

SUEZ ASIA

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EN English version

中 中文版

 **suez**



SUEZ-JV Derun Environment wins watershed management project to improve Chengdu-Chongqing Economic Circle ecological environment

A consortium consisting of four parties, namely Derun Environment, China Construction Fifth Engineering Division Corporation Ltd., China Construction Tunnel Corporation Ltd. and Changjiang Survey Planning Design and Research Co. Ltd., led by Chongqing Derun Environment, a SUEZ joint venture, was awarded a 25-year project to treat and improve the Yipin and Huangxi Rivers in Chongqing as part of the 'Clear Water and Green Banks' programme. This Public-Private Partnership project aims to further improve the ecological environment of the Chengdu-Chongqing Economic Circle and enhance the quality of urban water management.

The project is located in Banan District, south of Chongqing's central urban area. Chongqing Derun Environment, the leading member of the consortium, will be responsible for setting up a project company and for overseeing the operation and maintenance of the project.

The construction and operational activities of the project consist of water treatment (including a wastewater treatment plant and pipe network), waterfront management, water ecosystem restoration smart water, and ancillary projects. The construction period is three years, and the operational trial period is expected to begin in 2024.



This project is part of Chongqing's priority 'Clear Water and Green Banks' programme. The initiative will be tremendously beneficial to the long-term development of Chongqing. We're confident that by leveraging the consortium members' extensive expertise in watershed management, this project will become another benchmark of excellence, similar to the Changsheng River integrated remediation project and the 'livable waterfront' project in Wuhou District of Chengdu. 

Lai Shengping
Executive President of Chongqing Derun Environment



We're honoured to have the opportunity to once more apply our expertise in water ecosystem remediation and water quality improvement to a Chongqing project. SUEZ is committed to ongoing expansion of its investment in Chongqing. Currently we're developing more environmental treatment and restoration projects in western China. We will keep playing our important role in the ecological protection of the Yangtze River basin to support residents' livelihoods and wellbeing. 

Steve Clark
CEO of SUEZ Asia



59.75 km
length of watershed
under management



350 km²
area of watershed
under management



RMB 1.4 billion
total investment



SUEZ wins new industrial wastewater treatment project in Changshu, Jiangsu contributing to the city's high-quality socio-economic development

SUEZ, through Jiangsu Sino French Water, a local joint venture, has been awarded a 30-year build-and-operate contract for an industrial wastewater treatment plant in Changshu, Jiangsu Province. This expands the already broad strategic partnership between SUEZ and the city of Changshu, which spans a portfolio of water, wastewater and waste management projects. The project will reinforce high-quality, environmentally sustainable development for Changshu's economy.

The SUEZ joint venture is responsible for designing, constructing and operating the wastewater treatment plant in the Changshu Economic and Technological Development Zone, which will help many chemical companies in the Park meet even the strictest discharge standards. The treatment plant is expected to be commissioned in 2024. It will enhance the Park's integrated support services and protect the water environment.

RMB 258 million

total investment

15,000 m³

daily treatment capacity



For over 15 years, Changshu and SUEZ have forged a powerful partnership that has driven strong growth for the city's water business. This new collaboration represents the diversification and upscaling of our cooperation. Together, we've won widespread industry recognition for service quality and operations management, and we expect the joint venture to add to our joint efforts in improving Changshu's ecological environment through advanced technology, scientific management, and quality services.

Jin Ke
Chairman of Jiangsu Sino French Water



Our partnership with Changshu continues to deepen, and such a strong partnership testifies to our shared commitment of improving the ecological environment and pursuing excellence in urban water management. SUEZ, together with joint venture partners, have invested over RMB 3.9 billion in Changshu, remains committed to improving public services and quality of life for local residents. We have successfully replicated this Changshu model of cooperation in other cities, like Shaowu and Anji.

Steve Clark
CEO of SUEZ Asia



SUEZ, Changshu and Anji join forces to create a joint venture to provide innovative digital solutions in waste recycling

The agreement provides for the creation of a joint venture between SUEZ, Changshu and Anji to operate and maintain a construction waste recycling plant in Anji, located in Zhejiang Province, for a period of 20 years. The project, led by Anji, will process approximately 380,000 tonnes of construction waste per year, while meeting the highest environmental standards. Following SUEZ's successful experience in Changshu, it represents another major national R&D project in the field of construction waste treatment.

The Anji project will mirror the 'Changshu model' initiated by SUEZ's JV in 2018 for the reuse of construction waste into new resources, and will rely on Internet and Internet of Things technologies, customised treatment processes, bespoke equipment, and a smart digital platform that monitors the entire process of waste collection, transfer and treatment. The project will also integrate advanced, intelligent sorting facilities to efficiently and precisely treat construction waste, in order to achieve minimum reuse rate of construction waste of 85%.

380,000 tonnes / year

construction waste treatment capacity

85 %

construction waste reuse rate



Recycling Construction Waste

The recycled construction aggregates will be used to produce bricks, curbstone or road bedding for different purposes; combustible materials will be supplied to waste incineration plants as fuel for power generation. Additionally, metallic materials will be reused directly.

SUEZ secures a new contract to provide watermains cleaning services for water network in Singapore



SUEZ was awarded a new three-year contract by the Public Utilities Board (PUB), Singapore's national water agency, to provide water pipes cleaning services using water-saving technologies Ice Pigging™ and air scouring. This further extends the cooperation between the parties in water pipes cleaning following a previous three-year contract.

Under this new contract, SUEZ will provide a range of preventive maintenance techniques including data gathering of the water pipe network, real-time water quality monitoring, valve exercising, and deploying suitable cleaning methods. The services will be performed on the potable water network in residential, commercial and industrial areas of Singapore from late 2021 till 2024.

Preventive Maintenance

Potable water contains minerals which settle down over time in the pipelines. Ice pigging and air scouring help clean the internal surface of the pipes to remove these mineral sediments, which may accumulate over time. Such cleaning methods are non-intrusive, fast, effective and economical.

To cater to Singapore's high standards for water quality, SUEZ has worked closely with the PUB to streamline operating procedures, as well as equipment and operations' monitoring, to minimise inconvenience to customers. SUEZ's various techniques for the cleaning of water pipes will ensure efficacy whilst optimising its cleaning strategy for all network conditions.

SUEZ's Ice Pigging™ technology uses a pumped ice slurry to physically clean pipes, sweeping and removing settled and loosely adhered deposits. This unique 'no-dig' solution delivers superior cleaning results, is safe and gentle to pipes, and requires about 50% less water than conventional flushing techniques. More importantly, its quick deployment significantly reduces chances of customers being adversely affected during cleaning operations.

Through innovation, the local team has developed an adjusted ice pigging technique that suits the tropical climate of Singapore, demonstrating ice pigging's efficacy at cleaning potable water pipes year-round.



The successful deployment of Ice Pigging™ technology around the world

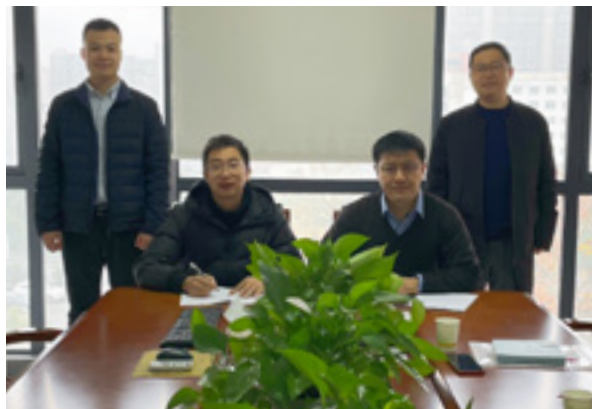
Since the launch of Ice Pigging™ over 10 years ago, it has been successfully deployed in the water industry in many countries including the UK, U.S.A., Australia, Italy and Japan. In Asia, SUEZ is in the process of expanding its service for municipal water networks with contracts in mainland China, Hong Kong and Taipei.

SUEZ wins equipment and technical services contracts



In Shanghai ensuring effluent meets Class A discharge standards

With a treatment capacity of 700,000 m³/day, SUEZ will supply equipment and technical services using Densadeg™ treatment process to Shanghai Zhuyuan WWTP to ensure the effluent meets Class A 'Pollutant Discharge Standards for Urban Sewage Treatment Plants' (GB18918-2002).



In Hunan Maotangpu Industry Park minimising impacts to local water environment

The project's treatment capacity is 30,000 m³/day. SUEZ will supply equipment and technical services for Densadeg™ and Denifor™ V treatment process to the WWTP in the Park to ensure that the effluent meets local discharge standards, thereby minimising impacts to the local water environment.



