



Water, Environment, Energy and People
BUILD YOUR FUTURE & DREAM



WELCRON HANTEC CO., LTD.

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MESSAGE FROM THE CEO

Water · Environment · Energy and People BUILD YOUR FUTURE & DREAM

WELCRON HANTEC CEO, Rhee Young-Kyu 



Since its founding in 1994, WELCRON HANTEC, based on business philosophy that focuses on humans and environment, has grown into an environmental plant specialist company supplying not only Food & Beverage/Pharmaceutical Plant but also Energy-saving/Thermal Processing Plant such as concentrating, drying and distillation facilities and Environmental Plant such as wastewater treatment and water reuse facilities.

WELCRON HANTEC, which never stops challenging new things for the future, made its foray into general construction field in 2012 with its unique technology, reliability, design, procurement, construction and business management capabilities.

As a result, we have secured the ability to carry out construction projects optimized for each plant in general construction field including industrial facilities, logistics centers, office buildings, and plant construction markets in domestic and overseas chemical, energy, power generation and industrial fields. Cosequently, WELCRON HANTEC is becoming a total solution engineering company providing engineering, procurement, construction, and O & M for various technical services and EPC business execution.

With the advent of the Industry 4.0, which is people and environment-oriented, WELCRON HANTEC has been expanding its business to high value-added businesses focusing on the renewable energy sector, which has been getting the limelight as a sustainable future energy alternative to fossil fuels, while strengthening its water treatment capacity.

In particular, we will secure global competitiveness through securing and fostering excellent human resources, continuous technological innovation, and aggressively developing overseas markets. In addition, we are contributing to the creation of new synergies through collaboration with the WELCRON Group family companies and the convergence of advanced technologies.

Dear Valued Customers!

Based on our past challenge and enthusiasm, we have grown into a global plant/general construction company with continuing innovation and development. In the future, we will not only create new value for our customers through constant quality innovation and service improvement, but also actively respond to customer needs and practice trustworthiness.

We will take the lead in establishing transparent and healthy corporate culture through ethical Management and win-win cooperation.

Furthermore, We will do our best to be a company that provides clean living environment for the future generations and the quality of life that is rich and happy through our corporate spirit of thinking 'water, environment, energy and people'.

For the new future and the greater leap of WELCRON HANTEC, we ask for your continuous support and encouragement.



WELCRON GROUP

01 Welcron Group Management philosophy
We aspire to bring health and happiness to humanity (well-being), cleaner and livelier environment to nature and society (Eco-friendly), and create a better work place for our customers, shareholders, and members of the company (The great work place)

02 Welcron Group Mission
With challenge spirit and passion, we contribute to the preservation of the health of humanity and global environment based on our talent and technology convergence.

03 Welcron Group VISION & CORE VALUE
World-class company in the field of water, energy and environment.
Global Top-Tier Company

Creation Basic Challenge Collaboration Passion Integrity Ownership

WELCRON GROUP Main Business

WELCRON

WELCRON is leading the industrial textile market

WELCRON Global Vina

WELCRON Global Vina, WELCRON Group's Overseas Production Base and Global Market Base

WELCRON Healthcare

WELCRON Healthcare is the No.1 industry in the oriental medicinal sanitary product market

MIRAE JEJU

Specializing in the intermediate processing and recycling of construction waste

WELCRON HANTEC

WELCRON HANTEC, a leading industry in water, energy, environmental plant/construction

REWELL

Specialized in treating sewage sludge

EWELL/EWELL ENERGY

Specialized in waste wood treatment and BIO-SRF

DONGWON ENERGY

Specializing in the manufacturing of fuel pellets for power generation through the recycling of sewage sludge

Shanghai Yingchi Trading Co., Ltd.

A subsidiary of Welcron Hantec in China



| WELCRON Headquarters | | WELCRON Eumseong plant | | WELCRON HANTEC Hwaseong plant | | WELCRON Logistics Center | | WELCRON Composite Center |



| WELCRON Healthcare Bupyeong plant | | WELCRON Global Vina | | MIRAE JEJU | | DONGWON ENERGY | | Shanghai Yingchi Trading Co., Ltd. |



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01 VISION

Water · Environment · Energy and People
BUILD YOUR FUTURE & DREAM

02 COMPANY HISTORY

Initial period	Growth period	Stable period
<p>2000.06 Selected as the promising export Small & Medium sized business in Gyeonggi-do</p> <p>04 Established the R&D center</p> <p>1998.10 Selected as one of Excellent Technology Companies by the Korea Technology Finance Corporation</p> <p>1996.07 Selected as one of Technology Development Demonstration Companies (by the Industrial Bank of Korea)</p> <p>04 Moved to new facilities in Icheon</p> <p>1995.01 Renamed as Hantec Engineering Co., Ltd. and conversed to a corporation</p> <p>1994.01 Established Dongbang Engineering</p>	<p>2012.07 Registered construction business</p> <p>03 Renamed as Welcron Hantec Co., Ltd.</p> <p>2011.08 Registered machinery and equipment installation business</p> <p>2010.08 Registered a renewable energy equipment installation company</p> <p>02 Rhee Young-Kyu take office as CEO</p> <p>2009.11 Awarded the USD 5 Million Export Tower</p> <p>2008.07 Listed on KOSDAQ</p> <p>03 Selected as the Partner Company of the Korea Institute of Industrial Technology</p> <p>01 Obtained license for industry environmental equipment business</p> <p>2007.12 Obtained ASME U stamp</p> <p>10 Registered a foreign investment company</p> <p>2005.11 Obtained China Special Equipment License Certificate</p> <p>08 Registered Water Pollution Prevention Facility Business</p> <p>07 Registered an Energy Service Company(ESCO)</p> <p>2004.08 Selected as the INNO-BIZ</p> <p>2003.11 Awarded the USD 1 Million Export Tower</p> <p>2002.04 Obtained ISO9001 Certificate</p> <p>2001.03 Moved to new facilities in Sihwa Industrial Complex</p>	<p>2023.05 Obtained ISO45001 certificate</p> <p>2022.12 Acquired Dongwon-Energy</p> <p>2022.06 Acquired Rewell</p> <p>2021.12 Acquired E-well, E-well Energy</p> <p>2021.01 Lunched a construction brand 'OVU' Received the grand prize of 'The Beautiful Architecture in Cheongju-si'</p> <p>2020.10 Received the Minister of Land, Infrastructure and Transport Award at the Korea Architecture Awards Received the Architecture Award from the 'Korea Architects Association'</p> <p>2019.10 Obtained ISO14001 Certificate</p> <p>2018.01 Established a corporation in China</p> <p>2017.10 Established a corporation in Hong Kong</p> <p>07 Certified as Outstanding Authorized Economic Operator (AEO)</p> <p>06 Acquired a license in industrial environment facility construction</p> <p>2016.04 Obtained license for fire-fighting system installation business</p> <p>2015.05 Obtained license for civil engineering and construction business</p> <p>2014.01 Established Dongwon Architects & Engineers Certified new RO seawater desalination technology (by the Ministry of Environment)</p> <p>2013.11 Received the Gold Medal in the Korea Tap Water Technology Competition 2013</p> <p>07 Registered electrical business</p>

Company Details

- Established : January 1994
- Sales : KRW 332.2 billion(as of 2023)
- KOSDAQ : July 2008
- Personnel : 279 people
- Headquarters and Plant : Hyangnam-eup, Hwaseong-si, Gyeonggi-do
- Seoul office : Guro-dong, Guro-gu, Seoul

Certification Status

- Registered mechanical equipment construction business
- Registered as a special construction company for water quality and environment
- Registered civil engineering construction business
- Registered electric business
- Registered real estate development business
- Registered firefighting facility
- Registered as housing construction company
- Registered green remodeling business
- Registered as a partner company of KEPCO KPS (Electricity, Machinery)
- ISO 9001 / ISO 14001 / ISO45001
- ASME U STAMP Certification
- Environmental New Technology Certification
- Certified as a maintenance company (Korea South-East Power Development Co., Ltd.)

