Complete environmental engineering from a single source

EISENMANN can offer the complete range of modern environmental engineering technology with plants for exhaust air purification, water conditioning, waste water treatment, waste management and recycling.

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Exhaust air purification with concentrator unit in paint manufacture.

Above: Ultrafiltration with plate-type modules for concentration and separation of biomass.

Incineration of toxic waste in the high-turbulence reactor “Turaktor®”. 
Innovations and strategies for the optimization of manufacturing, process engineering and logistics within the plant are our daily business. EISENMANN builds facilities for surface engineering, material flow automation, environmental technology, firing lines for ceramics and specialized facilities for coating, recycling, thermal treatment and energy recovery.

Approximately 2,500 employees, half of which are engineers or technicians, are developing new ideas worldwide for your future manufacturing, assembly, paint shop or distribution departments. Among them are experts and specialists with well-founded knowledge from various fields and trades. This is highlighted in made-to-measure concepts, the most modern technology and a high degree of economy.

Another result of our rational production and assembly strategy is that our own manufacturing centres are fine-tuned to individual customer wishes. They enable the manufacture of a system configuration tailored to your specifications right on site.

The unique assembly concept contributes significantly to boosting quality and punctuality. Whenever complex systems are involved, the complete plant is erected on our premises prior to delivery and subjected to exhaustive testing. The preassembled functional units are only shipped to the customer when they have successfully completed this test run. The advantage for you is that the installation effort is reduced to the absolute minimum. This saves a great deal of time and money and permits installation without interrupting production.

Of course, we will be there for you after installation as well if required: Our after-sales service handles professional maintenance, quick repairs and the immediate provision of spare parts.

We not only offer individual environmental plant engineering, but also we take over complete operation of the systems with our own personnel and own responsibility.
An intact environment and modern production are by no means mutually exclusive. On the contrary: the two go hand in hand, aided not least by sophisticated technologies reconciling production with ecological interests. To this end, EISENMANN offers a large range of equipment tailored to your specific application, from exhaust air purification through waste water treatment to water purification, waste disposal, recycling, and energy utilisation.

Your benefit is two-fold, for you can profit from both our extensive know-how in the field of environmental engineering and from our comprehensive competence in production and process engineering.

In keeping with the motto "Avoid – Minimize – Dispose", the first step is to investigate the overall situation of the production process, for the best way to protect the environment is by avoiding emissions.

However, investment and running costs can be cut significantly by reducing and concentrating the exhaust air to be disposed of. In addition, saving primary energy leads to a major reduction in $\text{CO}_2$ emissions.

The decision as to which steps and processes are the best and most economical in each individual instance depends on numerous factors, such as the volume of exhaust air involved, the nature and concentration of the emitted pollutants, the temperature of the exhaust air and the possibilities available for utilizing this energy.

Since EISENMANN’s range encompasses all the most important exhaust air purification processes, our customers can be assured of receiving objective advice. This is also reflected in more than 1500 exhaust air purification systems installed throughout the world, in many different branches of industry and in all sizes.

Exhaust air purification with thermal incineration in a painting plant for plastics.

Photo on the left: This RTO unit purifies the exhaust air from a rotogravure plant for packaging materials.
Concentrator unit for purifying exhaust air from a paper processing plant.

Compact RTO unit in the chemical industry.

Exhaust air purification with concentrator unit in the chemical industry.
The concentrated solvents can be disposed of economically in the downstream thermal incinerator.
EISENMANN develops, designs and installs custom-made systems for water purification, waste water treatment and water recycling for nearly all areas of production and service. Depending on the desire of the customers, EISENMANN provides not only the planning, design and installation of water treatment systems, but also turnkey total solutions, including buildings or even build-operate-transfer models.

For this, EISENMANN can utilise experience of more than 800 reference installations for water treatment plants including all of the important systems as: detoxification, oxidation, precipitation, flotation, biology, filtration, ion exchanger, membrane filtration and many more.

