环境保护工程专家
process
流程技术·气体处理
From its foundation in 1957, the innovation has been a priority objective in TECNIUM. Also we have always been pioneers in the development of techniques and applications in the field of Gas Treatment, from 60's to the present time. Some examples:

1966 Gas Washing Plants
1967 Polyester Fans
1969 Multiventuri Scrubbers
1973 Mist Eliminators
1979 PVDF and PET equipment build-up
1991 Odour Removal with Ozone
1993 Polyester Covers
1995 Biological Gas Treatment
1997 Dry system chemical absorption
1998 VOC elimination
2000 Regenerative Thermal Oxidation
2003 Installations for classified zones ATEX 94/9/EC

TECNrium 公司自1957年成立以来，一直以创新为宗旨。因此，从60年代至今，我们在气体处理技术的应用和创新方面一直是行业先锋。
Founded on 1957 in Barcelona, with nearly 50 years of experience, TECNIUM has always been a pioneering company and leader in solving problems of the industry related to corrosion and atmospheric pollution. TECNIUM guarantees the protection of the environment controlling the atmospheric pollution originated by industrial processes.

TECNIUM 公司于1957年成立于西班牙巴塞罗那，在处理工业相关的腐蚀问题和大气污染方面有着50多年的丰富经验。TECNIUM 用先进的工艺来控制工业流程产生的大气污染。
Thanks to the specialized R+D department, composed of a team of top-level engineers and technicians and thanks to the continuous collaboration with several Universities, TECNIUM offers to the industrial world applications and solutions of advanced design and high performance.

Consulting and testing

TECNIUM Process also offers to its clients a consulting and testing service, providing studies and simulations, reports for subsidies and even some pilot modular plants to perform tests in real conditions.

TECNIUM 过程部门可以为客户提供技术咨询或测试服务，也可以根据用户要求，提供模拟实际工况的测试并提供报告。
Manufacturing 生产

TECNiUM has the most suitable facilities and equipment for manufacturing its specialized products, complying with the requirements of ISO standards, within a quality assurance system guaranteed process.

TECNiUM 拥有完善的专业的生产设备，整个流程符合 ISO 质量控制体系标准

R+D 工程项目咨询服务
Engineering. Consulting

Materials 材料

The use of corrosion resistant materials (Polypropylene, PVDF, E-CTFE, Glass Reinforced Polyester, PVC, etc.) together with traditional steels, alloys and coatings, makes our solutions reliable and competitive.

除了普通的钢、合金之外，我们还使用极具耐腐蚀性的材料（PP、PVDF、E-CTFE、GRP、PVC 等），因此我们的解决方案更加可靠。
TECNiUM Process offers a wide range of equipment and technologies in the scope of the recovery or gas washing, and its plentiful experience and service in the selection of solution which adapts better to clients necessities.

TECNiUM 流程部门可以根据客户的需求提供多种解决方案以供选择，在回收、气体处理等方面我们有极其丰富的经验。

The technical solutions for the gas treatment of TECNium Process are based on the optimal combination of equipment and technologies such as:

- Horizontal or vertical scrubbers wet absorption.
- Venturi or multiventuri wet absorption.
- O₃ oxidation.
- Adsorption, in activated carbon...
- Biofiltration.
- Thermal Oxidation.
- Dry way absorption.
- Stripping.
- Dry or wet dedusting (cyclones, venturi...)
The TECNIUM Process division provides you with services of instrumentation and automatism. It offers a wide range of accessories, dedicated to facilitate and optimize the gas treatment: fans, hoods and covers, dampers, stacks, packings, demisters, air collecting ducts, etc.

TECNiUM 流程部门提供的服务包括设备和自动化控制系统，还包括很多附件：风机、接头、盖板、缓冲器、填料、收尘器等。

应用最高效的处理技术

efficient technologies

TECNiUM 的解决方案是我们流程技术部门优化组合出的最好的解决方案：
- 湿法吸收——卧式或立式的洗涤塔
- 湿法吸收——文丘里或复合文丘里
- 旋流法
- 活性炭吸附法
- 生物过滤法
- 热氧化法
- 干法吸收
- 气提
- 干法或湿法除尘

Hi:S+VOC biofiltration at a Spanish food plant
西班牙某食品厂生物法去除Hi:S+VOC
For each problem TECNIUM Process analyzes the most effective solutions, and simultaneously it studies the different alternatives with the purpose of:

- Trying to recover the polluting agent in valorizable by-product form.
- Reducing the power or reagents consumption.
- Optimizing the relation investment/exploitation cost adapting it to the clients priorities.

针对每一个问题TECNiUM流程部门都会分析效率最佳的解决方案，同时可根据如下侧重方向提出优化的解决方案：

- 回收污染物介质的有价值的副产物
- 减小能源和药剂消耗
- 根据用户的需求，最优化相关的投资和开发费用

Solutions to multiple
为各种环境污染问题提供解决方案

environmental problems

TECNiUM Process is specialized in providing solutions on complete turn-key installations to confront several problems, taking charge of the design, manufacture, assembly, supervision and start-up of equipments as well as legalization projects in case they are necessary:

• Neutralization of pollutants.
• Dedusting.
• Odor elimination.
• By-products recovery.
• Stripping.
• etc.

