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# **WATER LEAKAGE THROUGH BUILDING FACADES**

**ROBERT J. KUDDER**  
**JEFFREY L. ERDLY**  
EDITORS

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# ***Water Leakage Through Building Facades***

*Robert J. Kudder and Jeffrey L. Erdly, editors*

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# Foreword

The Symposium on Water Leakage Through Building Facades was held 17 March 1996 in Orlando, Florida. ASTM Committee E6 on Performance of Buildings sponsored the symposium. Robert J. Kudder, Raths, Raths & Johnson, Inc., and Jeffrey L. Erdly, Masonry Preservation Services, Inc., presided as symposium cochairmen and are editors of this publication.

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# Overview

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The sponsoring Subcommittee for this Symposium is ASTM E06.55 on Exterior Wall Systems. The Subcommittee was started in 1985 by Alan Yorkdale to establish a ‘‘systems’’ approach to wall performance, and to depart from the prescriptive, material specific, and procedural approaches to wall performance evaluation and testing.

In October 1990, the first Symposium on wall leakage was held in Dearborn, Michigan, chaired by Thomas Schwartz. Tom retold the advice from an architect in the 1930s about common errors, omissions, and wrong thinking which would guarantee a leaky building. The irony was that if so many buildings leaked, that must be what people wanted. The remarks were as timely in 1990 as they were in the 1930s, and it appeared that little progress has been made in the intervening sixty years.

We believe that progress is being made to reduce the frequency of wall leakage problems, at least in buildings involving informed design and construction professionals working with owners who commit sufficient resources to construct workable designs. The papers in the 1990 Symposium presented examples of the mistakes which caused walls to leak, and diagnostic and testing methods to determine the causes of leakage. In contrast, many of the papers in today’s Symposium discuss design and quality assurance topics intended to prevent leakage, refined techniques for diagnostic and quality assurance procedures, and a broadened perspective to include durability issues. We like to think that this shift in Symposium topics reflects an evolution in how we think about and deal with wall leakage. With better dissemination of information which these ASTM Symposia represent, better attention to details and quality control, and a clearer understanding of performance requirements, we should expect a progressive reduction in wall leakage problems.

While a reduction in building leakage is acknowledged, portions of our industry continue to build structures with walls that leak. As the pressure to build lower cost structures continues, the resulting design requires the utilization of thinner, lighter building envelopes, less capable of withstanding the damage caused by even minimal water leakage. When reviewing the papers contained in this publication, we encourage the user to be aware of how everyone from the architect to the technician who installs the final linear foot of joint sealant, has a critical role in the success or failure of these building walls.

Evaluating and repairing wall leaks remains an art. Many of the papers, particularly the case studies, present authors’ varying approaches to diagnosing and repairing leaks. As an art, there is much room for the creative application of proven techniques, but there is usually no one ‘‘right’’ way to address a leakage problem. It is hoped that this Symposium will illustrate how many skilled technical professionals have attempted to prevent, diagnose, and correct wall leakage.

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