03 BUSINESS AREA

Plant Field

■ Evaporation/Crystallization and Distillation System

MVR and TVR evaporation system, Crystallization system (Amino acids and food materials), Drying system (Tube Bundle, Disk, Flash, Ring Dryer), Zero Liquid Discharge System (ZLD), Secondary cell material system (Nickel sulfate, Cobalt sulfate, Manganese sulfate, Nitrite hydroxide, Concentrated crystal)

■ Environment sector

Wastewater treatment system (Anaerobic, Nitrogen, Sulfur, Dehydrator), Food and livestock waste resource system, and wastewater recycling system

■ Food & Beverage / Pharmaceutical sector

Automatic beverage plant, Dairy products plant, Extractive and concentrated health food products plant, Bio and pharmaceuticals plant and filling system (Bottle, Can, PET, etc.), product inspection and packaging system, Automatic logistics system

Construction Field

■ Construction business

Industrial facility, production facility, and logistics center
Medical/religious facility, educational research facility

■ Civil engineering business

Construction of a complex
Road, river, park, water environment, water treatment
Sports facility

■ Housing business

Multi-family housing, officetel, and Knowledge Industry Center

■ Public facility

Public housing, schools, government offices, cultural facilities

Energy Field

■ Renewable energy business

Developing incineration using waste and sewage sludge and daily supply (Converting waste into energy), power generation and heat supply using biomass (Bio-energy power generation business),
A project to develop an aging incinerator and boiler facility (Revamping works)

■ Entrusted wastewater treatment and water treatment system

Drying effluent and MBR association's entrusted wastewater treatment system, Reverse osmosis water treatment system (SWRO, BWRO) and power generation and wastewater treatment system



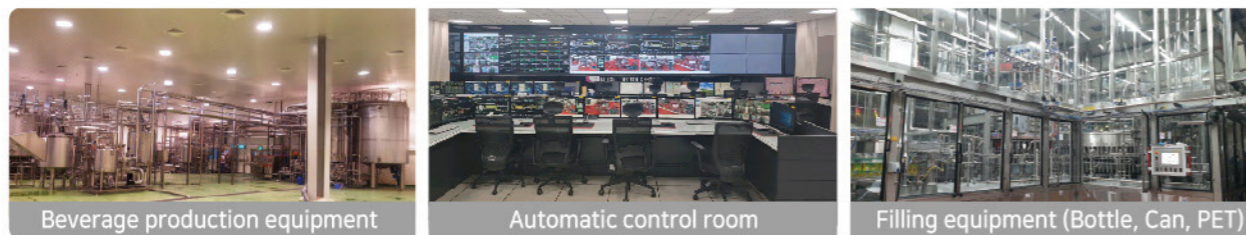
01 Division of Plant



01 Food & Beverage / Pharmaceutical sector

"Establishing a Smart Factory with Remote Monitoring and Control System (SCADA) and Production Management System (MES)"

- Advantages**
1. Improving productivity by collecting, controlling, and analyzing process data remotely and in real-time during production
 2. Enhancing food safety and quality control of products by using product identification and production history tracking system
 3. Reducing labor costs and waste factors by preserving predictions and increasing the availability of equipment
 4. Establishing efficient production plans and collaborating with ERP



Beverage production equipment

Automatic control room

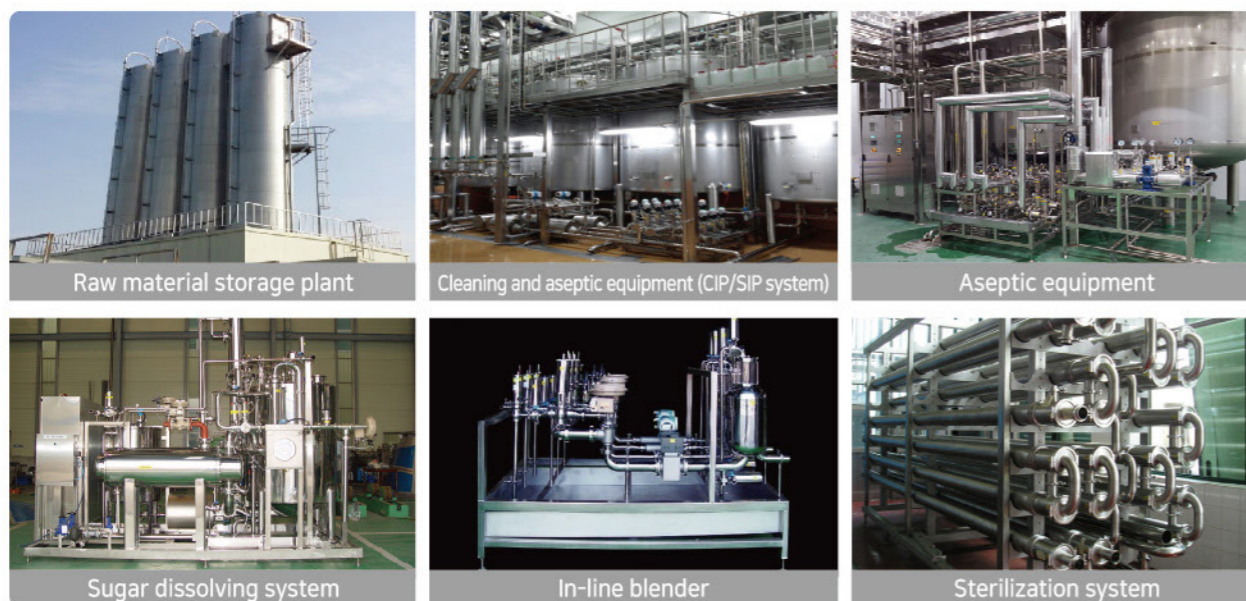
Filling equipment (Bottle, Can, PET)

Having accumulated years of experience and abundant skills in the food and beverage, pharmaceutical industry, Welcron Hantec offers the most convenient and hygienic equipment in the field by applying customer needs first.

