

# Robert Higgins

## Qualifications and Experience

Expertise in moisture-related concrete issues, having been involved with waterproofing, technical committees, professional groups, lecturing, teaching, and construction defect litigation.

Bob Higgins is equally involved in product and process development, having developed most of the products manufactured and marketed by his former company SINAK Corporation, as well as owning or co-owning patents for moisture testing, concrete curing and control of ASR (alkali-silica reaction) in concrete.

**Construction Defect** - expert opinion and testimony

**Inspection** - Before, during and after

**Before Installation:** How to properly test, analyze and determine what, if any steps are needed prior to floor installation.

**During Installation:** How to properly monitor and test the concrete surface and the ambient conditions to ensure a problem-free installation.

**When Problems Arise:** Determine what went wrong, why and how to test and analyze correctly and accurately; determining root-cause.

**Teaching/Lecturing** - available for in-house training for those involved with inspection of concrete, moisture testing of concrete prior to installation of moisture sensitive products.

**Specifications** - Assisting in Architects/Engineers/Designers,

in developing sound concrete specifications for the ever changing environmental restrictions and product changes.

**Product Usage appropriate for Site Conditions:** Assisting manufacturers, distributors and installers in the selection process of material appropriateness and applicability.

### **Professionally**

Bob has been involved with waterproofing since 1976 and has acted as an expert in construction litigation since 1985. Bob was Vice President and Chemist/Product Development for SINAK Corporation for nearly 30 years (1979-2009).

Bob has written articles in local and national publications, lectured in regional and national conventions.

Bob has contributed to, used as an expert resource or written over 100 papers involving moisture-related concrete issues including deterioration mechanisms, testing protocols, diagnosis, inspection and repair.

### **Lectures, Seminars given Internationally, Nationally and Regionally**

**ICRI** (International Concrete Repair Institute)

**WLI** (Water Loss Institute)

**IICRC** ( Institute of Inspection , Cleaning and Restoration Certification)

**IFMA** (International Facilities Managers Association)

**DuPont Flooring Systems**

**CREIA** ( California Real Estate Inspectors Association)

**Stone Expo/Marble Institute of America**

**CSI** (Construction Specifications Institute-regionally and nationally)

**Mott McDonald** (British Engineering Group)

**SSPC** (Society for Protective Coatings)

**ACIA** (The American Construction Inspectors Association)

**AIA** (American Institute of Architects)

**British Rail** - Presentation, supervision, product selection for waterproofing of approximately 60 miles of the London Underground

Tunnel system

**ACI** (American Concrete Institute)

**BIS** (Building Industry Show)

**WFCA** (World Floor Covering Association)

**SWRI** (Sealant, Waterproofing & Restoration Institute)

**CEFPI** (The Council of Educational Facility Planners International)

**CSBC** (Customer Service Builder Council)

**National Park Service** - U.S. Dept of the Interior - presentation, tour and assessment of concrete and stone issues with the Kennedy Performing Arts Center

**ATF** (Academy of Textiles and Flooring)

**FEI Group** (Floor Expo, Inc.)

**XL Brands** Adhesive Manufacturer (technical presentations for various resilient and carpet manufacturers.

**FSU** (Florida State University) Technical presentations given for FSU Engineering Dept along with Florida DOT and Federal Highway Administration Personnel

IAQ Radio (Webcast Outlet for the Indoor Air Quality Profession)

Several presentations given for the continuing education series

**CFI** (Certified Flooring Installers)

**Tarkett** (Floor Covering Manufacturer): gave seminars and hired as a consultant for various flooring claims over concrete.

**RIA** (Restoration Industry Association)

**Building Science Conference** - Winter Break: Gave presentation for the restoration, mold and indoor air quality professional groups (January 2022 and scheduled for Feb 2024).

## **Schools, Certification and Industry Continuing Education**

Moisture Related Flooring Failures on Concrete Foundations, Academy of Textiles & Flooring, Teacher/Instructor, WFCA Education Center, August 3, 1994 - 1997.

Certification of Completion: Moisture Related Flooring Failures on Concrete Foundations, Academy of Textiles & Flooring, July 17, 1996.

Certificate of Completion – Solving Moisture-Related Problems with on-grade concrete – World of Concrete, January 24, 1997.

## Committees

**CSI** – Represented San Diego as a Delegate for the national convention, wrote a follow-up article review on the keynote speaker, June 1985.

