

WIND BECOMES WEATHER AT RICOWI MEETING

HAIL INCLUDED SINCE MEETING IN CONJUNCTION WITH RCI

BY PHILIP D. DREGGER, PE, RRC, FRCI

Meeting in Charlotte, North Carolina as part of the RCI Convention, The Roofing Industry Committee on Wind Issues (RICOWI) voted to amend its bylaws to become the Roofing Industry Committee on Weather Issues, Inc. (RICOWI).

Rick Olson, NTRMA, Chair of the Strategic Planning Committee, explained that the original "wind" focus was born out of concerns about roof covering performance after a series of storms. Since then, RICOWI has successfully brought together academic, insurance, and industry groups to discuss and cooperate on wind-related research. Over the last several years, concerns have also arisen about the effects of hail, energy efficiency, and durability on the performance of roof coverings.

Mr. Olson cited several reasons why it would be a natural extension for RICOWI to include "weather related" topics:

- Industry, code, and insurance group representatives already participate in RICOWI and would form a ready nucleus for the broadened scope of interest.
- Currently there are no other organizations that have directly attempted to provide a singular forum for these topics.
- With an increased demand from code officials to address the topic of hail impact and resistance, a forum such as RICOWI could provide positive feedback on possible alternatives available.
- This change would broaden the basis of involvement and thereby increase the feasibility of participation by academic groups, testing facilities, and research groups that have an interest in these topics.

RESEARCH AND TESTING UPDATES

Some interesting comments made during the various member reports, technical presentations, and subsequent meeting discussions follow. (Note: The accuracy of the following statements was not confirmed and is offered for the reader's consideration only.)

Ken Rhodes, UL: The speed of the wind stream directly over an asphalt shingle can be 3 times greater than the approach wind speed. Since asphalt shingles are air permeable, wind uplift pressures are readily transferred down through the shingles to act on



Members of RICOWI hold a meeting in conjunction with the RCI Convention in Charlotte.

the roof deck. Uplift forces associated specifically with "flow separation" of the wind stream act directly on the shingle tabs. These uplift forces will generally represent about a "2- to 3-fold reduction from those estimated using ASCE 7-95 procedures."

Marty Obando, Cedar Shake and Shingle Bureau: Heavy (3/4" thick) Certi-Label cedar shakes have passed the UL2218 Class 4 hail test and now qualify for property insurance "roof covering credits" offered by some insurance companies. The credit system introduced by the Texas Department of Insurance is expected to reduce losses from hailstorms.

Tom Smith, T. L. Smith Consulting Inc.: ASCE 7-98 is in the last round of balloting and should be available in the summer of 1999. Revisions from the 7-95 version are likely to include: clarification that the use of exposure B is acceptable for components and claddings of most buildings less than 60 feet tall; reduction of coefficients for internal pressure; simplified topography effects; and inclusion of a new table for rapid determination of loads on components and claddings of low-rise buildings. Smith also mentioned that two reports from the Federal Emergency Management Agency (FEMA), mobilized to investigate building damages from Hurricane Georges, were now available at the FEMA web site (www.fema.gov).

Bonnie Manley, Institute for Business and Home Safety: Informational pamphlets are available by calling IBHS (617-292-2003). They include "Performance of Metal Buildings in High Winds" and, later this year, "A Homeowner's Guide to Roofing and Hail."

Dan Best, SPFD: Submitted a letter indicating that the Society of Plastics Industry is currently seeking Factory Mutual

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approvals for spray foam roofing systems applied directly to steel decks. The Del Webb School of Construction, AZ State University, has completed a new hail study for spray foam roofs.

Tom Kelly, 2001 Company: Using a slow rise polyurethane foam material to seal over fasteners and laps of steel decks resulted in sustaining wind uplift pressures in excess of 200 psf in tests at FM and UL.

Tom Hall, Factory Mutual Engineering: When damage was experienced by various roof systems, it appeared to be related to omission of FM-recommended "enhancements" for perimeter securement, air filtration at perimeter features (e.g., gutters), and internal pressurization through large, wall-mounted vent openings.

Joint RCI/RICOWI Seminar

In January 1999, RCI and RICOWI teamed up to put on a wind seminar in Houston, Texas. RICOWI representatives presented wind design and research-related topics and RCI representatives presented project-oriented topics. Based on the favorable feedback received, a similar joint educational effort is planned for this fall in the Chicago area, including a tour of the Underwriters Laboratory's (UL) facilities in Northbrook, IL.

Join RICOWI

Individuals interested in becoming Affiliate members of RICOWI and attending RICOWI meetings are asked to contact RICOWI Executive Director, Patricia A. Wood-Shields for additional information by phone at 770-914-7235, by fax at 770-915-7102, or e-mail: pawsroof1@aol.com.

—Philip D. Dregger, PE, RRC

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