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AQUA TECHNOLOGY ECO SYSTEMS

TREATMENT AND RECOVERY OF GAS EMISSIONS OF INDUSTRIAL PLANTS

PROBLEM

Air pollution is a transboundary environmental problem associated with many differently acting pollutants. Although significant and well-targeted action has resulted in emissions reductions over more than two decades, air pollution in Europe continues to pose a hazard and adversely affect human health and the natural and built environment.

The nature of pollution depends on the type of industry, and methods of pollution control depend on governments, public understanding of environmental issues and the willingness of businesses to contribute to environmental protection. But since the middle of the 20th century, there has been a positive trend - with the growth of industrial production and the welfare of the country, more people begin to understand the importance of protecting the environment for the health of present and future generations, which leads to the introduction of environmental standards and the adoption of various programs to combat pollution

THE ESSENCE OF THE PROJECT

Introduction of revolutionary technology in the field of ecology (purification and recovery of gaseous emissions from industrial enterprises).

IDEA

We propose to take part in the creation of a European company, obtaining a European certificate of quality, industrial production of equipment using unique and effective technologies for the purification and recovery of gaseous emissions from industrial enterprises from all types of impurities to the required standards. The technology is unique, energy efficient and constantly being improved.

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Globalization, population growth and increasing human needs over the past half century have made environmental pollution a global and real problem.
To successfully solve this problem, all countries need to work on its elimination in coordinated efforts, despite the fact that local problems may require an individual approach.
However, the existing experience of environmental protection in different countries shows that environmental problems are solved more effectively where society, business and government are aware of them and cooperate with each other.
Therefore, as renowned actor and environmental peace envoy Leonardo DiCaprio said in one of his speeches, we must work together on this issue and not take the planet for granted.

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DECISION

Our company offers an innovative solution in the field of purification and recovery of gaseous emissions from industrial enterprises, based on our own developed oxidizing reactors.
This technological solution, in contrast to existing technologies, allows removing 96-98% of harmful substances from the total volume of emissions, due to the use of liquid oxidizing reactors in the technological process, which have shown their efficiency in waste
waters, varying degrees of pollution.

The difference in purification lies in the fact that gases from emissions, after passing through the cooling unit, are purified in an aqueous medium of an oxidizing reactor using a physicochemical process.

The cleaning results are:

- **hot water obtained by cooling gases;**
- **purified water in recirculation mode;**
- **dehydrated, detoxified waste residue from waste products to be recycled or disposed of at a landfill.**

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DESCRIPTION OF THE TECHNOLOGICAL PROCESS

Gas cleaning from dust:
Inertial dust collectors with the use of dies are used.
With a sharp change in the direction of movement of the gas flow, dust particles tend to move in the same direction under the action of the inertial force, and after a sharp turn of the gas flow, the dust falls into the hopper.
The gas velocity in the section of the chamber is 1.0 m / s. For dust particles with a size of 25-30 microns, a removal rate of 65-80% is achieved.
If fine cleaning is required, a dynamic dust collector is used, with a cleaning degree of 80-95%.
A cooler with a heat recovery system is used to cool the gas. We supply cold water to the cooler under pressure, at the outlet we get hot water for use in production (heating or hot water in the water consumption system.

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The collected dust must be recovered or returned to production.
It depends on the physicochemical properties of the concentration of a potentially useful component, its toxicity, cost, and prospects for subsequent processing.
Then the gas is directed to the absorption reactor. During absorption, an interaction occurs between the gas and the solution (reagent), which contains a substance that reacts with this gas.
Depending on the peculiarities of the interaction of the absorber and the component extracted from the gas mixture, we use methods based on the laws of physical absorption and the method of absorption accompanied by a chemical reaction in the liquid phase (controlled and simulated process).
The second stage (oxidizing reactor) is water purification using a flocculant and precipitation of suspended and heavy substances.
The sediment is discharged into a shock-inertial tank.

After cleaning, the liquid is sent to the homogenization tank,
sediment to the separator-dryer, and then for processing (disposal).
Purified water after filtration is sent to the 1st stage reactor (circulating water, up to 25 times of use)

Advantages of the technology: a comprehensive solution, full control over the physical and chemical process, low power consumption, water recycling, heat recovery, recovery of substances obtained in the treatment process, reduction of the "greenhouse effect".
Depending on the production profile and technical specifications of the customer, technological regulations and a set of equipment can be changed. Guarantee of the degree of gas purification by 98%.

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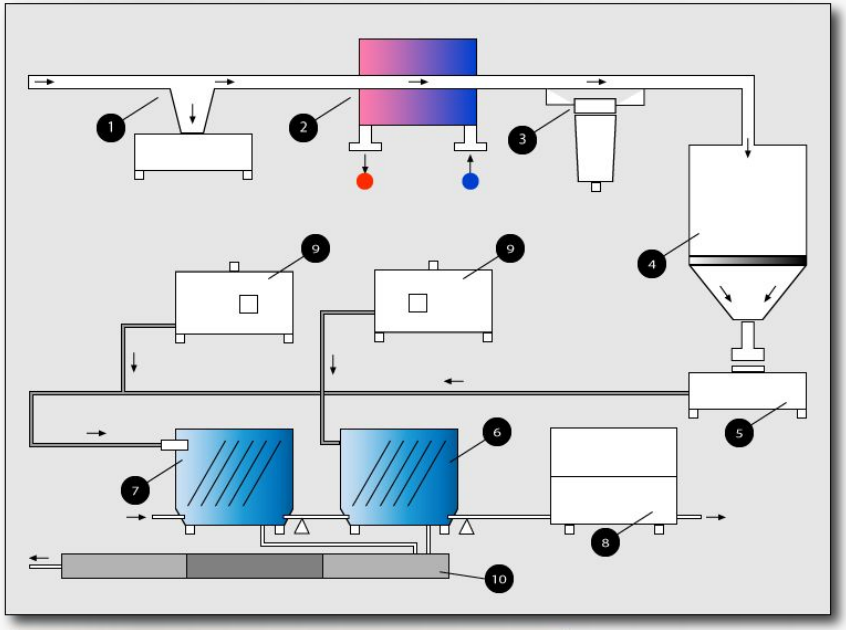
ТЕХНОЛОГИЧЕСКАЯ СХЕМА



- Inertial Dust Collector
- Gas cooler (heat recovery and hot water production)
- steam trap
- Gas storage filter
- Screw compressor
- Exhaust gas purification oxidation reactor
- Oxidation reactor
- Pressure filter
- Reagent nodes
- Shock-inertial gas scrubber
- Averager (capacity)


LET'S MAKE OUR WORLD CLEANER!

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OFFER TO INVESTOR

The aim of the search for investments in size is to create a research and production company in the European Union, on the basis of which industrial designs of equipment will be created, which, in turn, will be certified and patented.

To do this, you need to take the following steps:

- opening a company;
- purchase of an office with the possibility of creating a showroom;
- purchase of production space;
- purchase of equipment for production;
- purchase of materials and components for the production of equipment;
- team building (engineering and production);
- equipment certification and patenting;
- marketing and advertising;
- search for potential customers for the proposed equipment with its further sale;
- conducting the Initial Public Offering (IPO) procedure;
- creation of a network of dealerships and service centers.