**SSPC** – Review, correction and commentary for SSPC Inspection Handbook (Section 4.3, Inspection of Surface Preparation of Concrete, and the Appendix, Concrete Surfaces) 1996

**SSPC C.1.6.B** – Task Group on Coatings for Concrete Floors, 1997-98.

**ICRI** - Moisture-Related Issues with Concrete Floor Finishes

Subcommittee Chair: Robert Higgins, from 2005-2009.

**WFCA** (World Floor Covering Association) Chair (Technical committee), Authored Industry Position on Moisture-related Flooring Issues “White Paper”, endorsed by virtually every industry organization, October 25, 2001.

**ASTM**, E Committee, one of three primary authors for ASTM E1907 Test standard, later merged in with F1869, 1996-2001.

**IICRC**, Institute of Inspection, Cleaning & Restoration Contractors, Past Chair Concrete Substrates and Subfloors, (drafted initial test protocol), 1998-2000.

**IICRC**, Committee S230 - Manual of Inspection 2020-ongoing.

**NFCA** (National Floor Covering Association)

## Articles

- **Construction Specifier** Magazine, Concrete Carbonation: It's Prevention and Cure, December 1985.
- **Roads & Bridges** Magazine (2 articles), “Hydraulic ‘footprints,’ vapor pressure may degrade concrete friction surface”, Bob Higgins and Walter Lum, March 1986
- **Construction Specifier** Magazine, Repairing and Restoring Steel Reinforced Concrete, December 1986.
- **ACI Materials Journal**, Discussion on Committee Guidelines for ACI 330, July-August 1988.
- **Concrete Repair Bulletin**, Some Concrete Basics, September 1989.
- **Concrete Repair Bulletin**, Some Concrete Corrosion Basics, March 1990.

- **Concrete Repair Bulletin**, Commentary on prior article, Review of Concrete Sealers for Large Horizontal Concrete Surfaces, March 1990.
- **Concrete Repair Bulletin**, Taking a Closer Look at Warranties, September-October 1992.
- **Concrete Repair Bulletin**, Who Tests the Testers?, May/June 1993.
- **Parking Magazine**, Taking a Closer Look at Warranties, July/August 1993.
- **Concrete Repair Bulletin**, Aesthetics: What's in a Name?, July/August 1995.
- **Concrete Repair Bulletin**, More Confidence in Moisture Measuring Method, May-June 1996.
- **Flooring**, Moisture: It's a Concrete, Not Flooring Problem, Christopher Capobianco (credited as primary information source), March 1997.
- **Western Floors Magazine**, Clarification on Moisture-Related Concerns, Ray Thompson Jr. (credited as primary information source) July 1997.
- **Flooring**, New Studies Indicate Many Concrete Problems Linked To pH, Christopher Capobianco (credited as primary information source) August 1997.
- **Western Floors Magazine**, Industry Perspectives (Nov 1997 issue) Discussion, January 1998.
- **Concrete Construction Magazine**, Vapor retarders can't stop moisture problems (Reader Response Section), April 1999.
- **Concrete Construction Magazine**, Controlled testing eliminates dew-point effects (reader response), Bob Higgins, July 1999.
- **Concrete Repair Bulletin**, Understanding Floor Covering Failure Mechanisms, Shondeep Sarkar (cited as reference source), March/April 1999.
- **Construction Specifier Magazine**, Moisture-Related Flooring Failures: Dispelling the Myths (ran concurrently online - throughout 2001), March 2000.

- **Concrete Construction**, Observation on adhesive-moisture absorption (reader response), November 2000.
- **Construction Specifier Magazine**, Dewpoint and Condensation – The two most commonly misdiagnosed floor moisture failures”, December 2002.
- **Linked In** – 128 Articles
- **Wood Floor Floor Business** – Proper Moisture Testing
- **Naval Facilities Engineering Service Center - Special Publication SP-2085-SHR**: Referenced resource for: Overview of Industry Guidance on concrete condition assessment and concrete repair for use prior to coating.
- **ITW Resin Technologies Technical Bulletin #311**  
Referenced technical resource for - "Water, Water Everywhere - The problem with moisture in concrete".
- **Pennsylvania State University**, University Study - Characterization of silicate sealers on concrete -J. LaRosa Thompsona, M. R. Silsbeeb, P. M. Gilla and B. E. Scheetzb a.**The PQ Corporation**, Valley Forge, PA 19428 , USA, b University Park, PA 16802 , USA (referenced Waterproofing Reference and Guide, authored by me).
- **Linked In**: Multiple articles regarding environmental and moisture effects with concrete. Subjects covered from proper curing necessities to renovation and restoration considerations.