In Chongqing Tangjiatuo achieving more stable operation and better treatment performance

SUEZ will optimise treatment process and equipment selection for more stable operation and better treatment performance in Chongqing Tangjiatuo WWTP. SUEZ will supply the dewatered sludge conveying system, heat transfer oil supply system, electrical and automation system, as well as the core China-made sludge drying equipment, which is the first for SUEZ in China.



In Hunan reducing 50% backwash water

SUEZ, in its third collaboration with Kaifu WWTP in Hunan Province, adopts the innovative biological reactor Biolex™ to further remove total nitrogen. The treatment capacity is increased without enlarging the size of the tank. The water volume for backwash is also reduced by 50%.



In Hainan Dongfang Industry Zone

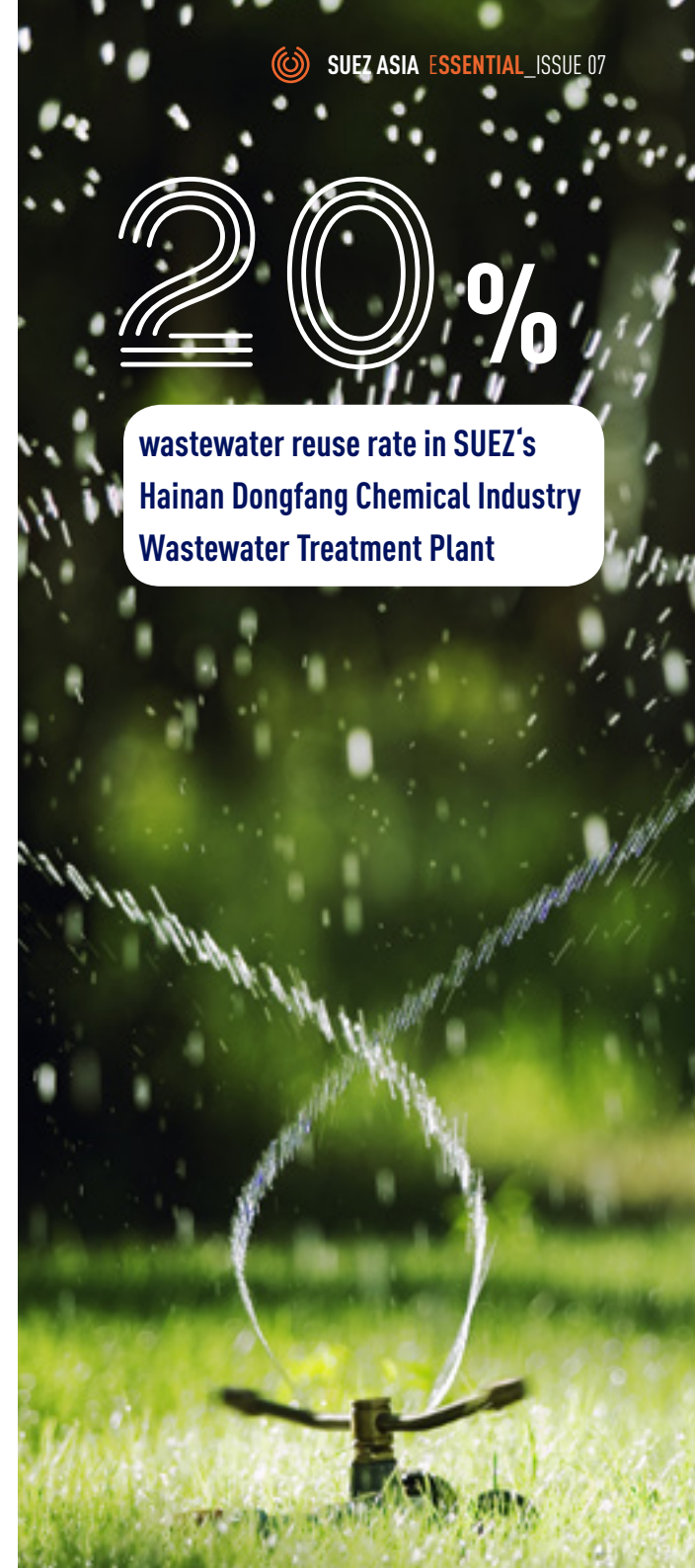
**quality wastewater treatment services
promote water resources conservation and marine conservation**

SUEZ and CNOOC Energy Technology & Services Ltd. established a 50/50 joint venture in July 2017 to work collectively on the Hainan Dongfang Chemical Wastewater Treatment Plant project. The joint venture took over the operation and management of its existing wastewater treatment plant, which has a daily industrial wastewater treatment capacity of 12,000 m³. It is also responsible for improving the operational standards and retrofitting the facility - installing a new acrylonitrile treatment line of 4,800 m³/day and improving the quality of effluent in the old plant.

Construction commenced on 20 January 2022 and is expected to be completed by end of July this year. By treating and reusing wastewater without using more land, the footprint will be minimal and in compliance with the country's standards for discharge of concentrated brine. The reclaimed water will be used for greening irrigation and industry production.

20%

**wastewater reuse rate in SUEZ's
Hainan Dongfang Chemical Industry
Wastewater Treatment Plant**



SUEZ's new sludge treatment facility in Yangzhou commissioned



On 25 March 2022, two new sludge drying production lines in SUEZ's Yangzhou Project were commissioned. Each production line is built with a treatment capacity of 100 tonnes/day and the project's total treatment capacity is boosted to 500 tonnes/day. It manages to receive all wet sludge produced by the surrounding wastewater treatment plants and dispose of them on the same day. Dried sludge is a renewable source for green energy production when combusting in the power generation plant to recover the energy. The boost in production capacity can treat 180,000 tonnes of wet sludge a year, saving 11,000 tonnes of standard coal per year, and reduce carbon dioxide emissions by 29,000 tonnes. Additionally, the plant's wastewater discharging system is optimised and the exhaust gases are further treated as per their nature, which help protect the surrounding environment.



180,000 tonnes
annual sludge treatment capacity



29,000 tonnes
CO₂ emissions reduced per year



11,000 tonnes
standard coal saved per year



SUEZ's wastewater treatment project in Chengdong of Changshu put into operation



30 years

concession contract

120,000 m³ / day

total treatment capacity
of Chengdong WWTP

Jiangsu Sino French Water, a SUEZ JV, was awarded a 30-year concession contract for the wastewater treatment plant and sewer network in Chengdong, Changshu, in 2018. The JV is responsible for the investment, design, construction as well as operations and maintenance of the plant so as to increase efficiency of wastewater treatment and improve environmental governance in Changshu. Phase I of the project with a treatment capacity of 60,000 m³/day commenced operations in September 2021, while phase II of the same treatment capacity commenced operation in January 2022.

Construction of SCIP AnYo SUEZ Waste Incineration Plant

Expected to be completed by end of 2022

SUEZ formed a joint venture - SCIP AnYo SUEZ Environmental Technology Co. Ltd., with SCIP and SAIC Motor, which will be responsible for the investment, construction and operation of the hazardous Waste-to-Energy facility of 40,000 tonnes/year. It will provide specialised hazardous waste treatment services to the different production sites of SAIC Motor in Shanghai and to the increasing volume of hazardous waste generated by clients inside the Park.

Construction work began in Q1 2021. As of end of March 2022, the installation of a 130-tonne rotary kiln, a boiler water wall and cooling tower, which make up the core facility of the incineration line, have been completed. 60% of the installation of the project's core incineration facility has been completed. Despite the COVID-19 epidemic in Shanghai, all related parties maintain close communication and are well prepared to resume the construction work. If the epidemic can be controlled as expected, the project can still meet the targeted completion deadline in Q4 2022.



On-going construction of SUEZ Taixing Industrial Wastewater Treatment Project

Expected to be put into operation in Q3 2022

The 50,000 m³/day industrial wastewater treatment project, which is invested and built by SUEZ, China Communications Construction and Jiangsu Taixing Economic Development Zone, is recognised as the pilot PPP project in Jiangsu Province. Upon the completion of the project, key indicators of the effluent will meet the Class IV standard of surface water. It will ensure green and sustainable development of the Park and help protect the Yangtze River water environment. Currently, the civil work has been completed and the equipment installation is in the final stage.



SUEZ Tech M&D APP

To promote and better apply SUEZ technologies in various joint ventures, SUEZ's water technical team provides technical support through specific projects. To achieve data visualisation and accelerate project progress, SUEZ has developed the Tech M&D APP, which enables all related parties in a project to share data and communicate timely. It is a useful digital tool to improve the technical service quality and technical management performance.

