

13/WSD/17

Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

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生命第一



對危險說不 SAY "NO" TO DANGER

LIFE FIRST

Site safety is of utmost importance to our construction site. The project team embraces site safety culture by strictly implementing various safety measures and worker's welfare measures at site to maintain our record of "Zero Accidents" after over 1,500,000 man-hours of work! Our effort was well recognized and our site was chosen by CIC and DEVB to be part of their "Life First" 2022 safety promotion campaign. During the kick-off of "Life First" Campaign at TKODP site on 26 May 2022, the message of "Life First" was well delivered by the top management to all levels of the workforce on site. The project team will ride on the success and continue the concerted effort to uplift safety performance. The key activities are highlighted below.

EVENT VIDEO



Derrick Pang
Chairperson
Committee on
Construction Safety
<CIC>

Thomas Ho
Chairman
<CIC>

Ricky Lau
Permanent Secretary
of Development
(Works)
<DevB>

Kelvin Lo
Director
<WSD>



PRESENTATION BY PROJECT TEAM – INTRODUCTION OF CENTRALIZED SAFETY PLATFORM @G/F AT MIC SITE OFFICE

The project team presented different smart devices which are integrated into the platform in order to achieve overall site management and inter-communications. The adoption of innovative technologies has helped improve the safety performance.



ENCOURAGEMENT SPEECH FROM PERMANENT SECRETARY OF DEVELOPMENT (WORKS) & CHAIRMAN OF CIC

Mr. Ricky Lau and Mr. Thomas Ho shared their views to all levels of site workers on how to improve the site safety culture and atmosphere. RSS will work closely with the Contractor for risk identification and monitoring implementation of the agreed measures. The Contractor will review the risks, propose solutions and cascade the safety messages.



SITE VISIT AND INTRODUCTION OF DFMA RO RACKS FOR RO BUILDING AND THE BUILDING INFORMATION MODELING WITH AUGMENTED REALITY TECHNOLOGY (BIM-AR)

The project team demonstrated how TKODP adopted smart safety devices as additional safety measures to enhance site safety. BIM-AR device has been used to visualize the future design arrangement in relation to the surrounding environment and real-time project progress. Additionally, this technology has become crucial in the time of COVID-19 when people were not able to visit our site in-person due to social distance measures.



SITE VISIT AND INTRODUCTION OF SAFETY EXPERIENCE TRAINING CENTRE

The project team introduced the tailor-made scenarios with integration of BIM model created according to the actual site condition which provided training in a realistic and risk-free simulated environment. This could improve the worker's impression of the training, enabling them well-prepared for the upcoming high-risk tasks.

RETRIEVAL OF TBM



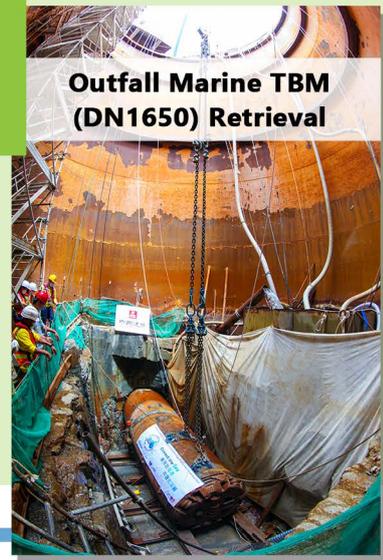
Intake Marine TBM (DN2500) Retrieval



Intake

BRAVO!! The TBM for the Intake Tunnel was retrieved successfully on 13 June 2022. This was the second **marine TBM** retrieval ever carried out in Hong Kong (*Second!?, When was the first? Don't worry, you will soon find out!*). The whole operation was carried out by divers. Since the TBM was laid at 28m below sea level, the operation period for each diver was limited due to the decompression issue. The TBM was embedded in a pile of aggregates confined within a shaft and the aggregates were cemented by the TBM's slurry as it ran into the shaft. The challenge was therefore for the divers to clean up enough aggregates to expose the TBM as well as to create room for the TBM to separate from the first jacking pipe. The separation was conducted by a sub-sea recovery module which was introduced behind the TBM. A crane barge was deployed to lift the entire TBM in one go.

