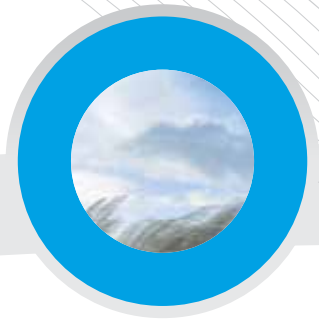




CMI ENVIRONMENT

AIR & GAS  
CMI Europe Environnement



Expert in the treatment of industrial chemical pollution:  
**harmful & corrosive gases in SURFACE TREATMENT**

CMI Europe Environnement makes available to you the highest performing technologies for controlling gaseous pollutants from your processes in numerous applications, such as:



ELECTROPLATING  
(AUTOMOTIVE, MEDICAL)



METALLURGY



ELECTRONICS



HOT DIP GALVANISATION



HARD CHROMIUM COATING



AERONAUTICS

The chemical and electro-chemical attacks on plastic and metal surfaces modify the properties of the treated parts, and also generate different types of gaseous pollution: our job is **to define and set up the optimal treatment solution** in line with your requirements and those of the regulations in force.

Thanks to its **know-how** and **technological skills**, CMI Europe Environnement helps to:

- Protect the operators on site
- Control your gaseous rejects
- Preserve your working environment: buildings and equipment
- Enhance your image among local residents and clients

AUDIT

TREATMENT  
SOLUTION DESIGN

MANUFACTURE

INSTALLATION

COMMISSIONING

MAINTENANCE  
& AFTER-SALES  
SERVICING



## EXAMPLE OF A RECURRENT CHALLENGE IN ELECTROPLATING FOR THE AERONAUTICS / AUTOMOTIVE SECTOR

- Treatment of vapours and aerosols from soaking baths (degreasing, sweating, polishing, flowing, passivization, deposits, conversion, etc.)
- Ambient temperatures up to 80°C
- Pollutants: HF, HNO<sub>3</sub>, NO<sub>x</sub>, HCl, NaOH, Cr(III), Cr(VI), CN...

## EXAMPLE OF A TYPICAL SOLUTION



## CLIENT'S PROCESS: SURFACE TREATMENT FOR THE MANUFACTURE OF HELICOPTER PARTS (FRANCE)

- Pollutants: Chromium and alkaline acids emitted by the bichromate plugging, degreasing, sulpho-chromic aluminium pickling, sulpho-nitro-ferric (SNF<sub>3</sub>) bath, and anodic chromic and sulphuric oxidation baths
- Airflow: 27 000 m<sup>3</sup>/h at 50°C

### OUR SOLUTION

- Droplets separator with blades and ducting elements
- Spraying gas scrubber with automatic regulation of the washing solution, made up of sodium water

### PERFORMANCE:

- > 99% ON THE CHROMIUM
- > 90% ON THE ALKALINE

## EXAMPLE OF RECURRENT CHALLENGE IN ELECTRONICS

- Treatment of gas arising from attack processes and deposits on electronic parts (vacuum extraction on machines and clean rooms...)
- Pollutants: HF, HNO<sub>3</sub>, NO<sub>x</sub>, HCl, NH<sub>3</sub>, SiF<sub>4</sub>

## EXAMPLE OF A TYPICAL SOLUTION



## CLIENT'S PROCESS: CHEMICAL ATTACKS FOR THE MANUFACTURE OF PHOTOVOLTAIC CELLS (SICILY)

- Pollutants:
  - HF : 250 mg/m<sup>3</sup>
  - NO<sub>x</sub> : 150 mg/m<sup>3</sup>
  - CO<sub>2</sub> : 670 mg/m<sup>3</sup>
  - SiF<sub>4</sub> : 354 mg/m<sup>3</sup>
- Airflow: 69 000 m<sup>3</sup>/h per line (x2)
- Temperature: 130°C

### OUR SOLUTION

- Quench Venturi to manage dust and temperature
- Spraying and packing scrubbers with automatic pH regulation
- Network pipes and radial droplet separators

### PERFORMANCE: > 98%