 **26 projects**

As of now, 26 technical projects serving various water joint ventures in Chongqing, Changshu, Panjin, Sanya and more have been managed or are being managed via the platform.



clearly defines the responsibility of different roles and with different accesses as per the users' role, which ensures confidentiality

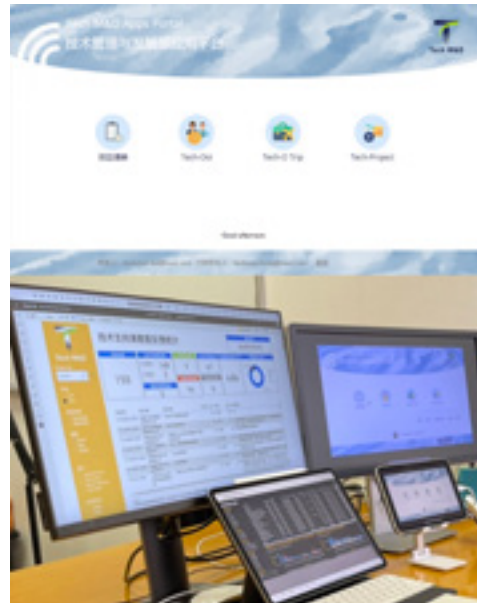


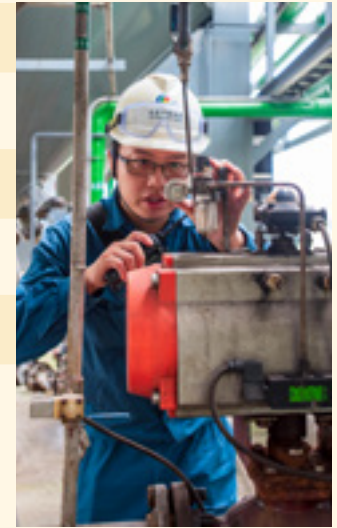
automatic pushing process that reduces manual errors or delays



includes all the project information that helps managers master global information for decision-making and improvement

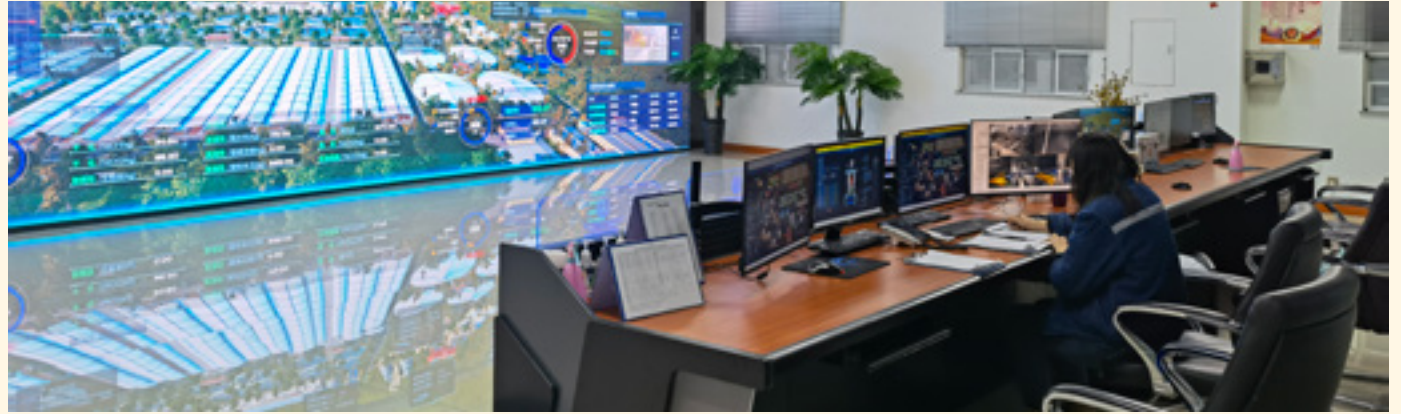
The project has been implemented for half a year. It has sped up the progress of different technical projects and best exerted the value of the technical projects. Currently, the team has expanded the platform to manpower management, budget and final account management, travel management and other technical support management. This year, it will be further extended to other corporate departments for customised development and application.





Committed SUEZ staff provide customers with high-quality and uninterrupted services

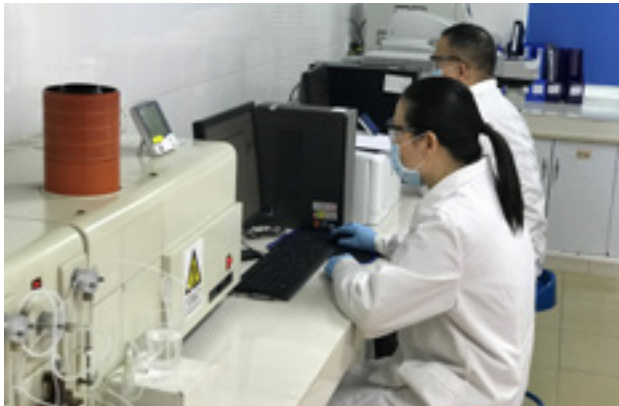
In face of extreme conditions brought about by COVID-19, our SUEZ teams have responded with extraordinary determination and solidarity, working from home or at our facilities under closed-loop schemes to keep running crucial operations for our customers.



Thanks to each and every one of our staff for their solidarity, resilience and dedication strengthened by the support of our partners



SUEZ wins various awards across Asia



Tanzhou JV achieves outstanding performance in water testing contest

Following the success in the polyaluminum chloride testing contest organised by Guangdong Water Supply Association, the JV's water testing centre went on to achieve satisfactory results in an interlaboratory comparison test organised by the Water Testing Technical Committee.



Excellent testing standard to ensure urban water supply safety

The JV's water testing centre was recognised as a national testing laboratory in 2018. To improve water testing procedures and ensure water supply safety, Tanzhou JV built a new water testing centre that commenced operations on 15 November 2021. The new centre covers four testing categories: physical and chemical analysis, machine analysis, microbic analysis and comprehensive analysis. Together, these categories span over 60 water test parameters and over 20 water purification material quality tests.



Chongqing Water JV clinches 2nd prize in SODIC 2021

The Shared Open Data Innovation Contest (SODIC) 2021, co-organised by Guangdong Provincial Government Service and Data Management Bureau and Shenzhen Municipal Government, attracted over 4,000 participating teams. The JV's project to build a precise forecasting model for regional water consumption won the 2nd prize. This fully demonstrated the JV's capability in digitalisation, as it strives to build a smart water treatment plant.



Chongqing R&D Centre certified as state-level high-tech enterprise

The R&D centre, which is committed to R&D of smart water solutions, has been certified as 'State-Level High-Tech Enterprise' and 'Key Enterprise of Scientific and Technological Innovation in Jiangbei District, Chongqing in 2021'; Its 'Research and Application of Carbon Source Intelligent Dosing in Smart Transformation of Urban Wastewater Plant' project managed to obtain research funding from the Chongqing Government.



Jiangsu Water JV formulates testing standards for water supply industry

On 9 December 2021, a special publication on water testing methodology, compiled by Jiangsu Sino French Water, passed the expert evaluation, setting new industry standards for water quality testing technology as authorised by Jiangsu Urban Water Association.



Tianjin Tanggu JV network rehabilitation project wins accolade from residents

From 2013 to 2021, Tianjin Tanggu JV launched a water network rehabilitation project in old residential estates in Tanggu. A total of 100,000 households from 224 estates have benefitted from the project, which helps solve the problem of water supply in old estates as well as improve stability of water supply and drinking water quality.

9 years

project duration

100,000

households benefitted

Visits & exchanges



Sanya

On 17 December 2021, Sylvain Fourriere, consul-general of France in Guangzhou, accompanied by Felix Fan, Senior Vice President of SUEZ Asia, and Goldwin Li, Regional Director of Water Operations, SUEZ China, visited Sanya Sino French's Qingtian Water Treatment Plant, to learn more about SUEZ's business in China.



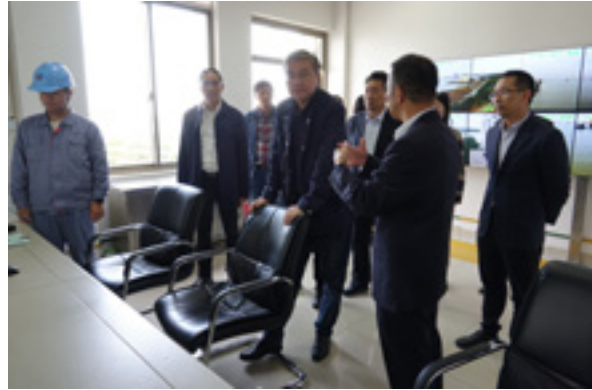
Chongqing

Yu Guodong, Deputy Director of Chongqing Ecology and Environment Bureau, led a delegation to visit Liangtuo Water Treatment Plant to understand raw water reservoir environmental protection issues.



Qingdao

A 12-member delegation from Water Conservancy Department and Department of Housing and Urban-Rural Development of Binzhou City, Shandong Province, visited Qingdao Sino French Hairun to understand the water treatment process as well as safety production measures.



