



Martin Cummins on moisture measurement ... again!

When will moisture be hung out to dry?

I RECENTLY came across a couple of copies of **CFJ**, which were nearly 20 years old (funnily enough about the time I, as a quality control chemist, joined Colas, which became Laybond Products). Flicking through the pages, one thing struck me – moisture was a problem back then and in 20 years it still is! It is probably fair to say that moisture problems have increased over this time.

Certainly most on-site problems we encounter are moisture-related, but why is this so? Pardon the pun, but surely in 20 years we should have hung moisture out to dry?

So what's going wrong and why are we no better at dealing with moisture? It must be accepted that floorcoverings, screeds, adhesives etc, have changed over this time and the effects of moisture on them may be different.

However, the need to test for moisture is even more relevant today and for most of us in technical service and site support, moisture testing is something we do every day.

We employ British Standard test methods using the hygrometer, plus indicative tests such as encounter meters, probe tests, pin meters, etc. With this armoury you may think we all know what we're doing; however, the consensus is far from agreed.

So what is the problem? It arises from the variety of test methods often used. The uncertainty of correlation and agreement between these testing methods may be more of a hindrance than a help. Suspicion, particularly with the many main contractors we come into conflict with, that the hygrometer test only

proves a floor is wet, doesn't help this.

Alternative test methods may then assist an attempt to find a result that gives a 'dry' floor. I don't for one moment suggest that the only relevant test is the hygrometer. I fully understand the limitations and where and when these results are relevant.

We must accept that we now operate in a global market. Remember that over time different equipment and testing methods have been developed for 'local' markets. Should we really stay blindfolded and only look at the method used and recommended in our Codes of Practice?

It is right to agree that moisture can be measured, and that if the hygrometer, used in accordance to British Standards, determines that the floor is wet then the contractor should not continue.

However, in certain situations the British Standard might not be the most appropriate test. For example, a calcium sulphate screed was recently tested using a TrameX instrument. The reading was above 75% RH and so was clearly not dry. However, using a carbide bomb (which is a definitive test for moisture content of calcium sulphate) the screed would have been considered sufficiently dry.

Typically, if I test a hygrometer against a carbide bomb for a selected calcium sulphate screed, the carbide bomb reading would be quoted as dry, whereas it would read wet on our hygrometer in Europe.

Is the carbide bomb biased low or is the hygrometer biased high or perhaps different

site conditions bias in one direction?

Is Europe right and we are wrong OR is it more the lack of control on UK sites that means we need the comfort and confidence of our old friend the hygrometer, used regardless of floor structure, type and situation.

Another site recently had one manufacturer recommending and using the plug method, which is relevant when used correctly. However, when the plug is placed in an asphalt floor, as on this site, the reading is totally irrelevant, showing wet (on direct to earth slabs) regardless of the asphalt being a moisture barrier in its own right.

Inconsistencies go on and on, including relevance of hygrometers on cold sites, the use of conductance meters in reinforced screeds and the use of pin meters on exposed slabs.

Nobody wants a floor to fail as it is costly and inconvenient, but with different test methods being used and no accepted understanding of the correlation between readings of different test methods problems are sure to continue. What are the relative merits of each test method and how best should they be used in support of British Standards? How can results be interpreted such that the next step of the installation can be defined so that a trouble-free result is achieved?

Maybe the solution is an open forum to discuss the various test methods, their use on different flooring installations and the effect of often conflicting moisture readings to the success of a floor. But perhaps ultimately it's

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Phil Berwick on the tax amnesty this month

Your last chance to come clean on tax

HM Revenue and Customs has announced a second tax amnesty. Under the New Disclosure Opportunity (NDO) the taxman will seek tax on undeclared liabilities, interest and, in most cases, a penalty. The NDO is an extended version of a similar facility HMRC previously offered.

Under the 2007 Offshore Disclosure Facility, HMRC approached five banks for information on customers. In 2009, the taxman is obtaining information from 200 plus banks, building societies and financial institutions.

The NDO is a time-limited process for taxpayers with a disclosure connected to an offshore account or asset. People with irregularities connected to UK accounts or assets can also secure similar settlement terms.

Not just bank interest:

Anyone coming forward must reveal all irregularities, including those not connected to offshore accounts or assets, for up to the last 20 years. Failure to make a full disclosure can result in, at best, a substantially higher penalty, or, in the most serious cases, prosecution.

Taxpayers intending to make disclosures must notify the taxman before November 30 of this year. Details of irregularities and payment of amounts due, must be disclosed to the taxman by March 12, 2010.

Offshore assets: As with offshore bank accounts, the taxman is not only interested in undeclared incomes. He wants to check that underlying assets have been purchased using funds from known sources, and not from

undisclosed income or gains.

Assets associated with the NDO are mainly bonds or other financial products; land and/property; trusts; business interests; and other types of assets, including yachts and vehicles.

Anyone coming forward under the NDO should declare not only any offshore bank accounts held, but also any overseas assets. It is a serious error of judgement to declare bank accounts, but not other assets, perhaps assuming that HMRC will not discover them.

Simple process for most:

There are many pitfalls for the unwary or those with complex tax affairs. A badly-managed disclosure under the NDO can lead to higher penalties or, potentially, prosecution.

Ordinarily, a taxpayer has to endure a lengthy investigation

when their affairs are being examined. A typical enquiry takes an average of 18 months. An advantage of using the NDO is that you avoid that level of intrusion, and professional fees for sorting the problem out should be lower.

Fixed penalty to apply:

Under the NDO, taxpayers will not pay a penalty if the liability is less than £1,000. Where it is £1,000 or more, the penalty is 10% of tax due. However, taxpayers with undeclared accounts with Barclays, HSBC, HBOS, Lloyds, or RBS, who were offered the opportunity to disclose under the 2007 Offshore Disclosure Facility, will be charged 20%. Where an incomplete disclosure is made, the penalty will be higher.

