WOLF Testing Brings Field Insight To Water Penetration Performance

Even a well-designed facade can perform differently after installation. Product data and lab results help set expectations, but sequencing, workmanship, tie-ins, drainage, perimeter detailing, and surrounding conditions can all affect how the system manages water in the field.

Intertek's WOLF testing capability helps project teams evaluate installed windows, curtain walls, doors, and other exterior wall assemblies on-site under AAMA 501.1, the standard test method for water penetration using dynamic pressure. By applying wind pressure and water spray together, WOLF testing can help identify potential water intrusion paths, review surrounding conditions, and support repairs before access becomes limited.

"WOLF testing uses wind pressure and water spray to help project teams evaluate installed exterior wall systems before water intrusion leads to bigger problems."

Evaluating Installed Systems Under Dynamic Pressure

AAMA 501.1 gives project teams a way to evaluate exterior wall systems in the field, when product design, workmanship, sequencing, perimeter detailing, drainage, and tie-ins are all part of the final assembly. Those conditions can affect how windows, curtain walls, doors, and adjacent facade components respond to wind-driven rain.

The WOLF wind generation equipment applies wind pressure while water is sprayed across the test area. This allows the installed assembly to be evaluated under conditions that better reflect real exposure during severe weather. The test can help project teams see where water is entering, what surrounding conditions may be contributing to the issue, and whether repairs are working before access becomes limited.

What WOLF Testing Can Help Identify

Exterior wall systems may be tested before they reach the jobsite, but field performance depends on more than the product itself. Installation, sequencing, adjacent materials, sealant application, flashing, drainage paths, and tie-ins all affect how the system performs as part of the completed assembly.

WOLF testing can help project teams evaluate common problem areas, including transitions between systems, perimeter joints, anchor penetrations, end dams, weeps, sealant gaps, interfaces with air and water barriers, and drainage paths affected by field conditions.

When water penetration occurs during testing, the team can investigate the source, repair the issue, and retest while access is still available. That process is much easier than diagnosing the problem after interior finishes, tenant spaces, or building operations are affected.

Supporting Quality Assurance In The Field

Intertek's WOLF capability brings specialized equipment, technical expertise, and field experience together in a single on-site testing service. The test does more than document whether water appears. It can help identify likely sources of water entry, review surrounding conditions, support corrective work, and provide a record for the project file. It can also accomplish more testing in a shorter period of time than traditional chambered water penetration testing. No chambers to build.

That documentation can support quality assurance during construction, repair, and retesting before turnover; coordination among design and construction teams; warranty discussions; closeout records; and efforts to reduce water-related callbacks, disputes, and delays.

Better Testing Before Bigger Problems

Water intrusion can be expensive and difficult to diagnose after a building is complete. WOLF testing gives building teams a way to evaluate performance earlier, when access is better, and corrective work can be managed with less disruption.

Test reports can also help document conditions, observations, repairs, and retesting. That record can support quality assurance, closeout, warranty discussions, and future building performance decisions.

For Intertek, WOLF testing reflects a continued investment in building envelope performance and field testing. By combining wind pressure and water spray, project teams can better understand how exterior wall systems respond to wind-driven rain in the field.

Dynamic water penetration testing is also performed in the lab on our performance mock-ups using a large-scale wind generator. Intertek is currently developing a more advanced, fuel-efficient design for use on future projects in York, Pennsylvania, and West Palm Beach, Florida. Together, these field and laboratory capabilities help project teams evaluate water penetration performance across the design, construction, and project delivery stages.

For more information, click here.