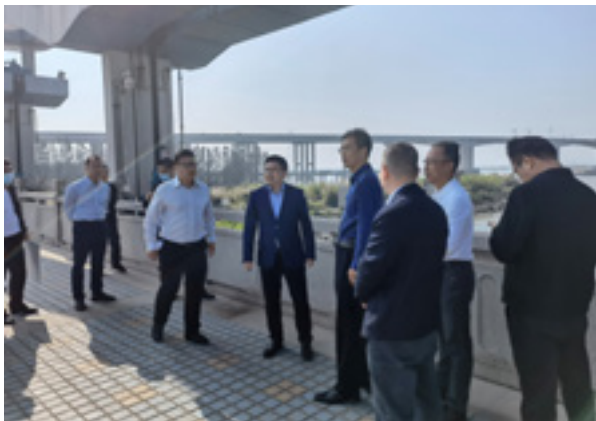
Changshu

A delegation from Ministry of Water Conservancy's Changjiang Water Resources Committee, together with Water Resources Department of Jiangsu Province and representatives from water offices under the Department, inspected Changshu's water source safety protocols.



Tianjin Jieyuan

Li Wenyun, Chairman of Tianjin Water Group, visited the JV to understand its operation during lockdown of the plant due to COVID-19 epidemic.



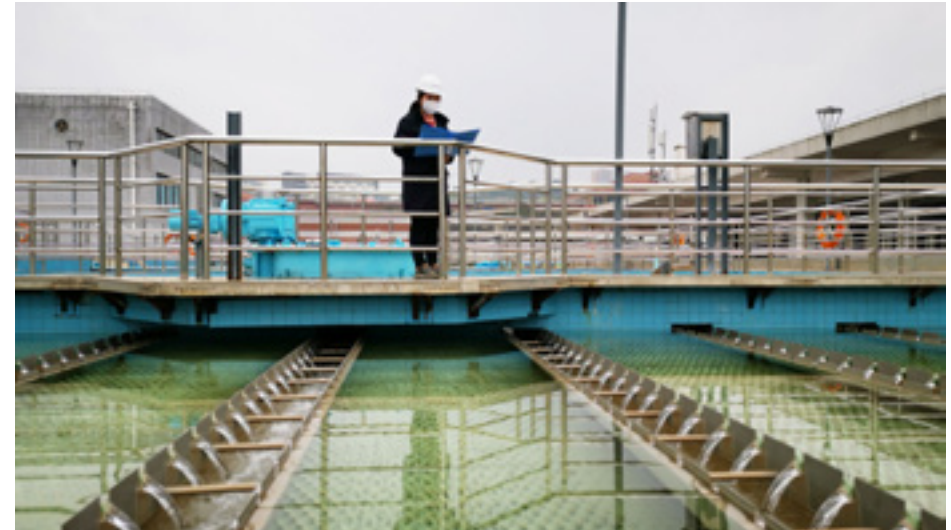
Tanzhou

Guangdong Provincial People's Government officials led a delegation to visit Tanzhou JV to find out more about the measures against salt tide.

SUEZ Asia Innovation Trophy 2021 Asia Grand Innovation winning projects sharing



Water Demand Prediction Accuracy and its Application Chongqing Sino French Water



Prediction accuracy of water demand is of great importance to water supply companies. It not only improves the capacity of the water treatment facilities but also the plant's emergency response capacity, ensuring a quick response to contingencies and minimising the impacts to the city's water supply. Chongqing Sino French Water's project team has established a database which records the historical data for water demand and actual water supply every 15 minutes. The team manages to correlate the data of relevant factors that may influence the water demand by integrating historical water demand data, weather data, raw water data

and special date labels with the local dispatch experience. By preprocessing the data through machine learning, the model can be self-optimised. The team has an inventory for different dispatch plans, including daily dispatch plan, emergency dispatch plan and cross-district dispatch plan, so as to ensure quick responses under different circumstances. With accurate prediction of water demand and due consideration to factors influencing NRW of the water network, **the production volume can then be timely and precisely adjusted to save water resources and control energy consumption of the plant more effectively.**



Pudong Sludge Project: Clean and Low-Carbon Sludge Incineration Technology and Application

Treatment Infrastructure



The Shanghai Pudong Sludge Treatment Project, for which SUEZ Treatment Infrastructure is in charge of process design and equipment supply, adopts SUEZ's 'Semi-Dry Fluidised Bed Technology'. **It radically solves the common problems of self ignition of dust and dry sludge.**

More importantly, the NOx emission standard of flue gas and tail gas of the incineration system exceeds that of the EU, arguably the best among existing sludge treatment plants in China.

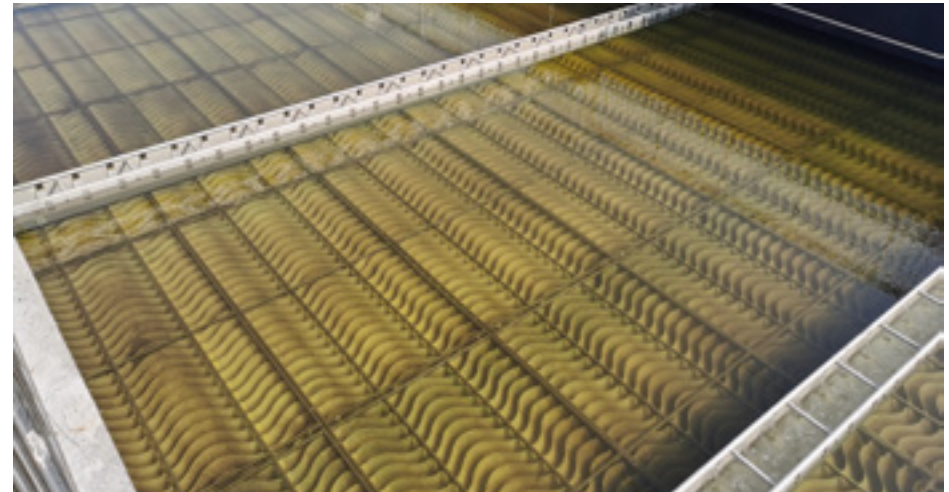
The system also adopts many low-carbon technologies. In the process system, the plunger pump is used to transport dry sludge to reduce heat

loss, while other measures are taken at the same time to optimise the energy recovery system, such as the application of flue gas heat exchanger tertiary energy recovery technology on top of secondary energy recovery, and air preheater system with high flow rate and low heat loss; the fire-tube boiler is also used to optimise air distribution and wet sludge feeding, thereby ensuring high efficiency of the sludge treatment system.



Application of SUEZ's FBBR Light-Weight Media Bioreactor in Kaifu Wastewater Treatment Plant

Treatment Infrastructure



SUEZ uses FBBR biological filter to refurbish the Biostyr post DN filters in the Kaifu Wastewater Treatment Plant in Changsha, Hunan Province. This is the first time that FBBR has been used in Biostyr post DN filters. It manages to boost the treatment capacity from 200,000 m³/day to 270,000 m³/day and total nitrogen at 5mg/l, without expanding the size of the plant. FBBR biological filter is designed for an up-flow water treatment process and the media is submerged in water within the reactor. FBBR filters' backwash is conducted by water and air. Outlet water is used during backwash by gravity, and the outlet screen is

installed above the inlet distribution zone to prevent media leakage during water backwash. The scour air perforated pipes are installed at the bottom. **It has the advantages of saving energy for backwash, larger treatment capacity and less blockage in the filters.**

We care about the people



In Hong Kong Donating to local charity group

SUEZ donated daily necessities including umbrellas, environment-friendly bags and clothes to St. James' Settlement, supporting their target beneficiaries in need. St. James' Settlement is a multi-social service agency, which has served Hong Kong for over 70 years.



In Macao Supporting SEN children

Macao Water sponsored a charity run organised by Bosco Youth Services Network and Macao University Alumni Association. The aim of the sports event is to raise public awareness of the plight of children with special educational needs (SEN) as well as to promote social inclusion. For its efforts, Macao Water was awarded a certificate of appreciation by Bosco Youth Services Network.



In Qingdao

Taking measures to ensure occupational health and safety of staff

To ensure workplace safety, Qingdao JV collaborated with a qualified third party organisation to conduct noise and gas testing in targeted workplaces.



In Tianjin

Offering help with epidemic control

Young volunteers helped local communities conduct nucleic acid tests. They collected 860 samples from the testing site and 14 samples from residents' homes. They also bought heat patches for the team working on the nucleic acid test to keep them warm during the winter.



In Suzhou Industry Park

Fulfilling corporate social responsibility

At 6 am on 16 February 2022, volunteers from Suzhou JV conducted nucleic acid testing at multiple sites and helped to keep order. The JV demonstrated its commitment to corporate social responsibility and in support of local epidemic control efforts.



