Installation:

The structures concerned use generalised, covered, and ventilated and operate in a slight vacuum in order to prevent the discharge of air to the outside. The final air is collected by an exhaust system before being sent on to a special treatment unit. The deodorisation shall take place in this unit.

Depending on the characteristics of the site concerned (ambient space, concentration of pollutants, fluctuations in the air etc.) the deodorisation process will employ biological techniques (Alizair®) and/or physical-chemical techniques (Aquilair®).

In both cases, the installation will be decomposed as a series of air flows to be treated, in fact, both methods are known for their ability to cope with a very broad range of air flows. They are therefore suitable for both small plants and large plants.

AQUILAIR®

- COMPACT
  - Modular and vertical design. Aquilair® is easily incorporated into a compact assembly and can be easily adapted to increase its capacity.

- FLEXIBLE
  - Regulation of the method by the by-pass® technique allows the adjustment of the volume required for each installation of the site, without affecting the quality of the treated air. Aquilair® can be adapted to cope with varying climatic events.

- AUTOMATIC
  - The whole installation is automated and therefore requires no particular maintenance.

ALIZAIR®

- BIOLOGICAL
  - Based on a biological process, Alizair® is a green method that operates with no chemical product. The only products necessary are the nutrients ones required for the installation.

- SIMPLIFIED
  - Alizair® is also characterised by its simplicity. In fact, one single piece of equipment makes all plants compact, thereby facilitating its installation and its operation.

- DEMONSTRATION
  - Demonstrations on the installation cost, Alizair® is also energy-saving.

OXYSURF® is a unique technique that combines the benefits of ALIZAIR® and OXYSURF®. The concentration of chlorine injected into the liquid water is determined in a special analysis system (package of Veolia Water Solutions & Technologies). This system continuously monitors the chlorine content of the liquid water. The overall quantity of reagent used is reduced, and the purification output is increased.
Odoar treatment

It is difficult to accept thattrapping, water filtration, or odour treatment stations, which help protect the environment, are necessary in a world where pollution, urbanization, and industrialization, especially when they are located in towers, in residential areas, or in small spaces.

For many years, Veolia Water Solutions & Technologies has developed and marketed various odour control solutions to help reduce the number of odour complaints and help maintain a pleasant environment.

Many years of research on the mechanisms and control of gaseous pollutants has enabled Veolia Water Solutions & Technologies to improve highly efficient odour control methods that are perfectly suited to the odour emissions produced by various industries.

These methods are now used in new installations from the design stage, but may also be easily added to existing installations.

AQUILAIR®

AQUILAIR® is a chemical deodorization method that consists of transforming the odorous gas molecules in a liquid phase.

The process is based on absorption of gaseous odour agents by water that has been pre-treated to improve the liquid-gaseous contact.

Depending on the nature of the compound to be eliminated, a neutralizing agent (acid or base) is added to the washing water in order to accelerate the liquid-gas transfer. The treatment’s effectiveness is the sum of the neutralization step, which contributes to the elimination of the transfer process and to the elimination of the odorous agents by modulating the absorbed molecules.

Main sources of odour nuisance induced by methanogenesis or the anaerobic treatment of wastewater (algae, fats, oils, etc.):

- hydrogen compounds [hydrogen sulfide (H2S), mercaptans, mercaptocarboxylates, etc.]
- nitrogenous compounds (ammonia, nitrates, nitrites, etc.)
- organic compounds (volatile fatty acids, acetone, etc.)
- cyclized compounds (alcohols, ketones, esters, etc.)

Performance

AQUILAIR® is used to treat highly concentrated gaseous effluents that can be up to 100 mg/m³ of odourating compounds.

This technique is very reliable and reaches a filtration efficiency of more than 95% governing the total absence of odour polution.

The characteristics of the liquid material (pH, specific surface, volume, height, etc.) are calculated to optimize the good liquid-gas contact time and transfer of the molecule.

ALIZAIR®

ALIZAIR® is a biological deodorizing system that employs the technique of biotreatment.

It consists of a biological elimination of the odorous molecules in a liquid medium, thanks to a microorganism that is mixed with a solid material that favor the microorganisms.

The biodegradation process requires three conditions, namely:

- the circulation of air inside the material, a constant humidity of the material, and the addition of nutritive elements (phosphates, iron compounds, etc.).

The support material used in the ALIZAIR® Biodeodorizer is a porous (porous glass, coarse, etc.) that is supplied as a prefabricated matrix allows the decomposition of materials that are to be biodegraded and this nature of the matrix is to be iodized.

- The specific weight is always 100% of the matrix is to be iodized and the nature of the matrix is to be iodized.

- Regular maintenance of the current of air allows a constant humidity to be maintained in the bed, which ensures necessary conditions for the microorganisms to develop.

- The biodegradation process (the matrix is iodized) is irreversible.

- The specific weight is increased in the base of the reaction is maintained or renewed at the head of the station.

Performance

ALIZAIR® is particularly well suited to the treatment of the gaseous effluents generally encountered in wastewater treatment and is able to cope with very large flows of air.

With its wide range of deodorization on site, Veolia Water Solutions & Technologies has endeavored to use of efficient material to alter the method so that it can be considerably improved.

The ALIZAIR® method can achieve very high filtration speeds (80 m/h) with purification charges that remain very low.