As Energy Codes Tighten, Continuous Insulation Moves From ‘Nice to Have’ to Standard Practice

Design teams balance thermal bridging, moisture control, and exterior wall fire performance as CI adoption accelerates.

Panel+ Wall System

OLD MILL | SYSTEMS

Old Mill Systems, part of the Old Mill Building Products family

AMERICAN FORK, UT, UNITED STATES, January 1, 2026 /EINPresswire.com/ -- Exterior wall design has changed fast in the last several code cycles. Energy targets have moved upward, and building owners now expect predictable performance, fewer moisture problems, and fewer callbacks. At the same time, schedules remain tight and jobsite labor remains difficult to secure. Those pressures have made wall assemblies a higher-stakes part of the design and construction process, especially on commercial and multifamily projects.

One of the clearest shifts has been broader adoption of continuous insulation (CI). Rather than relying only on insulation placed between studs, CI places insulation across the exterior of the wall so it remains continuous over framing members. That detail matters because framing acts as a thermal bridge. In walls with steel studs in particular, heat can move through framing more easily than through insulated cavities alone. CI helps reduce thermal bridging and supports higher-performance envelopes without forcing a dramatic redesign of the building.

CI is also changing what project teams ask for from wall systems. It is no longer enough to select

insulation and then figure out cladding attachment later. Design teams increasingly look for coordinated approaches that address multiple performance requirements together: thermal performance, air and water control, drainage and drying behind cladding, and where relevant, assembly-level fire performance.

“As CI becomes more common, the questions we hear from architects and builders keep getting more specific,” said Kirk Harris, VP of Marketing for Old Mill Building Products. “They want clean details, they want buildable sequences, and they want clarity around how an assembly performs, not just how one layer performs.”

What CI changes on the wall

When insulation shifts to the exterior, designers often revisit how the wall manages water, how it dries, and how cladding attaches. Veneer systems, rainscreens, and adhered veneers each create different water-management demands. Drainage pathways, flashing, and continuity at transitions become even more important because small misses can lead to trapped moisture and long-term damage.

CI can also influence material selection. If foam plastic insulation is part of the assembly, some projects must also address exterior wall fire performance requirements using full-assembly testing methods. That is why manufacturers and design teams increasingly talk in terms of “tested assemblies,” not only product components.

Why assembly-level fire testing enters the conversation

For certain building types and construction classifications, exterior non-load-bearing wall assemblies that include combustible components may require compliance with NFPA 285, depending on the code path and jurisdiction. NFPA 285 evaluates how fire propagates over the face and within the core of a wall assembly under defined test conditions. Importantly, results apply to a specific assembly configuration and are not automatically transferable to every variation.

As an example of assembly-level testing in this category, Old Mill Buildingproducts’ Panel+ insulated thin brick and stone veneer system has been evaluated in a full-scale exterior wall assembly test performed by Intertek Building & Construction. Intertek tested the assembly in accordance with NFPA 285-19, and the assembly met the Conditions of Acceptance (report number G104002492SAT-003.R1; test date November 12, 2019).

The tested assembly included, among other elements, interior 5/8-inch Type X gypsum board, 6-inch 20-gauge steel studs at 16 inches on center, 1/2-inch exterior gypsum sheathing, a fluid-applied air and water barrier, 3-inch Type II expanded polystyrene (EPS) insulation as part of the Panel+ system, and thin brick installed into molded courses. Because NFPA 285 results are assembly-specific, designers should evaluate whether their project wall build aligns with the tested configuration and details when NFPA 285 applies.

Durability and weather exposure matter more as assemblies get more complex
As wall assemblies add layers, owners and contractors pay closer attention to durability and resistance to real-world exposure. Beyond energy performance, the wall still has to handle wind, freeze-thaw cycling, and water exposure over time.

Old Mill cites system performance testing commonly requested on commercial and multifamily projects, including structural performance under uniform static air pressure (ASTM E330) at +/- 150.0 psf with no failures; freeze-thaw resistance testing (ASTM E2485) after 60 cycles with no observed cracking, blistering, delamination, or erosion on thin brick or stone veneer samples; and surface burning characteristics (ASTM E84) reported for assembly configurations over drywall and OSB.

The goal of citing these results is not to suggest one approach fits every project, but to reflect what designers are increasingly asking for: published, test-referenced performance information that supports decision-making during design and review.

Aesthetics still drive decisions, but performance sets the baseline
Even with the shift toward higher envelope performance, owners still want the look and feel of traditional materials. Thin brick and thin stone veneers remain popular because they deliver authentic masonry appearance with a lighter system than full-depth masonry construction.

In this context, insulated adhered veneer systems have grown in interest because they can help coordinate multiple requirements: thermal performance through CI, moisture management features behind the veneer, and a veneer-ready substrate that supports consistent coursing and cleaner field installation.

What design teams can do now
As CI adoption continues, project teams can reduce risk by aligning early on a few practical items:

Confirm the project's compliance path and whether exterior wall fire assembly requirements apply

Treat the wall as a system, with clear sequencing for air and water control layers, flashing, and transitions

Match cladding attachment details to insulation thickness and substrate requirements

Where applicable, align specifications to tested assembly configurations rather than assuming component performance transfers automatically

Kirk Harris
Old Mill Building Products

+1 385-281-2281
email us here
Visit us on social media:
LinkedIn
Instagram
Facebook
YouTube
