

On the House

Using Rigid Foam With Trusses

Q. *We're considering installing a layer of 1-inch rigid foam insulation on the underside of a cathedral ceiling framed with scissor trusses. Is the foam a vapor barrier, or will we need to install a poly vapor barrier on the interior side of the foam? Will the foam cause problems when it comes time to finish the drywall?*

A. Henri de Marne responds: Extruded polystyrene (such as Styrofoam, Foamular, and Amofom) and aluminum-faced polyisocyanurate rigid insulation (such as Thermax) make an effective vapor retarder if installed on the bottom chord of any style truss as long as the joints are sealed with a compatible foil-faced tape. If the foil tape is applied carefully at the joints, there should be no need for an additional poly vapor barrier.

By contrast, expanded polystyrene or "beadboard" would not perform as well as a vapor retarder, since this type of rigid insulation can absorb moisture. Assuming that you have R-19 or greater fibrous insulation between the trusses, a 6-mil poly vapor barrier should be installed on the bottom chord of the trusses prior to installing the beadboard.

I don't see any reason why the foam insulation would cause a problem when installing or finishing the drywall, as long as the drywall is screwed properly to the bottom chord of the truss. Applying 1x3 strapping over the foam will reduce the number of screw misses, however, and creates a dead air space that contributes to a small increase in R-value.

Henri de Marne is a consultant in Waitsfield, Vt., specializing in moisture-related construction problems.

Long-Reach Drywall Fasteners

Q. *When installing drywall over existing wall finishes, we often need to use long fasteners to reach the underlying framing members. Can galvanized roofing nails be used to fasten drywall in these situations?*

A. John Minoia responds: Ring-shank drywall nails are typically available in up to 2-inch lengths. When longer fasteners are required, galvanized roofing nails (generally available in up to 3-inch lengths) can be used. But you may want to consider using long drywall screws — they're available in lengths up to 6 inches, and offer higher withdrawal values than roofing nails.

An alternative fastening method is to use "rock to rock" drywall laminating screws and construction adhesive. Apply adhesive to the existing wall surface, then "clamp" the new sheet to the underlying material with the laminating screws while the adhesive cures. The wide-bodied threads of the laminating screw provide more holding power than a standard drywall screw. It's important that the existing wall surface is clean, sound, and compatible with the construction adhesive.

John Minoia, Jr., is a sales representative for the U.S. Gypsum Company.

Leveling Tips for Transits

Q. *It sometimes takes me forever to level the base for my builder's level. Any tricks?*

A. Clayton DeKorne responds: A lot depends on the speed of the



To save time leveling the instrument scope, first rough-level the base. To level the scope, turn the leveling screws, moving your thumbs either toward or away from each other.

vials and the thread of the leveling screws. Leveling a cheap instrument with slow vials and coarse leveling screws can be maddening. Even so, following this basic procedure each time can help:

Rough-level the tripod. If you're setting up on a slope, place two legs of the tripod on the downhill side, and the remaining leg on the uphill side. The table of the tripod can quickly be "eyeballed" level by repositioning the uphill leg.

Set base. Before you begin leveling the scope, make sure the thumb wheels on the leveling base are centered on the threads of each leveling post.

Rule of thumb. To level the scope, start by turning the scope over one pair of leveling screws. Turn both thumb wheels in opposite directions at the same time (your thumbs should move toward or away from each other). The bubble moves in the same direction as your left thumb.

Next, turn the scope until it lines up over the next pair of leveling screws, and level the scope, again turning both thumb wheels at the same time. Make a final check, rotating the scope over each leveling point to make sure the bubble remains centered.

Got a question about a building or renovation project? Send it to On the House, JLC, RR 2, Box 146, Richmond, VT 05477; or e-mail to jlc@bginet.com.

