

Peco Anchor Batch 1 Test Report
24th September 2011 and 5th October 2011

Introduction

This test report is for the Peco anchors from batch 1 which were marked BCA 01.

Ingleton Quarry 24th September 2011

Method

15 Peco anchors were installed in limestone on 23rd September 2011. The anchors were installed in compliance with the BCA E&T Committee document "Permanent Resin Bonded Anchors – Installation Procedure, Training and Documentation" (IPTD). The holes were drilled to 100mm deep and cleaned using water (pressure wash), brushed and washed until all the limestone dust had been removed, the holes were then dried using absorbent cloth. The anchors were secured in the substrate using Allgrip KMR-RES chemical anchor mortar which is a polyester resin with styrene. The anchors were left unloaded for 1 day until test to failure on 24th September 2011.



During the test period it became apparent that the chemical anchor mortar had not thoroughly mixed during application into the hole. This resulted in two relatively low readings. Anchor test number 10 was extracted using 26KN. And anchor number 13 was extracted using 18KN. On closer inspection of the chemical anchor mortar it was granular which could indicate that thorough mixing had not occurred, or it require a longer curing time.

The ultimate failure load i.e. the peak load at which the anchor started to egress from the resin or the load required to extract the anchor from the resin, whichever was higher, was within the range 18-41KN. with a mean of 34KN.

Ingleton Quarry 05th October 2011

Method

17 Peco anchors were installed in limestone on 01st October 2011. The anchors were installed in compliance with the BCA E&T Committee document "Permanent Resin Bonded Anchors – Installation Procedure, Training and Documentation" (IPTD). The holes from the test bed 24th September 2011 were re-drilled to 100mm deep and cleaned using a water (pressure wash), brushed and washed until all the limestone dust and previous chemical anchor mortar had been removed. The holes were then

dried using absorbent cloth. The anchors were secured in the substrate using Allgrip KMR-RES chemical anchor mortar which is a polyester resin with styrene. The anchors were left unloaded for 3 days until test to failure on 05th September 2011.

These anchors have had a longer unloaded time as a result of chemical anchor mortar curing discrepancies from the test on 24th September 2011.

The ultimate failure load i.e. the peak load at which the anchor started to egress from the resin or the load required to extract the anchor from the resin, whichever was higher, was within the range 25-45KN. with a mean of 34KN.



Conclusions

From the test data gathered from these two tests comprising in total of 32 batch 1 (BCA 01) Peco anchors. It is evident that the batch 1 Peco anchor is consistently similar in performance and strength to the DMM Eco anchor.

We therefore conclude, that it is not necessary to remove any batch 1 Peco anchors, that have been installed by BCA installers using the BCA E&T Committee document "Permanent Resin Bonded Anchors – Installation Procedure, Training and Documentation" (IPTD).



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