

Finding A Leak

QUESTION - I have a customer who has a hardwood floor installed over a radiant heat floor. It has a leak tubing in lightweight concrete with sleepers, presumably from a flooring nail. We have removed the flooring and did not see any evidence of a misguided nail. Is there any way of narrowing down the location of the leak without tearing out the concrete?

The sleepers are on 9 inch center and we had five rows of concrete that were wet. We have the heat off on this floor and have been drying the slab with fans and a dehumidifier for two weeks. The plumber on the job has not been any help. He claims he has never run into the problem! Any assistance you can give me would be greatly appreciated.

Thank you
Bob - Homer,AK

ANSWER - There are several methods for locating a leak such as you describe.

1. Listening. Drain the system and pressurize it with air. Listen for the escaping air. If you have isolated the area you may be able to use soapy water sprayed on the floor to create bubbles near the leak.

2. A listening instrument. This is an instrument that resembles a metal detector. The system is put under pressure with compressed air. The listening instrument is used to locate the leak by hearing the air escaping. It can be dialed in to focus on the specific sound. Utility companies often have these devices for finding leaks in pipes buried in the ground.

3. Infrared camera. Infrared cameras see the heat pattern in the floor. With the heat on, you can see each individual tube. You will also see the area where the hot water is escaping from the tube. Energy auditing companies often have infrared cameras. You may also check with your local utility companies.

4. Helium detector. A helium detector is used by telephone and cable companies to find leaks in the jackets around their wires. The system is pressurized with helium and the helium detector will find the spot where helium is rising to the surface. The light gas will easily penetrate concrete.

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