In Chongqing Changshou

Volunteering services to the community

Prior to the Spring Festival, volunteers from Chongqing Changshou JV helped villagers check the electrical circuits in their households and replace old power sourcing equipment to ensure safety.

We care about the environment



In Tanzhou Cleaning up waste to protect the ocean

On 27 November 2021, Tanzhou JV staff cleared waste along the shoreline as part of marine conservation.



In Xi'an Organising tree-planting activity

On 11 March 2022, Xi'an JV organised its staff to plant trees within the wastewater treatment plant to improve the environment.



In Sanya Promoting waste sorting in local community

On 5 November 2021, Sanya JV promoted waste sorting in the local community by showing residents the correct way to sort and dispose of waste.



In Suzhou Industry Park Cleaning up trash and planting trees

On 10 March 2022, Suzhou JV organised its staff to clean up the trash along the Wusong River, and to plant trees on Arbor Day.

SUEZ Ethics and Compliance

Among the central values of SUEZ which we build together, respect for ethical and societal values is paramount: these values are and always will be central to any commercial success. We cannot tolerate any violations that would undermine our very essence.

In this respect, and for some time, the Group has maintained a policy of conducting its business in compliance with the applicable laws. This includes fighting corruption and respecting competition law.

Acts of corruption and infringements of competition law are likely to have extremely damaging social, legal and financial consequences which have a lasting negative impact on the reputation of our company and on how we conduct our business. As such, we are adopting a zero-tolerance policy on any violation of our integrity and any form of corrupt practice. This policy

applies to the entire Group and all its activities. I ask you, therefore, to be particularly vigilant in enforcing compliance and competition rules. The discipline we apply every day is the cornerstone of the values of the SUEZ Group.

This zero-tolerance policy represents a guarantee of trust and societal responsibility. It concerns each and every one of us, including those who provide services on our behalf. I ask you to redouble your vigilance in choosing third-party business partners who work on behalf of SUEZ.

I expect you to adopt impeccable behavior in carrying out your business activities and I expect every manager of every Group entity to ensure full enforcement of rules and internal procedures in the fight against corruption and to ensure compliance with competition law.



Sabrina SOUSSAN
CEO of SUEZ



any questions, please send email to:
ethics.asia@suez.com

SUEZ organises various staff activities



Qingdao JV's walkathon



Chengdu and Chongzhou JVs' team building activity



Xi'an JV's Health & Safety activity

Treatment Infrastructure annual meeting





Chongqing R&D Centre sports event



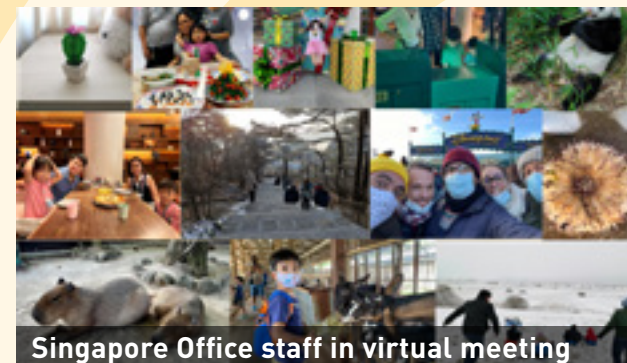
Chongqing JV's sports games



Baoding JV's marathon event



Tanzhou JV's team building activity



Singapore Office staff in virtual meeting

SUEZ Asia Health and Safety KPI 2021



H&S activities in Asia for 2021



H&S good practices sharing

Forklift Anti-Collision Alert System

SCIP R&R Project

To avoid accidents caused by the blind spot of forklift truck drivers and their malpractices or carelessness, SCIP SITA has developed a forklift anti-collision alert system with sensors installed on both sides as well as the rear of the truck, a visible light indicator and an audio alert device. When an object is found within 1 metre of the operating truck, the audio alert device will be triggered to draw the attention of the driver and passers-by; the red light projected via the visible light indicator 3 metres away from the truck will prompt passers-by to keep a safe distance. The implementation of the system helps improve the safety operation of forklift trucks and avoid accidents.



Plant Personnel Smart Management System

Zhuhai Gaolan Port Wastewater Project

Zhuhai Gaolan Port Sino French adopts the Plant Personnel Smart Management System to achieve safety management of staff within the plant. By receiving information via Wi-Fi tag bracelets and badges worn by the staff and with the help of various location-based service stations installed within the plant, it is possible to:

- be aware of the health condition of the staff by observing their heart rate and prolonged motionlessness. Alerts will be sent out if safety problems are detected, and the staff can also use the shortcut dial to seek help;
- send out pre-warning when the staff approaches any restricted zone, such as a high-voltage facility or a deep-water tank;
- display the number and location of staff on-site in real time via the control room screen so that emergency evacuation can be carried out in case of contingency;
- be equipped with other functions such as safety inspection records and linkage with existing CCTV system.

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SPRING 2022



苏伊士旗下重庆德润环境 中标流域治理项目 推进成渝双城经济圈 生态环境建设

苏伊士旗下重庆德润环境牵头联合体（由德润环境、中国建筑第五工程局、中建隧道建设有限公司及长江勘测规划设计研究有限责任公司四方组成）中标为期 25 年的重庆一品河、黄溪河“清水绿岸”治理提升项目。该 PPP 项目旨在进一步推进成渝双城经济圈生态环境建设，提升城市水环境质量。

该项目位于重庆主城区南部的巴南区，重庆德润环境为联合体牵头方，负责组织项目公司实施该项目，并负责项目的运营和维护。

项目的建设和运营内容包括水环境治理（含污水处理厂和管网）、水岸线治理、水生态修复工程、水智慧工程以及水环境附属工程等，建设期 3 年，预计于 2024 年试运营。



该项目是重庆市重点打造的‘清水绿岸’工程项目之一，这对重庆的长远发展大有裨益。我们深信凭借联合体各方在流域治理领域上的经验，有信心把这个项目打造成继长生河综合整治项目、成都武侯‘宜居水岸’项目后的又一示范案例。

重庆德润环境执行总裁
赖生平



我们很高兴再一次为重庆提供水生态修复和水质改善方面的专业技术。苏伊士已确定加大在渝投资的目标，目前也正在中国西部地区开发更多环境治理与修复项目。我们将继续竭力保护长江流域的生态环境以厚植民生福祉。

苏伊士亚洲地区首席执行官
郭仕达



59.75 公里

治理流域长度



350 平方公里

治理流域面积



14 亿元人民币

总投资

苏伊士再获江苏常熟 工业污水处理新项目 助力社会经济高质量发展

苏伊士通过合作公司江苏中法水务获得江苏常熟为期 30 年的工业污水处理厂建设与运营服务项目。这是苏伊士与常熟继供水、污水及固废资源管理项目后，双方在全面战略合作上的又一次扩展，这将进一步为当地经济高质量发展提供有力的环境支撑。

合作公司负责污水处理厂的设计、建造及运营服务。项目预计于 2024 年投运，届时将为园区大量化工企业提供符合最严排放标准的污水处理服务，以提升园区的综合配套能力并保护水环境。

2.58 亿元人民币 **1.5 万立方米**
总投资 日处理能力



常熟与苏伊士逾 15 年的合作不仅实现了常熟水务事业的跨越式发展，更拓宽了我们的合作领域、扩大了我们的合作规模，在服务质量、运营管理方面得到了行业的认可。我们期待合作公司继续凭借其先进技术、科学管理和优质服务，继续为我们共同构建常熟美好生态环境系统再添新砖。

江苏中法水务董事长
金科



我们与常熟的合作层次不断加深，如此坚定的合作伙伴关系承载着我们对美好的生态环境和高品质的城市水资源管理的共同追求。苏伊士与合作伙伴在常熟的总投资已逾 39 亿元人民币，致力于改善公共服务、提升居民生活质量，并成功将常熟模式扩展到邵武、安吉等其他城市。

苏伊士亚洲地区首席执行官
郭仕达

苏伊士与常熟、安吉携手成立 合作公司为建筑垃圾资源化利用 提供创新数字解决方案

苏伊士与常熟、安吉合作伙伴共同成立一家合作公司，在未来 20 年为浙江安吉建筑垃圾处理项目提供运营和维护服务并实现资源化利用。该项目由安吉牵头，每年处置建筑垃圾约 38 万吨，并满足最严格的环保标准。继苏伊士在常熟的成功经验之后，这是建筑垃圾处置领域的又一重大国家研发项目。

安吉建筑垃圾处理项目将复制 2018 年由苏伊士合作公司开发的“常熟模式”建筑垃圾循环利用经验，采用互联网及物联网相结合技术、定制化的处理工艺和设备，通过智慧化、信息化的监控平台对收集、运输、处理进行全过程监管。更重要的是，项目结合先进的智能化分拣设施对建筑垃圾进行高效和精细化的处理，从而实现建筑垃圾资源化利用率不低于 85% 的目标。

