

Water Supplies Department

13/WSD/17

Design, Build and Operate First Stage of

Tseung Kwan O Desalination Plant

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TKODP

CONSTRUCTION INNOVATION EXPO 2022

建造創新博覽會

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Construction Innovation Expo 2022

by Michelle Cheung - RE Binnies



The Project Team introduced the TKODP's BIM Model to the Director of Housing, Ms. Agnes WONG Tin-yu (left second) and the former Director of Water Supplies, Mr. Kelvin LO Kwok-wah (right second).

The **Construction Innovation Expo 2022** on 13 to 17 December 2022 has achieved remarkable success, attracting many visitors from different sectors, including construction professionals, government officials and engineering students. It provided an excellent platform for exchanging ideas and exploring new technologies in the construction industry. As we are moving towards a more **technology-driven and sustainable future**, it is crucial to focus on **innovation and collaboration** in the construction sector. The Water Supplies Department (WSD) is committed to stay up-to-date with the latest trends and advancements to provide efficient and reliable services to the community. We look forward to participating in more events and exhibitions to promote knowledge exchange and collaboration in the construction industry.

The booth's interactive, touch-screen demonstration platform featured a three-dimensional **Building Information Model (BIM)** of the Tseung Kwan O Desalination Plant (TKODP). Visitors could choose different buildings to learn their functions. Apart from this, we used a large LED screen to display a tailor-made 3D animation showcasing the step-by-step water treatment process in TKODP. To further enhance the workers' safety awareness, **Virtual Reality (VR)** safety training was adopted to simulate different construction environments to deepen worker's understanding of safety hazards.

Moreover, the **"Safety Smart Site System" (SSSS)** currently adopted in the TKODP was promoted. This system aims to enhance construction site safety by introducing various innovative technologies and smart devices to site safety management alongside with trainings for workers and managerial levels.

In conclusion, WSD is committed to exploring new ideas and possibilities that allow **enhancements and improvements** in the construction and operations. TKODP project team will continue to raise awareness of the use of innovative technological solutions to provide a safe and sustainable water supply for the people of Hong Kong.



The large L-shaped screen displaying the WSD logo in 3D effect



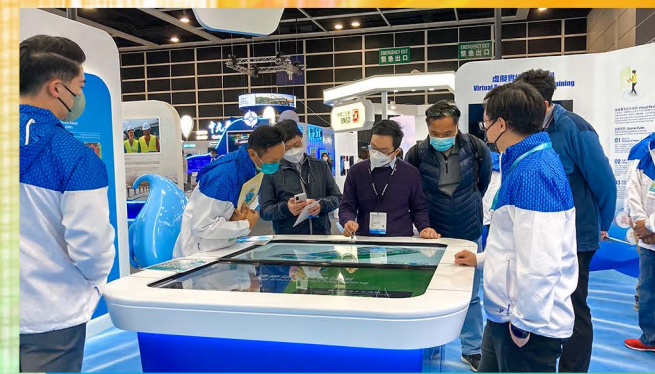
Introduction of smart construction technology



Safety Training by Virtual Reality (VR) technology



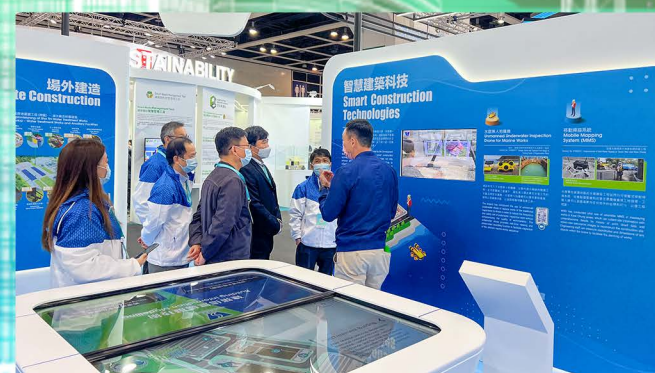
Introduction of Off-site Construction of TKODP



