

Bob Schjerven

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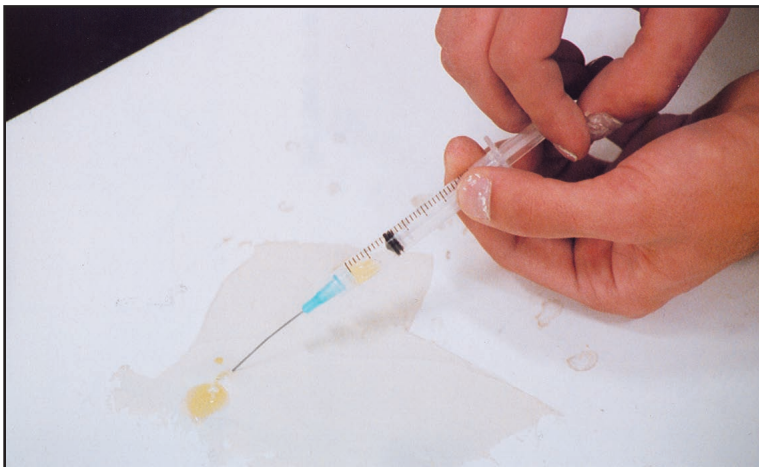
Roanoke, TX 76262

The following photographs show the beautiful, personal hanger, of **Bob Schjerven**. Unfortunately, the floor has hydrostatic pressure problems, isolated to the checker board pattern, and mostly in the black squares. Tests are planned to determine the source of the water and why it is only one quadrant of the hangar floor (recoating of the entire floor may be a possibility).



The moisture “bubble” problem was so severe, we were able to pull almost 2ml out of one bubble.

Hydrostatic pressure explanation available at www.redfordcorporation.com



REDFORD Corporation

Having a discussion...
Hydrostatic Pressure (“Bubbles/Blisters”)

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Dealing with problems caused by excessive hydrostatic pressure in concrete floors is no easy task. The situation is upsetting for both facility owners and flooring installation contractors/coating suppliers. A natural tendency is to finger-point to other causes, but this energy is better spent searching for a solution to the problem.

The Cause
Hydrostatic pressure problems in Redford’s Line 100 are encountered anywhere, but some areas of the country are more prone to these problems than other areas. Specifically, structures located in the Gulf Coast states of Florida, Louisiana and Texas are much more likely to develop problems, because the water table is so close to the ground surface. Buildings and homes in these areas are built without basements because it is nearly impossible to keep subsurface water from entering (and taking full on) into walls to be ground on a properly engineered vapor barrier).

One source of hydrostatic problems is the inherent characteristic of concrete. First, concrete is permeable, which allows water to migrate through interconnected pore spaces in the cement matrix. The amount of permeability is partly dependent on the water content of the concrete mix when the concrete is placed. A low water content mix results in a denser, stronger and less permeable concrete. However, a mix that is too thick will not flow properly, resulting in air pockets in the concrete.

These large pores decrease the strength of the concrete and can control escape movement of water and contaminants through the concrete.

Secondly, concrete highly alkaline, sometimes as high as pH 13, making the components reactive with even mildly acidic compounds. In addition, some aggregates used in the concrete may not react with cement alkalis, forming compounds that can swell and cause alkali cracks in the concrete. After construction, alkali cracks can also form due to movement of the building. Any cracks can serve as a pathway for water and contaminants.

One source of problem is the inherent characteristics of concrete.

Coatings are applied to improve the look of exposed concrete surfaces and to protect the concrete from outside agents. Before coating a surface, cracks and flaws should be repaired because such flaws can contribute to coating failure as well as decrease the moisture integrity of the concrete.



PERSONAL HANGAR BOB SCHJERVEN

The photographs below show the stunning **LENNOX International** corporate hangar at Addison Airport in North Dallas. **Mr. Bob Schjerven** is the president of **LENNOX International**. **LENNOX International** is known for operating a first class flight department with two (2) jets flying over 1,200 hours per year.



LENNOX International has been built on a heritage of integrity and innovation dating back to 1895. Over 15,000 employees are dedicated to providing trusted brands, innovative products, unsurpassed quality, and responsive service. Their first class flight department is only one example of the high, professional standards displayed.