GOJE®

Pursuing Excellence with First Class Quality

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Provide comprehensive energy-saving equipment application solutions

JIANGSU GAOJIE ENERGY SAVING EQUIPMENT GROUP CO.,LTD.

GOJE®

Our vision:

Become the world's leading energy-saving equipment design and manufacturing company

Our mission:

Achieve employees internally and customers externally

Our philosophy:

Provide a full range of energy-saving equipment application solutions

Our perspective:

Customer first
Teamwork
Welcoming change
Gratitude and dedication

Company profile

GOJE group is an environmentally-friendly and energy-saving equipment manufacturing company, as well as a high-tech enterprise that integrates research and development, design, production, installation, and commissioning. The company specializes in the design, production, and manufacturing of MVR evaporation-crystallization systems, wastewater zero discharge treatment, and exhaust gas treatment equipment.The company is centered around the internationally leading MVR evaporation-crystallization technology, with two major divisions: the Environmental Chemical Division and the Biological Fermentation Division. Additionally,it possesses various technologies for ion exchange membrane concentration, biochemical water treatment, evaporation and concentration,as well as cooling and crystallization. These technologies provide comprehensive energy-saving solutions to various industries such as chemicals, environmental protection, agriculture, metallurgy, textile printing, biotechnology, fermentation, food processing, and pharmaceuticals.

After years of development, the group has established a comprehensive system of intelligent and refined management and production models. The design and manufacturing of each product line strictly adhere to the quality management requirements of ISO9001:2015. The company also holds a D-level pressure vessel manufacturing license, ensuring the high quality and stability of its products. Moreover, the company is certified with ISO14001:2015 for environmental management, ISO45001:2018 for occupational health and safety management, and the EU CE certification,etc.GOJE has a strong team of talents in both research and development to production. Its corporate spirit of "Striving for Excellence and Innovating for the Future" has propelled the company's continuous innovation and development. The company has obtained numerous patents for its products, with several being recognized by the Jiangsu Provincial Department of Science and Technology as high-tech products.Equipments are widely sold to Southeast Asia, Africa, Europe, and other regions, with overseas offices and agents.It has been selected by numerous well-known domestic and international companies, earning a high reputation for its products.

Over the years, GOJE group has adhered to the business philosophy of "Technology-driven, Intelligent Manufacturing, People-oriented, and Customer First." Satisfying our customers is our ultimate goal.

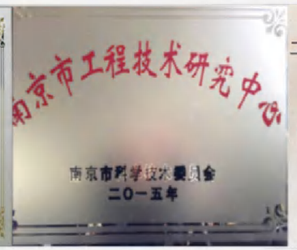
GOJE®

Quality control

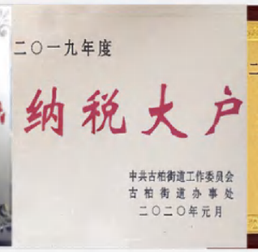
Company business license

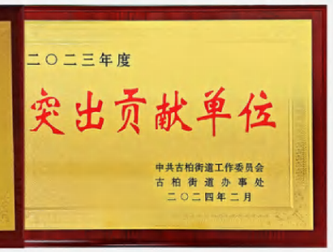
High-tech enterprise

MVR evaporator is listed as the first provincial set

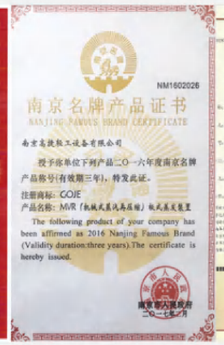


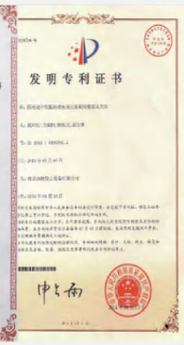
Goje Group four years into the large tax payers

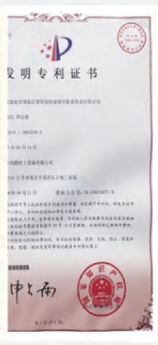


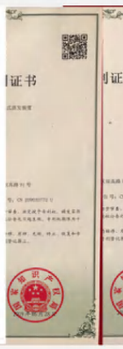


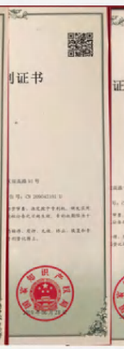
Company invention patent:

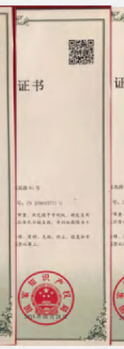












Company utility patent:

Advantages of GOJE Group

In the environmental protection chemical field, with the integration of water treatment general contracting and implementation:pretreatment, biochemical neutralization, various membranes and special membranes, MVR evaporation and crystallization zero discharge, and water reuse. In the bio-fermentation field: Integration of total process packages for starch sugars and fermentation fields.

