

Moisture Intrusion Through a Cavity Wall with Fill Insulation

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ABSTRACT

Water intrusion into a building through a brick-and-brick cavity wall with fill insulation caused moisture damage to interior finishes and mold growth. The fill insulation used was expanded vermiculite with an asphaltic coating, and appeared to repel moisture absorption. Past remedial efforts included installation of a water repellent coating on the exterior face of brick, and drilling of weep holes near the base of walls. This remediation failed after approximately five years.

This paper describes the investigation of this wall to determine the underlying causes of the moisture intrusion and findings. Investigative tools included field observation, use of masonry absorption tubes, observation of insect movement, study of plans, test holes for observation, and sampling and testing of the fill insulation.

Keywords: moisture, water intrusion, wall assemblies, modeling, testing, weep holes

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