38 万吨 / 年

建筑垃圾处理量

85 %

建筑垃圾资源化利用率

安吉



回收利用建筑垃圾

回收的建筑装修垃圾经处理后成为再生建筑骨料及可回用的可燃物和金属物质。再生建筑骨料可用于生产成为不同用途的砖块、路沿石或道路垫层；可燃物可提供给垃圾焚烧厂进行焚烧发电；金属物质则可直接进行回收利用。

苏伊士与新加坡签署合同 为其供水管网提供管道清洗服务



苏伊士与新加坡国家水务机构（PUB）签订为期三年的新合同，以碎冰清管及气脉冲两项节水技术为其提供供水管道的清洗服务。继之前签署的三年合同完成之后，此举进一步扩大了双方在管道清洁方面的合作。

根据新的合同，苏伊士将提供一系列预防性维护技术，包括收集供水管网数据、实时水质监控、阀门操作，并针对具体情况采取合适的清洁方法。从2021年末到2024年，新加坡商住和工业区域的饮用水管网都将采用这些服务。

预防性维护

饮用水含有矿物质，而随着时间的推移，矿物质会在管道中沉淀下来。碎冰清管和空气冲刷有助于清洁管道的内表面，以清除长期累积的矿物质沉淀。这类清洗方法不具有侵入性，而且快速、有效、经济。

为满足新加坡政府对于水质的严格要求，苏伊士与PUB密切合作，精简清洁流程，同时监控设备与操作，以尽可能减少给客户带来的不便。苏伊士拥有多项供水管道清洗技术，不仅节能高效，而且可以针对所有管网条件优化清洗策略。

苏伊士的碎冰清管技术通过注入冰浆对管道进行物理清洁，清洗并去除管道内部附着的以及松散粘附的沉淀物。这项“免挖开”解决方案具有卓越的清洁效果，对管道安全、温和，而且相比传统冲洗技术可节约50%的用水量。更重要的是，其高效清洗流程可以显著减少管网清洗期间给客户带来的不便。

此外，依靠不断创新，当地团队开发出一种改进的碎冰清管技术，可以完美适应新加坡的热带气候，彰显出该技术能够在全年任何时段对饮用水管道进行清洗。



碎冰清管技术在全球成功应用

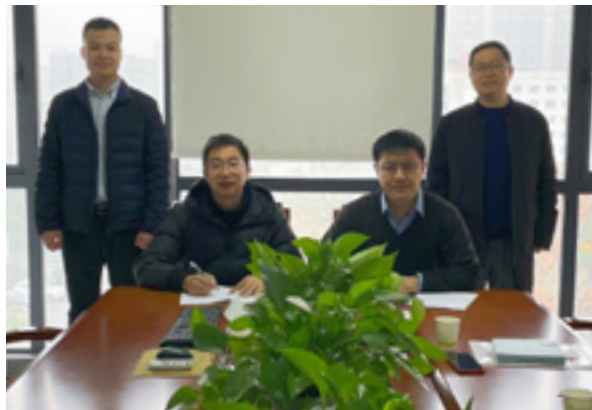
碎冰清管技术从10多年前诞生以来，已成功应用在全球供水行业，得到英国、美国、澳大利亚、意大利以及日本等多个国家和地区的采用。在亚洲地区，苏伊士正进一步拓展其在中国内地、香港以及台北的市政供水管网清洁服务。

苏伊士获多项设备供货和技术服务合同



上海 使出水水质达到一级 A 排放标准

项目处理规模为 70 万立方米 / 日。苏伊士为其提供 Densadeg™ 高密度沉淀池工艺设备供货及相关技术服务，使出水水质达到《城镇污水处理厂污染物排放标准》（GB18918-2002）一级 A 标准。



湖南长沙毛塘铺工业园 帮助优化当地河道水环境

项目建设规模为 3 万立方米 / 日。苏伊士提供 Densadeg™ 高密度沉淀池和 Denifor™ V 反硝化深床滤池的设备供货及技术服务，使处理后的出水达到当地一级标准，优化河道水环境。



重庆唐家沱 优化污泥处置绩效，使运行更稳定

苏伊士提供脱水污泥输送系统、导热油供给系统以及电气控制系统，并首次使用国产污泥干化系统关键设备。优化污泥干化工艺设计及设备选型，使运行更稳定并优化污泥干化绩效。



湖南开福 减少约 50% 的反冲洗水量

苏伊士第三度与客户就开福污水处理厂进行提标改造。采用创新生物反应器 Biolex™ 对原生物滤池进行改造，在占地面积不变的情况下，提升反硝化滤池的处理规模，进一步去除总氮，并减少约 50% 的反冲洗水量。



海南东方工业园

促进水资源保护及海洋保护的优质污水处理服务

苏伊士与中海油能源发展股份有限公司于 2017 年 7 月按照 50/50 的比例组建合作公司，就海南东方工业污水处理项目展开合作。合作公司对其现有处理量为 1.2 万立方米的工业污水处理厂进行运营和管理，并负责污水处理厂的提标改造——新增 4,800 立方米 / 日丙烯腈处理线且原污水线实现深度处理。

项目在 2022 年 1 月 20 日开始动工建设，预计在今年 7 月底竣工投运，使处理后的污水不仅满足国内炼化污水严苛的排放标准，最大限度减少出水对周边海洋环境的影响，更能在尽量减少土地占用的情况下对污水进行处理、回用于绿化和工业生产。

20%

苏伊士海南东方工业污水处理项目污水回用率



苏伊士在扬州新增 污泥处理设施投用



2022年3月25日，苏伊士在扬州污泥处理项目新增的两条污泥干化生产线落成投用，处理能力分别为100吨/天，使项目总处理能力提升至500吨/天，实现100%接收并即日干化处理由扬州市内及周边区域污水处理厂产生的湿污泥。干化后的污泥送至电厂焚烧发电，实现有机生物质能回用：该项目一年的污泥处理量达18万吨，每年可节约标准煤1.1万吨，减少二氧化碳排放2.9万吨。同时，扬州项目完善了废水处理系统，并对尾气按照来源进行分级处理，最大限度保护了周边环境。



18万吨

湿污泥年处理量



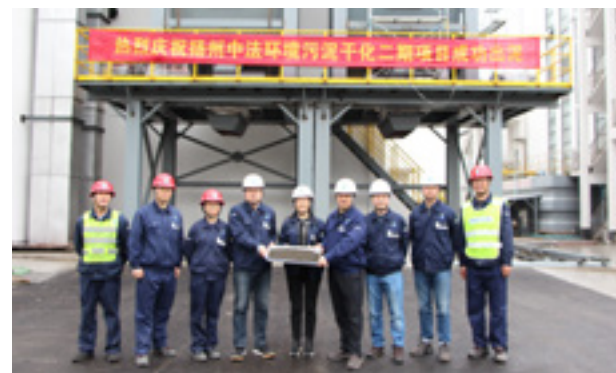
2.9万吨

减少二氧化碳排放



1.1万吨

节约标准煤



苏伊士位于常熟 城东污水处理厂竣工投运



30 年

特许经营权

12 万立方米 / 日

城东污水处理厂一二期总处理能力

苏伊士的合作公司江苏中法水务在 2018 年赢得常熟城东污水处理厂及配套管网 30 年的特许经营权。为提高污水处理效率，提升常熟市水环境治理水平，合作公司负责投资、设计、建设、运营和管理污水处理设施。其中一期工程已于 2021 年 9 月投运，日处理能力为 6 万立方米；二期工程日处理能力同为 6 万立方米，已于 2022 年 1 月投运。

上海化工区安悦危废处理项目在建中

预计 2022 年第四季竣工

苏伊士与上海化学工业区和上汽集团共同成立合作公司上海化学工业区安悦苏伊士环境科技有限公司，负责在上海化学工业区投资、建设及运营处理能力为 4 万吨的危废处理设施，不仅为上汽集团来自上海不同生产企业产生的危废提供专业的处理服务，还将满足园区企业日益增多的危废处理需求。

项目于 2021 年第一季度开工建设，截止 2022 年 3 月底已经完成 130 吨回转窑吊装以及焚烧线主体设备锅炉水冷壁和急冷塔吊装，标志着焚烧线主体安装工程核心设备安装完成了 60%。尽管受上海疫情影响，项目建设的各方仍保持密切沟通，为全面复工做好准备。如符合预判的疫情形势，项目计划于 2022 年第四季度竣工。



苏伊士泰兴工业污水处理项目建设不停步

预计 2022 年第三季投运

苏伊士联合中国交通建设集团以及泰兴经济开发区共同投资建设的 5 万立方米 / 日的工业污水处理厂，获评江苏省政府公私合营（PPP）示范项目。项目建成后，处理后的工业污水主要指标将达到地表水 IV 类标准，保障园区绿色可持续发展，助力保护长江水环境。目前，土建施工已基本完成，正处于设备安装最后阶段。



