

Progress of opening-up investigation in second stage of holistic assessment strategy for Hung Hom Station Extension under Shatin to Central Link Project

According to the holistic assessment strategy of MTR Corporation Limited (MTRCL) regarding the platform slabs and diaphragm walls of the Hung Hom Station Extension under the Shatin to Central Link (SCL) Project accepted by the Government on December 5, 2018, the MTRCL proceeded to commence the relevant work on December 10. The first purpose of opening up the concrete is to carry out physical investigations at locations with gaps in the documentation, so as to verify the as-constructed conditions of the connections between the platform slabs and diaphragm walls. The second purpose is that, in view of the allegations on the cutting-short of steel bars, the MTRCL needs to open up certain connections between the platform slabs and diaphragm walls for detailed inspection, and to conduct non-destructive tests to verify the works quality of the coupler connections. The locations of opening-up were randomly selected based on a statistical approach.

According to the information from the couplers' supplier, proper installation requirements of a coupler are:

- (1) there shall be a maximum of two full threads exposed; and
- (2) the embedded length of the threaded steel bar inside the coupler shall be at least 40 millimetres.

The MTRCL uses the phased array ultrasonic examination to verify the embedded length of the threaded steel bar inside the coupler. As the allowable measurement tolerance of the test is 3 millimetres, equipment readings below 37 millimetres are regarded as failing to meet the requirement. The test is carried out by the professional technicians of A.E.S. Destructive and Non-Destructive Testing Limited.

As at yesterday (December 20), the preliminary coupler test results conducted by the MTRCL are given below:

Test results of couplers exposed for the first purpose (as at December 20, 2018)
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Coupler No.	Location of coupler tested	No. of exposed thread	Embedded length – preliminary results (millimetres) (Note 1)	Embedded length – formal test report (millimetres) (Note 2)
EWL-E44-TT-T1-01-C1	At the top of Area B of East West Line (EWL) slab near eastern diaphragm wall	1-2	31.61	To be provided by MTRCL
EWL-E44-TT-T1-02-C1	At the top of Area B of EWL slab near eastern diaphragm wall	8-9	6.22	To be provided by MTRCL

Test results of couplers exposed for the second purpose (as at December 20, 2018)				
Coupler No.	Location of coupler tested	No. of exposed thread	Embedded length – preliminary results (millimetres) (Note 1)	Embedded length – formal test report (millimetres) (Note 2)
EWL-E46-BB-B1-01-C1	At the bottom of Area B of EWL slab near eastern diaphragm wall	2-3	34.91	To be provided by MTRCL
EWL-E46-BB-B1-02-C1	At the bottom of Area B of EWL slab near eastern diaphragm wall	3-4	29.65	To be provided by MTRCL
EWL-E46-BB-B1-03-C1	At the bottom of Area B of EWL slab near eastern diaphragm wall	2-3	34.32	To be provided by MTRCL

According to the holistic assessment strategy of the MTRCL, upon the completion of the opening-up investigation under the second stage and in the third stage, the MTRCL will consolidate test results found in the first two

stages, conduct a detailed structural analysis on the works for the Hung Hom Station Extension to ascertain if the overall structural integrity of the works is acceptable and determine if it is necessary to conduct strengthening works.

In anticipation of further test results to be received later today (December 21), the Government will make a separate announcement. From now on, upon receipt of new test results, the Government will release the results for reference by the public at the Highways Department's website for the SCL project (www.hyd.gov.hk/en/road_and_railway/railway_projects/scl/index.html).

Note 1: Preliminary results of the phased array ultrasonic examination refer to the readings taken on site, subject to verification.

Note 2: Allowable measurement tolerance of the phased array ultrasonic examination is 3 millimetres.