Interstitial condensation results from vapor transmission which is dependent on vapor pressure differential and the ratio of the rate at which vapor may enter the materials of the structure to that at which it passes out of the structure. The proper installation of a vapor barrier on the warm side of the structure, where the higher vapor pressure usually exists, will reduce greatly the amount of vapor entering the building construction and will minimize the possibility of objectionable condensation. Such a barrier may consist of a coated paper applied under the plaster, a coated plaster base, or a vapor-resistant finish applied to the interior wall surface [12]. A vapor barrier is tentatively defined as a

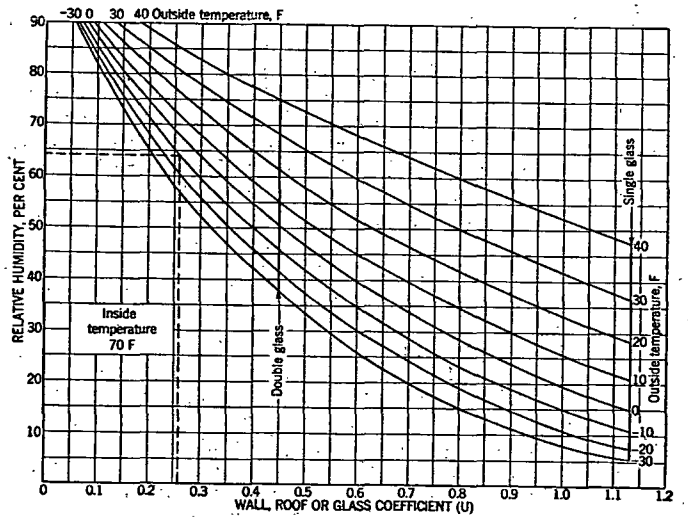

FIG. 4. PERMISSIBLE RELATIVE HUMIDITIES FOR VARIOUS TRANSMISSION COEFFICIENTS

material having a water vapor permeability not exceeding 1.25 grains per (hour) (square foot) (inch of Hg vapor pressure differential).

To prevent condensation on the under side of roofs above attic spaces over insulated ceilings, ventilation with outside air may be provided through suitable louvers or other roof ventilators.

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