In the field of energy-saving technologies such as fluid heat exchange, evaporation and crystallization, and waste heat recovery, we have over 20 years of development experience. In industries such as biotechnology, sugar alcohol fermentation, food and beverage, pharmaceuticals and healthcare products, fine chemicals, and wastewater treatment, we have accumulated rich experience in design and manufacturing engineering. We are dedicated to providing application solutions for energy-saving devices.

Among our peers, we are one of the few companies capable of designing and manufacturing various types of heat exchangers, plate evaporators, tube evaporators, crystallizers, separators, and other individual equipment. Additionally, we can provide turnkey projects for MVR tube and plate evaporative crystallization systems as well as integrated services for environmental chemical engineering and biotechnology fermentation.

The MVR plate evaporator system has been honored as the first set of products at both provincial and municipal levels in China. The semi-welded heat exchanger and plate evaporator device have been awarded the title of high-tech products, and the company has also been recognized as a national high-tech enterprise with a municipal engineering technology center and renowned products at the municipal level. Additionally, multiple certifications including quality management system, environmental management system, occupational health and safety management system, as well as CE certification have been obtained by the company.

A well-developed ERP management software can consistently ensure excellent quality and process control in every stage of design, production, and manufacturing.

Each product is equipped with a QR code for traceable program software. Scanning the QR code provides relevant information such as inspection reports, drawings, and company qualifications to ensure that customers can check all equipment at any time during use.

All heat exchangers, evaporators and condensers use advanced heat balance calculation software imported from Canada, which can accurately improve the calculation results and effectively reduce customer equipment investment costs.

All equipment can be detected with records and results of the pressure process, and the pressure test data table is constantly monitored and controlled by the computer.

We have a number of agents and service providers involved in various industries, such as Thailand, Vietnam, Indonesia, Malaysia, North, Iran, Russia, Turkey, etc.It can effectively and quickly solve the pre-sales and after-sales problems.

Introduction

Characteristics of water treatment process

01 Full process service

Engineering design, installation, commissioning, operation full process service, turnkey project. The company is equipped with experienced design, installation, commissioning, operation personnel,give customers technical support in the whole process of the project.

02 Whole process design

The company can complete the process design, equipment supply and equipment installation of the whole process of pretreatment, biochemistry, all kinds of membrane treatment, advanced treatment, evaporation, etc., among which biochemical includes MBR, MBBR, A2O, UASB,IC, micro-electrolytic oxidation and other treatment processes, membrane treatment includes internal ultrafiltration membrane, hollow fiber membrane, tubular membrane, nanofiltration membrane, reverse osmosis membrane, TUF membrane, TMF membrane, membrane ammonia membrane and other conventional and special membrane treatment technologies.

03 Whole process management

The company has a complete project management system, including ERP management software, product two-dimensional code traceability, design, production, installation, use of each process control to ensure good quality.

Characteristics of waste gas treatment

01 Gaojie Group is a professional R & D, design, production, installation, after-sales in one, in the direction of waste gas treatment has technology development, engineering design, equipment manufacturing and engineering implementation of comprehensive capabilities.

02 The company designs and manufactures all kinds of waste gas treatment and environmental protection equipment, serving in chemical, pharmaceutical, printing and dyeing, food, municipal, spraying and other industries and fields.

