? Or simply, would you like to improve the sustainability and environmental footprint of your business?

Proven solutions to air emission issues

Dekonta is an international supplier of air treatment systems.

Since 1992, we have adopted a policy of continuous development. Our R&D department has filed more than 50 patents, leading to many innovations in the field of the waste air treatment.

We are able to provide cost-efficient solutions for removing dust, volatile organic compounds and other organic and inorganic pollutants or their mixtures from waste air.

Applications:

Among our clients are medium-size to multinational companies in a variety of sectors like:

- Chemicals & polymers
- Waste Water Treatment
- MSW treatment & Composting
- Textiles & Composite
- Paints & Coatings
- Food & Beverage
- Flavourings & Tobacco
- Rendering & animal breeding
- Paper & Printing
- Pharmaceuticals & Cosmetics

BIOFILTERS

Biofiltration is filtration process where the pollutants are biodegraded. It is a widely used solution compared to the physical-chemical and chemical processes at the same efficiency. Unlike conventional technologies such as thermal and catalytic incineration, scrubbing or carbon adsorption, biofiltration is:

- Efficient (full degradation of complex mixtures of pollutants);
- Environmental friendly & safe (transforming pollutants into harmless products, waste-free and no combustion sources);
- Cost-effective (lower investment and operational costs).

DEKONTA's biofiltration technology has won the EU "Seal of Excellence" a quality label awarded by the EC. We provide a full package service:

- Design according to your site specific conditions (reinforced concrete, plastic or stainless steel containers);
- Pilot-scale tests at your site;
- Manufacturing, delivery, installation, maintenance & air emission monitoring;
- Supply of biobed (biofilter filling + biopreparate) to existing biofilters;
- Reconstruction of non-functioning biofilters.

WET SCRUBBERS

Packed bed wet scrubbers are commonly used to remove water soluble compounds and eliminate any particulates (PM) from the polluted gas stream. It consists of a chamber containing layers of variously-shaped packing material, to provide a large surface area for liquid-particle contact. A scrubbing liquid (in general water or a solution with chemicals according to the contaminants) is sprayed with nozzles on the packed material. Such system allows the continuous formation of scrubbing liquid droplets; thus, the liquid surface is incessantly regenerated. The polluted gas stream flows up to the chamber (counter current to the liquid) and the particulates and soluble gas molecules come in contact with the film of scrubbing liquid on the packing and then removed by either absorption or chemical reactions with the scrubbing liquid. The liquid recirculates in the system and it is removed only when it is saturated with pollutants.

We provide:

- Single stage or multi-stage scrubbers
- Customized settings
- Pilot-scale tests at your site
- Design, manufacturing, delivery, installation, maintenance & air emission monitoring

REGENERATION OF ACTIVATED CARBON FILTERS

If your company has installed granular activated carbon (GAC) filters for waste gases and odors treatment, we provide a containerized unit to regenerate when it should be normally disposed. Advantages are enormous:

- The reuse of the GAC cuts off the cost related to the disposal and its associated liabilities and the continuous purchase of new product.
- Approx. up to 95% of the previous adsorption capacity is achieved and the GAC can be regenerated many times.
- Thanks to this eco-friendly technology, less solid waste is produced..

The regeneration is carried out with superheated steam at temperatures up to 350 ° C. This allows a thermal desorption of the GAC without pyrolysis or combustion, therefore no burnout or opal GAC is produced and the porous surface area is not damaged, thus the performance of the regenerated GAC remains the same. Our system is able to treat 500 kg of GAC in a 8 hours shift! The unit consists of one 20' and a 40' containers.

To confirm the possibility to regenerate your GAC send us a sample. We will carry out a test and perform the determination of the iodine number according to the ASTM D4607-14. The iodine number is connected with the "activity" of the AC and it is widely used as a quality control parameter in production and reactivation of AC.

CATALYTIC OXIDIZERS

This technology is based on the decomposition of pollutants in the waste air at elevated temperatures with the help of a catalyst. In principle, this is similar to conventional combustion (thermal oxidation), with the difference that the application of an efficient catalyst makes it possible to reduce the required combustion temperature by hundreds of degrees Celsius, and thus saving an important amount energy.

Our catalytic oxidizers can be used to remove virtually any volatile or low volatile organic compounds (VOCs / SVOCs), including chlorinated or other hazardous derivatives in concentrations up to 10,000 ppm. We use special transition metal oxides that have a better price/performance ratio than noble metals, such as platinum or palladium, that are relatively expensive and sensitive to deactivation.

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