Constructing Innovations Ltd

Suite 8i Enterprise Centre
Moorgate Point
Moorgate Road
Liverpool
L33 7XW

24 April 2017

To whom it may concern

Re: Findings of Calcium Carbide Moisture Test (CM Test)

Location: Room 403, Garden Inn Hilton Hotel, Lancashire Cricket Ground, M16 0PX

Date the screed was laid: Week commencing 13 March 2017

Date of CM Test: 20 April 2017

Equipment used: Radtke Messtechnik Carbide Moisture Test Kit

Objective/Methodology of the Test

For any kind of flooring, the final floor finish should not be put down until the screed upon which it is to be laid has dried optimally.

A CM Test offers the most accurate way of assessing the moisture content in screeds. Note that readings taken from other testing equipment such as Tramex meters should be used for guidance only as they are less precise.

A CM Test requires a small sample of screed (50g) to be taken from the full depth of the screed and crushed into powder form. This screed sample is then mixed with a calcium carbide reagent, and subjected to orbital rotation in a vacuum flask.

Upon reacting, the mixture releases acetylene gas, the amount of which indicates the level of moisture in the sample. The percentage of concrete moisture within the screed (% CM) is then recorded at approximately 2, 5, 7 and 10 minutes from the commencement of the test.

Prior to the installation of the final floor finish, the acceptable CM% reading should be no more than 3.2% when testing a Retanol Xtreme screed.

Findings of the CM Test

The screed analysed in this test was 75mm deep and had been laid on the concrete substrate.

The following CM readings were taken during the course of the test:

- **Reading at 2 mins 2 secs - 1.5% CM**

- **Reading at 4 mins 59 secs – 2.0% CM**

- **Reading at 7mins 2 secs - 2.2% CM**

- **Reading at 10mins 0 secs - 2.3% CM**

The screed area from where the sample had been taken was repaired once the test had been completed.

Conclusion

At the end of the CM Test (the duration of which was 10 minutes), the gauge reading was 2.3% CM.

Therefore we would now consider the screed that has been tested to be sufficiently dry and ready to receive the chosen floor finish.

Caveats and Additional Observations

Potential water spillage and relative humidity

During the site visit to complete the CM Test, we understand that in some areas of the building, plastering of walls had taken place soon after the screed had been laid. Such scenarios can lead to the screed being exposed to further moisture, both through water spillages when mixing the plaster and through an increased relative humidity (RH) in the building.

This point is highlighted for your consideration as any water spillages or significant increases in RH can lead to increased screed drying times and moisture related problems when applying the final floor finish.

Yours faithfully

Michael Lea
Managing Director
Constructing Innovations Ltd