Initially the overall situation of the production process is investigated. In the following our engineers develop the best water treatment process for your application.

Waste water treatment
Water purification

Above: Ion exchanger fluidized bed system for water purification in a power station.

Above right: Waste water treatment for direct discharge in a river: Phosphate precipitation with contact sludge recirculation and a high-performance sludge clarifier for a chemical protection plant.

Right: Complete disposal of the effluent from an automobile plant; the photograph shows the reverse osmosis plant for demineralizing water.
Complete disposal of the effluent from an automobile plant.

Ultrafiltration with tabular ceramic modules for emulsion splitting in a waste disposal company.

Continuous waste water treatment plant for fluorid removal, preinstalled and commissioned at EISENMANN.
ISENMANN Environmental Technology includes thermal plants for recycling substances as secondary sources of energy or secondary raw materials, as well as for disposing of a whole variety of wastes. Among other things, these include production wastes with high calorific value, industrial and municipal sewage sludges and recyclable solid, liquid or paste-like materials. Rapidly increasing disposal and energy costs are driving operators to consider more sustainable means of disposing waste streams. Distributed, local solutions reduce or eliminate disposal and transportation costs.

Depending on the application, thermal waste disposal processes can include drying, combustion, pyrolysis a well as multi-stage hybrid solutions integrating these technologies into a common system. All of these solutions are offered with the appropriate, proven, flue gas cleaning system to insure compliance with the applicable local and federal regulations. This results in a large number of plant concepts individually adapted to the particular application, from which the most economical and technically best process can be selected in each case.

Photo on the left: EISENMANN plant for disposal of residual wastes with downstream flue gas purification system.

Waste disposal Recycling

EISENMANN

Turaktor® for reactivating spent catalyst.

Pyrobustor® for thermal treatment of pre-dried sewage sludge.
Semi-mobile system mounted on skids for thermal disposal of arsenic waste.

Disposal plant for toxic by-products: the Turaktor® and flue gas purification can be seen in the background.
The EISENMANN Service offers an extensive range of services. These are tailored individually to the customer’s needs, thereby taking the know-how of the customer’s employees, the cost structure, the processes and the need for expertise into consideration. Therefore, we regard ourselves as system providers when it comes to meeting the individual customer’s requirements.

- **Inspection**
  We determine the actual state of your system by conducting inspections and then inform you about the weak spots and possibilities for increasing your performance, or let you know if there is an urgent need to take action.

- **Servicing**
  In order to determine the target state of your system, our specialists not only conduct the servicing, but also carry out mechanical and electrical check-ups and safety tests. Routine servicing guarantees an optimum functioning of your system and increases its service life.

- **Repair**
  Our maintenance team also carries out any necessary repairs and component replacements of course.

- **Remote system diagnosis**
  Using remote data communication, the remote system diagnosis enables our specialists to access your controls and material-flow computers quickly and easily, and remedy any faults within the shortest time.

- **On-call Service**
  We offer you a 24/7, on-call service conducted by our Service specialists, which is based on a mutually agreed response time and customised to your own specific shift operation and production times.

- **Maintenance contracts**
  You can rely on EISENMANN Service. We offer you customised Maintenance Contracts for your system. You are reminded in good time of the next routine service which is carried out by qualified engineers. This enables you to plan the costs on a continuous basis and reduce the system downtimes by taking preventative measures.

- **Full service**
  Due to our excellent experience gained in the construction and operation of highly automated industrial systems and factories, we are able to take over the entire maintenance of your system, allowing you to fully concentrate on the key processes of your business. We guarantee system availability at all times, and the value of your systems is preserved long-term through:
  - Preventative maintenance
  - Troubleshooting
  - Repairs

The EISENMANN Service is your first contact for system reconstructions or extensions, whether for paint-spraying and environmental technology, or for process technology and materials-handling. We adapt your systems engineering to new conditions if, for example, you should wish to increase your throughput, or the product dimensions or weights have changed, or if your space planning necessitates this. We likewise offer you a first class service where production relocation is concerned.