The first **marine TBM** retrieval ever happened in Hong Kong was occurred in end March 2022, also at TKO Desalination Plant (Yes, we hold both records). In that operation, not a single diver was deployed because we had generated a dry working environment for the retrieval operation. A 12m diameter, 20m high steel caisson was successfully sunk on the rock head below the sea; creating a watertight condition within the caisson. Further rock excavation (6m in depth) was carried out at the bottom of the caisson to facilitate the arrival of the TBM for the Outfall Tunnel. Since a dry working environment had been created, the TBM was able to be disassembled before lift up by a derrick lighter.



Outfall Marine TBM (DN1650) Retrieval



WOOD WASTE UPCYCLING WORKSHOP

According to the EPD's Waste Statistics for 2020, **more than 345 tonnes of wood waste** are disposed to landfills every day in Hong Kong. To support the EPD's promotion on waste reduction and recycling, on 2 June 2022, Binnies and AJCV co-organized a wood waste upcycling workshop in collaboration with WASTED Co. Ltd which is a listed waste collector/ recycle (wood) recognized by EPD. Around 25 Binnies and AJCV staff worked together to create an artistic handcrafted epoxy-wooden table, under the concept of "Reuse and Recycle".

Before getting our hands on the wood, Dr. Dickson Yan, founder of WASTED Co. Ltd, gave a brief introduction on the information and process of recycling and upcycling of wasted wood. The wasted wood materials used in this workshop were collected from the EPD's Yard Waste Recycling Centre (Y · PARK) and the TKODP construction site. Under Dr. Dickson Yan's guidance, while one team of participants was making the table legs by using the hand saw and electrical drill, the other team was preparing the epoxy resin for the table top. Another example of good team spirit, we worked hand-in-hand to **transform wasted woods into a unique stylish table**. Everyone had a great time in this event and embedded sustainability deeply in our minds!



SITE CLEAN-UP DAY



To promote site cleanliness, AJCV and Binnies jointly held a TKODP Site Cleanup Day event on 17 June 2022. The event was warmly participated by 93 members of project team, including WSD, RSS, AJCV and subcontractors, Independent Environmental Checker (IEC) and Environmental Team Leader (ET). At the beginning of the event, Mr. Roger Wu (CRE) and Mr. Stephen Yeung (PM of AJCV) gave a speech to explain the purpose of this event, highlighting the **importance of good housekeeping to a construction site and its connection to health and safety**. After Mr. Brian Kam (EM of AJCV) presented the rundown of the event, we were joined by our top management in collecting rubbish along the scheduled route. In the course, leaflets printed with housekeeping tips were distributed to the workers to enhance their awareness of site tidiness. After **1.5 hours of hardwork, over 60 bags of rubbish, together with tons of sweat and tears**, were collected and disposed. What a day?!

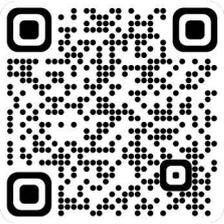




**Tseung Kwan O
Desalination Plant**

PROJECT VIDEO

WATCH NOW!!



According to the Contract requirement, we shall produce 5 types of video including progress videos, design and construction videos, public relations videos, promotional videos and documentary videos. For documentary videos, there will be 4 episodes covering (1) the background of the Contract; (2) the latest seawater reverse osmosis technology; (3) the construction of the TKODP, and (4) the Operation. The special features of the Works will be highlighted in each episode.

The 1st episode of the documentary video "Project Background" has been recently released on the website. This documentary video provides an insight into the **planning and development of seawater desalination strategy in Hong Kong**, revealing the benefits that TKODP will bring to Hong Kong's freshwater supply system. To find out more, please scan the QR code above to watch the video. Tell us if the video helped you learned more about this project!

Please subscribe our **TKODP YouTube Channel** to get new video updates, stay tuned!