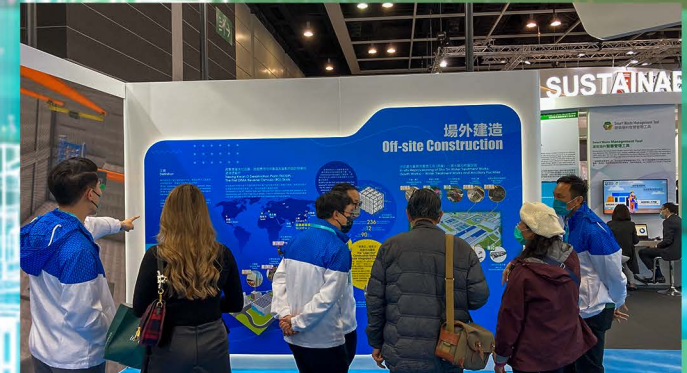
Interactive demonstration of TKODP's BIM Model



Introduction of digital twin technology in WSD water treatment plants



Introduction of smart construction technology



Introduction of smart construction technology

Director of Water Supplies Mr. Tony YAU Kwok-ting's Visit

by Michelle Cheung - RE Binnies



It is our honour to have, **Mr. Tony YAU Kwok-ting**, who took up the post of the **Director of Water Supplies** (DWS) on 4 January 2023, to visit our TKODP site on 31 January 2023.

Accompanied by a team of his associates, including the **Deputy Director of Water Supplies, Mr. Chau Sai-wai**, and the **Chief Engineer of the project, Mr. LIN Tang Tai**, Mr. Yau was warmly welcomed and given a tour of the construction site by our Chief Resident Engineer, Mr. Roger WU Chung Wai. During the tour, Mr. Wu presented the current status of the project and highlighted the various challenges that were being faced and diligently resolved by the project team. With a group of competent professionals fuelled by collaborative spirit, the project team was making best endeavors to work towards the same goal – commissioning the TKODP by 2023.

Mr. Yau expressed his satisfaction with the progress made so far and commended the Project Team for the quality of work done. He said that the project was a clear indication of how cooperation between government and private sectors could transform the lives of the people. **"I am extremely impressed with what I have seen so far. The project is not only the first of its kind in Hong Kong, but also a breakthrough in local water treatment history by adopting seawater desalination as an alternative water source to Hong Kong's resident,"** said Mr. Yau.



The visit was started with a presentation by CRE Roger



Site Inspection by DWS Mr. Yau and the project team



The visit was ended after a debriefing by DWS Mr. Yau

Safety Open Day for Workers

by Lawrence Lau, RE Binnies

The Safety Open Day for Workers held on 14 February was a highly anticipated event that aimed to **promote safety awareness** and **enhance site safety culture** in the workplace. The event was organized by our top management and was attended by over 100 nos. of construction workers from various disciplines and sub-contractor's companies.

The event started with an opening speech from our top management, highlighting the importance of safety and how the integration of **innovative technology** into safety management could help to prevent accidents and injuries in the workplace. Participants were then invited to play a series of interactive activities, including **safety game booth**, **health examination booth**, and **4D CAVE VR safety training booth**. The safety game booth allowed workers to participate in fun games while learning about safety procedures and the importance of wearing personal protective equipment. The health examination booth provided workers with the opportunity to check their health status and learn about the importance of maintaining **good health in the workplace**. The safety training kit booth provided workers with training materials and information on how to use various safety equipment.

Overall, the Safety Open Day for Workers was a successful event that helped **raise awareness** about safety in the workplace. It provided workers with valuable information and resources that they can use to maintain **ZERO accident**, as well as a **safe and healthy workplace**.



Our SRE, David and our Project Manager, Laurence delivered key safety messages at the opening speech



Worker's Health Examination Booth



Safety Game Booths

Recycle - Used Red-pocket & Clothes

by Naomi Chow, PRM AJCJV



During the celebration of Chinese New Year, the project team organised a **sustainable initiative** of recycling used red pockets and old clothes in the site office.