Overview	Purpose	Method
Supplying unit equipment, pretreatment process, filling and packaging processes in food, beverage and pharmaceutical factories with the latest automated equipment	To prevent product quality accidents, increase production efficiency, and establish a production management system	Unit equipment, Processing equipment, Filling & packaging equipment, automatic valves, pumps, control system based on PLC and HMI

Unit Equipment

Storage and transport equipment, Concentration terminal (Pyeongtaek Port), Cleaning and aseptic equipment (CIP / SIP system), Sugar silo, Powder silo, Aseptic equipment, Sugar dissolving system, In-line, Sterilization system (HTST, UHT)



Raw material storage plant

Cleaning and aseptic equipment (CIP/SIP system)

Aseptic equipment

Sugar dissolving system

In-line blender

Sterilization system

Processing Equipment

Juice and carbonated beverage production plant, Milk and processed milk production plant, Liquid and concentrated fermented milk production plant, Cheese and dairy product production plant, Power and liquid raw material storage plant, Extraction and concentration plant, Tea and health drink production plant and biopharmaceutical plant(FDA, GMP)



Extraction and concentration plant

Milk and processed milk production plant

Cheese production plant

Freeze dried coffee plant

Juice and beverage production plant

Bio · pharmaceutical plant(FDA, GMP)

Filling&Packaging Equipment

Filler (bottle/can/pet/pouch/stick), Caser and box packaging system, Robot loading system, Palletizer, Conveyor, Inspection equipment (inkjet printer/seal screening equipment/metal detector/x-ray inspection equipment / weight checker)



PET filler

PET filler

Glass bottle filler

Can filler

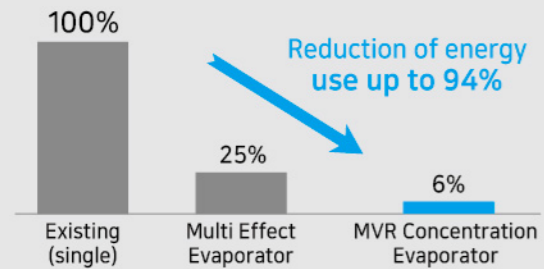
Can filler

Coffee filler and packaing system

02 Evaporate, Crystallization, Distillation Plant

Save energy up to 94%
Supply eco-friendly energy plant in various sectors

[Comparison of the Energy Consumption of Evaporation System]



[Successful Cases of Energy Cost Reduction in Evaporation System] (unit : billion won)

Company	Before	After	Saving Rate
A	1.58	0.36	77%
B	0.8	0.16	80%
C	0.41	0.14	60%
D	10.4	2.5	76%

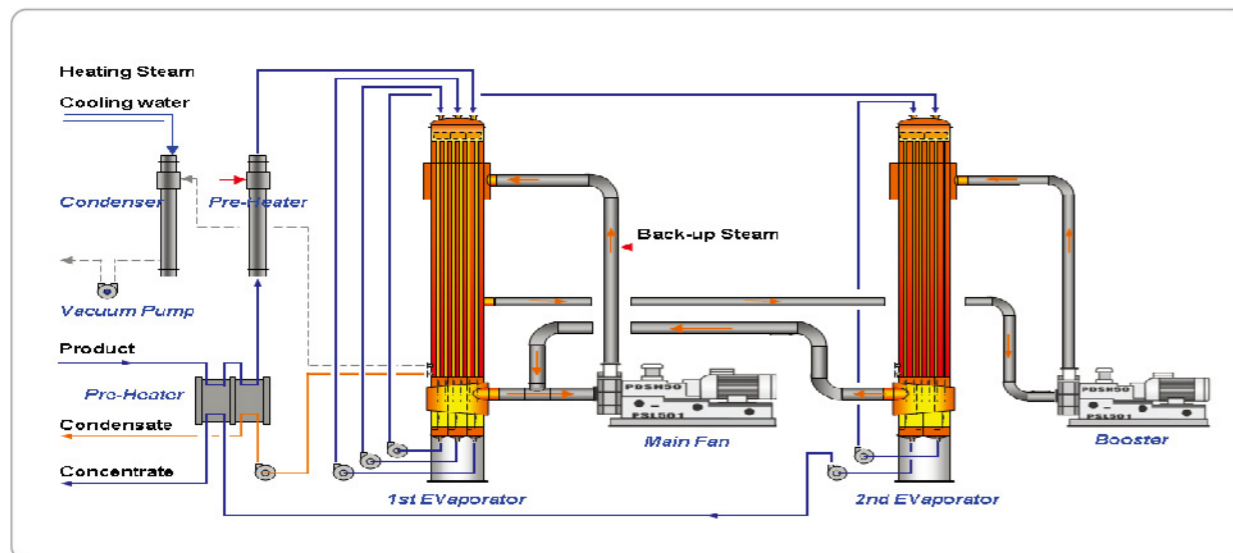
Advantages

1. Automated Operation
2. Economical & High efficiency design
3. Stable continuous operation
4. Proven performance

Applicable Industry

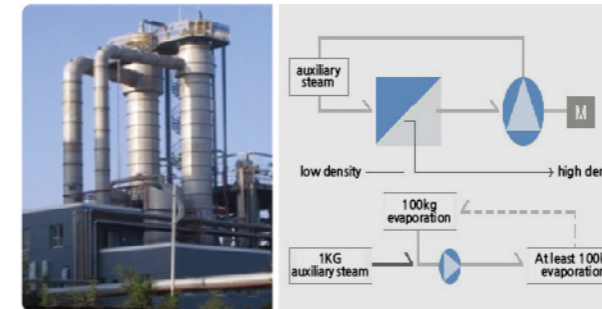
1. Fermentation industry-Lycine, Nucleic acid, MSG, Methionine
2. Starch sugar industry-Glucose, Starch syrup, Fructose, CSL, Dried by-product
3. Material industry-Precision chemistry, Secondary battery material
4. Food industry-Juice, Whey, Powdered skim milk, Coffee, Red ginseng, Liquid sugar, Gelatin
5. Other industry - Various waste liquid(waste food, livestock sludge, food waste leachate), Waste solvent, Desalination(MED), Fiber industry(NMMO)

We can supply automation systems according to customer requirements, and in the case of fully automatic operation, it helps reduce labor and improve product quality.



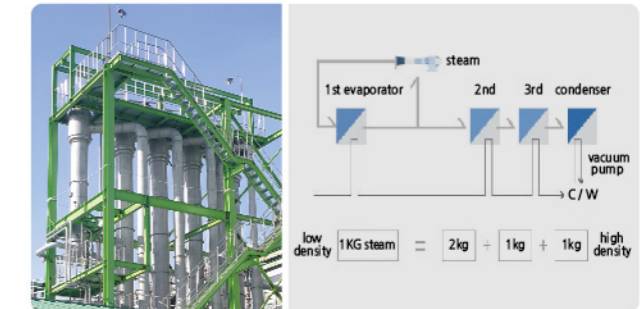
Evaporation System Using MVR

MVR is a system that recycles waste steam by mechanically compressing the steam evaporated from evaporator from external power and increasing the temperature of steam.



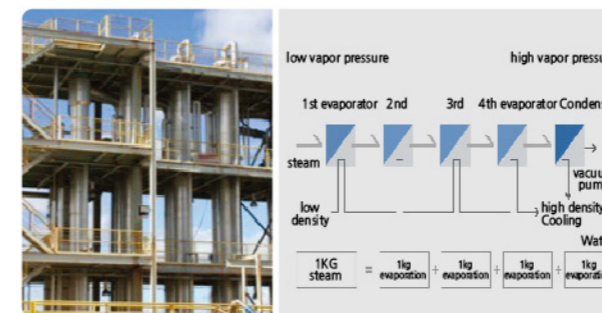
Evaporation System Using TVR

TVR is a system with reduction-expansion nozzles that recycles the waste steam by increasing the temperature and pressure of steam evaporated from the evaporator.



Multi-Effect Evaporation System

Multi-effect evaporation system uses the steam evaporated from the evaporator subsequently at the next evaporator as the heat source without using compressors such as MVR or TVR.





Crystallization System

This system creates solid crystals from the process of increasing the concentration of liquid that can have energy saving effect as a result in combination with TVR or MVR.



