



Water Treatment

Changi Water Reclamation Plant
One of the world's largest fully-automated sewage treatment plants



Client: Public Utilities Board, Government of Singapore

Project name: Changi water reclamation plant (CWRP),
contract C3C liquid module 1(LM1) - mechanical and electrical works

Capacity: 400 million liters/day (Voltas' scope) - Plant actual of 800 million liters/day

Location: Singapore

Technology: Step Feed Activated Sludge Process

About

It's a testimonial to Voltas' present-day international standing as an EPC contractor, and the reliability of its engineering and project management skills. The 800 MLD Changi Water Reclamation Plant could well become a model project for water reclamation from sewage, and the proud legacy of a progressive and technologically oriented Singapore. Voltas has engineered, supplied, installed and commissioned critical processes equipment/systems and piping with actuated valves for capacity of 88 MGD (400 MLD) plant module (C3C)

Project Highlights

- > Use of fine screens with 3mm openings
- > Processes for removal of oil, grease, and grit unto 50 microns size
- > Bio-oxidation through the use of 50,000 fine air bubble diffusers in 24 multi-pass anoxic/aerobic step-feed bioreactors
- > Two scum concentrators which show 90% collection efficiency at 35 m3 per hour flow
- > Activated sludge conveyance and return of wastewater through drains
- > Air high-pressure systems and various facilities for chemical dosing
- > Special air conveyance systems to deal with odorous and exhaust air
- > 130 pumps, 2400 valves with actuators, and 59kms of stainless steel/cement lined ductile iron pipeline of size ranging from 3000mm diameter to 50mm diameter

*What's your Challenge?
Let's work together to solve it.*

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