*With this opportunity, let's introduce our **Video Production House - The New Office (TNO)** which is responsible for making of all of our project publicity videos. TNO is established in 2012 and is a Hong Kong-based creative video production house. The **Founder, Neo Wong**, is dedicated to making professional videos in multimedia. Under Neo's leadership, his multi-talented team members are able to deliver high quality videos efficiently.*



Neo Wong
Founder of The New Office

INSPECTION UNDERWATER DRONE

SMART SAFETY DEVICE



The construction of TKODP involves a series of underwater works. According to the Contract requirement, the underwater works should be inspected by the Supervising Officer's divers at any stage of the construction. Therefore, many diving operations are required to inspect both temporary and permanent works underwater, such as silt curtain, seabed formation and marine cofferdam. However, industrial diving is a high risk construction activity.

In view of this, we have introduced the use of Underwater Drone to **replace some of the traditional diving inspections**, to reduce the safety risk in the inspection process without compromising the quality of workmanship. The Underwater Drone provides real-time viewing and photo/video recording function. Most importantly, the risk of decompression illness and other safety hazards to divers are avoided.

Learn more about the Underwater Drone from the introduction video!

**INTRODUCTION
VIDEO**



COMING 3-MONTH CHALLENGES

- Complete Combined Shaft & Pumping Station structure
- Handover Civil Building Structures to E&M Teams for E&M and BS Installation
- Deliver the Lime Saturator and Lime Silo

OUTSTANDING APPRENTICE AWARD



The **Outstanding Apprentice Award Scheme**, organized by the **Vocational Training Council (VTC)**, serves to acknowledge the outstanding achievement and hard work of apprentices, and the staunch support of employers and industries to apprenticeship training in Hong Kong. Outstanding apprentices are nominated by their employers and appointed by a selection panel based on judging criteria such as good job ethics, proactive personality, construction professional skills and passion in pursuing a career in construction. It is widely recognized in the industry in being a powerful encouragement for young people to acquire skills in construction.



Q Please introduce yourself.

A Hi, this is **CHAN Oi Lam, Shirley**. I had completed the Advanced Diploma in Quantity Surveying in HKIC and Higher Diploma in Building Studies (Part-time) in IVE. After graduation, I joined the China State Construction Engineering (Hong Kong) Limited to kick start my career in this construction industry. In this Contract, I am mainly responsible for measuring the quantities of construction works and preparing tender documents.

Q What are the key factors that make you successful in this competition?

A First of all, I would like to express my thankfulness to China State for providing enormous support and nominating me for this year's award. As a novice, there are many areas that I yet to understand, but I always remain positive and passionate when solving problems. I also acknowledge my own limits and seize every opportunity to ask and learn new things. Whenever I seek help from colleagues, they are all willing to give guidance and constructive feedback.

Q What are your views on this project?

A This is my first civil contract since I joined the construction industry. I am impressed by the strong team spirit to overcome challenges together. All parties are working towards the goal as a team. It is a great honor for me to be part of this large-scale project.

PEDOMETER CHALLENGE 2022



The annual **RSK Group's Pedometer Challenge** has come back for its 6th year to shine a light on healthy lifestyle and healthy mind. This Challenge ran from 1st to 31st May 2022 and engaged staff from RSK businesses all over the globe. For every individual entry received, RSK would donate £1 to their chosen charity, Mind, which is a mental health charity covering England and Wales that provides advice and support to **empower anyone facing a mental health difficulty**.

Representing Binnies Hong Kong, TKODP led seven teams with a total of **67 members from WSD, Binnies and AJC Joint Venture** to participate in the Challenge. After a month of sweat, tears and joy, all seven teams are among the Top 45 in terms of most steps walked as a team, including two teams winning the honors of top steppers and first runners' up!

- ### Top 45 Ranking team of 10
1. **HK TKODP Fast & Furious 10** led by *William Tang*
 2. **HK TKODP Dream Walker** led by *David Wong*
 6. **HK TKODP S Team** led by *Roger Wu*
 12. **HK TKODP DfMA** led by *Christina Ko*
 17. **HK TKODP Geoshakers** led by *Lorinda Lee*
 23. **HK TKODP E&M Team** led by *Patrick Mak*
 31. **HK TKODP Avengers** led by *Brandon Kwok*



Let's look at some footages from our teams!



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