TECNiUM 流程部门能够提供针对复杂工况的专业交钥匙工程，包括设计、制造、安装、监理、调试以及相关项目认证等

• 污染物的中和
• 除尘
• 气味去除
• 副产物回收
• 气提
Some representing sectors are:

- **Pharmaceutics and Fine Chemistry**: relief gases washing on reactors manufacturing; HCl, SO₂, Cl₂, ClO₂, NH₃...
- **Fertilizers**: HF removal in SSP, NH₃ and dust elimination on NPK and DAP granulation.
- **Mineral and Organic Chemistry**: gases on production of NaClO, FeCl₃, Aluminium Sulphate, Phosphoric and Sulphuric acid, Zn and Cu production.
- **Surface Treatment** (metal and glass): hot dip galvanizing gases, degreasing and pickling, anodizing... glass etching gases, process water stripping.
- **Food** (human, animal and aromas): gas washing during grease treatment processes and incineration.
- **Water treatment** (potable, urban and industrial wastewater): H₂S removal from biogas coming from digesters and landfills, Cl₂ and NH₃ emergency scrubbers, odor control on pretreatment, dehydration and thickeners (H₂S, NH₃, mercaptanes, VOC, amines,...), stripping of lixiviates (NH₃, trichloroethylene,...), osmosis water decarbonation (CO₂)...  
- **Waste treatment** (organic and inorganic): gas treatment on compost tunnels, maturation buildings, inertization plants.
- **Paintings and varnish**: VOC elimination or recovery.
- **Electronic compounds**: gases on electronic circuits and semiconductors manufacturing.
- **Aeronautics**: gas washing coming from chemical etching (NOₓ, HF,...).
- **Pulp and paper**: gas treatment on bleaching units (Cl₂, chlorine dioxide,...).
- **Power plants**: gas treatment on slurry drying on the cogeneration processes (thermal drying), liquid manure treatment plants (for fertilizer preparation)...
- **Sterilization units**: ethylene oxide absorption.
- **Chemical products storage**: air relief absorption of HCl, NH₃,...
部分应用领域

- 制药和精细化工：生产流程中反应器产生的废气，如HCl、SO2、Cl2、CH2O、NH3等。
- 化肥行业：SSP工厂的HF去除、NPK和DAK工厂造粒机除尘和除NH3。
- 矿山和有机化学：生产NaClO、FeCl3、硫酸铝、磷酸、磷酸、钯、镍等产品产生的废气。
- 表面处理（金属和玻璃）：热镀锌废气、脱脂、酸洗、阳极电镀废气、玻璃刻蚀废气，以及工艺废水气体喷淋。
- 食品或饲料行业：油脂处理工艺或焚烧工艺中的气体洗涤。
- 水处理行业（饮用水、城市和市政污水处理）：沼气池、垃圾掩埋场产生的沼气中的H2S的去除；Cl2和NH3应急处理洗涤塔，污水厂的预处理、脱水、浓缩工段的气味控制（H2S、NH3、硫醇、VOC、胺类等）。
- 废弃物处理（有机或无机）：混合肥料管路、热化装置产生的废气处理。
- 喷漆和抛光：VOC的去除或回收。
- 电器元件：电路板和半导体生产产生的废气。
- 航空：化学刻蚀产生的废气。
- 纸浆和造纸：漂白单元的气体处理。
- 发电厂：再生工艺的浆料干燥产生的废气处理，液态化肥的气体处理。
- 炼油装置：环氧乙烷吸收。
- 化学品储存区：HCl、NH3等气体的吸收。

行业应用实例

- NH3 stripping on an urban landfill
  城市垃圾厂的NH3气提装置

- NH3+H2S+R-SH absorption on an industrial WWTP
  工业废水处理厂的NH3+H2S+R-SH吸收装置
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INTERNATIONAL PROJECTION • 国际项目
TECNiUM Process offers several references developed within the 5 continents in collaboration with engineering companies such as FOSTER WHEELER, TOYO, MONSANTO, UHDE, TECNICAS REUNIDAS, ONDEO DEGREMONT, LURGI... and clients such as ALUMINIUM PECHINEY, ATOCHEM, SOLVAY, BASF, AKZO NOBEL, REPSOL, etc.

TECNiUM通过和以下工程公司的合作，可以提供在五大洲的应用实例：FOSTER WHEELER, TOYO, MONSANTO, UHDE, TECNICAS REUNIDAS, ONDEO DEGREMONT, LURGI...及部分客户：ALUMINIUM PECHINEY, ATOCHEM, SOLVAY, BASF, AKZO NOBEL, REPSOL,等...