苏伊士技术 管理与发展部 应用平台

为了让苏伊士的专业技术更好地应用于各地合作公司，苏伊士在中国的水务技术团队以项目形式提供技术支持服务，同时为实现项目管理的数据可视化、加快项目进度流程，苏伊士自主开发了“技术管理与发展部应用平台”，让项目参与者通过平台进行信息和数据分享、及时沟通，提升技术服务质量及绩效。



26 个项目

目前，通过此平台已经和正在管理 26 个技术项目，服务苏伊士水务运营的多家合作公司，包括位于重庆、常熟、盘锦、三亚等合作公司。



明确分工、细设权限
兼顾保密性

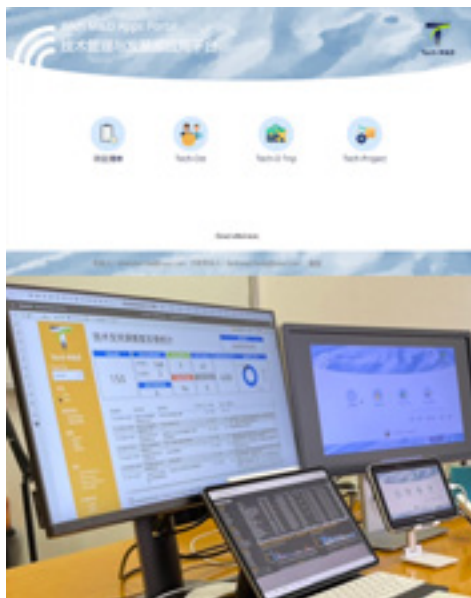


流程自动推送
减少人为错误或延误



项目数据全面
帮助管理者掌握全局信息
进行决策和优化

平台执行半年来，大大加快了多个技术项目进度，并有效地发挥的技术项目的成效。目前，项目团队正把平台拓展至人工管理、预决算管理、出差管理以及其他技术支持的管理。今年将进一步推广到其他部门进行定制化开发及应用。



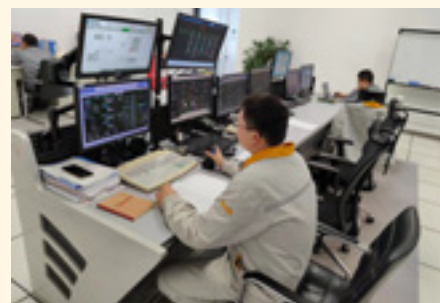


苏伊士员工 默默奉献 为客户提供优质 且不间断的服务

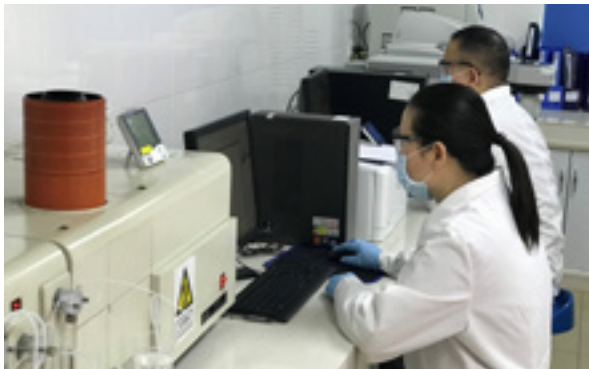
在新冠肺炎疫情的困难和挑战面前，苏伊士的每一位同事以坚定的决心和团结的精神，通过居家办公甚至驻厂封闭式运行的方式，向客户提供不间断的关键运营和服务。



感谢每一位团结协作、坚韧不拔
和无私奉献的同事
以及合作伙伴强有力的支持



苏伊士在亚洲地区获得多个奖项



坦洲自来水水质检测中心 在检测比赛中获优异成绩

继 2021 年初在广东省水协主办的“聚氯化铝”比对中获满意结果后，合作公司水质检测中心再获水质检测技术委员会关于“2021 年聚氯化铝氧化铝、铁等参数实验室间比对”满意结果。



卓越的检测技术水平为城市供水保驾护航

合作公司的水质检测中心早于 2018 年获评国家认可实验室。为提高检测能力，保障供水安全，新建了一座水质检测中心，并于 2021 年 11 月 15 日正式投用。新的检测中心分为理化分析、仪器分析、微生物分析和综合服务四大部分，可以进行包括微生物指标、一般化学指标、毒理指标等六十多项水质参数及二十多项净水材料质量检测。



重庆中法供水获全球开放数据应用 创新大赛二等奖

活动由广东省政务服务数据管理局和深圳市政府主办，来自全球四千多支队伍参赛。合作公司通过建立城市区域性需水量精准预测模型，获得大赛二等奖。这充分肯定了合作公司在数字化方面的实力，助力建设智慧型水厂。



重庆中法环保研发中心获 国家高新技术企业荣誉

研发中心致力于智慧水务解决方案的研发，最近先后获评“国家高新技术企业”以及“2021年重庆市江北区科技创新重点企业”；其“碳源智能投加在城市污水厂智慧转型中的研究与应用”项目获重庆市科研资助经费。



江苏中法水务制定供水行业检测标准

2021年12月9日，由江苏中法水务主编的《水中臭味物质土臭素和2-甲基异莰醇快速检验固相微萃取气相色谱质谱法》技术类团体标准通过专家评审，是江苏省城镇供水排水协会的首份水质检测技术类团体标准。



天津塘沽中法老旧小区管网改造工程 获市民赞赏

由2013年开始至2021年结束的塘沽老旧小区供水管网改造工程，惠及224个小区约10万户居民，解决了旧区的供水问题，提升供水稳定性和饮用水水质。

项目历时

9年

受惠居民达

10万户

互访交流



三亚

2021年12月17日，法国驻广州总领事福希玮在苏伊士亚洲地区高级副总裁范晓军以及苏伊士中国水务运营区域总监李国军陪同下到访三亚中法辖下的青田水厂，了解苏伊士在中国的发展情况。



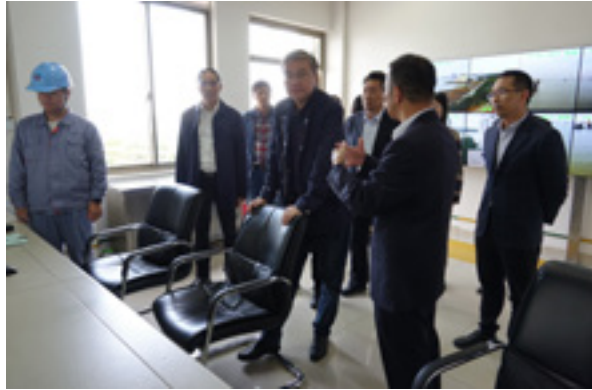
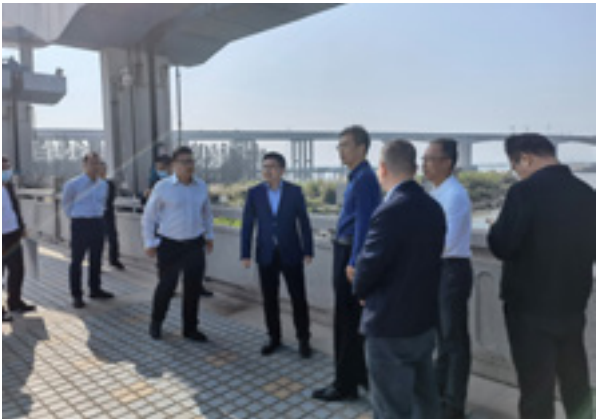
重庆

重庆市生态环境局副局长余国东巡查合作公司重庆中法供水辖下梁沱水厂水源地生态环境保护工作。



青岛

山东省滨州市水利、住建部门一行 12 人到青岛中法海润参观，了解水处理工艺及安全生产的措施。



常熟

国家水利部长江水利委员会、江苏省水利厅及辖下的水务局代表对常熟市水源地安全保障工作开展现场调研。

坦洲

广东省三防办领导到坦洲了解咸潮应对措施。



天津芥园

天津水务集团董事长李文运到合作公司了解疫情下水厂封闭运行的情况。

苏伊士亚洲 2021 年创新奖 “亚洲最高创新奖” 项目分享



需水量精准预测及应用

重庆中法供水



需水量的精准预测对供水企业有重要的作用，既可以提升现有供水系统的供水能力与资产利用率，也能提升水厂应急响应能力，减少突发事件对城市供水的影响。重庆中法供水项目团队建立了需水量历史数据库，记录每 15 分钟需水量数据及实际供水量的历史数据，并对影响需水量相关要素的数据进行关联：将水量历史、天气和原水数据以及特殊日期标签与本地调

