Hong Kong West Island Line
Waterproofing for challenging subsurface soil condition

The background

Master Builders Solutions Hong Kong has been awarded a contract to supply waterproofing products for the 3 km underground tunnel linking the newly added MTR stations from Sheung Wan to Sai Ying Pun, the University of Hong Kong and Kennedy Town. The construction work is part of the West Island Line extension project initiated by the MTR Corporation Limited.

The challenge

Gammon-Nishimatsu WIL Joint Venture, the project contractor, decided to “freeze” the soil following the spray concrete process, to overcome the soft soil conditions in the area, which could hamper their construction work. However, the soft soil engineering they undertook resulted in a temperature drop in the shotcrete, to -3 degree Celsius. As a result, the shotcrete surface temperature is cold and moisture coming from condensation. The temperature of the affected area had to be maintained at 20 degree Celsius to ensure the shotcrete surface was dry enough for the successful application of MasterSeal 345, a waterproofing membrane for concrete.

Contact:
Ricardo Evaristo
Assistant Manager, Korea, Taiwan, Hong Kong,
Underground Construction, Construction Chemicals
BASF Hong Kong LTD., Unit 2, 20/F, EW International Tower,
120-124 Texaco Rd., Tsuen Wan, N.T., Hong Kong
Tel: +852 6390 4694
Fax: +852 2408 4401
www.master-builders-solutions.basf.com.hk
Our solution

The underground construction team was called in to tackle the technical issue. It was resolved with the placement of PVC canvas sheets, to isolate the area earmarked for treatment. To ensure the required temperature level for the sprayed concrete, jet heater guns and ventilation fans were also used. Eventually, the shotcrete surface dried up and was ready for waterproofing application. Considerable savings in time and manpower were achieved due to the remedial work, much to the client’s satisfaction.

The customer’s benefit

- Time saving – 4 days for apply MasterSeal 345 instead of 2 weeks for PVC membrane
- Manpower saving – 3 workers instead of 8 workers for application work
- Easy application – Only one spray machine for apply MasterSeal 345 instead a large platform, tools and PVC membrane applicator.
- Easy to repair – Easy to find the leak crack because of the full bonding system.

Projects facts at a glance

- First application of MasterSeal 345 on ground freeze area
- Master Builders Solutions Hong Kong will continue to provide waterproofing solutions and technical support for the project’s second phase which will commence in November 2015

Master Builders Solutions from BASF

The Master Builders Solutions brand brings all of BASF’s expertise together to create chemical solutions for new construction, maintenance, repair and renovation of structures. Master Builders Solutions is built on the experience gained from more than a century in the construction industry.

The know-how and experience of a global community of BASF construction experts form the core of Master Builders Solutions. We combine the right elements from our portfolio to solve your specific construction challenges. We collaborate across areas of expertise and regions and draw on the experience gained from countless construction projects worldwide. We leverage global BASF technologies, as well as our in-depth knowledge of local building needs, to develop innovations that help make you more successful and drive sustainable construction.

The comprehensive portfolio under the Master Builders Solutions brand encompasses concrete admixtures, cement additives, chemical solutions for underground construction, waterproofing solutions, sealants, concrete repair & protection solutions, performance grouts, performance flooring solutions.