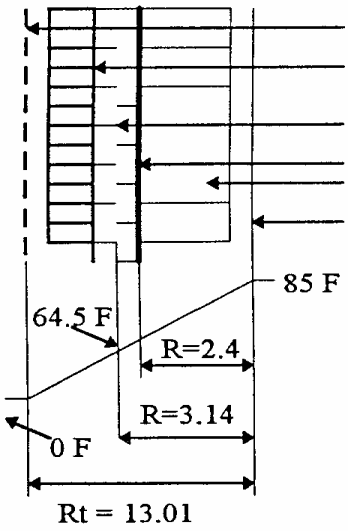
POOL ENCLOSURE AT 85 DEGREES F DB, 50% RH, DEW POINT 54.5 F.



OUTSIDE WALL COMPOSITION	R
OUTSIDE SURFACE (15 MPH WIND)	0.17
FACE BRICK 4"	0.44
RIGID POLYSTYRENE 2"	10.00
VAPOR BARRIER	-----
CONCRETE BLOCK 8"	1.72
INSIDE SURFACE (STILL AIR)	0.68
Rt =	13.01

R AT 64.5 F DEW POINT:

13.01 X (85 F db - 64.5 F dp) = 3.14
85 F differential temperature

Figure 2

Figure 2 shows a cross section of a typical wall design with an outdoor temperature of 0 degrees F and indoor temperature of 85 degrees F. It can be assumed that somewhere in the wall is an area that is at the dew point temperature of 64.5 degrees F.

By using the formula in figure 2, it is found that 64.5 degrees F occurs at a partial resistance of R = 3.14, counting from the inside, for a total wall resistance of R =13.01, positioning the dew point of 64.5 degrees F on the cold side of the vapor barrier. This is a very important observation. If the 64.5 degrees F occurs on the warm side of the vapor barrier, condensation will form inside the wall, with all its consequential damages.

It is of the utmost importance to check the pool enclosure design for adequate insulation R factors and proper vapor barrier location.

Using the example in figure 2, more insulation would move the dew point temperature further away from the vapor barrier, hence reducing the risk of condensation, in case the outdoor temperature drops below design condition or the indoor conditions are changed to a higher dew point temperature.