

Air Clean



**Environmental
rehabilitation plants**
Air treatment



AIR S.R.L.
CLEAN

Applications and areas of intervention

Municipal and industrial



1 TREATMENT OF GASEOUS EMISSIONS PRODUCED BY THE MUNICIPAL WASTE WATER TREATMENT PLANTS

- Removal of odour and acidic gases produced by the wastewater treatment plants using biological technologies, chemical scrubbing and activated carbon systems
- Noise attenuation for blowers buildings
- Removal of odour and acidic gases produced by the wastewater pumping stations using biological technologies, chemical scrubbing and activated carbon systems
- Air treatment systems (dust removal, odour removal, heat recovery) for sludge drying plants
- Biogas purification by using chemical scrubbers and catalysts for hydrogen sulfide removal
- Biogas purification (removal of H₂S) by biological cleaning

2 TREATMENT OF GASEOUS EMISSIONS PRODUCED BY THE INDUSTRIAL WASTE WATER TREATMENT PLANTS

- Removal of acidic gases produced by wastewaters in tannery industry using chemical scrubbers and biotrickling filters
- Removal of BTX produced by wastewater treatment plants in the petrochemical industry by means of scrubbers and biotrickling filters
- Treatment of waste gases produced by the food and dairy industries using biotrickling filters
- Abatement of gases generated by the industrial wastewater treatment plants using chemical scrubbers, activated carbon systems and biological techniques
- Biogas purification (removal of H₂S) by biological cleaning

3 TREATMENT OF GASEOUS EMISSIONS PRODUCED BY THE MUNICIPAL SOLID WASTE TREATMENT PLANTS

- Odour, ammonia and VOC removal in the municipal wastes composting and sorting plants by means of chemical scrubbers and biofilters
- Dust removal in municipal wastes sorting plants using dry technologies (cyclones, bag filters, pneumatic transport) and wet systems (Venturi scrubbers and floating beds scrubbers)
- Removal of dust, acidic gases and VOC produced by municipal wastes incineration/energy by waste plants using bags filters and chemical scrubbers
- Odor removal in the municipal solid wastes incineration arrival pits using activated carbon systems

- Removal of methane and odours produced from landfill in depletion using biofilters
- Biogas purification (removal of H₂S and siloxane) for cogeneration and bio methane production

AEROBIC FERMENTATION SYSTEMS FOR THE MUNICIPAL SOLID WASTE TREATMENT PLANTS

- Design and construction of solid waste aeration systems
- Design and construction of biocells

TREATMENT OF GASEOUS EMISSIONS PRODUCED BY THE INDUSTRIAL WASTE TREATMENT PLANTS

- Odor, ammonia and VOC removal in the solid wastes treatment plants by means of scrubbers and biofilters
- Removal of odour generated by industrial sludges processing plants using biotrickling filters
- Removal of organic compounds produced by the paint barrels disposal using activated carbon systems
- Removal of odour generated by hospital wastes treatment plants

6 TREATMENT OF GASEOUS EMISSIONS PRODUCED BY THE FOOD INDUSTRY AND ITS WASTES TREATMENT

- Odour and dust removal in the energy production plants that are based on agricultural biomass anaerobic digestion
- Treatment of dust, odour, acid gases and VOC generated by the energy production plants that are based on biomass incineration or gasification
- Treatment of odour, VOC and ammonia generated by the rendering industry (animal and fish wastes processing for meals production)
- Odour removal from the food industry by air extraction plants and dispersion through a stack
- Removal of odour produced in oil processing industry
- Removal of odours generated in animal breeding
- Aspiration, removal and recovery of sugar, cereals, animal food and marine salt dusts



DUST REMOVAL PLANTS FOR GLASS, BRICK, GYPSUM, AGGREGATES AND ASPHALT INDUSTRIES

- Abatement of the gaseous emissions generated by the asphalt production and processing industry using chemical scrubbers and biofilters
- Dust removal in the bricks and concrete production factories using dry filters
- Removal of odour and VOC produced by drying furnace installed in the bricks factories using scrubber and biofilters
- Removal of dust generated during the refractory bricks production
- Centralized systems pneumatic cleaning

8 ASPIRATION AND TREATMENT PLANTS FOR DUSTS AND FUMES PRODUCED IN FOUNDRIES, STEEL INDUSTRY, FAUCETS AND FITTINGS FACTORIES AND MECHANICAL INDUSTRIES

- Aspirations and treatment of fumes produced in the induction furnace, cooling houses, casting machines, cores forming machines
- Aspiration and removal of dusts and oily vapours generated by machine tools (cutting-off machines, grinding machines, finishing machines, grinder, lathes)
- Plants for the aspiration and treatment of oily fumes produced by the steel and mechanical industries
- Construction of blowing system for metallic profiles drying
- Plants for the aspiration of welding fumes
- Centralized systems pneumatic cleaning

