

MTR Deploys New “Vapourised Hydrogen Peroxide Robot” to Further Enhance Disinfection of Stations and Trains

The MTR Corporation is committed to providing a safe and comfortable environment for passengers, with continuous enhancement by introduction of new technologies and equipment. Recently, the Corporation has deployed a new automated “Vapourised Hydrogen Peroxide Robot” (“VHP Robot”) to conduct deep cleaning and decontamination in train compartments and stations, further enhancing hygiene and health protection for passengers and staff under the current epidemic.

The VHP Robot is a co-invention arising from a joint project of MTR and Avalon Biomedical (Management) Limited (“Avalon”), a Hong Kong biotechnology company. By automatically spraying hydrogen peroxide solution that is atomised to a specific concentration, the VHP Robot ensures that disinfectants penetrate in the small gaps that are difficult to reach during normal cleaning work. In this way, it can eliminate viruses and bacteria, including staphylococcus aureus, Escherichia coli and so on. The effectiveness of the VHP Robot has passed relevant tests and achieved the desired results.

When there is a need to conduct disinfection, the operator can preset the VHP Robot to operate automatically by pre-setting the floor plan of the designated area, or remotely control the robot manually with a mobile device within a distance of 20 metres. In general, it takes about 4 hours to complete the cleaning of an 8-car train in automatic mode. If there is a special situation, such as a passenger vomiting on a train, MTR staff will deploy the VHP Robot to perform deep cleaning on top of the regular cleaning with diluted bleach water. Recently, the robot was dispatched to disinfect the back-of-house area at Mong Kok East Station, including staff changing rooms, staff toilets and mess room, as well as the passenger lifts at the station after a staff member there was diagnosed with COVID-19.

“We fully understand our passengers’ concerns about hygiene in their travelling environment, especially amid the current COVID-19 outbreak,” said Dr Tony Lee, Operations Director of MTR Corporation. “While MTR has comprehensively strengthened cleaning and disinfection work in the railway network, we have also continued to actively explore feasible enhancements.”

“We plan to deploy a total of 20 VHP robots for train cleaning in depots and hope this helps to ensure the comfort of passengers’ journeys by providing ever greater health protection for our colleagues and our customers alike. We are very happy to be collaborating with Avalon and are very encouraged by the results,” Dr Lee added.

The collaboration between MTR and Avalon also includes the introduction of a dedicated surgical face mask manufacturing facility for MTR, which can produce masks that are capable of blocking PM 2.5 particles with nanofibre technology developed by experts of Hong Kong Polytechnic University. The manufacturing facility has been delivered to MTR and the setting up of a clean production room is underway. Production is expected to start in the second half of this year at the earliest, and the ultimate production rate should meet the daily consumption rate of MTR staff.

“As MTR staff will wear face mask when they carry out customer-facing duties during the current epidemic, the production can help ensure its smooth operations with stable supply of face masks,” said Dr Lee.

Furthermore, MTR and Avalon are also testing the use of air filters made by nano-air filtration technology to further improve the air quality of stations.

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About MTR Corporation

Every day, MTR connects people and communities. As a recognised world-class operator of sustainable rail transport services, we are a leader in safety, reliability, customer service and efficiency.

MTR has extensive end-to-end railway expertise with more than 40 years of railway projects experience from design to planning and construction through to commissioning, maintenance and operations. Going beyond railway delivery and operation, MTR also creates and manages dynamic communities around its network through seamless integration of rail, commercial and property development.

With more than 40,000 dedicated staff*, MTR carries over 13 million passenger journeys worldwide every weekday in Hong Kong, the United Kingdom, Sweden, Australia and the Mainland of China. MTR strives to grow and connect communities for a better future.

For more information about MTR Corporation, please visit www.mtr.com.hk.

*includes our subsidiaries and associates in Hong Kong and worldwide

Photo caption

1. The "Vapourised Hydrogen Peroxide Robot" can carry out automatic deep cleaning and disinfection in train compartments, which helps enhance the efficiency and effectiveness of such tasks.



2. Operations Director Dr Tony Lee showcases MTR's new face mask manufacturing facility. Face masks will be produced by using nanofibre material to provide high protection and excellent permeability. The surgical face masks will mainly be supplied to MTR staff.



3. MTR Corporation, Avalon Biomedical (Management) Limited and experts from the Hong Kong Polytechnic University are working together in various research and development projects and are making encouraging progress. (Left: Professor Johnson Lau, Co-Founder of Avalon BioMedical (Management) Limited; Middle: Dr Tony Lee, Operation Director of MTR Corporation; Right: Professor Wallace Leung, Chair Professor of Innovative Products and Technologies, Department of Mechanical Engineering, The Hong Kong Polytechnic University)

