



# The MPS System

Multi Pulse Sequencing

The permanent solution to water ingress



Hydro Technology + innovation

# Introducing Multi Pulse Sequencing

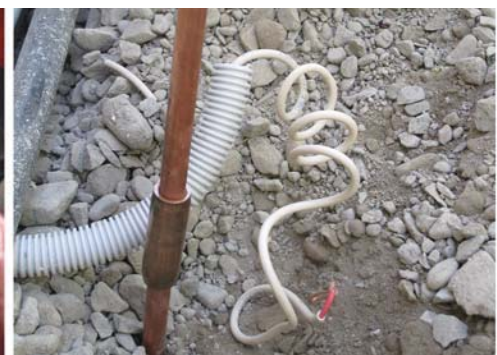
“Hydrotech provide a permanent solution to water ingress - GUARANTEED”

Water ingress has long since been a major problem for Architects, Property Managers, Contractors and Engineers. Conventional waterproofing techniques only address specific problems for a limited period of time and as such, costs can spiral.

Hydrotech's innovative MPS System succeeds where all others fail and is safe, reliable and cost effective. Furthermore whether it is an existing structure or a new building, Hydrotech's proprietary technology, The MPS System provides water ingress protection - GUARANTEED.

## Corporate History

Hydrotech International Limited is a publicly listed company that has official quotation on the Australian Stock Exchange Limited. The company trades under the stock code of "HTI". Hydrotech is a total water ingress solutions provider and owns 100% of the intellectual and commercial property rights to the Multi Pulse Sequencing System (MPS System). The company is a specialist design and installation supplier of proprietary technology and know-how in the area of prevention of water ingress into subterranean concrete and masonry structures. The company has offices in Hong Kong, Beijing, Guangzhou and the United Kingdom with a state of the art R&D centre in Norway.



# The permanent solution to water ingress

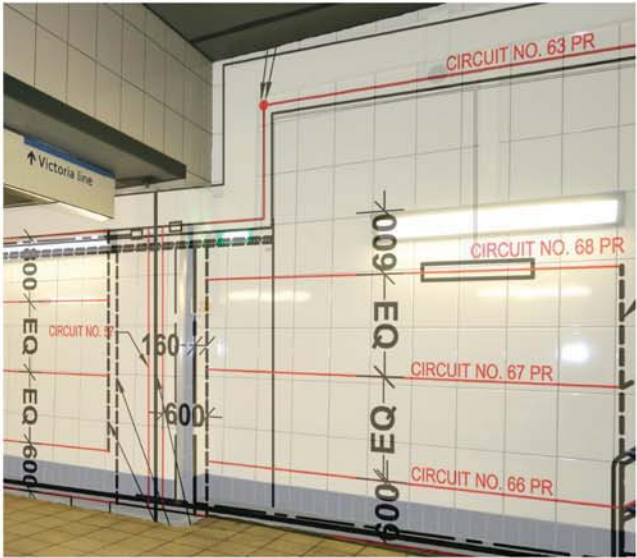


## What is the MPS System?

The MPS System is an evolutionary technology built upon established scientific theory. It gives new life to existing structures, avoids expensive reconstruction and allows a broad field of applications in concrete structures.

Concrete and brick masonry structures consist of a mass containing capillary formations. A common form of water ingress into basement structures is through capillary action. Water penetrates into the concrete through voids and cracks and travels along the capillaries using a similar mechanism as plants and trees receive and distribute water.

The MPS System waterproofs both new and existing structures using a series of complex, low voltage, positive and negative pulsating charges passed through electrodes in the form of anode wire strategically placed within the structure. The pulsating charge creates an electromagnetic force which actively repels water within the capillary to the groundwater behind.