- Special plants
- Construction of profiles drying systems in the iron and steel industries
- Construction of booths for handling spillable and dusty materials (pesticides)
- Air conditioning plants for olfactometric laboratories
- Construction of noise attenuator booths for blowers
- Cooling systems for industrial processes and electrical switchboards rooms (heat exchanger, air conditioners, forced ventilation)
- Pneumatic transport systems for the paper industry
- Forced ventilation systems for underground car parking

- Environmental consultancy
- Feasibility studies for air emissions treatment systems
- Environmental impact studies using air dispersion models
- Odour measurements by dynamic olfactometry
- Pilot plants

TREATMENT OF GASEOUS EMISSIONS FROM SURFACE TREATMENT PROCESSES

- Removal of organic solvents used in the print and/or painting processes using activated carbon, scrubbers, biofilters and biotrickling filters
- Dust and pigments removal from painting booths
- Aspiration of fumes produced in the galvanisation plants

10 TREATMENT OF GASEOUS EMISSIONS IN INDUSTRIAL PROCESSES

- Removal of Styrene produced by fiberglass production and/or processing factories using scrubber and latest generation of biofilters
- Removal of formaldehyde and VOC produced in the plastic processing industry by means of scrubbers and biotrickling filters
- Aspiration of fumes produced in plastic drawplate processes
- Abatement of hydrogen sulfide and reduced sulfur compounds in the paper industries by biological and chemical systems
- Removal of dust and odours produced in the pharmaceutical and cosmetic industry, including absolute filtration for white rooms
- Removal of metallic dusts produced in the printed circuits production industries
- Removal of dusts and odours generated in the fertilizer production industry
- Removal and recovery of chips in the wood manufacturing industry



Air Clean plants worldwide

Air treatment plants

Over 1000 Air Clean plants worldwide

Australia 1	Italy 350	Spain 12
Canada 2	Jordan 4	Sweden 1
China 3	Korea 2	Thailand 1
Croatia 2	Malta 2	Tunisia 2
Egypt 5	Myanmar 1	Turkey 3
France 30	Oman 1	United Arab Emirates 5
Greece 5	Poland 1	UK 350
India 1	Qatar 1	Ukraine 1
Indonesia 1	Russia 6	USA 20
Iraq 5	Saudi Arabia 15	
Ireland 120	Slovenia 1	

USA 20 Plants, built by Bord na Móna using MónaShell® technology

California 2	Maryland 1	South Carolina 2
Connecticut 1	Maine 1	Texas 2
Florida 1	North Carolina 3	Utah 1
Georgia 2	Ohio 1	
Indiana 2	Rhode Island 1	



Technology utilized singularly or in combination

Biological Systems (for air treatment)

- Biofilters
- Biotrickling
- Bioscrubber

1

Absorbers (washing towers)

- Chemical washing towers
- Humidifiers
- Stripping towers
- Direct air to water heat exchangers
- Chemical scrubber

2

Adsorbers (air depuration by activated carbon)

- Activated carbon for solvents removal
- Impregnated activated carbons for acid gases
- Renewable (on site) activated carbon
- Activated alumina

3

Wet dust removal systems

- Floating bed water scrubbers
- Venturi scrubbers

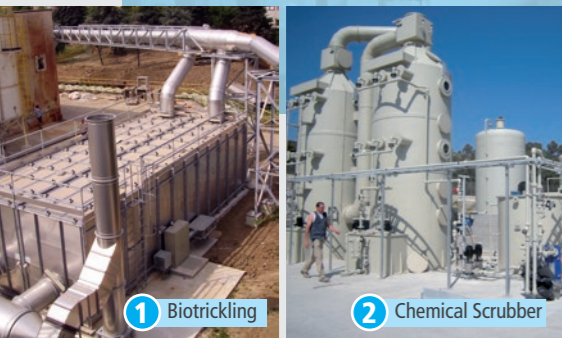
Dry dust removal systems

- Cyclons
- Cartridge filters
- Bag filters
- Sleeve filters

5

Composting plants

- Aerated floors for biostabilisation
- Biocells



1 Biotrickling

2 Chemical Scrubber

- Industrial ventilation
- Air extraction filters
- Air condition filters
- Heat recovery systems
- Silencers - Soundproof cabins
- Special plants
- Cooling systems for steel profiles
- Booths for the safe operation on dangerous products



3 Activated carbon



5 Bag filters



Biofilters



The Company

Air Clean is a specialized company in environmental rehabilitation of air, water and waste treatment. With its thirty-years experience, Air Clean operates worldwide in the area of complete air treatment plants installations.

Fully workability and autonomy

- Specialized technicians visit to the site for survey and study.
- Projects design by in-house engineering division.
- Full realization plant by in-house laboratory division.
- Delivering and installation by specialized staff.

Research and development kept on

- Environmental monitoring and pilot plants.
- Presence in major trade shows and conventions.
- Partnership with a University Research Centre.
- Exclusive distribution of MonaFil®, Monashell® and CrumRubber™ biological proprietary systems, developed by Bord na Móna.

Full customization of plants starting from the design stage as well as at the manufacturing stage allowing Air Clean to offer unique competitive solution with high quality products. Access to the latest consolidated technologies and continuous research process allows us to provide the best solution for every application.



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