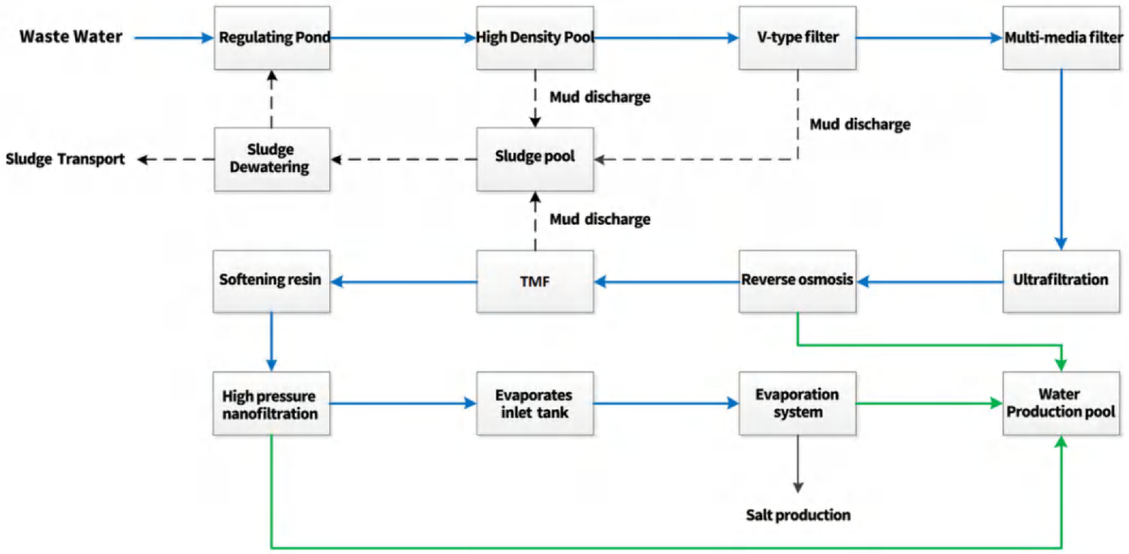
03 The company's professional talent team provides targeted and professional management solutions for the enterprise exhaust gas situation.

04 Business scope: spray exhaust gas, chemical exhaust gas, medical exhaust gas, waste gas, sewage plant/station odor, rubber factory exhaust gas, casting exhaust gas, acid and alkali exhaust gas, electronics factory exhaust gas and all kinds of dust exhaust gas treatment.

05 Waste gas process: activated carbon adsorption, spray tower washing, activated carbon/resin adsorption regeneration, RCO, rotary adsorption concentration, RTO, wet dust removal, filter cylinder dust removal, cloth bag dust removal, box biological filter, biological soil filter, etc.

Introduction of water treatment technology

Water treatment process



Water treatment unit

Raw water pretreatment unit

The industrial wastewater is lifted to the pre-settling tank by the lifting pump, and most of the suspended matter such as pulverized coal in the raw water is removed. The collected sludge is sent to the sludge dewatering unit for dewatering treatment.

Raw water softening unit

The pre-treated produced water is raised to the softening and removing hard high-density pool by lifting pump, and chemical agents are added to react and precipitate the scale impurities in the raw water. Coagulants and coagulants are added to accelerate the deposition of the sediment generated by the softening reaction to form chemical sludge, and most of the Ca2+, Mg2+, silicon and other scale-prone impurities in the system are discharged through sludge discharge. Due to the relatively high turbidity of the softening water produced by the high-density pool, the turbidity is further controlled by the V-type filter to ensure the stable operation of the subsequent membrane treatment system.

High density pool

V-type filter

Membrane desalination unit

The membrane desalination unit is composed of ultrafiltration and reverse osmosis systems. The raw water after pretreatment and softening treatment is lifted by the pump through the self-cleaning filter and the ultrafiltration device respectively, which can effectively control the turbidity and SDI values to meet the water intake requirements of the reverse osmosis system and extend the service life of the reverse osmosis membrane. Using the dense filter aperture of reverse osmosis membrane, the salt and other impurities in the water are effectively intercepted, the desalted water enters the product tank, and the reverse osmosis concentrated water is transported to the subsequent process unit for salt concentration.

Water treatment process

Ultrafiltration membrane

Salt separation unit

A softening system composed of softening removal of silicon and ion exchange is set up before the salt separation nanofiltration system, which can effectively remove Ca2+, Mg2+, silicon and other easy scaling impurities enriched in reverse osmosis concentrated water. The softened water is transported to the nanofiltration system by lifting pump, and the ratio of SO42- to Cl- in concentrated brine is further increased by the selective permeability of nanofiltration membrane to different valence ions. The nanofiltration produced water enters the product tank, and the concentrated water is transported to the subsequent evaporation crystallization system for treatment.

Multi-media filter

Special separation membrane

Reverse osmosis membrane

Evaporative crystallization unit

The concentrated salt water of the system first enters the evaporative crystallization unit and then passes through falling film concentration and evaporative crystallization.The majority of the sodium sulfate in the water can be recovered to form sodium sulfate crystal salt, which is sold as a by-product,the mother liquor through the drying system to reduce the output of a small amount of salt is entrusted with the relevant qualifications of the enterprise for final disposal. The evaporative condensed water is mixed with reverse osmosis and nanofiltration water in the product pool. After the product water is fully reused, the rest of the product water is provided to the park as industrial circulating water.

