John Cockerill
Europe Environnement

Physical-chemical counter-current solution
Spraying Scrubber **LPV & LPH**

The spraying gas scrubber can treat air containing soluble pollutants via a physical-chemical method.

The gas is treated by spraying a scrubbing solution against the gas/liquid current.

The operating conditions of this process using chemical reagents are very flexible: batch processing, high flow rates, variation of load, etc.

This device is suitable for the surface treatment industry (e.g. galvanization, chrome plating and acid pickling lines) or the chemical industry according to the effluents to be treated and their concentrations.

WIDE VARIETY OF CONTAMINANTS TREATED
(NOT EXHAUSTIVE):

- cyanide compounds
- acids / bases
- phosphates
- chrome, etc.
- fluorinated compounds
- aldehydes and ketones
- mercaptans
- sulphur compounds
- etc.

Upstream of a biofilter, it can saturate gases with moisture.

Flows processed up to 130,000 m^3/h
efficiency greater than 99%

Constructed from PPH or HDPE
suitable for aggressive and corrosive compounds

Requires little maintenance
reliable and fully automated operation

Several possible choices
of sizes, materials, etc.

Low pressure loss

Various optional equipment
lined pumps, sloping bottom, finishing separator, etc.

LPV, Electroplating application

LPH (PVDF), Metallurgical application

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Operation

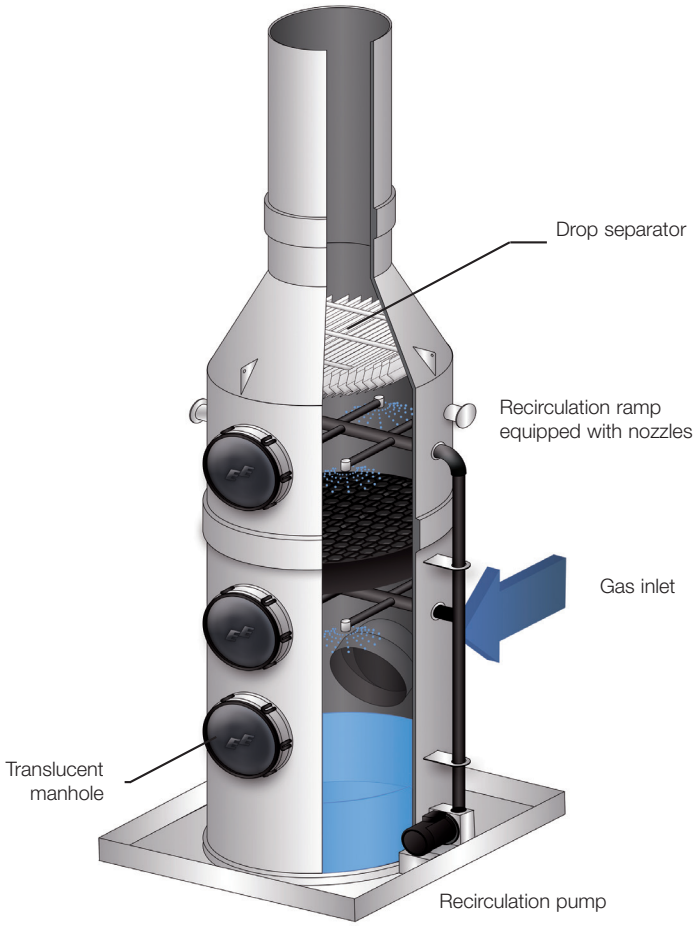
When pollutants pass against the current with the aqueous scrubbing solution, the pollutants are transferred from the gas phase to the liquid phase where they can be neutralized (acid-base or redox chemical reaction) by the reagent injection (soda, bleach, sulphuric acid, etc.).

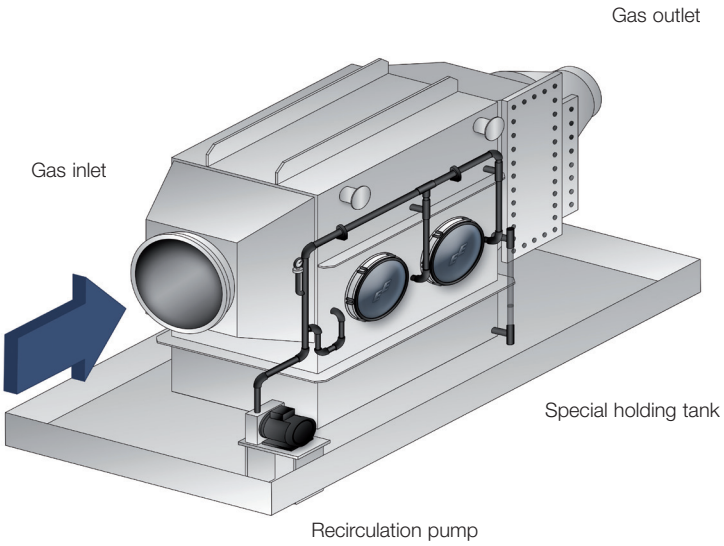
Unlike packed bed scrubbers, the liquid/gas contact surface created in the column of the scrubber is made up of a multiplicity of liquid droplets sprayed into the gas stream.

Spray nozzles, placed at the top of each cell of the scrubber, produce a mist of droplets to create an exchange surface between the liquid and the pollutants. These droplets meet the gaseous pollutant, thereby creating the liquid/gas interface.

Once the pollutants are dissolved, they are degraded and neutralized in the scrubbing liquid by chemical reagents. The liquid is then periodically deconcentrated then sent to the water treatment station.

- Vertical version (LRV): minimal footprint
- Horizontal version (LRH): reduced vertical space required





Standard range:
Full rectangular LPH range.

Other designs possibles, such as cylindrical LPH with a remote tank.

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