

the curves by the percentages indicated in the last column of Table 4. These percentages will give values approximately correct.

In Fig. 7: t_o = temperature of air on warm side of insulation.
 t_m = temperature of the medium on cold side of insulation.

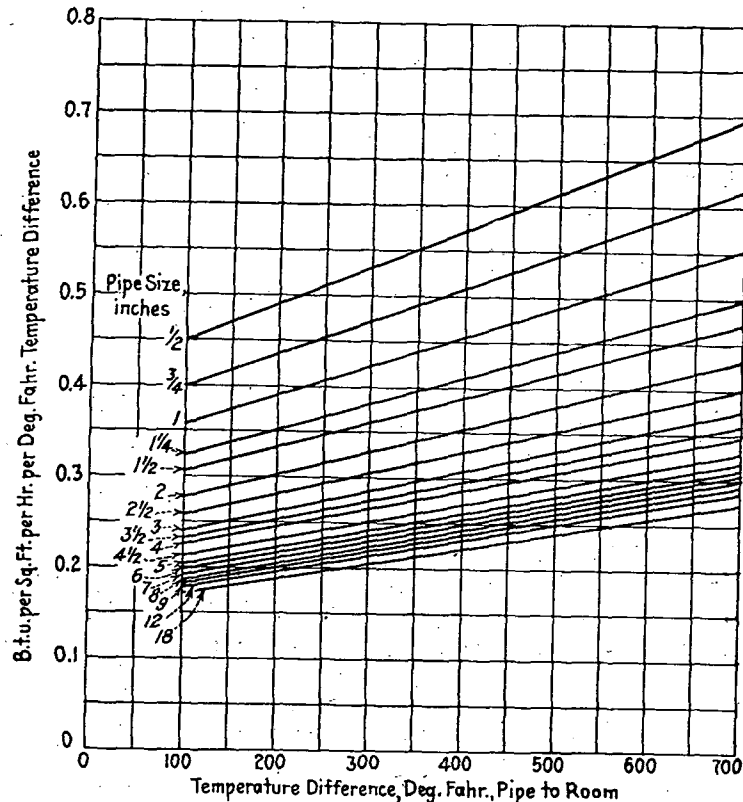


FIG. 5. HEAT LOSS THROUGH 2 IN. THICK COVERING

EFFECT OF AIR VELOCITY ON SURFACE LOSSES

The rate of heat loss from a surface maintained at constant temperature is greatly increased by air circulation over the surface. Fig. 8 is based on Langmuir's equations (*Trans. Am. Electro-Chem. Soc.*, Vol. 23). Other investigators have shown even greater increases in rates of heat loss from bare surfaces due to air velocity.

In the case of well-insulated surfaces the increases in losses due to air velocity are very small as compared with increases shown above for bare surfaces, because of the fact that air flowing over the surface of the insulation can increase only the rate of heat transfer from surface to air.

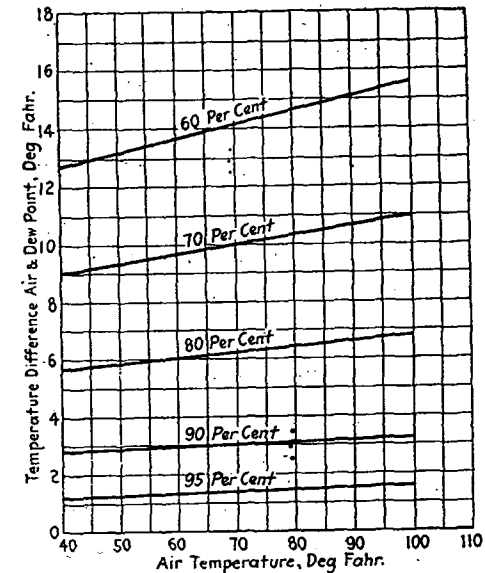


FIG. 6. TEMPERATURE DIFFERENCE BETWEEN AIR AND DEW POINTS AT DIFFERENT RELATIVE HUMIDITIES

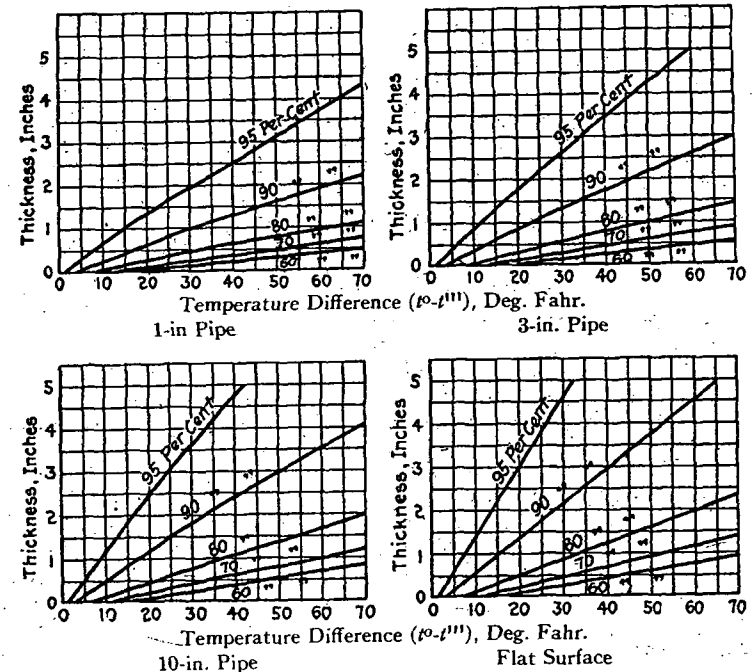


FIG. 7. THICKNESS OF INSULATION TO PREVENT SWEATING