

Moisture Vents - Recover Situations

OVERVIEW

As a matter of clarifying BITEC policy, one-way moisture vents are required on all recover situations whether or not a Retrofit Board or recover insulation of any type is used. This practice is considered an industry standard for years now, it appears that some persons in the industry are unaware of it.

These vents are also required over all types of concrete decks, insulating fills of all types, various combinations of both for new and existing construction. Over periods of time these decks can absorb and release moisture which can blister roof membranes if there is not a method to release the vapor pressure created from the moisture.

Don't misunderstand the purpose of these vents; they are not for the purpose of drying out wet situations or wet fill decks, but only to allow some venting of vapor pressure created below the new roof membranes. Concrete and wet fill type decks can retain moisture for years which can be detrimental to any roof membrane. Wet material should not be recovered, but must be removed and replaced with new dry materials; both insulation and membrane.

Wet insulation loses its insulation value, as the moisture absorbs heat energy, mostly from solar radiation. The wet insulation should be replaced for energy efficiency in addition to providing a suitable substrate for a recover assembly. Wet insulation encapsulated by a recover membrane will not dry out, but in most instances will deteriorate to the point of losing its compressive strength (especially fiberglass insulation) which in turn will allow mechanical fasteners to work up and down against the new membrane under roof traffic. This could eventually cause penetration of the new roof membrane resulting in leaks. Even recover situations over existing membranes without insulation should have vents, due to the possibility of

residual moisture in the old membrane. For the same reason, recover membranes using mechanically fastened base sheets of all types without recover insulation should also incorporate moisture vents. Only when approved by the Technical Department, may vents be omitted due to specific project conditions.

As a matter of good roofing practice, NRCA recommends installation of moisture vents when recovering with insulation boards, when vapor retarders are used and over all types of wet fill decks. (The NRCA recommendation can be found in the Appendix of the Roofing and Waterproofing Manual, page 1) BITEC believes existing roof membranes should be considered as a vapor retarder when recovered, with or without an insulation board.

Additionally, BITEC recommends the use of spun aluminum vents with one-way valves. Flanges of these units should be primed and dry before installation. Installation should be done in accordance with Detail #21 in the back of our Specification and Detail Manual. Since BITEC warranties do not cover roof accessory items such as these vents, the plastic type vents are acceptable with SBS membranes but not preferred, and should not be used with torch applied membranes for obvious reasons.

When the BITEC Specification and Detail Manual is revised for the next reprinting, this matter will be addressed in the General Requirements.