# Introducing Multi Pulse Sequencing

## Where can the MPS System be installed?

The MPS System is extremely effective in the following types of construction:

- Basement walls with a high water table
- Tunnels with concrete or masonry lining
- Underground structures and car parks
- Dams, marine structures and foundations
- Bridge abutments and arches

## Why choose the MPS System?

- The MPS System provides a permanent solution to all substructure waterproofing requirements
- Dry-wall construction with drained cavities is not required, providing greater utilization of space and reduced construction costs
- If water ingress occurs, mechanical crack remedial measures are extremely effective and easy to implement
- Eliminates the need for an internal wall when a diaphragm wall type of construction has been used
- The MPS System is installed from the exposed side of a structure, negating the need for expensive exterior excavation work to existing basements
- The MPS System prevents mould and mildew growth
- The MPS System reduces energy costs

## Guarantee

- Whether it is an existing structure with water ingress or a new building, Hydrotech's evolutionary MPS System provides water ingress protection - GUARANTEED to meet agreed performance objectives.
- The MPS System incorporates a monitoring system to ensure that the performance objectives are achieved.



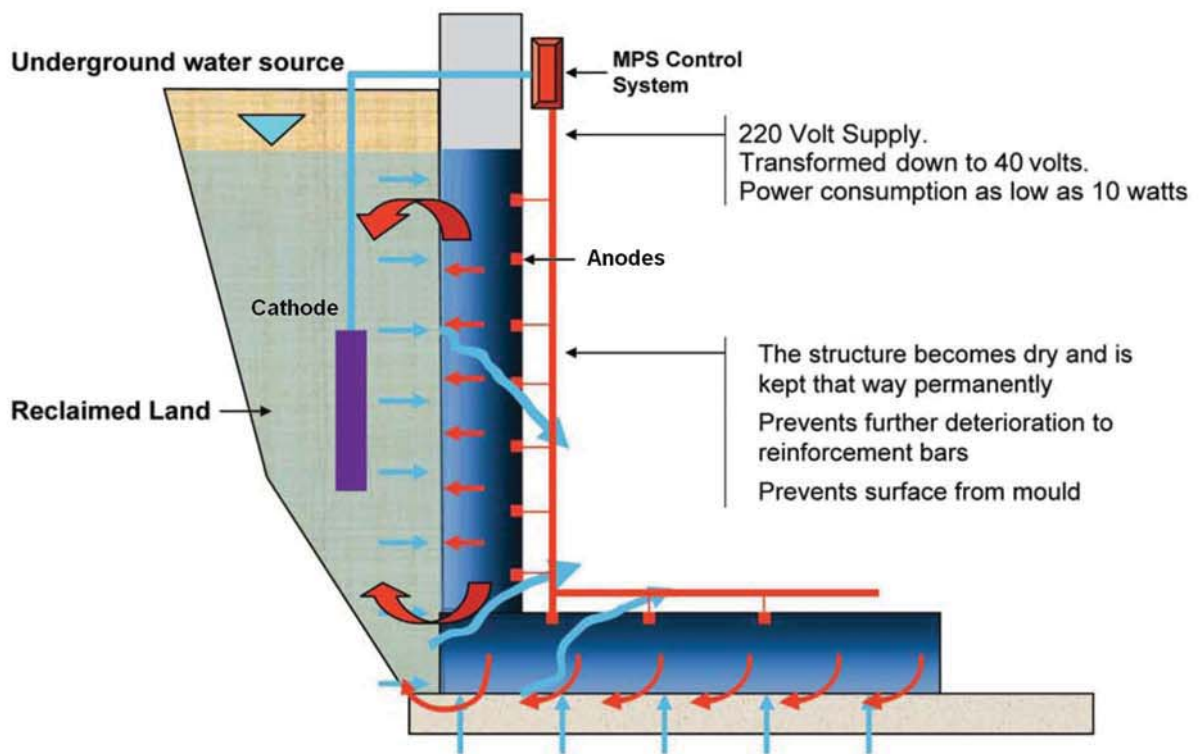
GUANGZHAO POWER PLANT

Stage 1: Site Visit

Stage 2:

The permanent solution to water ingress

## Characteristics of the MPS System



- Low voltage system, with minimal running costs. (Approx 10 Watts per 1,000m<sup>2</sup>)
- Touch safe
- Reduces the corrosive environment for steel reinforcement within a structure
- Improves a structure's insulation, reducing cooling and heating loads
- Prevents penetration of waterborne bacteria



Site Assessment

Stage 3: Treatment

Stage 4: Completion

# Introducing Multi Pulse Sequencing

## The MPS Installation Process

1. Identification of the water ingress problem
2. Feasibility study to determine the suitability of the installation
3. Provide a proposal and quotation
4. Design the layout
5. Installation of the MPS System
6. Commissioning
7. Ongoing monitoring until results achieved
8. Guarantee issued

## Typical Specification

The Proprietary Electro Osmosis waterproofing system shall be Hydrotech's Multi-Pulse Sequencing (MPS) system. The MPS System will have a minimum of 10 years proven track record for use in waterproofing below grade concrete or masonry structures. The MPS System will use low voltage and low current to actively repel water out of the structure and shall incorporate the MPS Control Unit capable of supplying current to a minimum of 30 separate anode circuits which will cover a minimum of 1,500 square metres of concrete surface. Anode circuits comprising of 2.0mm diameter, titanium wire embedded into 23mm deep x 8mm wide grooves saw-cut or formed in the concrete surface and 14mm diameter copper coated mild steel cathodes as detailed in the design specification.

MPS Clients: Hydrotech has worked with the following clients



**Architectural Services Department**  
The Government of the Hong Kong Special Administrative Region



**Hong Kong Housing Authority**



**MTR**

心繫生活每一程

The permanent solution to water ingress

## MPS Project References ...a truly global solution for water ingress issues

### Hong Kong

- Central Station Pedestrian Subway (MTRC)
- One IFC (Henderson Land)
- Cityplaza 4 (Swire Properties)
- International Plaza, Kowloon Bay
- Hang Seng Bank Headquarters
- Wo Hop Shek Crematorium, Fanling (ASD)
- Oi Man Estate, Homantin, HK Housing Authority
- HK Institute of Education, Taipo
- 181 Gloucester Road, Wanchai

### China

- Tengmieshan Highway Tunnel, Yunnan
- Zhengzhou Electric Cable Tunnel, Henan
- Hydro-power Dam, Guiyang Guizhou Province
- Residential Basements, Green Rivers Manor, Beijing
- Shanghai Villa and Ping Hu Villas in Zhejiang Province

### Rest of World

- Walthamstow Station Pedestrian Subway, London Underground
- Oslo Central Railway Station, Norway
- Norwegian National Museum
- Oslo Housing Society
- Oslo Ullevall Hospital
- Tafjord Dam, Norway
- Tonstad Power Station, Norway
- The Norwegian Building Research Station
- The Norwegian National Hospital
- St George's Hospital, Christchurch, New Zealand

nts in the provision of permanent solutions for water ingress:

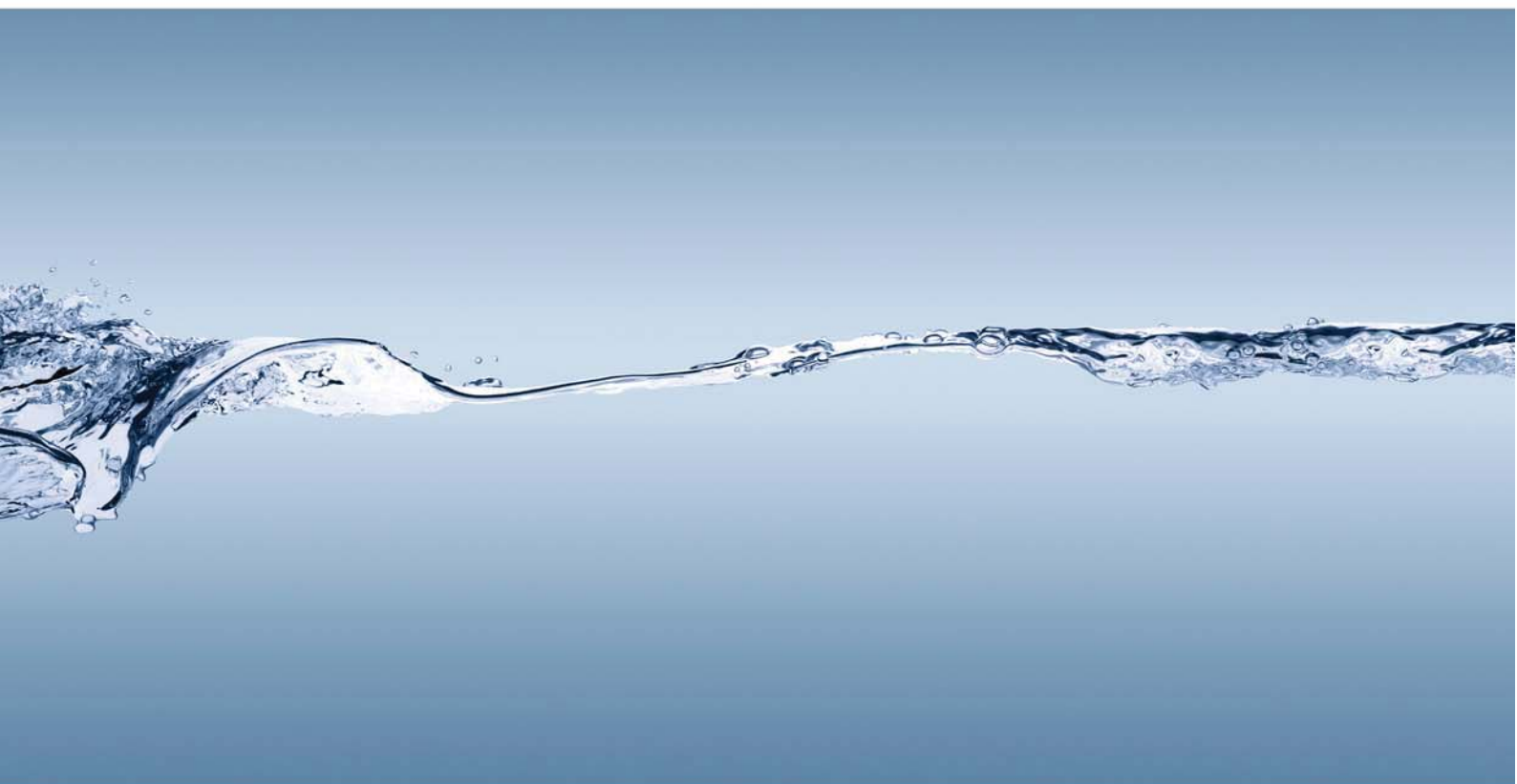
生銀行  
ING SENG BANK  *Managing wealth for you, with you.*

  
恒基兆業地產集團  
HENDERSON LAND GROUP

  
The Hong Kong  
Institute of Education  
香港教育學院

 SWIRE PROPERTIES

# Systems marketed by Hydrotech



HYDROTECH ASIA LIMITED  
Tel: +852 2865 6600  
Fax: + 852 2865 6606

HYDROTECH CHINA LIMITED  
Tel: +86 10 6878 5181  
Fax: +86 10 6878 5183

HYDROTECH EUROPE PLC  
Tel: +44 1908 675 244  
Fax: +44 1908 397 513

HYDROTECH R&D LIMITED  
Tel: +47 97466505  
Fax: +47 69294330

[www.hydro-usl.com](http://www.hydro-usl.com)

For all assistance, please contact [enquiries@hydro-usl.com](mailto:enquiries@hydro-usl.com)

Hydrotech International is a Member of Hydrotech International  group of companies

