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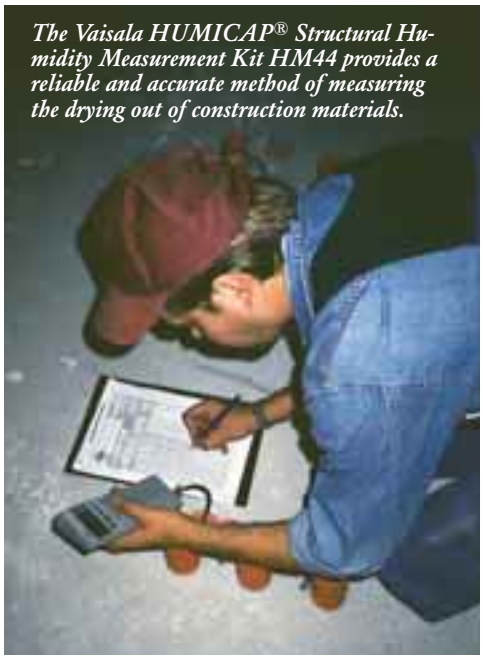
ASTM Standard passed in order to

Determine Moisture Levels in Concrete

The American Society of Testing and Measurement (ASTM) approved a standard in late 2002 to determine the moisture levels in concrete using an in-situ measurement. For some time (over ten years), this has been common practice in many European countries, especially in Scandinavia. Excessive moisture in structures can cause problems ranging from surface deterioration and indoor air impurities to mold. Since repairs often mean monetary losses, a reliable measurement standard and method is a must in the construction industry.



The Vaisala HUMICAP® Structural Humidity Measurement Kit HM44 provides a reliable and accurate method of measuring the drying out of construction materials.

"Is your concrete dry?" is usually the ultimate question, if you are involved in the building of a new concrete structure, or the remodeling of an old one. But the flooring industry in particular might hear or speculate on this issue more often than anyone else.

Excess moisture in structures can cause problems and monetary losses. In new construction, the tight time schedule may not allow enough time for structures to dry completely. Excess moisture can later cause surface deterioration, room air impurities and in severe cases – mold. These problems often lead to expensive repairs. Floors that are installed on "wet" concrete typically fail, creating an expensive problem for the building owner and potential liability problems for contractors, flooring manufacturers and others.

In the past, a surface measurement alone was industry standard to determine whether the concrete was dry. However, a surface measurement would give misleading information, because concrete dries unevenly and is usually drier at the surface.

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Using a humidity probe and digital meter to measure relative humidity at different depths within a concrete slab is a clear indication of whether the material is dry enough. This measurement requires the drilling of a hole in existing concrete, or the advance placement of a sleeve in new concrete. ASTM standard F2170-02 defines the measurement methodology in detail.

Vaisala HUMICAP® Structural Humidity Measurement Kit HM44

The Vaisala HUMICAP® Structural Humidity Measurement Kit HM44 is ideal for measuring humidity in concrete. It has been specifically designed for in-situ measurement and therefore lacks the weaknesses of other methods and measuring devices. The HM44 kit meets the new ASTM Standard F2170-02 for measuring relative humidity in concrete slabs by either drilling into hardened concrete or pre-installation into wet concrete. It has also been tested by a third party and approved for this method. Vaisala has years of experience when it comes to this application. Customers in the United States now have access to measurements complying with the ASTM Standard and can benefit from Vaisala's knowledge, technology and expertise in the field. ●

Reference:

ASTM F2170-02 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in-situ Probes.