Drying Plant

Drying method	Advantages	Application
Indirect Heating Dryer  - Tube Bundle Dryer - Rota-Disc Dryer	- Indirect heating through steam tube and disc outer contact - Less energy consumption due to high heat insulation effect from drying by conductive and radiant heat - Due to the characteristics of indirect heating dryer, can minimize the size of air pollution prevention facility - Less thermal denaturation by contacting heat source of relatively low temperature - Dry various products and volumes according to application of diverse supplementary equipment	- Dry corn germs and cornhusk in starch sugar industry - Dry germs in fermentation industry - Dry brewers' grains in beer industry - Dry distillers grains in liquor industry - Dry sludgy in concentrated waste water - Dry organic feed such as fish meal and distillers grain - Applicable in diverse areas from organic industrial by-products and sludgy
Direct Heating Dryer  - Rotary-Kiln Dryer - Ring Dryer - Flash Dryer	- Dryer operated in direct contact of heated air and wet product - Products are dried by momentary contact while being transported within heat source (air flow) for several seconds - Fast heat delivery rate from heat source (air flow) - Energy saving method possible using waste heat which is effective for moisture evaporation of solids particles	- Mainly applied to drying small particles - Dry starch in starch sugar industry - Dry gluten in starch sugar industry - Dry waste matter with low heat denaturation

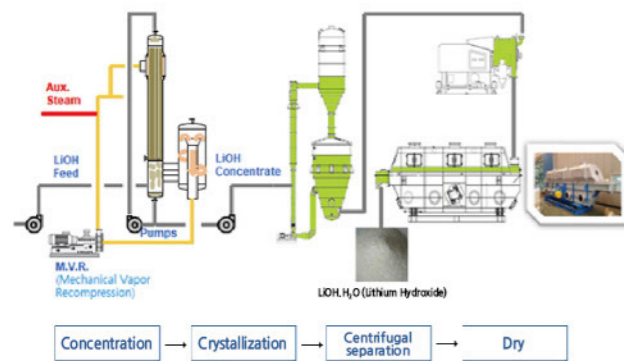
Secondary Battery Material Equipment

Lithium Hydroxide, Lithium Carbonate

Lithium Hydroxide, Lithium Carbonate is mainly used for high-capacity electric vehicle batteries because it is easily synthesized with nickel that increases battery capacity.

In addition, it has strong electrochemical properties and is used as a battery cathode material in the form of lithium oxide.

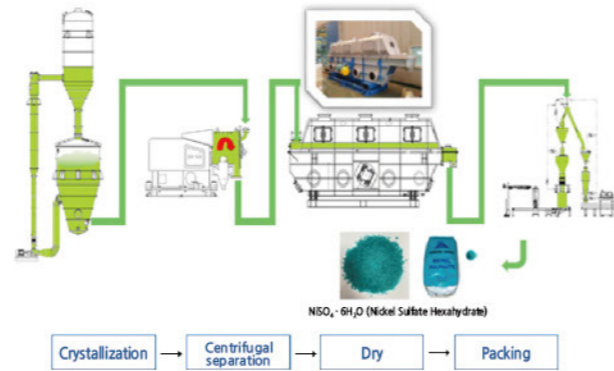
WELCRON HANTEC provides a process of concentrating and crystallizing the supplied lithium hydroxide, Lithium Carbonate is aqueous solution(LiOH Solution) into a saturated solution, followed by dehydration and drying.



Nickel Sulfate, Anti-acid Cobalt, Manganese Antioxidant

Nickel Sulfate, Anti-acid Cobalt, Manganese Antioxidant is a raw material used to make cathode materials, the core material of secondary batteries.

WELCRON HANTEC provides all processes from dehydration, drying and packaging after concentration crystallization of nickel sulfate, Anti-acid cobalt, Manganese antioxidant aqueous solution($\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$ Solution) in a turn-key method.



Secondary Battery Separator Plant



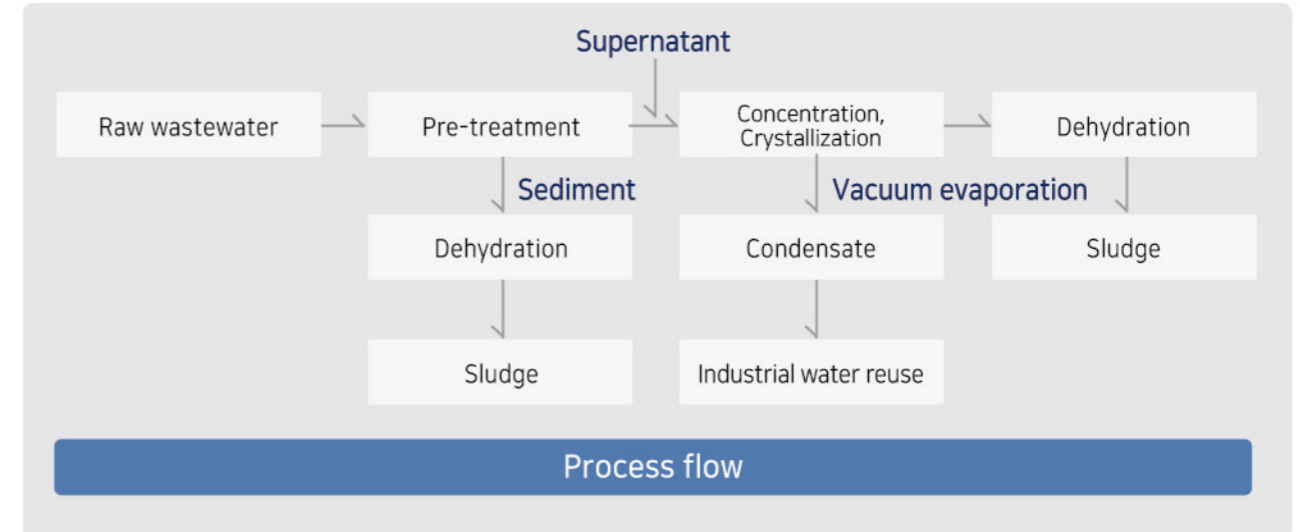
The secondary battery separator plays a key role in all secondary batteries by separating the positive and negative electrodes so that ionic charges can move rapidly through the electrolyte. The solvent recovery equipment of WELCRON HANTEC is a process equipment that separates and reuses expensive high-purity MC(Methylene Chloride) from waste MC aqueous solution mixed with oil during the wet manufacturing process of secondary battery separators, which plays a key role in lowering manufacturing costs.

Machine Specification

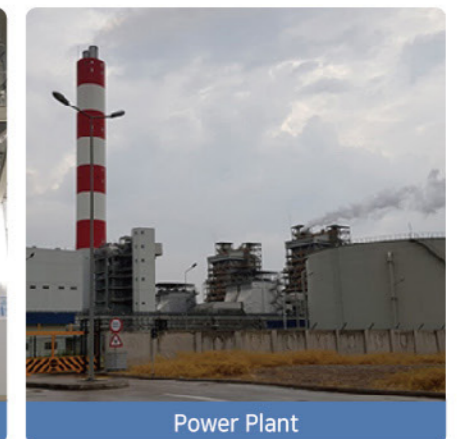
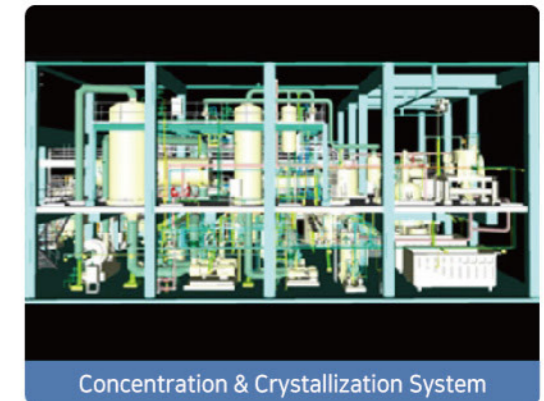
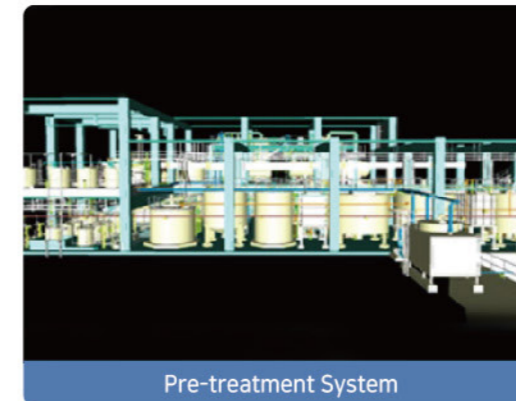
Waste MC Throughput	10m ³ /hr~45m ³ /hr
MC Recovery Ratio	99% or more
DistillatedMC Condition	MC 99% or more Oil 0.5% or less Water 0.05% or less
Refined Oil Condition	MC 0.05% or less Oil 99.5% or more Water 0.05% or less