Risk of prosecution:

Taxpayers should proceed with

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John Roberts trade tests a new spirit level

I will level with you about this instrument

THERE are many spirit levels on the market all with their own description of quality and accuracy, but this one stands out for me.

The manufacturer claims electronic adjustment to ensure the vials are set accurately. I measured the accuracy of this instrument against three other spirit levels, one being digital, and found this accurate at various temperature levels.

I must admit I have never checked a spirit level before and can only check as described above, as I do not own any sophisticated equipment to carry out accuracy tests.

This said, looking purely from a floor and wall tile angle (no pun

intended) the horizontal and vertical lines are the most important to customers. And this is where this instrument comes into it's own.

This level is 1000mm in length, making it a good size for floor tilers to achieve a spirit level on ceramic tiles even in confined spaces.

The level has a high tensile centre support. I did not want to test this to destruction but having applied a considerable amount of pressure to both ends with the middle on a solid base I did not find any deflection in the instrument.

I placed a straight edge along both edges before and afterwards and found no measurable effect of applying pressure.

UV stable vials, having only used this instrument indoors as do most floor and wall tilers, I did not evaluate this point.

The precision milled edge is very useful as it helped with the anti slip aspect. The instrument boasts anti-slip rubbers on each end. These were extremely useful when holding the level vertically with one hand, whilst placing a pencil line along the edge or when assessing the alignment of wall tiles.

The centre vial is magnified to aid the visual aspect from a distance and also from close up to give more accuracy. The centre vial has an 11-point resin lock for more accuracy.

Compared with my other spirit

levels, I found this one easy to use with virtually no slip and clear easy to see level from the magnified vial.

One negative point and a pet hate of mine, the instrument was not supplied with a container to store it and for when travelling to prevent damage from other tools falling onto the vials. **CFJ**

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John Roberts founded TAOFS (The Academy of Flooring Skills) and is a prominent consultant in flooring. TAOFS offers training in all types of floorcoverings.

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David Gatfield on changes for floorlayers

Big choice today. It wasn't always so!

BETWEEN now and Christmas there is bound to be several new types of flooring launched to add to an already bewildering array of products.

Currently there are rubbers, smooth vinyls, textured vinyls, tiles, planks, panels, imitation granite and marble. Then there's PVC pretending to be wood, ceramics, wood in the form of laminates disguised as ceramics, and even wood masquerading as itself. Oh, did I mention safety flooring? And we've not even touched on resins or carpet — an incredible choice of flooring types widely ranging in price and quality, not to mention availability, durability, usability, coveability, likeability and (today's buzz word) sustainability.

It was a lot easier when I started out in the game in the dark ages; there was wood, which had already been around forever, a bit of contract carpet, linoleum, rubber, thermo plastic tiles, some unstable contract vinyl sheet at either 3ft or 6ft wide and safety flooring, which came in only one format in those days and in just six colours. Half a dozen basic products covered the nation's entire flooring needs.

■ **Availability:** This was limited, as the distributor network of today was non-existent. Flooring contractors either bought from a few outlets with a limited stock, or direct from the manufacturer, which usually meant spending an hour waiting in line at the trade counter, before driving round the back and being ignored by the warehouse staff, to eventually collect your materials.

■ **Durability:** This was a suck it and see affair. Early flexible vinyl tiles wore out too quickly, so someone had the idea of loading them up with asbestos. It made them last longer — so long that some are still around today. Now the problem is that nobody wants to

take them up, for obvious reasons. However in those blissfully ignorant and innocent days, the dangers of asbestos were unknown; floorlayers of my era installed these products every day.

■ **Usability:** Most products in those days were difficult to use, especially by today's standards. Floorlaying was a hard job and not yet recognised as a trade, so it was head down, backside in the air until the job was finished, whatever the product.

■ **Coveability:** Not much was coved back then, except for a few thermo plastic tile installations, most of which were early attempts to cover in situ terrazzo or granolithic cove details. When I joined Altro, almost every job we did was coved, and now much contemporary flooring can be coved with many people sufficiently skilled to carry out this exacting work.

■ **Likeability:** It didn't much matter whether you liked a product or not. There was so little choice that changing from one sheet vinyl to another held no advantage for the flooring contractor; it might have been going from the

frying pan into the fire so better the devil you know, to abuse a cliché or two!

■ **Sustainability:** In those halcyon days, the world seemed to be a bottomless pit of natural resources; oil was abundant and there was thought to be no shortage of anything that took your fancy for the rest of time. How very different today! Oil, from which we derive PVC, is so depleted that the North Sea is expected to be devoid of this precious commodity within 15 years, if you believe the experts, so sustainability is now the order of the day.

All this adds up to a fantastic (though often confusing) choice for the consumer, but at an ever increasing cost to the environment. Schemes like our Recofloor partnership with Axion and Polyflor will hopefully mean we won't all be forced to live on the moon in a few years time. **CFJ**

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Moisture hung out to dry?

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about time we had a debate about the moisture testing and even get someone independent to look at the various methods of moisture testing, perhaps funded somewhat by the CFA on behalf of contractors.

To stamp out moisture we must get on top of the testing methods and agree a set of protocols for their use as well as how the methods relate to each other and if values can be compared?

At least it will allow the relative merits or pros and cons of each test method to be

defined and outline the circumstances under which they can be used and trusted. I would love to hear from anyone involved in this area to see if there are similar thoughts out there.

I'd like to think that in 20 years **CFJ** will look back at today and reflect on how much an issue moisture USED to be — what are the chances? **CFJ**

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