Sludge dewatering unit

The raw water pretreatment produces precipitated sludge, and the chemical sludge produced by the hardening and silicon removal softening system is collected and concentrated and dehydrated. The de-cementing cake is treated by an enterprise with relevant qualifications. The press filtrate is returned to the pre-treatment production tank and is not discharged.

Introduction of waste gas treatment technology

Industrial waste gas treatment classification

CO

Catalytic combustion（CO）
Activated carbon adsorption+CO
Zeolite wheel+CO
Zeolite module+CO

Activated carbon adsorption

Vertical honeycomb
Horizontal particle

Steam desorption

Steam desorption
Nitrogen desorption
Vacuum desorption

UV photolysis

Photocatalysis
Photolysis tower

RCO/RTO

Zeolite module +RCO/RTO
Activated carbon adsorption +RCO/RTO

Biological filter

Soil filter
Biological filter

Scrubbing tower

Swirl plate　Packed type
Sieve plate type　Venturi style
Empty tower type

Plasma

Injected ion　Energetic ion
Low temperature plasma

Catalytic oxidation treatment (CO)

Catalytic oxidation treatment technology (CO) is to heat the organic waste gas to more than 280℃, under the action of the catalyst to decompose the VOCS in the waste gas oxidation into CO2 and H2O, catalytic oxidation generated by the high temperature gas through the heat exchanger, preheat into the waste gas, thereby saving the waste gas heating fuel consumption treatment technology.

Features:

low reaction temperature, economical and safe;
Small footprint;
The removal rate is as high as 95%
Catalyst replacement cycle 2~3 years.

Spray

The exhaust gas is introduced into the exhaust gas purification tower by the fan. After the [granular pollutants] in the air stream contact with the washing liquid, the droplets or liquid film are diffused on the air stream particles, or the particles are humidified, so that the particles can be separated and removed by gravity, inertia force and other effects. [gaseous pollutants] are transferred into the washing liquid to separate from the incoming gas by turbulence, molecular diffusion and other mass transport and chemical reactions. The purified gas is passed through the defogging dewatering device to remove 90% of the water mist.

Wheel Enrichment + RTO

Zeolite runner + combustion system is a kind of organic waste gas treatment device suitable for low concentration and large air volume. The system mainly consists of pretreatment device, zeolite concentrator runner, combustion system, fan, chimney, etc. The principle of the system is to use the porous adsorption of zeolite molecular sieve to adsorb and concentrate organic matter, and the concentrated organic matter is oxidized and decomposed into harmless carbon dioxide and water by the combustion device. Regenerative combustion treatment technology (RTO) is to heat the exhaust gas to more than 700℃, so that the VOCS in the exhaust gas oxidation into CO2 and H20, the oxidation of the high temperature air through the ceramic heat storage body, so that it heats up "heat storage", and used to preheat the subsequent into the organic waste gas, so as to reduce the equipment operating temperature and system energy consumption.

Features:

Heat recovery of thermal storage materials can reach 90%-95% heat recovery rate ;
Less maintenance work, safe and reliable operation;
The removal rate was as high as 99% .

Introduction of waste gas treatment technology

Activated carbon adsorbed steam desorption

The activated carbon adsorption tower is powered by a fan. Positive pressure or negative pressure into the tower body, because there is an unbalanced and unsaturated molecular gravity or chemical strength on the solid surface of activated carbon, so when the solid surface is in contact with the gas, it can attract gas molecules, so that it is concentrated and maintained on the solid surface, polluting substances are adsorbed, waste gas through the filter, into the equipment dust removal system, purifying gas high altitude emissions.

Resin adsorption steam desorption

Resin adsorption depends on the van der Waals attraction between it and the adsorbed molecule (adsorbent), through its huge specific surface physical adsorption and work, so that organic compounds according to the adsorption force and its molecular weight can be separated by a certain solvent elution to achieve separation, purification, impurity removal, concentration and other different purposes.

Biological soil filter

The technology of biological soil deodorization is to collect the odor gas and send it into the artificial active soil layer, so that the odor is absorbed by the biological bacteria in the active soil layer when it passes through the active soil layer, so as to achieve the goal of deodorization. It is a simple, stable and economical treatment method for low concentration odor gas.

Tank type biological filter

Airflow-adsorption on filter media-resolution/dissolution in aqueous phase-biodegradation

Airflow-direct adsorption on biofilms-biodegradation

Airflow-dissolution in aqueous phase-biodegradation