ZLD(Zero Liquid Discharge) Wastewater Treatment System



- In the pre-treatment process, industrial wastewater discharged from the factory is pretreated to precipitate various pollutants and then discharged to sludge through dehydration.
- Supernatant water discharged from the pre-treatment process is concentrated and crystallized using various energy-saving equipment before being discharged.
- The condensed water generated from concentration and crystal is reused as industrial water.



03 Wastewater Treatment System

It presents eco-friendly and high efficiency wastewater treatment process models and provides stable ESG solutions based on the latest technologies and performance.

Based on WELCRON HANTEC's wastewater treatment system effect
*1200L of water generated per day

Land area reduction effect (Unit: m)

Aerobic	4250
Anaerobic + Aerobic	946

80% reducing

Operation cost reduction effect (Unit: million won)

Division	Electricity expenditure	Chemical cost	Sludge treatment cost	Total
Aerobic	657	321	1,153	2,131
Anaerobic + Aerobic	274	215	182	671

Annual additional income (Unit: million won)




Division	Biogas recovery	Sale of raw materials	Annual additional income
Aerobic	None	None	None
Anaerobic + Aerobic	475	25	500

Effect of acquiring carbon credits
* with biogas recycling About 2,900 tons of greenhouse gas reduction per year

Business scope

Water Treatment Construction	Environmental Consulting	Water Treatment Management
<ul style="list-style-type: none"> Specializing in water environment construction Engineering and construction of water treatment facilities 	<ul style="list-style-type: none"> Water treatment field Related to Carbon Emission Rights 	<ul style="list-style-type: none"> Water quality management agency Private sewage treatment facility management agency

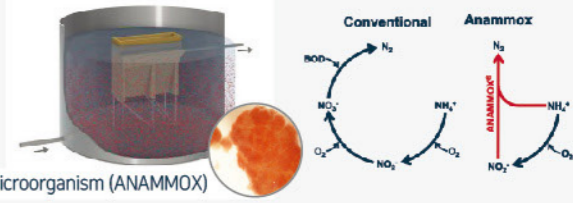
Anaerobic Wastewater Treatment Equipment

Equipment	IC Reactor	ICX	UASB Plus
			
	Economical wastewater treatment equipment that removes COD by using anaerobic microorganism, and can recover methane generated in this process to use it as an energy source	It is the latest technology developed based on the experience of UASB and IC Reactor, and it is possible to convert not only new wastewater treatment equipment but also anaerobic wastewater treatment equipment, which has operational problems such as microbial loss, to ICX	It is the technology that improved the disadvantages of UASB, and it is possible to convert existing tanks that are not in use and to improve wastewater treatment facilities with small initial cost
Advantages	<ul style="list-style-type: none"> - Low installation space due to high volume load - No malodors due to closed structure - No special maintenance necessary inside the reactor - Minimizing the loss of granule sludge - Stable operation possible even if the change in the concentration of raw wastewater is large 	<ul style="list-style-type: none"> - Lower initial investment cost by remodeling unused tanks into reactors - Low installation space due to high volume load - No malodors due to closed structure - Minimizing the loss of granule sludge - Stable operation even in inflow water with high flowage 	<ul style="list-style-type: none"> - Water quality of treated water is stable - Production of useful biogas - Lower initial investment cost by remodeling unused tanks into reactors - Installation space is less due to high volume load compared to UASB
Applicable range	Load (COD concentration x flow rate): 20 ~ 30kg COD/m ³ per day	Load (COD concentration x flow rate): 30 ~ 60kg COD / m ³ per day	Load (COD concentration x flow rate): 15 ~ 20kg COD / m ³ per day
	Applicable to food and beverage production wastewater, Starch production wastewater, Beer production wastewater, Alcohol production wastewater, Pharmaceutical wastewater, Paper production wastewater, Petrochemical wastewater etc.		

Nitrogen Wastewater Treatment Equipment(ANAMMOX)

Equipment

Unlike existing nitrification processes (NH₄→NO₃) and denitrification (NO₃→N₂), this is the technology that uses partial nitrification (NH₄→NO₂) process where granular ANAMMOX microorganism is removing nitrogen by using only the NH₄ and NO₂.



Advantages

- Reduced power consumption by up to 60%
- No need for carbon source (e.g. methanol)
- Reduced carbon dioxide emissions by up to 90%
- Very low amount of sludge
- It is strong against impact load because it uses granular microorganisms.
- A highly economical system with a small tank capacity due to high volumetric load
- Easy operation with automated equipment
- Stable operation even at relatively high concentration of solids


Applicable range

Applicable to wastewater, Organic solid wastewater treatment plant wastewater, Digester tank reject water, Food and beverage wastewater, Semiconductor wastewater, Fertilizer processing and fertilizer wastewater, Petroleum chemical, Animal wastewater etc.

Biogas Desulfurization Equipment(THIOPAQ)

Equipment

It is a system that removes hydrogen sulfide contained in biogas by combining a scrubber and a bioreactor. It absorbs hydrogen sulfide in the scrubber and discharges it in the form of elemental sulfur (S₀) by using microorganisms (thiobacillus) in the bioreactor equipment.



Advantages

- Good removal rate of hydrogen sulfide and re-use of removed sulfur
- Fast Start-Up
- Safe operation under normal temperature and normal pressure
- No use of chelate compounds and little caustic soda consumption

Applicable range

Gas flow rate: 100 to 1,400 Nm³ / h
Sulfur load (kg S / day): 50 to 600kg S / day


Applicable Industry

Applicable to biogas of anaerobic digester tank, Industrial digestion gas such as landfill gas, Petrochemical industry, Coal gasification plant of power plant etc.

Multi-Disc Wastewater Sludge Dehydrator

Equipment

The coagulated sludge is compressed and dehydrated by each of filtering rollers which consisting of stainless and resin discs are rotating at different speeds



Advantages

- Eco-friendly Dehydrator (Electric Power & Water saving)
- Automatic Operation
- Self-cleaning Mechanism
- Compact design
- Eco-friendly design (low noise and vibrations, no odors)
- Capable of Treating Oily Sludge (It can cope with a wide sludge concentration range of 0.5 to 5.0%)

Average electric power usage	
Multi-Disc Dehydrator	Belt Press Dehydrator
0.05kWh/kgDS	0.1kWh/kgDS

Average water usage	
Multi-Disc Dehydrator	Belt Press Dehydrator
48~140L/h	840L/h

Applicable range

Applicable to wastewater, Organic solid wastewater treatment plant wastewater, Food and beverage wastewater, Petroleum chemical, Animal wastewater etc.



