

Continuous Insulation with Adhered Thin Veneers

The use of continuous rigid foam insulation on a building's exterior wall presents a challenge to builders, architects and manufacturers of cladding systems. This is especially true when thicknesses exceed two, thus limiting or eliminating the possibility of using standard fasteners to attach cladding to the building structure. The weight of the cladding, along with continuous insulation, changes the forces on the fastener in addition to the seismic and wind loads that already exist. Yet, there has been a lack of definition within the building codes for the best use of fasteners under these conditions where such insulation is used.

When insulating a steel-framed exterior wall, particularly in cold climates, it is usually desired to provide continuous insulation on the exterior of the studs to reduce the effect of thermal bridging and move the dew point to the building exterior. As energy codes continue to become more stringent, the thickness of the continuous installation has and will be increased. Yet, the increased thickness required introduces several problems for building designers, such as:

- Selecting fasteners that can support cladding dead loads while also extending through a thick layer of continuous insulation.
- The possibility that window and door jambs might need extending and redesign.
- Cladding manufacturers' warranties might be voided when more than one inch of continuous insulation is used.
- The issue of meeting the requirements of the National Fire Prevention Association 285 code.



TABS & Continuous Insulation

The TABS II Wall System has been successfully installed over two inches of insulation for several years. Based on data from the Foam Sheathing Coalition, the TABS system installation guide for fastener type and spacing exceeds requirements for supporting dead loads. (See Links)

The TABS II Wall System is one of several cladding systems meeting the National Fire Prevention Association 285 code with tested designs from Carlisle Coatings and Waterproofing. The One Canal Street project in Buffalo, NY incorporated this design. (See link and photo above).

The TABS II Wall System has recently been specified for a project with 3" of continuous insulation. Working with a team that included the architect, engineer, general contractor and other manufacturer consultants, the framing and fastener schedule were designed to insure a successful installation. (Consult with TABS on all designs exceeding 2")

First Quarter 2014

Fastener Fatigue Due to Load



One Canal Street-Buffalo, NY