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**Catalytic oxidation plant for waste gas treatment following a desorption plant**

## Waste gas catalysis is gaining in importance in raw air treatment

Waste gas catalytic processing makes it possible to clean up contaminated areas which formerly used to be left polluted or whose cleanup proved to be too costly. Where the soil is contaminated with vinyl chloride, catalytic combustion plants are the only way to remove the pollutants.

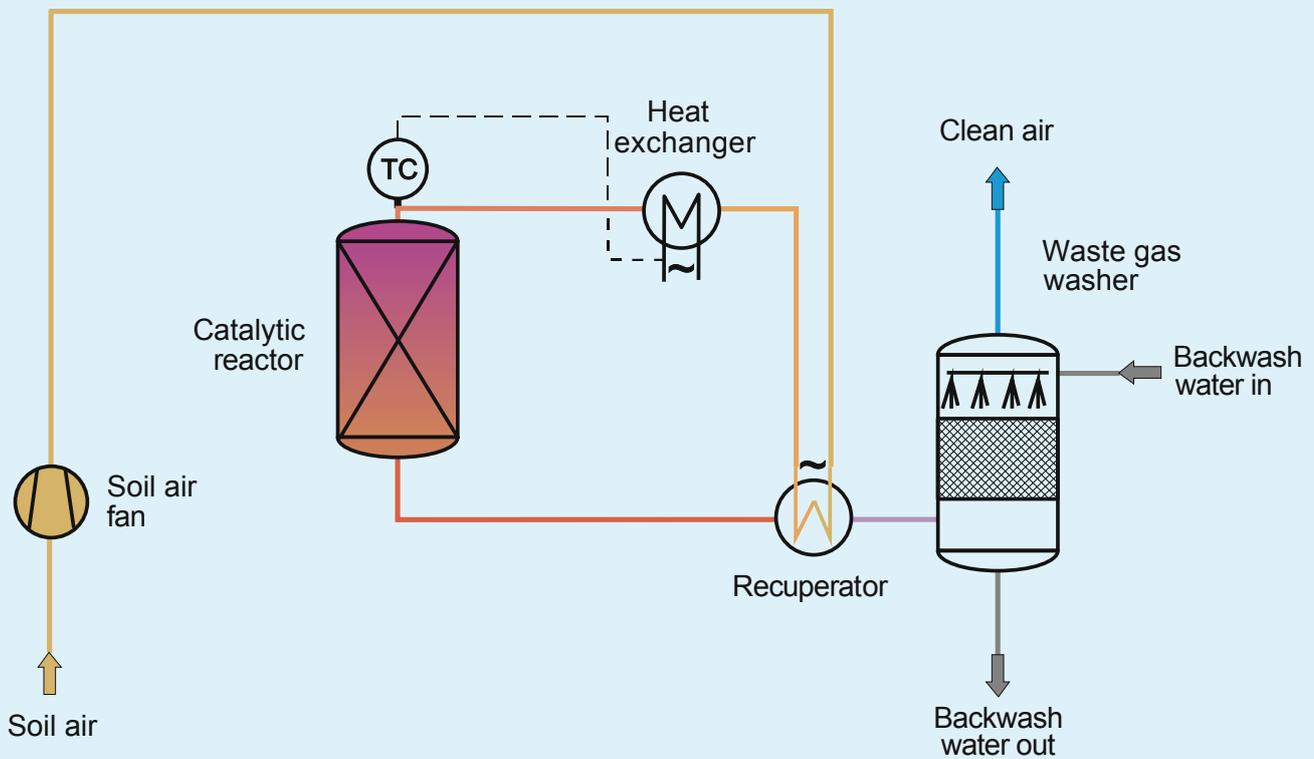
As a first step, the raw gas is preheated in a recuperator (air-air heat exchanger) before being heated up to the required reaction temperature by an electric heating or a gas burner. In the subsequent unit, the catalytic reactor, the pollutants are

subjected to oxidation which converts chlorinated hydrocarbons into water, carbon dioxide and hydrogen chloride. The reactions taking place are exothermic, i.e., they release heat which is recovered, fed back into the process and used for heating the raw gas.

Depending on the pollutant to be removed, catalytic combustion plants can be operated in an autothermic way, i.e., without the supply of energy, if the pollutant concentration exceeds 3 to 5 g per cubic meter raw gas.

### **Fields of application**

- benzene, toluene, xylene and similar substances (BTEX)
- chlorinated hydrocarbons, especially vinylchlorid
- fluorinated hydrocarbons



### Soil air exhaustion plus catalytic oxidation

There is no reason for the frequently voiced concern that catalytic combustion may produce dioxins by converting chlorine compounds. It has been found

that, provided the appropriate catalyst is used, no dioxin is formed at the temperatures which are typical of this reaction.

Our experience regarding the operation of catalytic waste gas processing plants has shown that these are highly reliable and efficient.

## Ideas for a clean environment

Groundwater and Lake Decontamination • Drinking Water and Process Water Treatment • Air Purification  
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