度经验充分结合，并通过机器学习的模式，对数据进行预处理，自主优化模型。针对不同情况的供水预测，项目组建立调度方案库，包括日常调度方案、应急调度方案、区域互调方案等实现快速应变。通过精准预测需水量以及考虑管网漏损等要素，适时精准调整生产水量，节约水资源，优化能耗管控。



浦东污泥项目：清洁低碳型创新污泥焚烧工艺及应用

水务工程



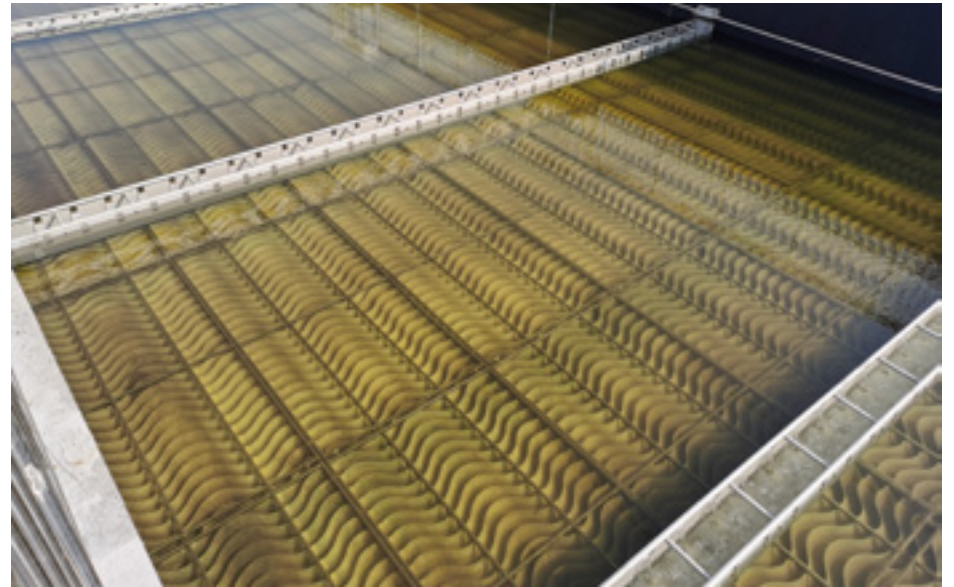
上海浦东污泥处理项目由苏伊士水务工程提供工艺设计和相关设备。项目采用了苏伊士污泥处置技术“半干化+硫化床焚烧技术”，解决了污泥处理过程中常见的粉尘、干污泥自燃的问题。焚烧系统的烟气尾气中的氮氧化物排放水平大大优于欧盟排放标准，目前处于国内建好的污泥处理厂中最高的排放水平。此外，系统采用

了多项低碳技术。工艺系统上利用柱塞泵输送干污泥，减少热损失。同时采取多项措施对能源回收系统进行优化，例如，在二级能源回收的基础上采用了烟气换热三级能量回收技术，以及高流速低热损的高温空预器系统，并且应用火管锅炉，优化布风与进料方式等措施保证系统整体高效运行。



苏伊士轻质滤料滤池 FBBR 在开福污水处理厂的应用

水务工程



2021年苏伊士对湖南长沙开福污水处理厂的原反硝化生物滤池进行改造，首次采用 FBBR 轻质滤料生物滤池，在占地面积不变的情况下，处理规模由 20 万立方米/日提升至 27 万立方米/日，同时生物滤池出水的总氮含量达到 5 毫克/升的标准。苏伊士的 FBBR 生物滤池是上向流生物滤池，采用 MBBR 填料为单层滤料。滤床反

冲洗时，利用出水池进行水洗，不需要设冲洗水泵。底部安装拦截筛网，防止滤料在反冲洗时泄漏。底部安装气管，进行曝气或反冲洗。苏伊士的 FBBR 生物滤池的优势在于气洗强度低，免去水洗水泵，节约冲洗的能耗，且处理能力大，滤床不容易堵塞。

我们关爱社区和员工



在香港 向慈善团体捐献物资

苏伊士香港办公室向服务香港超过 70 年的慈善团体圣雅各福群会捐赠物资，如雨伞、环保袋和衣物等，通过慈善团体再转赠予有需要的人。



在澳门 支援有特殊学习需要的儿童

澳门自来水赞助由鲍青网及澳门大学校友会合办的慈善跑步比赛，透过运动让大众关爱有特殊教育需要的儿童，促进社会共融。澳门自来水也因此获得鲍青网颁发的嘉许状。



在青岛 检测工作环境中噪音及有害气体 确保员工健康安全

为保护员工的安全和健康，合作公司联系第三方有资质机构对水厂的设施进行噪音和臭氧浓度检测。



在天津 志愿者帮助社区防控疫情

合作公司青年志愿者协助社区检测采样860人次，入户检测14次，还自费采购暖贴送至社区，帮助疫情防控人员驱寒保暖。



在苏州工业园 致力履行企业社会责任

2022年2月16日清晨6点，合作公司组织多名志愿者到社区多个核酸检测点协助采样和维持秩序，积极履行企业社会责任，为社区疫情防控作贡献。



在重庆长寿 志愿者服务社区

为了让村民安全愉快地度过新春佳节，合作公司志愿者帮助有需要的村民检查家里的电路，并更换老旧供电设备。

我们爱护环境



在坦洲 清理垃圾保护海洋

2021年11月27日，合作公司员工到海边收集和清理垃圾，保护海洋环境。



在西安 组织植树活动

2022年3月11日，合作公司组织员工在厂区内植树，美化厂区环境。



在三亚 帮助社区推行垃圾分类

2021年11月5日，合作公司到社区开展垃圾分类宣传，并引导居民正确分类和投放生活垃圾。



在苏州工业园 清理垃圾并参与植树

2022年3月10日，合作公司组织员工清理吴淞江边的垃圾，并于植树节当天在江边植树。

苏伊士道德与合规

在苏伊士员工共同建立的价值观中，尊重道德及社会价值是至关重要的，一直以来都是我们业务发展的致胜之道。我们绝对不允许任何违背我们核心价值观的行为。

一直以来，苏伊士集团都规定其所有业务活动必须是合法的，包括符合反贪法以及竞争法。

贪腐以及违反竞争法的行为可能引致极其严重的社会、法律以及财务后果，也对我们集团的形象以及业务的开展造成深远的不良影响。因此，我们对不廉洁的、腐败的行为采取零容忍的政策。这项政策适用于整个苏伊士集团及其所有业务。我要求大家严格遵

守相关法律法规。我们日常工作的规范习惯是建立苏伊士集团价值观的基石。

这项零容忍的政策就是让我们确保诚实守信以及履行社会责任。这关系到我们每一个位员工，包括代表我们集团提供服务的承包商。我要求大家谨慎选择我们的第三方合作伙伴。

我希望大家廉洁、诚信、守法地开展各项业务活动，同时每个业务单元的负责人需要确保其业务活动符合反贪法和竞争法以及集团的内部流程。



苏冰岗
苏伊士首席执行官



如有任何问题，请发邮件至
ethics.asia@suez.com

苏伊士 组织多项 员工活动



青岛合作公司健步走



成都及崇州合作公司团队活动



西安合作公司职安健活动

水务工程年会





重庆研发中心运动会



重庆合作公司运动会



保定合作公司长跑比赛



坦洲合作公司团队活动



苏伊士新加坡办公室员工参与线上沟通会议

2021 年苏伊士亚洲职安健回顾

事故发生率目标

< 2.33

实际事故发生率

1.90

事故严重程度目标

< 0.178

实际事故严重程度

0.10

安全巡视次数

1089

其中高层管理人员

安全巡视次数

285



2021 年亚洲地区职安健活动



职安健优秀做法分享

叉车防撞系统

上海化工区固废处理项目

为预防因视线盲区、误判或操作不当而引发的叉车事故，上海化工升达开发了叉车防撞系统：在叉车的两侧及后方安装传感器、可见光指示器及语音警示喇叭。当物体进入叉车的传感器检测范围内（检测范围为1米），便触发语音警报提示，让叉车司机及行人注意；同时可见光指示器可于叉车本体外3米处映射红光，以提示行人叉车所在的位置。项目的推行有效地提升叉车操作安全，避免安全事故。



厂区人员智能管理系统

珠海高栏港污水处理项目

珠海高栏港中法采用厂区人员智能管理系统，实现对场内作业人员的智能安全管理。通过让人员佩戴手环型或工牌形的定位标签，在厂区部署的多个定位基站的支持下实现以下功能：

- 实时收集作业人员的健康状况，包括心率、是否长时间静止不动等，并可按设置实现自动报警，也可由作业人员实现一键求助；
- 当人员靠近厂区高压设备或水池时，发出靠近预警；
- 在中控室大屏实时显示场所人员的数量和位置，以便在紧急情况下组织应急撤离；
- 保留巡检记录以及与现有视频监控系统的联动等。