



Continuing Education Unit (CEU) NCP-200904

A Presentation on Waterproofing Concrete Structures “Hot Applied”

Index

- Identify / survey / leak detection
 - Surface preparation
 - Finish – paint or stucco over
 - Questions and answer session
- End of section

Identify / survey water entry points

- a. Identification of the method of water entry is paramount to a successful waterproofing project.
- b. Determine the most suitable method of moisture / water detection (see moisture testing)
- c. Hot vs. cold applied systems.
- d. System application



Moisture detection

There are two types of technologies available, electrical resistance technology and capacitance technology. Electrical resistance technology requires the operator to penetrate the material being tested. The conductivity of the material between the points of contact, which is influenced by the presence of moisture is measured and displayed by the meter.

Pin-less meters, on the other hand, use capacitance technology to detect moisture. The sensor pad, which makes surface contact with the material being tested, sends a radio frequency signal into the material.

Moisture detection - continued

Which meter should I use?

A pin-less moisture meter is an excellent tool because it can scan the surface and determine if moisture is present, however it is important to remember if moisture is detected, the signal weakens as it moves further away from the sensor, limiting this meters ability to locate the source of moisture. For example, if moisture is present in insulation behind sheetrock, a pin-less meter cannot detect it. This in mind, it often becomes necessary to use a pin-less meter for a quick, overall evaluation of the job-site, and then use a pin-type meter to locate hidden moisture.

Determine best method for application

Once the moisture has been detected and entry points verified. A waterproofing system can be selected. While there are many types of waterproofing membrane systems on the market, we will address the “Hot melt type” system in this presentation.

Surface condition study



A concrete pond is leaking, water is getting through various crack in the slab as well as through gaps in the joint between horizontal slab and the vertical wall sections.

Surface preparation

The concrete in the area to be waterproofed is first repaired to insure that no broken sections or wide gaps are present. Following this the surface is cleaned and any loose materials or dust is removed.



Material is heated to melting point



Material transferred to spray system



Material spray applied to surface



A bond coat is applied



Joints are addressed



Matting is rolled out and cut



Matting is applied to bond coat



Horizontal areas receive matting



Matting is rolled into place



The finished section

After the fabric has been imbedded into the hot applied material it will become a permanent part of the structure. Once cooled to ambient temperatures the waterproofing is now complete.

Review

- Identify water entry points, determine repair method
- Surface preparation – Make any necessary repairs to the existing concrete, clean and prepare for hot applied material.
- Apply hot coating to concrete surface as a “bond coat”
- Apply additional materials in joint and slab terminations.

Review- continued

- Apply mesh fabric to surface
- Roll mesh to insure no air-bubbles or wrinkles are in the system.
- Apply additional hot coating to cover and encapsulate the fabric
- Clean up.

Question and Answer Section





End of section

“Restoring the past...
...Preserving the future”

