

ODOUR CONTROL TECHNOLOGIES



Many industrial and human activities give in general origin to odours that they often result troublesome for the employed operators and for the surrounding environment.

Sometimes, especially in chemical industry, odours are absorbed through quenching towers in which vents of reactors, barometric columns, security valves etc are absorbed with specific reactant solutions.

In many other industrial activities odours are not referable to single substances, but they derive from more complex fermentation or decomposition processes, and in this case, odours are the resultant of several factors involving physical and chemical parameters: Temperature, pH, Pressure, bacterial content etc

Then, while in the chemical activities the generation of odours is connected to the characteristic of the specific chemical product, in other activities as water treatment or mud dewatering, the manipulation of natural by-products (milk, meats, fish...), that notoriously can introduce remarkable problems of odours, the generation of the same is more referable to biological phenomena .

Organic substances degradation, because the high bacterial content leads to proteins breaking and the formation of more or less complex substances. Chemical analysis has brought to the determination of Mercaptans, Thio-aldehydes, Thio-ethers, Heterocycles Indolic or other simple mixtures, arising from Amines and Sulphides degradation.

The principal types of substances or techniques able to fight the problem of odours, are referable to:

MASKING PRODUCTS: in this case the presence in the formulation of a perfumed essential oil, mitigates the phenomenon of unpleasant odour, the perfumed component being predominant

CHEMICALLY REACTIVE PRODUCTS : in this case the formulation contains substances with slow or fast reactivity to react with the molecules responsible of the bad odours

ABSORBING SOLUTIONS : in this case the control of the odours is carried out by washing towers by mean nozzles sprinklers they allow an intimate contact among the flow of gas to treat and solutions of suitable chemical reagents (sulphuric acid, phosphoric acid or alkaline solutions)

BIOLOGICAL REACTORS : in this case, it's promoted the growth of bacterial mass suitable to develop a slow action of demolition of the odours when the flow of air or gas to be treated passes through beds of filtering constituted by peat or other material of support where bacterial masses proliferate

The adoption of a treatment anti-odour has to be evaluated case by case, trying to define the cause of the phenomenon, the speed of formation of the odour, the best formulation, the best product application and the possibility to appraise the result, the economic aspects etc.

INTECNA PROGRAM

INTECNA's product for odour control are specifically addressed to

wastewater treatment plants
sludge storages
food industry wastes storage
rubbish skip washing

In the photo is reported a typical installation to control odours arising from wastewater treatment plant.

Products are chemically reactive and meet the requirements of the following International Rules :

HYCOR SS 41

BGA	XLIV Section. III B2 XXXVI, Section C
FDA	175.105 – 176.170 – 176.180 – 177.2280
EINECS	203-474-9
CAS	107-22-22

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BGA	XV Section. I 2C
FDA	175.105 – 176.300 – 178.1010
EINECS	287-089-1
CAS	85409-22-9

Their mechanism of action is double. The active substance is able to react quickly with functional groups (- NR3) and (- SR) in such way it's neutralized the effect. Moreover, formulation contains natural terpenic oil that acts as antagonists on the odour phenomenon.

Very efficient results have been obtained by direct spraying of sludge or other wastes by means a spraying machine like in photo



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