

#### COMPANY VALUES:

- Our commitment to the customer
- New technologies development linking to environmental protection and energy optimization.
- R+D as growing engine. Search for being ahead of changes in technology exigencies, efficiency increase, environmental impact minimization and maximum industrial safety.
- Continuous improvement works, developing more efficient and profitable installations.
- Versatility and dynamism.
- Communication and dissemination of our work philosophy.

#### PASSION FOR NEW MARKETS OPENING



## GAS TREATMENT

# PRÜDESA

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## PRÜDESA



## GAS TREATMENT

### 1 TURN KEY PLANTS

PRODESA is specialized in the treatment of volatile organic compounds (VOCs) by different technologies. That allows us providing specific solutions to the needs of each client, and finding a perfect balance between investment and efficiency of their facilities.

### 2 WORK LINES

- Supply of turn key plants.
- Feasibility analysis and assessment for each application.
- Detailed and process engineering.
- Operation tests and Start up.
- Technical assistance and programmed maintenance.
- Plants revamping and optimization of the plant's efficiency.

### 3 EMISSIONS TREATMENT

#### • **Recuperative thermal oxidation:**

These plants allow the energy recovery from the thermal oxidation of VOCs, through heat exchangers, heating battery, steam boilers or thermal fluid.

It's a technology suitable for any kind of fuels, organic compounds and waste liquids.

It allows working with high VOCs concentrations, even in explosive conditions, while it ensures optimum levels of VOCs destruction, with constant emission levels.

#### • **Regenerative thermal oxidation (RTO):**

It is suitable for low VOCs concentrations. The high efficiency of the heat exchangers installed, optimizes the energy consumptions, and allows operating the plant without auxiliary fuel according to the VOCs concentration.

PRODESA offers solutions of two towers RTO (with low VOCs concentration) or three towers with heat dissipation devices. For high flows, we offer RTO with five towers or more.

#### • **Catalytic recuperative and regenerative oxidation:**

We use a specific catalyst for each application, reducing significantly the energy activation of the oxidation reactions.

Additionally, the energy consumption is reduced by using heat exchangers or the use of ceramic materials.

#### • **Solvent recovery with activated carbon:**

This technology is based on the activated carbon properties, which allow adsorbing the greatest part of the organic compounds and subsequently extract them.

Our adsorption plants are regenerated with steam or nitrogen, and are equipped with steam consumption reduction (economizer), liquid treatment and distillation columns, to obtain high purity solvent.

#### • **Rotoconcentrator with zeolites or activated carbon:**

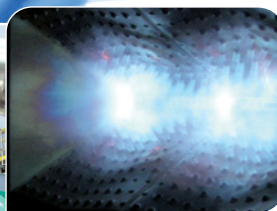
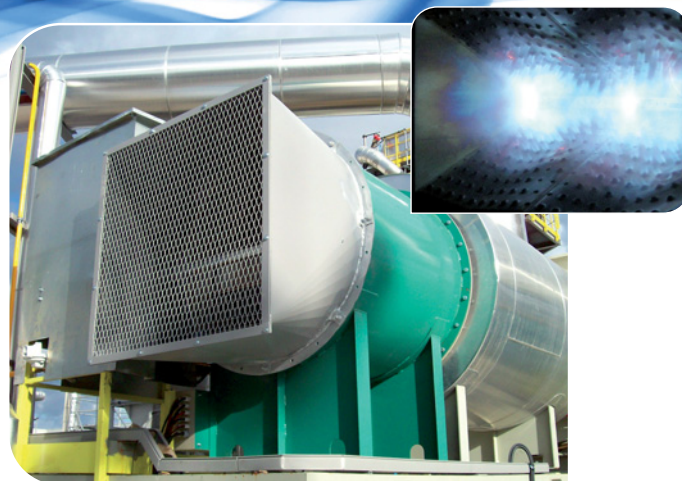
PRODESA integrates concentration systems, which consist of a rotator drum, where the VOCs are kept on the adsorbent material and come out purified to the atmosphere. In order to regenerate the zeolite, a low warm air flow circulates through it. This air contains a high VOC concentration and is sent to a thermal or catalytic oxidation with low operational costs.

### 4 OTHER PRODUCTS AND SERVICES

- De NOx catalytic systems.
- Gas washing, in neutralization process and particles removal (ecowash).
- Waste liquids recovery.
- Energy recovery systems.
- Automation systems and remote supervision.

### 5 MAIN SECTORS

- Chemical industry.
- Pharmaceutical industry.
- Paints, varnish, inks and adhesives.
- Surface treatments.
- Automotive and components industry.
- Graphic and printing industry.
- Food industry.
- Drying process.
- Waste treatment.
- Printing industry.
- Biogas process.



PRODESA