

JOB REPORT

Hydrodemolition has a big future in Singapore.

Dubai-based Asia Waterjet Equipment believes conditions in Singapore are right for contractors to invest in Hydrodemolition technology.

Asia Waterjet Equipment Pte Ltd, the Singapore division of the Dubai-based specialist in high-pressure water jetting and hydrodemolition equipment, sees great potential in Singapore, following the initiative by the government to reduce the use of immigrant contract workers by offering grants and incentives for contractors to mechanise.

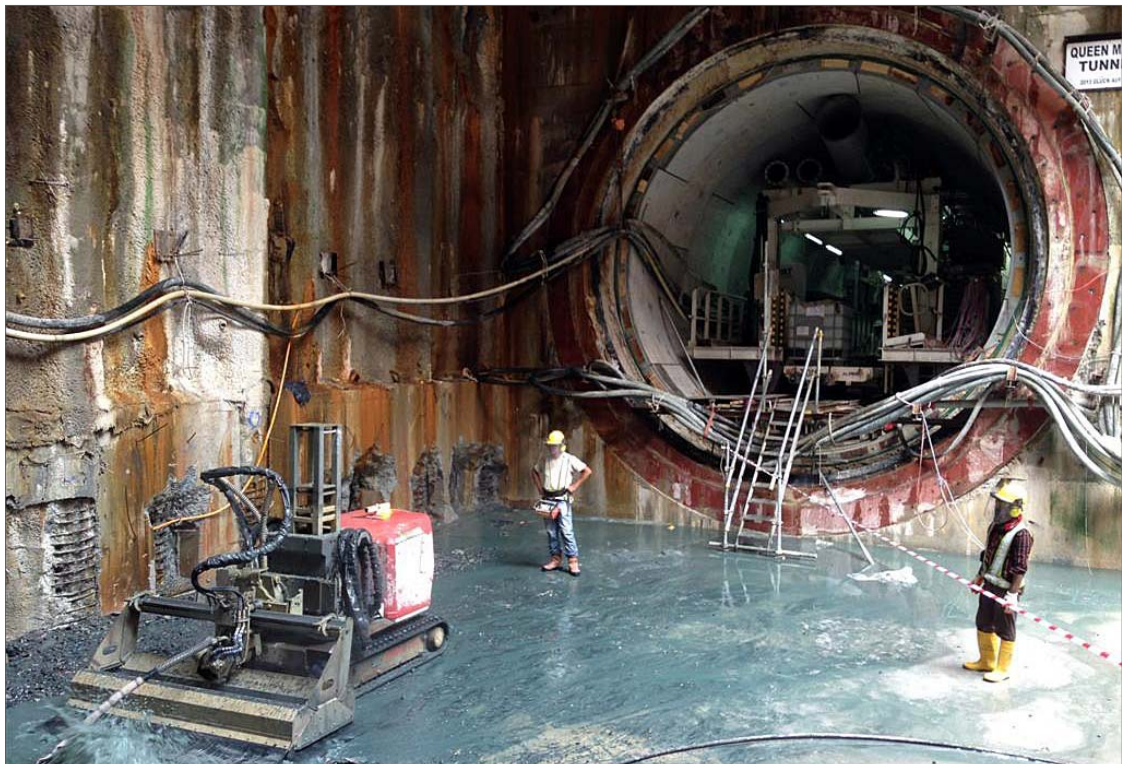
The company has recently taken on the distributorship in Singapore, Malaysia and Hong Kong for Sweden's Aquajet System AB Hydrodemolition equipment - having been the distributor in the Middle East for the past 13 years - and sold its first machine in Southeast Asia to a tunnelling contractor working on Singapore's new Downtown Line Stage 2 project.

The contractor used the machine, an AQUA CUTTER 710V Robot, to 'break out' concrete to below the rebar on the diaphragm walls of three underground stations in order to tie in further elements of the structures.

Breakout rates of 110 and 150 m² at an average depth of 65 – 75 mm were achieved; meaning the contractor would have to have employed 30 – 50 jackhammer operators and associated equipment to have achieved the same result.

Asia Waterjet was founded by Mike Biddle, who had spent time after the Kuwait war in the early 1990s supplying highpressure water jet cold cutting equipment during the fire fighting and capping of damaged oil wells.

Asia Waterjet Equipment had evolved from that experience, based at Jebel Ali Free Zone in Dubai and acting as the exclusive Middle East distributor for leading market suppliers.



HYDRODEMOLITION

The Singapore division was founded three years ago and covers a wide swathe of Asia, from Korea to India, although not including China. "We are not contractors, we are providing solutions and equipment, to solve customers' problems, said Christopher Perhill, AWE's Regional Sales Manager. "Often it is not possible to supply an 'out of the box' solution so we provide engineered water jetting solutions."

"We discuss with the customer what their needs are, and visit the site to fully assess the requirements before offering a solution. Often we custom-design an equipment package or specific application tool package in our Dubai headquarters; supplying it complete with on site commissioning and operator training included," he added.

"Singapore is our hub location for South East Asia and as such we keep stock of all fast moving parts and provide after sales service support to the region."

In the Middle East AWE has supplied a number of Aquajet machines to shipyards and marine installations, with units being used for cleaning and surface preparation of ship hulls in the dry docks and others undertaking hydrodemolition on, for example, piers and jetties. However in Singapore it is, believes Christopher Parkhill, the construction and demolition sectors that will first start to use Aquajet technology.

"The construction sector here is going to continue its strong performance for many years to come. When contractors see the benefits of investing in Aquajet hydrodemolition machines, then I am sure that we are going to see further sales of equipment."

Hydrodemolition works by pressurising and widening existing pores and micro-cracks in a concrete structure using high-pressure water penetration.



Christopher Perhill, AWE's Regional Sales Manager.

The rate of removal is dependent on the amount of water directed towards the concrete surface, and consequently the area and depth of removal can be closely controlled. Using a high pressure water jet also makes it easy for the operator to work around obstructions; particularly when compared with, for example, conventional jackhammer methods.

"With hydrodemolition, once programmed the jet moves rapidly and continuously over the selected area for removal," says Mr Parkhill.

"There is no percussive effect on the surface, with the water jet penetrating the deteriorated concrete, and there is no modification of the concrete microstructure or pore structure.

"Apart from very effective cleaning there is also no effect on the rebar and, in fact, the MRT contractor was using the AQUA CUTTER to clean away surplus concrete from the rebar on the three underground stations."

"Add to this the fact that you remove the transmitted noise of jackhammers, and that the physical and medical problems that can arise for the jackhammer operators simply do not apply. Hydrodemolition is a powerful argument in a country such as Singapore, where environmental concerns and safety are of prime importance."

Your partner to a successful solution

THE INNOVATOR

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