02

Division of Construction

Division of Construction

Welcron Hantec's general construction service is

Based on the abundant experience in construction work and technology, it is a comprehensive construction company that provides the entire processes of a project with a total service from engineering to procurement and construction. And we are continuously growing as No.1 Value Creator that creates differentiated customer value. Based on our knowhow in diverse areas, we will endeavor for the optimum space planning, highest construction quality and customer satisfaction. We will continue to construct buildings that will lead the construction technology through continuous technological development and improvement in construction ability.

Service Area



01 Architecture Business

Architecture Business

We achieve customer satisfaction with the excellent technology and perfect construction technique accumulated over the past years of diverse construction experience in the construction field, such as office, work, education, and medical facilities. In addition, we create efficient production/manufacturing facilities and logistics facilities based on specialized technology and core capabilities and build industrial systems in various fields such as CLEAN ROOM, GMP, and HACCP.

- Business and commercial facilities
- Religious facilities
- Clean room
- Education and research facility
- Production and manufacturing system
- GMP, HACCP
- Medical facility
- Logistics center
- Knowledge industry center



02 Housing/Public/Civil Business

Housing

With the know-how in the entire field of business, we create a pleasant and comfortable living space to increase the asset value of our customers. We will build the future and happiness of our customers.

- Apartment house
- Officetels



Public/Civil

We contribute to improving citizens' convenience and quality of life by participating in public facilities throughout society. In addition, we will contribute to balanced economic development based on our understanding of nature.

- Public housing
- School · Offices
- Cultural facilities
- Complex development project
- Roads · rivers · parks
- Water environment · Water treatment
- Sports facilities



About **DONGWON**

Dongwon Architects Planners & Engineering was established to provide reasonable and efficient building services. It provides project planning, project planning suggestions, planning design, implementation design, licensing, and supervision. Through cooperation in each field (structural, mechanical, electrical, and firefighting), we propose optimal design solutions, and we will make a project cost analysis considering architectural construction and interior design to achieve customer impression.



Brand Story



“Change of Perspective on Space”
‘OVU’ symbolizes a outstanding, open, and optimal space.

OUTSTANDING VIEW

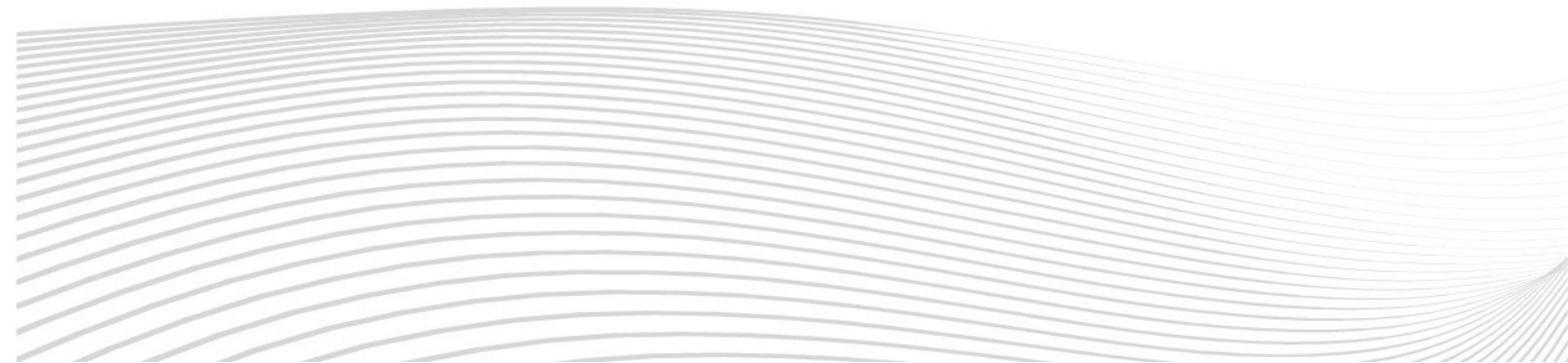
To make the person staying happier and more comfortable, and naturally have an excellent perspective on space, OVU provides a new perspective on people and space.

OPEN VIEW

We always create a space where you can live a leisurely life with an open mind. OVU's philosophy is to create a space where people can live with an open mind through an open space, just as people change through the environment.

OPTIMAL VIEW

Apartments, Officetels, Urban living houses, Living accommodation facilities, etc. OVU designs any type of space to create a satisfying life with the optimal space for each direction.





Division of Energy

01 Waste to Energy

Business Overview

Providing a comprehensive solution for waste energy and biomass power generation projects that pursue eco-friendly energy policy directions such as "2050 carbon neutrality declaration and increase of global climate ambition"

Technology

- Waste-to-Energy (WTE) : Incineration power generation with heat supply using industrial waste and SRF as fuels
- Biomass Power Plant : Biomass power generation with heat supply

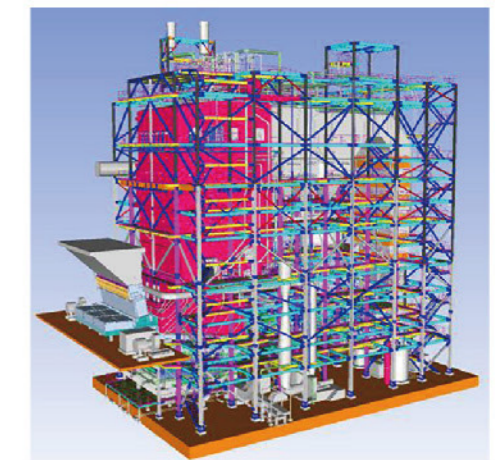
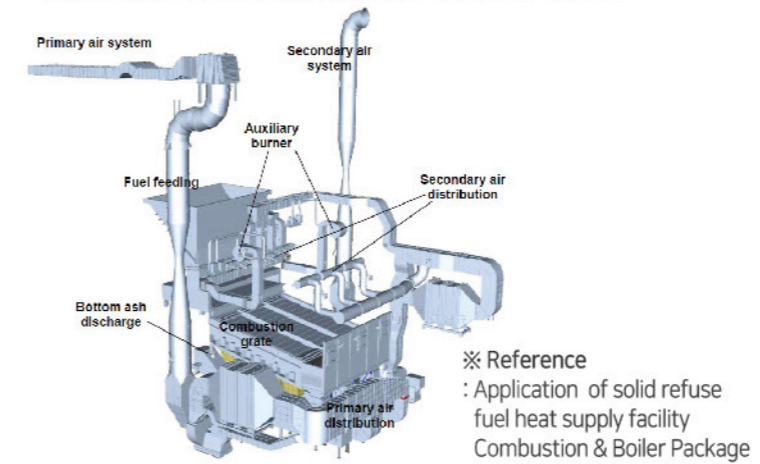
Features

[Water Cooled Grate Firing System]

- Possible to combust with high calorific fuel (3,500~7,000 Kcal/kg)
- Low-pollution combustion
- Less flue gas and high thermal efficiency with low air-fuel ratio

[Horizontal Tail End Boiler]

- Annual operation time: more than 8,000 hours
- Easy to remove ash deposit in furnace
- High thermal efficiency of more than 80%



