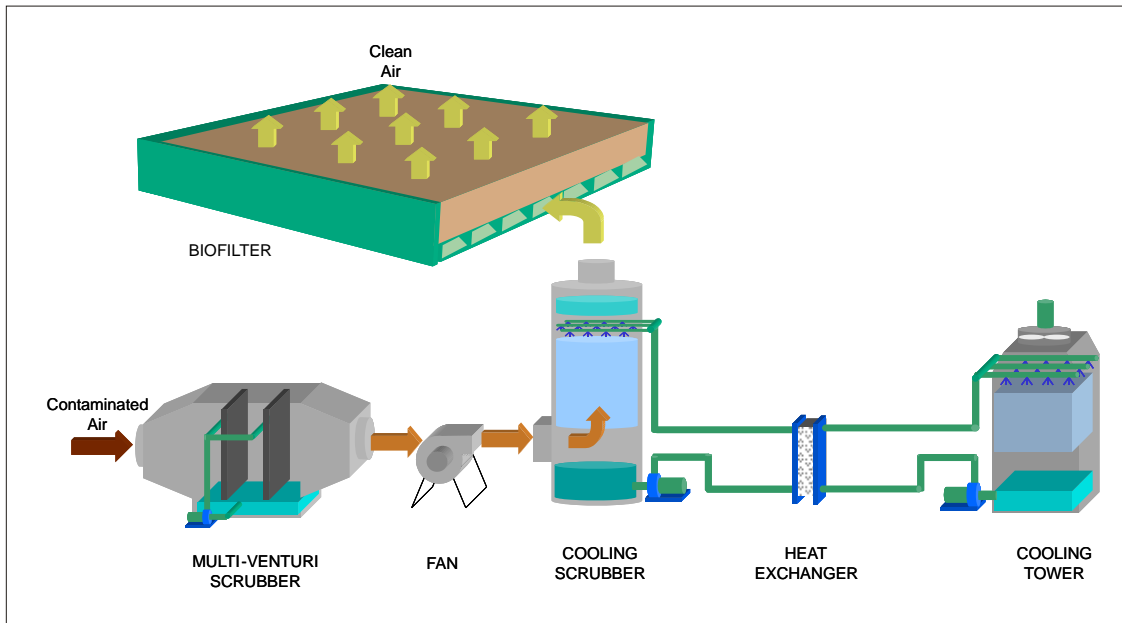


Clean Air...

Odour Control for the Tobacco Industry

Biofiltration



Flow diagram: Odour control for primary department

Exhaust from primary department is more and more a source which has to be treated before being ventilated into the atmosphere - even in industrial zones or in less densely populated areas. Moist and hot air carry a lot of odorous components and particles still noticed in long distances from the point of emission.

Especially for this problem Tholander Environmental Engineering have developed a multi-stage system consisting of a pre- scrubber system for dust removal by a **Multi Venturi Scrubber** followed by a **Cooling Scrubber** to reduce the temperature to below 40°C. These preconditioning units are followed by a highly efficient **biofilter**. With this plant configuration it is possible to reduce the odours with efficiencies up to 99%.

The air pollution control plant comprises six main components:

At first, the air is led through the **Multi Venturi Scrubber**. Here the gases are humidified, cooled down to the dew point and separated from dust.

After passing the **main fan**, sucking the air from the points of exhaust through the system, the air is led into the **cooling scrubber**. In this random packed counter-current scrubber the air is cooled down to a temperature of 35 - 40°C. The heat is transferred to the scrubbing liquid rinsing down from top of the column to the integrated water sump. Before the scrubbing liquid is circulated to the spraying nozzles it will pass a **heat exchanger**. Energy is transferred to the secondary circuit which is cooled by a **cooling tower** (air-cooled).

At last the exhaust gases are led into the **biofilter**. The air is spread in the distribution chamber and evenly allocated under the filter area. The gases stream slowly through the biologically active bed where the odours are decomposed into carbon dioxide and water by micro-organisms.