The project team aimed to promote **environmental awareness** and encourage sustainable practices during the holiday season. This volunteering activity was designed to encourage people to recycle their **used red pockets and old clothes** instead of throwing them away. Volunteers collected the items from designated collection points across the site office. The collected items were then donated to the "**Greeners Action**", an environmental non-profit organization in Hong Kong, where materials were reused and/or transformed into new **eco-friendly products** that would benefit the community. The initiative received widespread support from colleagues, with people from all walks of life contributing to the recycling effort. This recycling programme not only helped to reduce waste but also had a **significant impact** on the local community.

Fundraising RUN by CIC & HKIE



HKIE

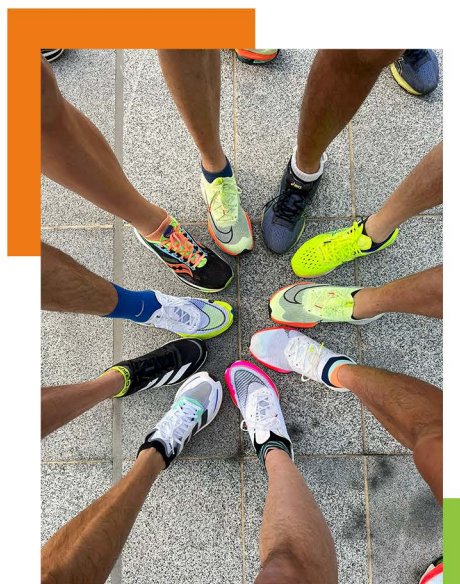
by William Tang - SRE Binnies

TKODP participated in two charity runs to support the **Construction Industry Council (CIC)** on 8 January 2023 and the **Hong Kong Institution of Engineers (HKIE)** on 11 March 2023 respectively. The charity runs were a huge success, attracting many participants from across Hong Kong. The charity runs started with a warm-up session, after which the participants took over the running tracks with great enthusiasm. The run for CIC was a 10km run that was held in the morning, while the event for HKIE was a 5km run that was held in the morning. The funds raised during the charity runs would be donated to CIC and HKIE to support various community programs and social welfare activities.

While the runners participated in the event with the aim of helping the charities, they also left with a sense of team spirit, bonding, and joy. The run for HKIE saw the involvement of many experienced runners, and the competition was intense. We managed to **secure both the Second and Third positions**, marking a significant achievement for the team. Winning such positions among highly competitive participants brought immense pleasure and satisfaction to the team! One of the participants of the charity run shared his thoughts on the event. Our Senior Resident Engineer, **Mr. David WONG Sze Wai said, "I am happy to participate in this charity run, and I am thrilled with our team's performance. It's great to know that we can support the community while promoting a fit and healthy lifestyle."** The charity runs participated by TKODP have proved to be highly impactful, both in terms of fundraising and community engagement. Congratulations to all the participants and winners for their admirable efforts to support these charities.



The CIC Happy RUN



The HKIE Fundraising Cycling & Run



Our Running Team



1st Runner-up & 2nd Runner-up for team

CIC Soccer Game

by Raymond Kok, RE Binnies

To promote healthy lifestyle and athletic sense among the industry practitioners, the **Construction Industry Sports and Volunteering Programme (CISVP) under the Construction Industry Council (CIC)** launched a football competition namely "Construction Industry 5-a-side Football Competition 2022" which was held on 18 December 2022 at the Hong Kong Football Club. In response to this football event, our project had formed a Soccer Team "TKODP" comprised of ten team members coming from WSD, Binnies and AJCJV.



There were 47 football teams took part in this annual competition, fierce competition could therefore be expected. The 47 teams would be divided into 16 groups with normally 3 teams in that group to flight for the knockout rounds. Under the outstanding performance of the players, **TKODP won all the two matches in group stage and got the first place to advance to the knockout round.** In the knockout round, we won the first round but unfortunately lost the second round and stopped in the top 8.



Even so, this football competition gave a great opportunity to demonstrate our excellent team spirit not only in project delivery but also in playing football. With the experience gained this year, we will definitely come back to try to win the Championship in 2023.