Reference

No.	Project	Capacity	Steam output	Steam pressure	Steam temperature	Year
1	Heat supply facility in Daesan Power Co., LTD, Korea	605 TPD	120 t/h	52 bar.g	405°C	2017
2	Heat supply facility in EMK, Korea	36 TPD	10 t/h	10 kg/cm².g	183°C	2021
3	Industrial waste incinerator in EBE YEOSU Co., LTD, Korea	93.6 TPD	23 t/h	45 bar.g	405°C	2021
4	Revamping of incineration and sewage drying system in SDH, Korea	62.4 TPD	17.3 t/h	16 kg/cm².g	203°C	2022
5	Auxiliary boiler package in VA2 CFPP, Vietnam	-	45.7 t/h	15.5 bar.g	300°C	2022
6	New waste pelleting plant for Bio-SRF and revamping of power plant in EWELL, Korea	100 TPD	17.5 t/h	29.38 bar.g	385°C	2022
7	Sludge drying system and SRF CHPP in REWELL, Korea	88 TPD	23.79 t/h	24 bar.g	223°C	2023

02 Sludge Drying and Shaping System

Business Overview

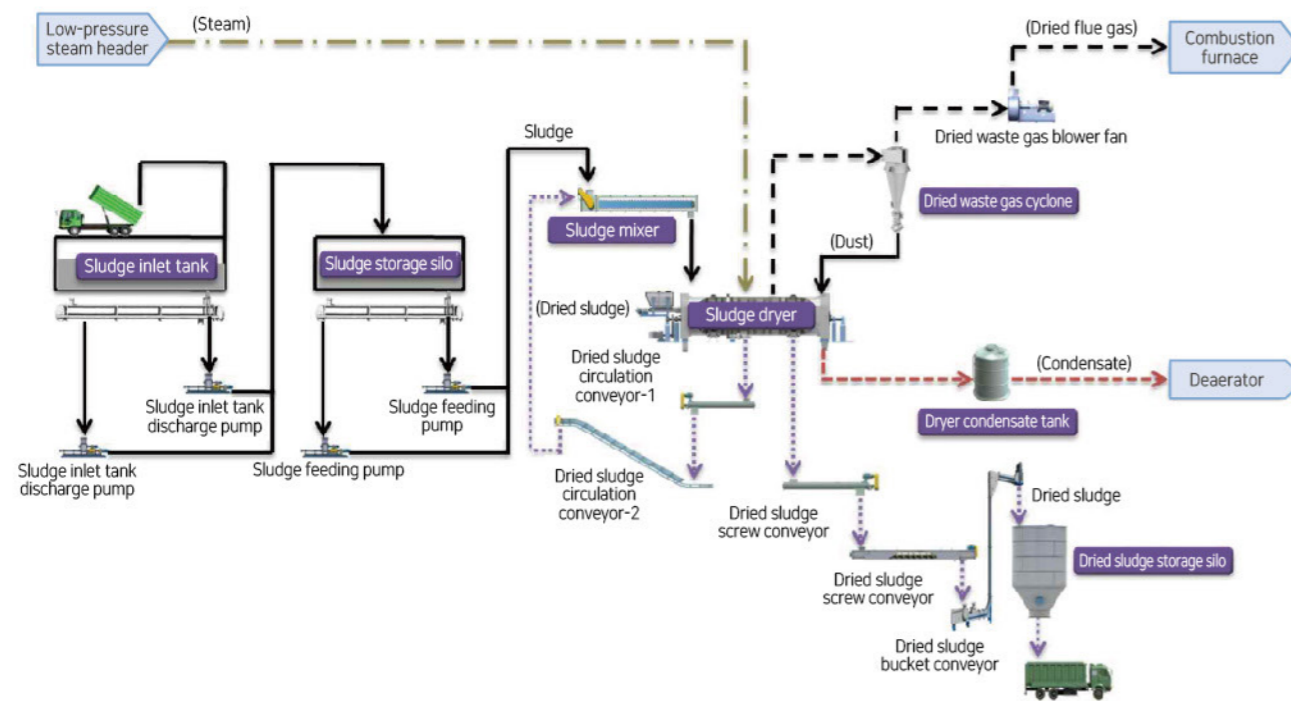
Providing a solution for reducing and drying organic sludge generated from wastewater and sewage treatment systems and turning it into a fuel resource

Technology

- Waste gas drying system
- Steam drying system

Features

- Increases energy efficiency using a waste heat source
- Reduces transport and treatment costs by decreasing the total amount of sludge
- Prevents secondary pollution caused by direct landfill (Improves the environment)



Reference

No.	Project	Capacity	Year
1	Organic sludge drying system in DAEBUL industrial complex, Korea	20 ton/d	2008
2	Organic sludge drying system in DONWON ENERGY, Korea	200 ton/d	2023
3	Organic sludge drying system in WELL ENERGY, Korea	200 ton/d	2023

03 Water & Waste Water Treatment

Business Overview

Proposing a power generation water and wastewater treatment system with competitive technology
Securing business feasibility with the proven entrusted wastewater treatment system of the latest technology combination

Technology

- RO system (SWRO, BWRO)
- Entrusted wastewater treatment system (Dryer / ZLD + MBR)

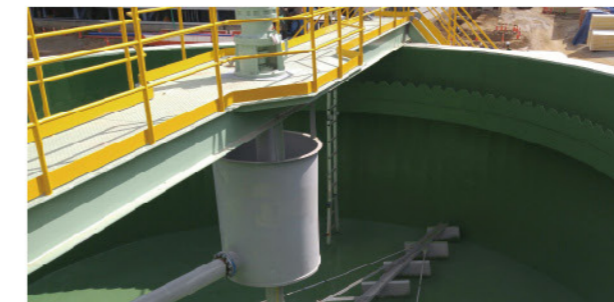
Features

[WT & WWT system for Power Plant and water reclamation system]

- Optimal design for water quality and operation conditions
- User-friendly and efficient system based on EPC turn-key

[Industrial waste water treatment system]

- Application of entrusted wastewater treatment process using remaining steam
- Optimal membrane for entrusted wastes of high concentration Applying technology to ensure processing water quality and operational efficiency is essential



Reference

Type.	Project	Capacity	Year
MED	MED system with TVC in Angamos CFPP, Chile	Demi water, 5,000m ³ /d	2008
RO	SWRO facility in Yongheung CFPP, Korea	Demi water, 2,000m ³ /d	2010
RO	SWRO facility in Jeju, Korea	Drinking water, 1,500m ³ /d	2011
RO	Nano filtration purification plant in Jeju, Korea	Drinking water, 6,500m ³ /d	2014
WT(RO) + WWT	WT & WWT facility in Seokmun Energy, Korea	City water 576m ³ /d x 2train	2015
WT(RO) + WWT	WT & WWT facility in Chuncheon Energy, Korea	City water 733.4m ³ /d x 2train	2015
Dryer/ZLD+MBR	IWW treatment facility in Onsan Industrial Complex, Korea	Industrial waste water 370m ³ /d	2019
WT(RO)+ WWT	WT & WWT system in Gatun CCPP, Panama	Demi water 991m ³ /d, WWT 698m ³ /d	2022

About REWELL

Business Description

- Organic sludge (water content 70%) generated in the wastewater treatment plant was reduced to 30% or less of the water content using the microbial drying method.
- In the treatment process, highly concentrated microorganisms and Rewell's patented catalyst (Rewell S, Rewell B) were added to and mixed with wastewater.

Application Method

- Reduces sludge landfill throughput by reducing sludge water content (70%→30%)
- Dried sludge containing microorganisms can be used as supplementary ingredients of cement and green soil
- Used as plant fuel resources, reducing fuel cost



Core Technology (Reducing highly concentrated microorganisms)

01

Rewell has the technology to cultivate highly concentrated microorganisms, unlike traditional microorganisms. (This is quite a simple method) We incubate these highly concentrated microorganisms to maximize their weight loss efficiency and, at the same time, inject materials with high growth porosity to maximize the activity of highly concentrated microorganisms. It has the advantage of reducing the water content of sludge and increasing the ability to remove odor, making it a highly efficient method of reducing the weight by 30% or more compared to the traditional way.

