

comfort to wet- and dry-bulb temperature at low air movement is shown in Fig. 6. Relations between moisture content and various dry-bulb temperatures to wet-bulb readings and effective temperatures are depicted in Fig. 7. Effective temperatures for various combinations of wet- and

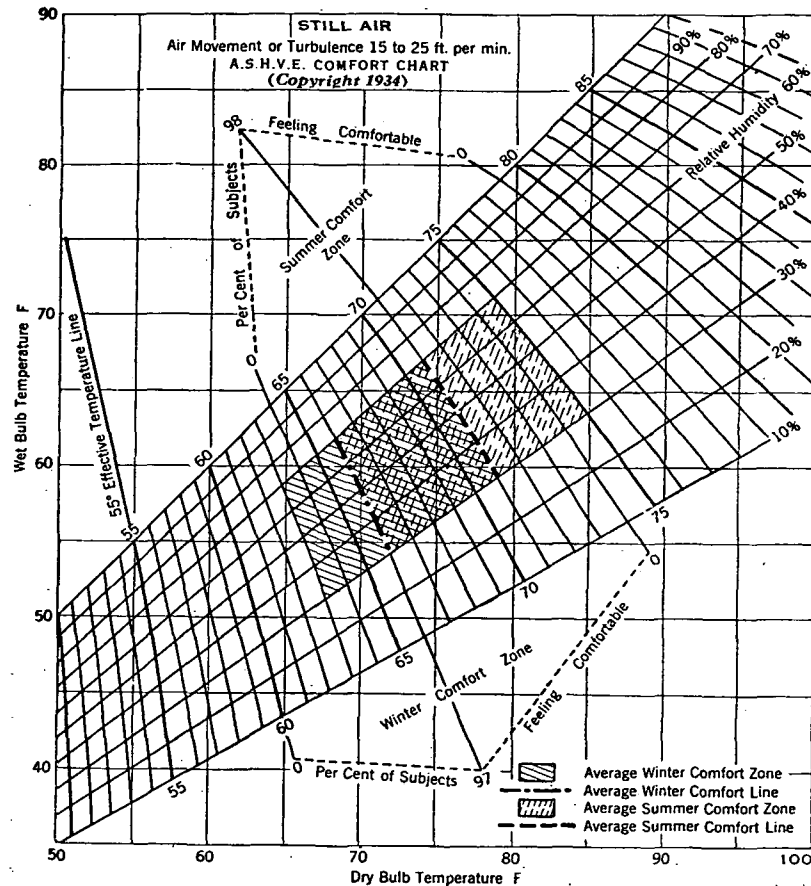


FIG. 6. A.S.H.V.E. COMFORT CHART FOR AIR VELOCITIES OF 15 TO 25 FPM (STILL AIR)

Note.—Both summer and winter comfort zones apply to inhabitants of the United States only. Application of winter comfort line is further limited to rooms heated by central station systems of the convection type. The line does not apply to rooms heated by radiant methods. Application of summer comfort line is limited to homes, offices and the like, where the occupants become fully adapted to the artificial air conditions. The line does not apply to theaters, department stores, and the like where the exposure is less than 3 hours.

dry-bulb temperature readings are given in Fig. 8 accompanied by various air movements.

The Comfort Chart shown applies to average normal and healthy persons adapted to American living and working conditions. Application is limited to sedentary or light muscular activity. It will probably not

apply to inhabitants of other countries where the living conditions, climate, heating methods, and clothing are materially different than those of the subjects employed in experiments at the Research Laboratory.

In rooms in which the average wall surface temperature is considerably below or above air temperature, a correction must be applied to the readings of the dry-bulb thermometer to allow for such negative or posi-

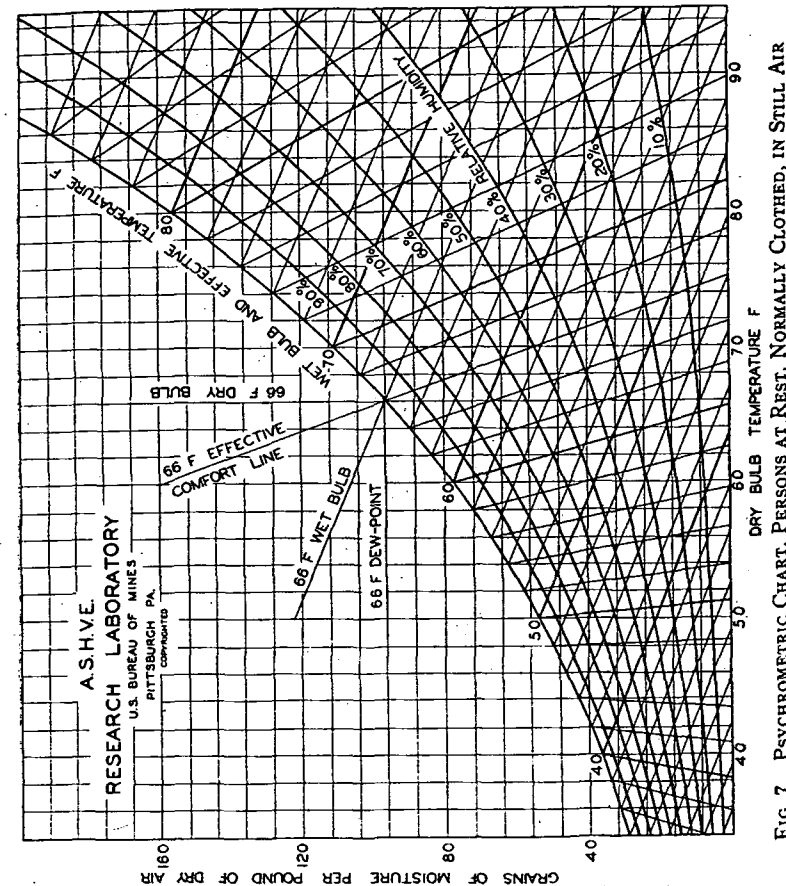


FIG. 7. PSYCHROMETRIC CHART, PERSONS AT REST, NORMALLY CLOTHED, IN STILL AIR

tive radiation. In Fig. 9 is given the cooling effect of cold walls as determined at the A.S.H.V.E. Research Laboratory²⁹ by trained subjects passing back and forth from a small experimental room having three cold walls, to a control room with walls and air at the same temperature.

It can be seen in Fig. 9 that in comparison with air and walls at 70 F in the control (warm wall) room, the cooling effect of three cold walls, at 55 F of the experimental room was 4 F. Therefore, for the same feeling

²⁹Loc. Cit. Note 28.