COMING 3-MONTH CHALLENGES

- »» Completion of all GRP pipe laying and testing
- »» Completion of all DfMA wall panels and Lifting of Inspection Corridor
- »» Obtain DG Storage License for Ferric Chloride Room
- »» Commencement of Testing and Commissioning of ActiDAFF

Shoreline Clean-up Day

Sha Ha Beach, Sai Kung

by **Michelle Cheung - RE Binnies**



On a sunny Saturday morning on 14 January 2023, a group of volunteers from TKODP gathered at the **Sai Kung Sai Ha beach**, armed with gloves, trash bags, and determination to make a difference. The volunteers were there to participate in a **beach clean-up event**, co-organized with the Construction Industry Council (CIC) as part of our corporate social responsibility efforts.

By the end of the clean-up event, the volunteers had collected more than **15 big bags of trash** from the beach, leaving it cleaner and safer for both people and wildlife. In addition to the positive impact on the environment, the event also had several other benefits, such as **strengthen bond** with colleagues. The volunteers left the beach with a **sense of accomplishment**, knowing that their efforts had made a tangible difference.

21th Hong Kong Occupational Safety and Health Award

by **Lawrence Lau - RE Binnies**

We are very honoured to have received the **Excellent Award in Rookie Safety Performance Award** in the "Construction Industry Category" under the 21st Hong Kong Occupational Safety & Health (OSH) Award. This award recognises our project's outstanding performance in OSH within the construction industry and our consistent good safety record over the past two years.



Winning the Safety Performance Award is also a prestigious recognition that demonstrates our commitment to safety in the workplace. It is a testament to the project team's efforts in creating a safe and healthy workplace for its employees. The award also helps to promote safety awareness and encourages our colleagues to prioritize safety in their workplace.

Hong Kong Award for Environmental Excellence

by **Lawrence Lau - RE Binnies**

We were recognized with the **Hong Kong Award for Environmental Excellence Merit Award** for their hard work, dedication, and innovation in the TKODP project on 20 February 2023. The Project aims to build resilience in the fresh water supply in Hong Kong while minimizing its environmental impact, and the Project team focused on developing innovative solutions to achieve this. Measures to reduce the carbon footprint included using renewable energy sources like solar power and adopting energy recovery devices. The Project team expresses gratitude for the recognition and vows to continue pursuing innovative and sustainable solutions in future projects.



School Outreaches

by Michelle Cheung, RE Binnies



Yan Chai Hospital Chan Iu Seng Primary School on 18 January 2023

Our project team is enthusiastic to share our "Outreach Educational Programme" that is specifically designed for local primary and secondary school students. The programme aims to introduce WSD's water conservation initiatives in Hong Kong and enable students to understand the strategies in combating climate change and building water resilience, in particular the missions and benefits of TKODP



Christ of Church in China (C.C.C.) Kei Faat Primary School Yau Tong on 15 March 2023

In the recent School Talks at **Yan Chai Hospital Chan Iu Seng Primary School** and **Christ of Church in China (C.C.C.) Kei Faat Primary School Yau Tong** on 18 January and 15 March 2023 respectively, over 500 eager students were engaged.

The Project Team introduced the concept of desalination to the students and explained how it works. The students were thrilled to learn about the science behind the plant and how it helps solve the water crisis in Hong Kong.

The Project Team concluded by encouraging the students to take up careers in the fields of science and engineering, as they play a crucial role in designing and implementing such innovative solutions. The school talk was a great success and left a lasting impact on the students, who will undoubtedly pass on the knowledge to their families and friends, and contribute towards a better tomorrow.

HKIE Civil Division and Environmental Division Visits

by Michelle Cheung, RE Binnies

The **Civil Division and Environmental Division of the Hong Kong Institution of Engineers (HKIE)** visited TKODP on 18 February and 18 March 2023 respectively to learn about the desalination water treatment process and **innovative construction method** and safety management.

The visitors were welcomed by the Project Team. The atmosphere was full of excitement as the visitors were keen to learn about the technology and processes implemented to make desalinated water **safe for consumption**. The project team provided a detailed presentation on the **desalination process**, including the screening, pre-treatment, reverse osmosis and post-treatment processes to ensure **safe drinking water**.



The Hong Kong Institution of Engineers (HKIE) - Civil division on 18 February 2023



The Hong Kong Institution of Engineers (HKIE) - Environmental division on 25 March 2023

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