02

'Rewell B', used as an additive, maximizes the efficiency of using such microorganisms, and the sludge activates the energy about 3 to 5 times through heat generation. 'Rewell B' is recyclable material, which has a recycling capacity of about 5 times.(Confidential)

03

'Rewell S' starts to self-activate by exercising its self-growth culture capacity of about 5 to 8 times in sludge while microorganisms are fully activated. The activated 'Rewell S' also has a high recycling capacity of more than 10 times as a recycled material. This is the critical factor in cost reduction

04

Rewell's sludge-reduction technology contributes to cost-saving and cost reduction by using fossil fuels instead of heat sources and thermal power, making it a key point of Rewell's success. This surely increases the net profit ratio of the business. We would like to achieve a stable return on the business utilizing Rewell's weight reduction technology that excludes heat sources.

Business Goals



02 Accredited the environment mark



Inquiries about Sludge Treatment

- Headquarters : 275, Duryu-gil, Angang-eup, Gyeongju-si, Gyeongsangbuk-do (2,000 pyeong)
- Contact : 054-620-1188 | Fax : 054-620-0088

About EWELL/EWELL ENERGY

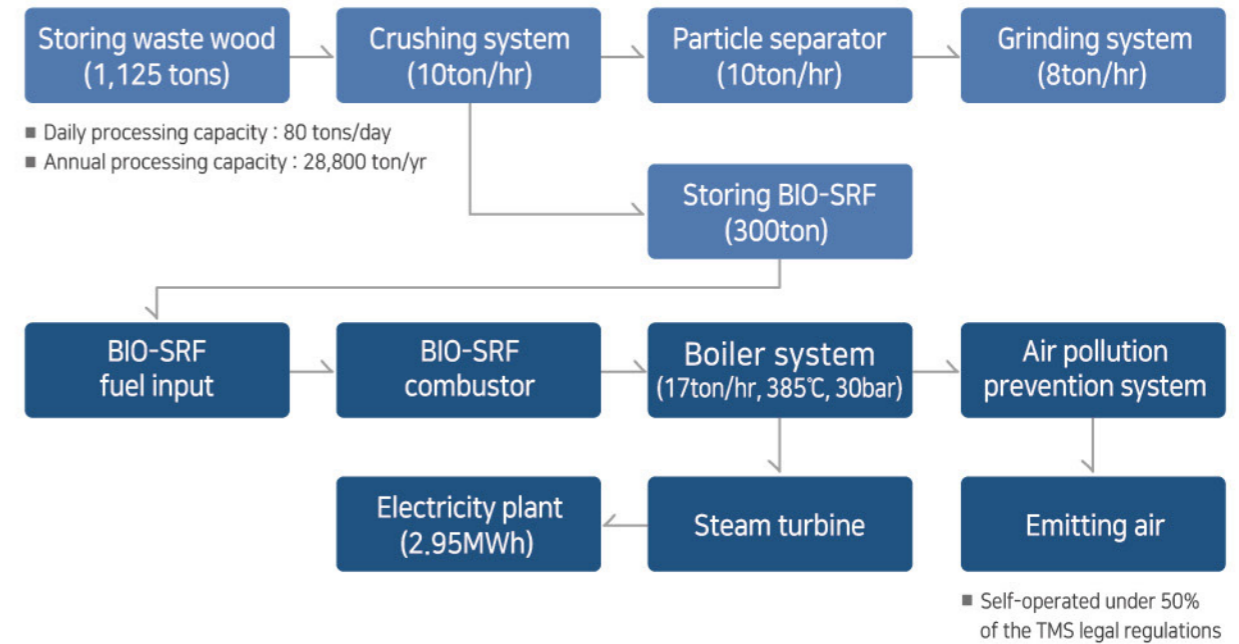
Business Overview EWELL ENERGY

- Produces bio-SRF (5 tons/hr) by crushing waste wood in Jeju

EWELL

- Supplies steam (17ton/hr, 385°C, 30bar) using BIO-SRF produced in Jeju Island as a heat source
- Produces and sells electricity (2.95 MWh) by operating steam turbines with the steam produced

Process of BIO-SRF Plant and Applications



Inquiries about waste wood disposal

- Headquarters/Plant : 33 Topyeong Industrial Complex-ro 127beon-gil, Seogwipo-si, Jeju Special Self-Governing Province
- Contact : 064-763-7002 (Forest, waste wood/construction waste wood, other waste wood)
- Website : www.e-well.co.kr

About MIRAE JEJU

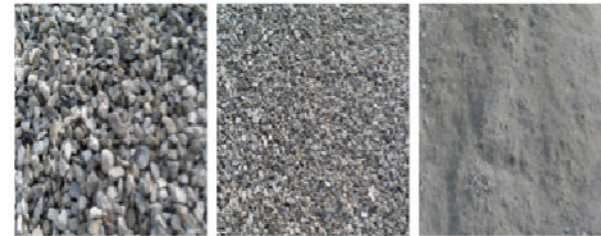
Specializing in the intermediate processing and recycling of construction waste

- Intermediate treatment involving the collection, transportation, sorting, crushing, and shredding of construction waste and industrial waste generated at workplaces



- Recycling of construction waste (such as waste concrete, asphalt, and construction debris) generated at construction sites by crushing and shredding them into sizes of 10, 25, and 50mm for reuse as recycled aggregates for concrete

- Specifications for crushers : 150 ton/hr (Nordberg , USA)



Recycled aggregates 50mm Recycled aggregates 25mm Recycled aggregates 10mm

Organic waste resource utilization business (organic waste incineration)



- Shredding, crushing, and sorting of wood waste, timber waste, citrus waste, and other organic waste materials for recycling as biofuel

Construction equipment rental business

- Equipment inventory and specifications

① Dump trucks (25.5 ton)

② Compactor vehicles (4.3 ton, 19.5 ton)

③ Excavators (0.8m³, 1.0m³)

④ Loaders (4.0m³)

⑤ Wood chip manufacturing machines



Inquiries about construction and industrial waste disposal

- HQ/Factory : 26 Bongmaedongsan-gil, Aewol-eup, Jeju-si, Jeju Special Self-Governing Province
- Contact : 064-799-3800

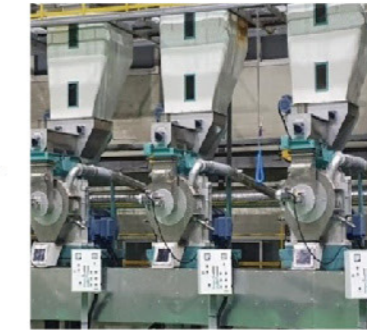
About DONGWON ENERGY

Organic waste incineration business

- Production of renewable fuel pellets for power generation by mixing sewage sludge and wastewater sludge with sawdust, contributing to waste recycling



Sludge collection and transportation



Pelletizing



Fuel pellet production

Eco-friendly organic fertilizer production business

- Production of organic fertilizers by mixing sewage sludge and wastewater sludge with sawdust and reinforcement materials, contributing to waste recycling



Pelletizing



Packaging and shipping of organic fertilizers

Inquiries about sewage sludge treatment and fuel pellet sales

- HQ/Factory : 25 Seobunam-ro, 566beon-gil, Sinchang-myeon, Asan-si, Chungcheongnam-do
- Contact : 010-5279-9444