

## Emissions Treatment for Tank Storage

Optimize your environmental management with customised solutions for your facilities.



Your emissions and  
waste problems are  
no longer problems.





## We are specialists and we cover the entire spectrum of tank storage emissions treatment operations.

Put your trust in us, we take responsibility for each one of them.

- **Loading and unloading - take a load off**

The operations of filling and emptying tanks cause emissions whose origin is in the variation of liquid level and the expansion of vapors.

- **Storage (breathing): many solutions fit**

Changes in ambient temperature and pressure cause expansion and compression within the tank, resulting in the expulsion of polluting vapors. These are the so-called respiratory losses, vapors that become fugitive emissions.

In fixed roof tanks: the emptier they are, the more vapors and polluting emissions.

In floating roof tanks: they can leak through rim seals, fittings and deck seams, etc.

- **Transport, cleaning and blanketing of tanks**

During transportation, leaks may occur in equipment such as open and closed surface pipes or underground pipes; valves and fittings, loading arms for connection to boats, pumps to move the product through conduits, vent holes, etc.

During cleaning, vapors are generated by forced ventilation, a moment in which emissions exhaust from the tank.

During the previous and obligatory process for the repair or lowering of the tanks, blanketing, emissions leaks occur.

# Tecam solutions for the Tank Storage sector

Dedicated professionals specialized in environmental technology will be in charge of your project, applying cutting-edge technology, adapting to your security protocols and focusing on your satisfaction as a customer.

Regardless of the content, characteristics of the tank (colour, fixed roof, floating roof, etc.) or the type of loss produced: permanent losses (breathing / standing losses), work losses (working losses), Tecam provides customized solutions in every situation and in every project.

Count on us. We are trained to manage your environmental problems in any of its variants and flows. We provide first-class solutions that cover the entire spectrum.

## At Tecam we are specialists in the treatment and elimination of:

- Volatile Organic Compounds (VOC)
- CO
- SO<sub>x</sub>
- NO<sub>x</sub>
- MVP2
- PM10
- HCL
- Chlorinated hydrocarbons
- Waste gases without oxygen
- Wet and corrosive waste gases
- Odours
- Halogen particles and aerosols
- Hydrocarbons and carbon monoxide
- Dioxins and furans
- Particles and alkaline compounds



# Specific solutions

## Regenerative Thermal Oxidation (RTO)

Versatility and efficiency.

We have extensive experience in the most widespread technique for the reduction of emissions of Volatile Organic Compounds (VOC) and the most suitable for a wide variety of solvents and processes.

WE OFFER YOU A CUSTOM DESIGN FOR:

- Wide range of air flows with variable incidence
- Variable VOC concentration rates
- Preferred solution regardless of ventilation characterization

TECHNOLOGICAL ADVANTAGES:

- Adaptable for low, medium and large air flows
- Wide range of pollutants to be treated
- Low operation and maintenance costs
- High thermal efficiency
- Does not generate any waste
- Possible heat recovery for plant processes use

OUR GUARANTEE:

- Thermal efficiencies of up to 97 % for the lowest fuel consumption
- 99.9 % removal of VOCs

# Special designs

At Tecam we carry out R&D projects with our customers, aimed at satisfying their specific needs.

We seek the best technological solution for your specific case, designing unique products that are adapted to the specific needs and requirements of your project and that comply with the most demanding environmental regulations.

Design and installation of specific RTOs for:

- Tankers in navigation
- Offshore oil installations

## VRU + RTO integrated equipment

We combine a Vapor Recovery Unit (VRU) plus an RTO (Regenerative Thermal Oxidation) solution, an effective response with significant cost savings.

The integration of VRU and RTO equipment achieves product recovery (through adsorption, absorption, membrane separation and condensation) and the elimination of pollutant emissions in a single installation that works in a coordinated way, thus making it simpler and more efficient.

## Koole case study

**More than 52 tons of VOC treated and not emitted into the atmosphere.**

Koole Tankstorage Minerals needed to eliminate the high emissions of polluting vapors (VOC, CO, SOx, NOx, MVP2 and PM10) produced during storage and unloading of ships for tank filling in the port of Rotterdam, The Netherlands.

After analysing their case, a customised Tecam RTO solution was implemented, taking into account the volume and nature of the gases emitted, reducing 99.9 % of pollutant emissions.



# Tecam, your specialist in environmental projects

Custom-made solutions for industrial sectors with great needs in environmental treatment.

Specialists. From concept to complete solution.

- We are an environmental technology company specialised in large industrial companies.
- We focus on the development of custom-made solutions for the emissions and waste treatment.
- We design and implement projects aimed at minimizing the environmental footprint, always looking for customised solutions, with flexibility to adapt to your operations and work rhythms.



We look out for the environment, we look out for you.

- Our way of working is based on long-term cooperation, with an open mind, providing advanced solutions for every need.
- Our commitment is to be a partner that provides you with tools and services that make you less polluting and more profitable through the efficient use of resources.
- We design, manufacture and supply technology that combines maximum environmental efficiency and resource optimization to improve process productivity.
- We operate in the most competitive way for you, depending on the type of the project: Build Operation Transfer (BOT), Consortium, Join Venture, Supplier; whatever your company needs.

